

**THE GERMAN  
SPARKASSEN**  
(SAVINGS BANKS)



# **THE GERMAN SPARKASSEN**

(SAVINGS BANKS)

**A COMMENTARY AND CASE STUDY**

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# Author

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He has held directorships with major manufacturing corporations in the UK and Germany and has wide experience of working in the USA and Europe. He has in-depth knowledge of Germany and is fluent in the language. His specialist areas are advanced manufacturing and financial management. He has a first degree in engineering and is a Sloan Fellow at the London Business School.

Apart from his direct business activities, he is deputy chairman of the UK Manufacturing Excellence Awards (MX), a member of the board of MX Germany, past-chairman and current board member of the Manufacturing Division and of the Management Group at the Institution of Mechanical Engineers. He is a Liveryman of the Worshipful Company of Engineers and a Freeman of the City of London.

# Foreword

Small and medium-sized British industrial companies continue to suffer from an acute shortage of finance from the British banking system; and when finance is available it is often on unacceptable terms. The problem is exacerbated by the heavy centralisation of the major clearing banks, which leads to decisions on lending being based on formulaic processes and computer analyses in some remote central office. The concept of local managers with detailed knowledge of the area and of the loan applicants has largely been eroded. Further, there is usually a demand for substantial collateral, which is difficult if not impossible to comply with for start-up operations and many other small businesses.

The clearing banks perceive that it is in their interests to channel what funding is available primarily for property development<sup>1</sup> where, as they see it, the asset backing minimises the risk exposure. The situation for lenders is also unsatisfactory, with derisory interest rates on offer and their funds still being channelled into casino-type banking operations.

Radical change is demanded. Quoting from the Bank of England's Initiative on Finance for Small Firms: 'Convinced of the vital contribution that small firms make to the economy as a whole (not least in terms of employment creation), and concerned at the breakdown in relationships between the clearing banks and their small business customers, the Bank has become closely involved in discussions and initiatives aimed at improving the financing of the small business sector.' There is much discussion regarding an 'Industrial Bank'.

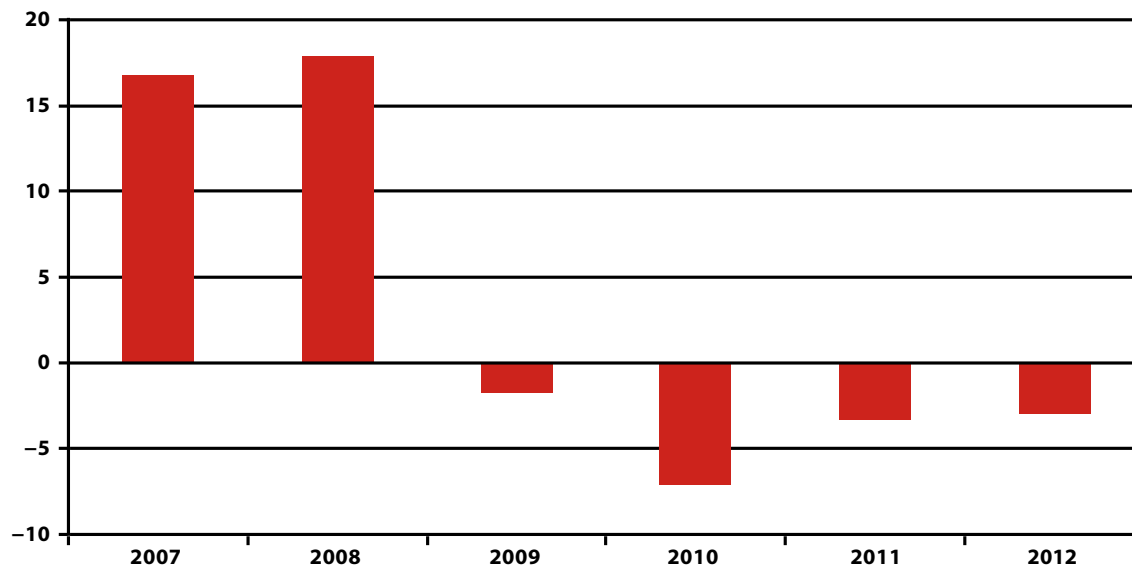
## Lending to UK businesses

	Averages								
	2007	2008	2009	2010	2011	2011 Q3	2011 Q4	2012 Jan.	2012 Feb.
<b>Net monthly flow (£ billions)</b>	7.4	3.8	-3.9	-2.1	-0.8	-0.5	0.1	-3.4	-4.0
<b>Three-month annualised growth rate (per cent)</b>	20.9	10.7	-7.7	-5.2	-2.0	-3.0	0.2	-2.7	-7.9
<b>Twelve-month growth rate (per cent)</b>	16.8	17.9	-1.8	-7.1	-3.3	-3.2	-2.1	-2.2	-3.0

Source: Bank of England

The think-tank Civitas determined that a more detailed appraisal of the equivalent circumstances obtaining in Germany would make a contribution to this vital debate and, even more importantly, help to produce practical proposals as to how the wholly unsatisfactory position in the UK can be improved. The focus has been primarily on the role of the German Savings Banks (Sparkassen) that provide the majority of finance to German industry and particularly to the Mittelstand.

### Lending to UK Businesses Twelve Month Growth Rate



Source: Bank of England

The problems experienced by some of the Landesbanken are well understood, as are the comments in the recent OECD Report. But these issues have been so widely reported in the British media with no small element of schadenfreude that it is thought there would be little value in further comment. It is, however, worth noting that the difficulties encountered by this small number of the Landesbanken, were due simply to them embarking on exactly the same business strategies that have been followed by British and US Banks with such catastrophic results. The other Landesbanken continue to operate successfully and provide a substantial part of total lending (around 17 per cent) with a strong emphasis on SMEs.

The commentary describes the history, structure and organisation of the Savings Bank Group with relevant statistics on market share and performance.

It is supported by a case study of an actual application for lending made by a medium-sized German industrial company to its local Savings Bank. The objective is to provide relevant data on the application appraisal; and also to convey the overall climate under which negotiations take place and the relationship between the bank and its customer. Clearly this has involved much highly confidential information being made available and for this reason very careful steps have been taken to make both the applicant company and the local Savings Bank totally anonymous. But as far as is possible in these circumstances, the data and conditions attached to the loan process and the final agreement are entirely real and it is believed provide a very good general indication of the conditions under which much of the finance to German industry is provided by the Savings Bank Group.

None of this would have proved possible without the cooperation and support provided by the Association of German Sparkassen (Deutscher Sparkassen – und Giroverband – DSGV). A consider-



## FOREWORD

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able debt is owed to the President Herr Heinrich Haasis<sup>2</sup> and Dr. Karl-Peter Schackmann-Fallis, and their colleagues for their wholehearted cooperation and valuable support. In particular we wish also to thank most sincerely Dr. Thomas Keidel, the Director for Financial Market Relations, who was responsible for coordinating the series of interviews and presentations and making available the very extensive amount of data and statistics.

Not least, we need to acknowledge the support and extraordinary level of trust given by both the applicant company and their local Savings Bank. We would otherwise wish to express our thanks publically and name those concerned, but for obvious reasons of confidentiality this is not possible. The company and the Savings Bank, however, know who they are. We wish them well and express our very great thanks and appreciation.



PART I

**A COMMENTARY**



# 1. Introduction

The remarkable success of the German Industrial Mittelstand in the last 60 years is directly related to the financial and overall economic support that has been provided by the German Sparkassen. In terms of structure, organisation, operation and definition of responsibility, seen from an Anglo-American perspective, they are unique. They provide not just finance but are obligated by their constitution to support the sustainable development of the total economy within their defined geographic business area. They also have very significant social responsibilities that extend well beyond provision of banking services.

These Savings Banks are not state banks but are essentially credit institutions operating under public law. Their responsible public bodies (but not owners) are the local municipalities. Savings Banks are not a consolidated group; each Savings Bank is an independent credit institution and is highly autonomous. They, however, come under an umbrella organisation, the Deutscher Sparkassen- und Giroverband (DSGV) that, although it can only exercise control by consent, is able to ensure effective and efficient operation with very low risk.

In order to understand the structure and operation of the Savings Banks, it is important first to recognise both the history and the government of the country as it currently operates. Germany has only existed as a unified country since 1871 (previously comprising a large number of independent states and principalities) and now has a federal structure with 16 Federal States (Länder), each

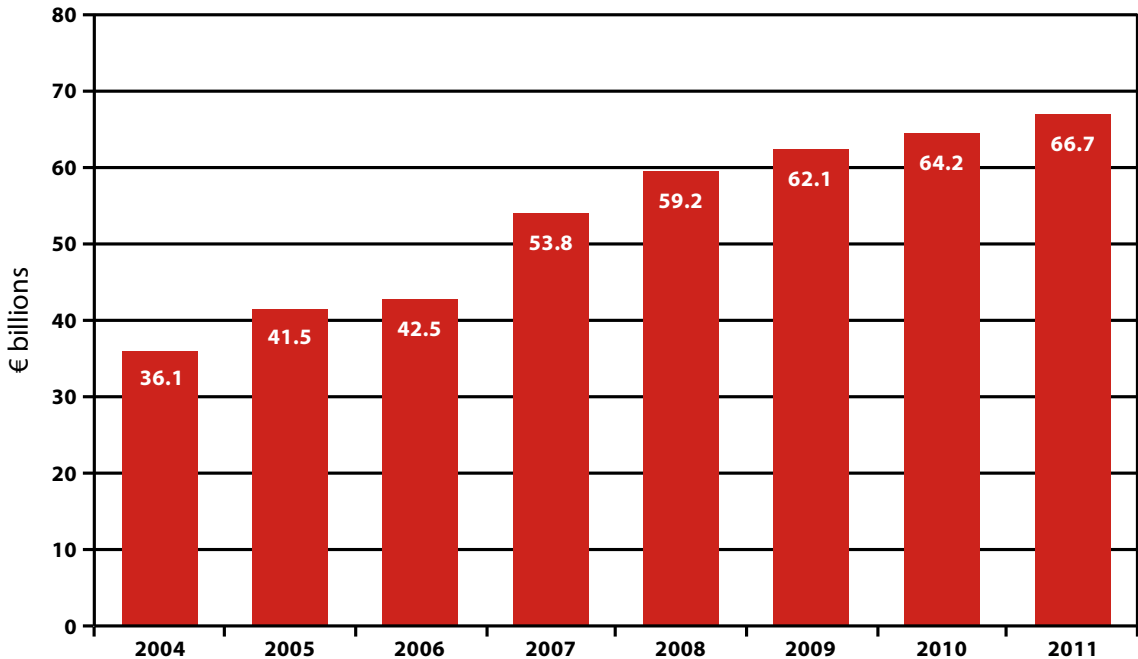


with its own parliament and tax raising authority. Many of the functions such as health, education etc., which in other countries would be the responsibility of the central government are in Germany exercised by the separate states.

There are marked differences in cultures and accents, reflecting the history, and which still have a significant impact on the conduct of business. There are 82.4 million inhabitants according to the Statistisches Bundesamt (Federal Office of Statistics). Re-unification in October 1990 had a huge impact when West Germany took over what was the totally bankrupt state of East Germany. Some 14,000 state enterprises were privatised or closed in the East and around four million people moved from East to West. The cost of restoring the infrastructure and progressively re-building the economy is estimated to have cost<sup>3</sup> over 1.3 trillion Euros.

German manufacturing industry went through an acute recession in 2009 and the financial support provided by the Savings Banks during this critical period proved vital not only in terms of survival, but in the ability of industry to emerge from the recession much faster as they were able to retain most if not all of their employees.

**New Loans from the German Savings Banks to Companies and the Self-Employed**



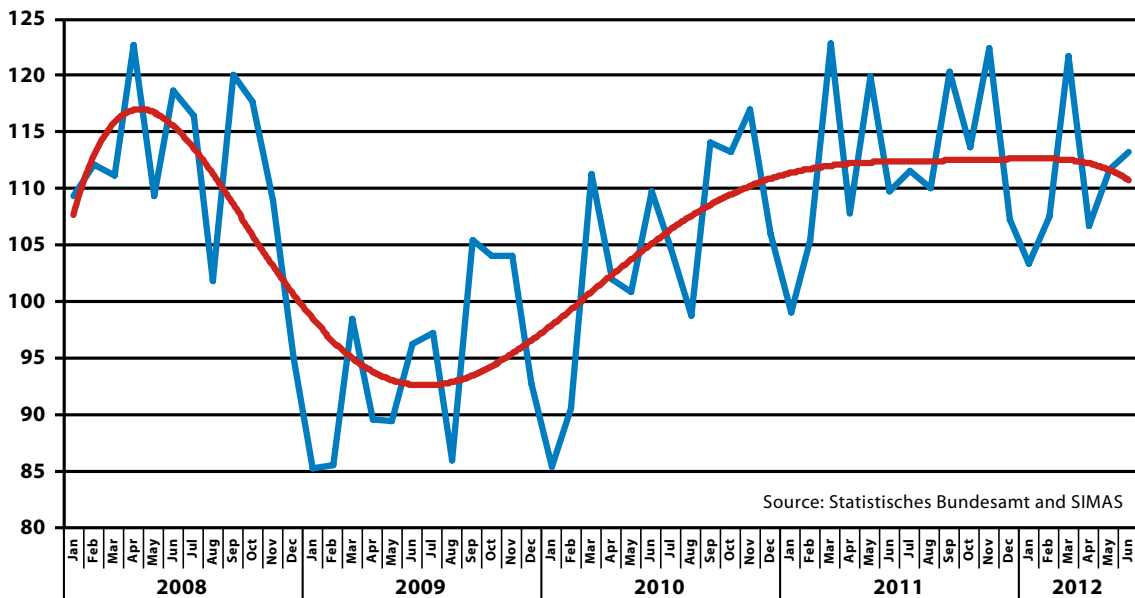
Nearly 99 per cent of all German businesses have annual revenues of less than €10 million. For such companies provision of finance via the capital markets is neither economic nor indeed in most cases realisable. Many of the larger family businesses are not prepared to consider market finance as they remain determined to retain control of the business. In such circumstances, the Savings Banks provide in every local community across the country immediate access to finance for these

small and medium sized companies. The local Savings Bank is regarded as the ‘house bank’ and ensures a long-term and secure relationship with each of their commercial customers. The Savings Bank Group in total provides currently 42.7 per cent of all finance to German businesses.

The role that the German government exercised during this critical period has also to be recognised. Very quickly, once the potential depth of the recession became apparent, legislation<sup>4</sup> was introduced that provided additional funds to companies that were obliged to put employees on short-time working. In summary, the employer was able to declare short-time working and continued to pay the employee for the time worked; the State paid for the time not worked at a rate of 60 per cent of the net income. The effect was that an employee on short-time working received over 80 per cent of the net income that would have been earned in full-time work and, crucially, employment was preserved. It is estimated that over half a million jobs were protected at a cost to the state of around €5 billion each year. At the peak, some 1.1 million people were being supported by the scheme.

Since the recession German industry has recovered at a remarkable rate, supported by the retention of skilled and committed employees and the additional investment in research and development made during the period of low demand.

**Production Index for German Manufacturing Industry (2005 = 100)**



In the period from January to April 2012, loans to business provided by the Savings Bank Group increased by a further €5.6 billion, reaching a total of €332.1 billion, corresponding to an increase of 1.7 per cent. This has allowed industry to maintain investment in more efficient plant and machinery, and in increasing capacity.

The current situation has been described as one where most manufacturing companies are fundamentally strong. As the new president of the DSGV, Georg Fahrenschon, said in June 2012: ‘Der

deutsche Mittelstand ist kerngesund und investiert ordentlich weiter' – 'The German Mittelstand is in good health and continues to invest at a sensible level.'

## 2. A Brief History of the Savings Banks

The concept of the original Savings Banks goes back to the eighteenth century when they were first founded with the philanthropic aim of providing the poor with the opportunity to deposit small amounts safely, earn interest and thus have funds available to combat the adversities of illness and old age. These schemes were progressively developed to include support for local tradesmen and businesses.

The first Savings Banks recognisable in a modern context were founded in Hamburg and other northern German cities in the late part of the eighteenth century. By 1836 there were some 300 Savings Banks and this progressed further so that by 1913 there were over 3,000 Savings Banks in operation. Most of these were founded by local communities.

There was a period of modernisation in the twenties, reflecting the wider use of cashless transactions. In the Nazi period, the number of Savings Banks was radically reduced and in the post-war years the Savings Banks were divided between East and West Germany. In the 1990s a period of consolidation commenced with the objective of achieving more efficiencies and the centralisation of IT and other facilities, which has allowed them to deliver all the products and services associated with a major banking group. The name 'Sparkasse' (Savings Bank) is protected under the Kreditwesengesetz (German Banking Act).

## 3. The Structure of German Banking

Basically, it is split into three main elements:

### 3.1. Credit Banks comprising:

- Large clearing banks
- Regional banks
- Private banks
- Foreign bank subsidiaries

### 3.2. Credit Institutions under Public Law comprising:

- Savings Banks
- Landesbank companies
- Regional building societies



### 3.3. Co-operative Banks comprising:

Volksbank companies

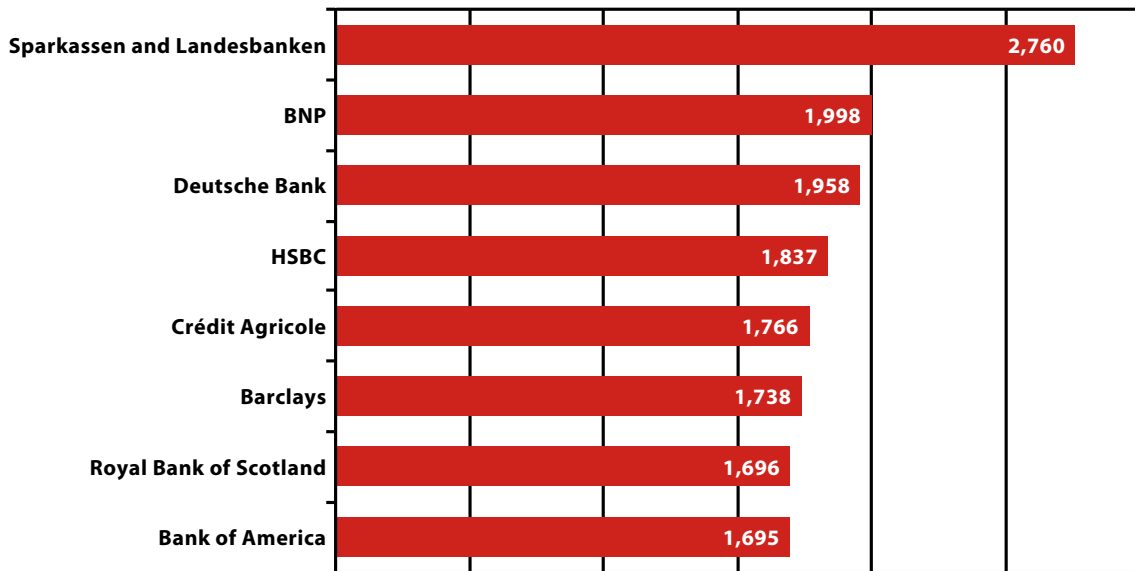
Raiffeisenbank companies

And their controlling institutions

All credit institutions in Germany are subject to the Kreditwesengesetz (KWG) – the German Banking Act and to the supervision of the Bankaufsicht der Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) – the Federal Financial Supervisory Authority. Each of the three elements referred to above has its own guarantee system and its own business model.

The cumulative size of the Sparkassen and Landesbanken<sup>5</sup> can be ascertained by reference to the following chart. It indicates their financial strength seen in an international context.

**Balance Sheet Totals of Selected Institutions in € billions**



## 4. Organisations within the Savings Banks Finance Group

Savings Banks are essentially credit institutions under public law; their responsible public bodies (but not owners) are the municipalities. Savings Banks are not a consolidated group and each Savings Bank is an independent credit institution. They operate within their own defined business territories and where co-operation with others is required, this is organised within the DSGV. They do, however, have regional associations which incorporate all Savings Banks in each state. The Joint Liability Scheme provides protection for all Savings Banks. The banks are public welfare-oriented

institutions and, instead of profit maximisation, their aim is the sustainable development of the real economy within their business territories.

Although Savings Banks operate independently in their respective regions, they are all members of the Savings Banks Finance Group, which plays a key role in efficiently processing the essential downstream activities that any large banking organisation requires. Thus they can operate flexibly at local level whilst offering advanced facilities compatible with a universal bank. The structure is remarkable in that it is neither fully hierarchical, nor market based nor indeed voluntary, but which operates on the basis of common interest. It is, according to Gärtner,<sup>6</sup> 'held together by a mixture of economic rationality, group philosophy, corporate identity, capital connections and laws and regulations'.

The Savings Banks Finance Group cannot be compared with say the structure of a group of companies or a holding company. However, close cooperation exists between Savings Banks and other members of the group which ensures efficiency.

The Landesbanken operate as service providers for Savings Banks, (e.g. as lead banks for credits involving large exposures) and the group also includes specialist providers as set out below for leasing, factoring, insurance, building society savings and securities etc.

Economies of scale are achieved, for example in IT and back-office areas, product development, dealing with regulatory requirements and in employee training.

Decisions made by Savings Banks' management boards remain autonomous.

All members operate under a common trade name ('Sparkasse').

The Deutscher Sparkassen – und Giroverband (DSGV) is the umbrella organisation representing the Sparkassen Finanzgruppe (Savings Banks Finance Group). It coordinates decision making within the group and determines strategic direction.

### The Savings Banks Finance Group (2011)

	No. of Institutions	Total Assets (€ billion)	No. Employees (000's)
<b>Savings Banks</b>	426	1,098	245
<b>Landesbanks</b>	8	1,495	48
<b>Building Societies</b>	10	55	9

The other important institutions in the group include:

- Regional public insurance groups
- Capital investment companies

- Capital investment companies of the Landesbanken
- Central building societies
- Deutsche Leasing and other leasing companies
- Factoring companies.

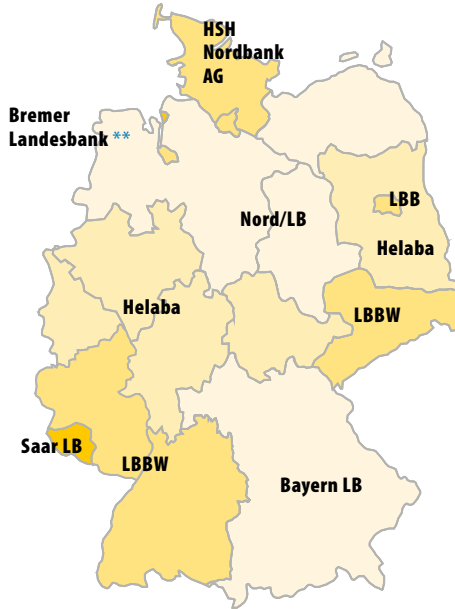
In total there are some 600 institutions employing around 346,000 people. The geographical distribution of the Savings Banks and the state banks is illustrated on the maps below.

### The Savings Banks and Regional Associations



**Landesbanken\***

- 7 Landesbank Groups
- plus DekaBank  
Deutsche Girozentrale  
(DekaBank)
- €1,628 Bn. Total  
Assets\*\*\* (inc.  
DekaBank)
- 52,421 Employees\*\*\*  
(inc. DekaBank)

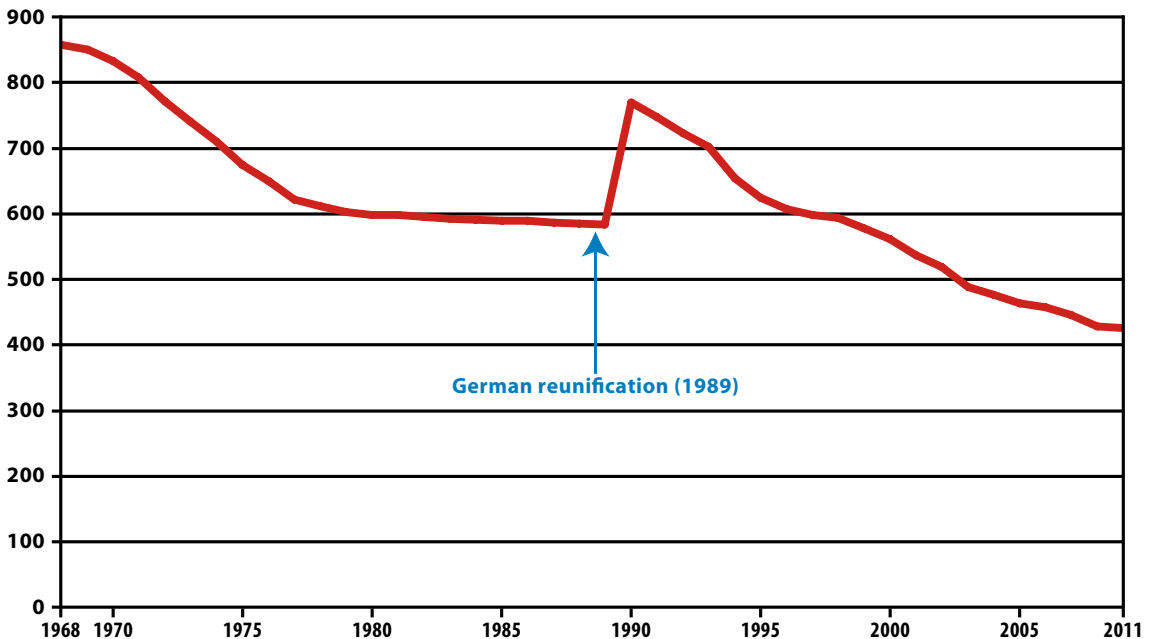


- \* Cartographic view of regional jurisdiction
- \*\* The Bremer Landesbank also operates as part of the Nord/LB group in the Weser-Ems region
- \*\*\* As per: 31.12.2011

Status: 01.09.2012

There is a broadly similar geographic pattern to be seen between the Savings Banks and the Landesbanks. Consolidation of the Landesbanks has taken place with the LBBW taking over the Sachsen and Rheinland-Pfalz Landesbanks and Helaba the West LB. The Savings Banks have consolidated significantly as a result of striving for continuing efficiency. As a result, the number of Savings Banks has fallen over time:

**Number of Savings Banks**



The sharp increase in 1990 is a consequence of re-unification, but the trend towards further consolidation soon recommenced reflecting also changes in the structure of towns and local authorities.

The ownership of the Landesbanken is both varied and complex. In general, the state in which the bank is located will have a significant holding together with the Savings Bank Association. The precise information is set out in Appendix I.

## 5. The Structure of the Savings Banks

The legal status of German Savings Banks is laid down in the special Savings Banks acts of the Federal States. The majority are incorporated as 'institutions under public law'. Also of fundamental importance is that Savings Banks come under the same credit and bank legislation as all other banks in Germany.

- They are legally and financially independent.
- Savings Banks have no 'owner'. There are no proprietary rights: based on current legislation, Savings Banks cannot be sold.
- The responsible public body (not owner) of a Savings Bank is its respective local authority (city, town or district) or a municipal special purpose association of a local authority for the purpose of jointly running a Savings Bank (municipal trusteeship).
- The legal form of 'institutions under public law' ensures that the population within the business region is represented in the bodies of the institution. There is always a management board responsible for the day-to-day conduct of the business and reporting to a supervisory board.
- The supervisory board is made up of representatives of the local population (customers), employees and the town/city council. It is responsible for the appointment and discharge of the management board and determines remuneration and any fundamental changes to the operation.
- The management board is comprised of banking professionals and must have at least two qualified members although in practice there are usually more and requires the approval of the Ba Fin.
- Savings Banks are not 'assets' of a municipality, but they also do not represent a 'liability'.
- Savings Banks operate according to commercial principles, but without the aim of profit maximisation.
- There is no 'pressure' for dividend distribution.

- In principle, all customary banking business may be carried out, with the exception of speculative transactions.
- The establishment of contingency funds is stipulated. This forms the fundamental equity position. Capital<sup>7</sup> is principally formed from reserves.
- The municipality has no shares; they cannot sell their Savings Banks and put the resulting revenue into their budgets.
- The supervisory board ensures that the Savings Banks carry out their public service obligation. The position of chairman of the supervisory board is generally held by the mayor (or head of the district authority).
- The rights of participation do not go so far as to facilitate political influence on day-to-day business. The responsibility for this is taken by the management board.
- The regional principle stipulates that Savings Banks are only authorised to operate branches within their own region (which incorporates the administrative region of the responsible public body) and essentially that they can only extend loans within that region.

*The basic principle is that local deposits are transformed into local loans.*

The effects of the above:

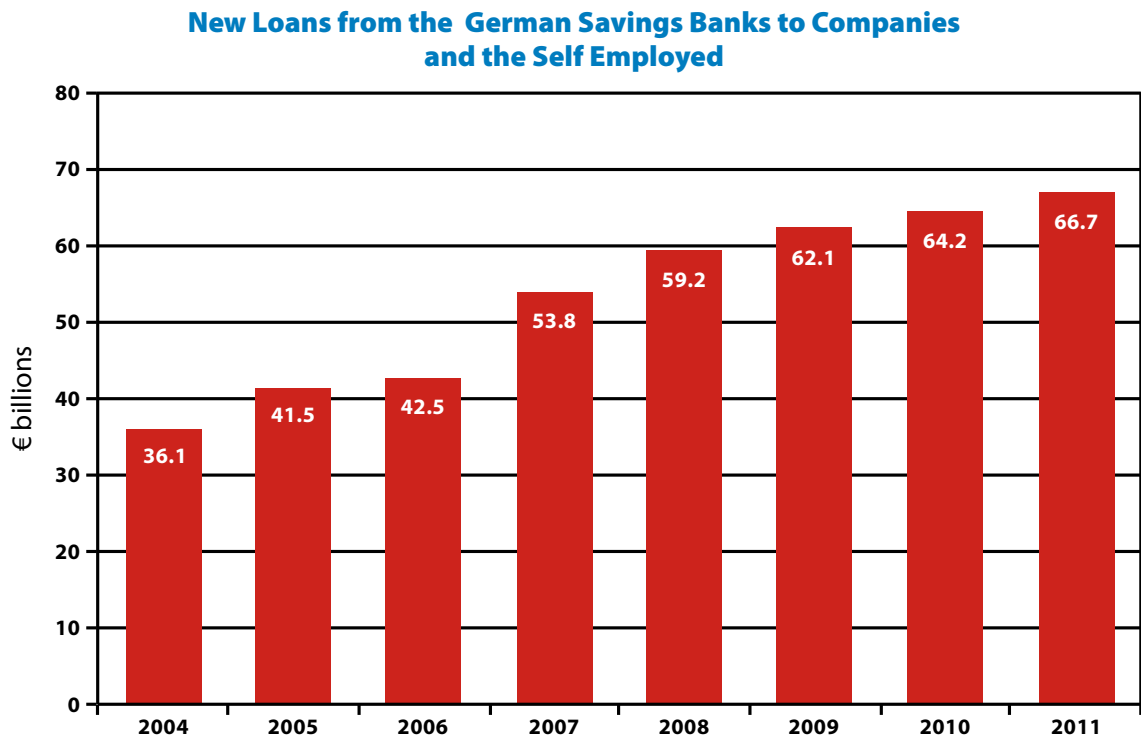
- Taxation from Savings Banks goes as direct tax payments into the local regional budget, as they are regarded as 'local companies'.
- Savings Banks cannot move into more lucrative regions. This also prevents them from growing too quickly.
- Strong focus on the home region provides detailed knowledge of the customers and facilitates risk management, resulting in a stable local economy over the long term. In addition, a range of services is promoted to meet the specific needs of the region.
- The principle of 'local deposits into local loans' provides financing opportunities for economically weak regions, preventing capital outflow from these areas.
- Savings Banks work according to market conditions. As a direct result of the regional principle, they are highly competitive within their regions as they cannot subsidise services from the profits of other regions.
- Common interests between municipalities and Savings Banks for regional development. Savings Banks support their municipalities in their obligation to facilitate economic development, regional policy, and in social and cultural areas.

## 6. The Public Mandate

This can be summarised as follows:

- To ensure an appropriate and sufficient provision of money and credit services to all customers, regardless of their personal income and financial situation, particularly to small and medium-sized enterprises in the region.
- To promote savings.
- To strengthen competition based on the competitive requirements of their business area.
- Surpluses remain with the Savings Bank and within the region: profits are used to increase equity and for non-profit purposes (the public benefit principle).
- The use of part of their surpluses for a broad range of social commitments (social, cultural, art, sports, scientific/educational purposes).

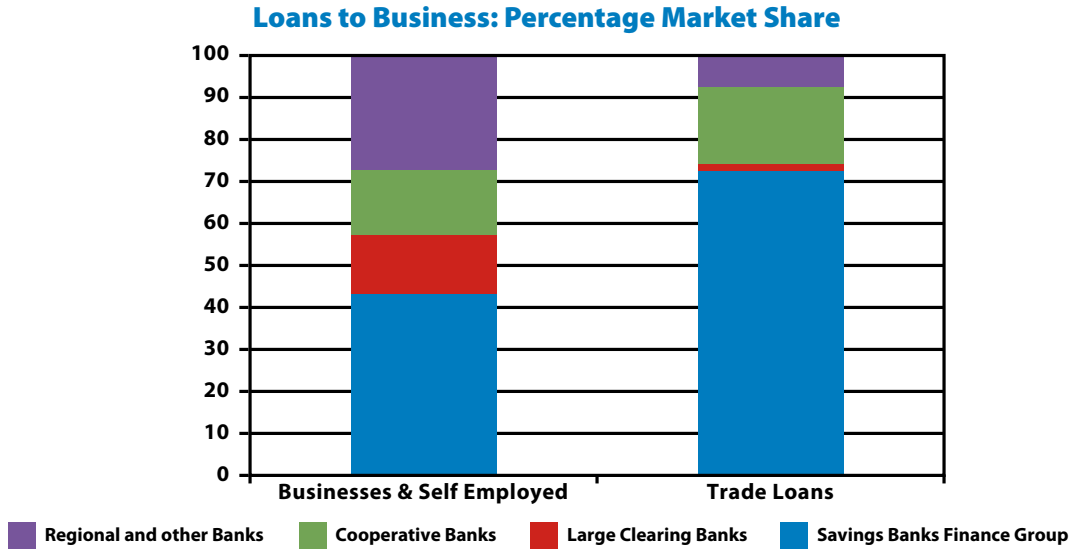
How this works out in practice can be seen from the following (The graph has already been shown in the Introduction, but the significance justifies it being shown again):



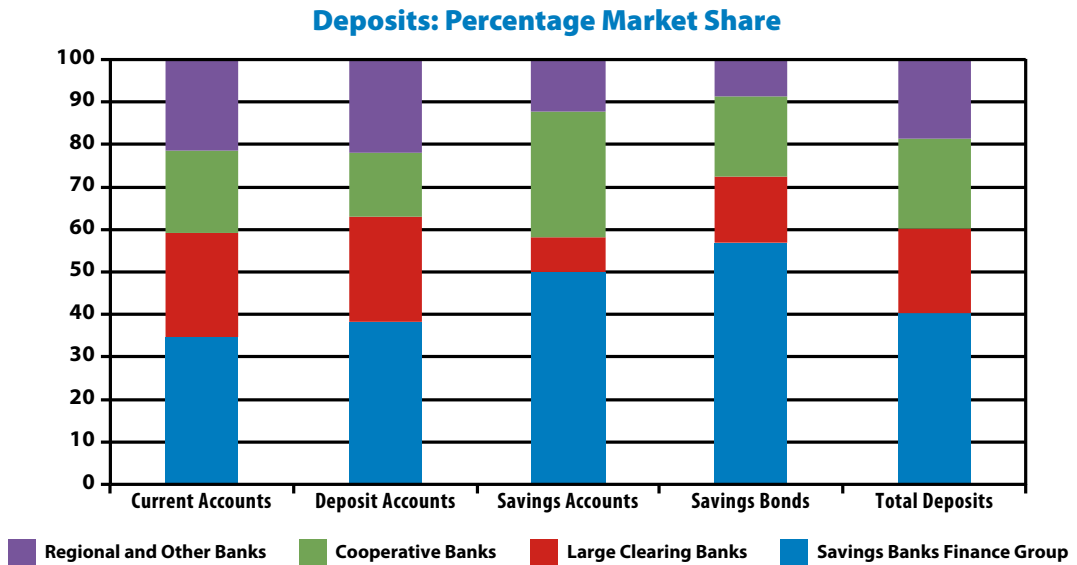
This is the period that encompasses the world financial crisis; the figures contrast starkly with the

UK lending figures set out in the introduction: lending to businesses substantially increased when they needed it most.

The Savings Banks Finance Group operates in a highly competitive market, yet has been able to secure very significant market shares:



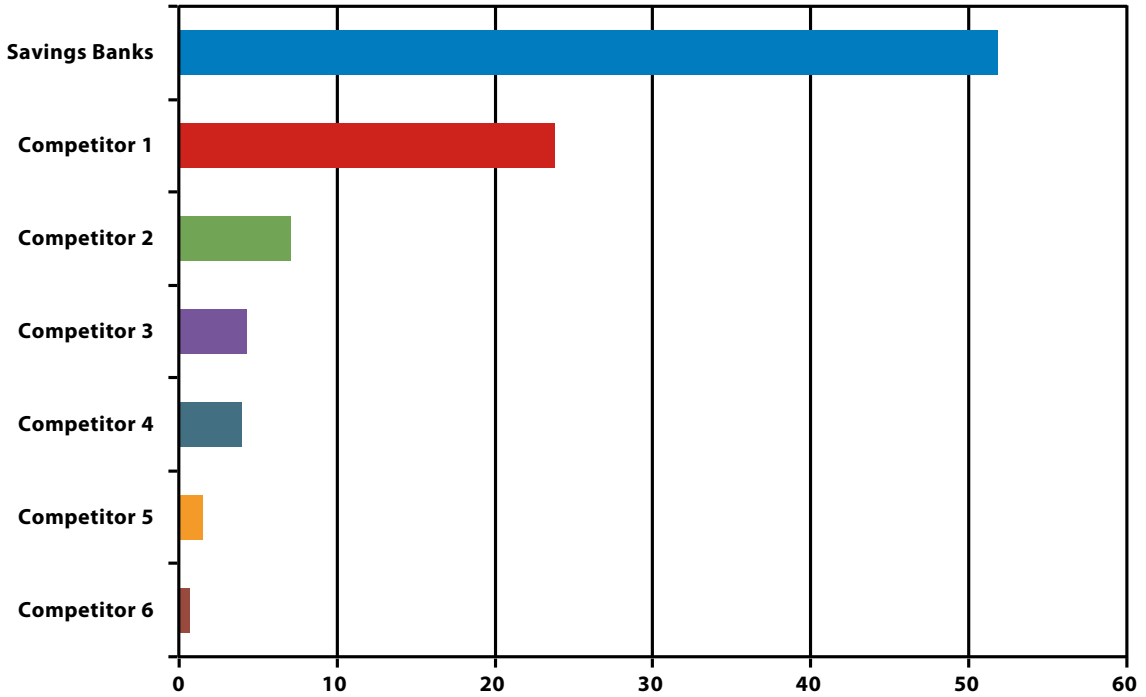
Over 43 per cent of all finance for businesses of all sizes, but particularly SMEs and the self-employed, is provided by the Savings Banks Finance Group.



Over 40 per cent of all customer deposits are with the Savings Banks Finance Group.



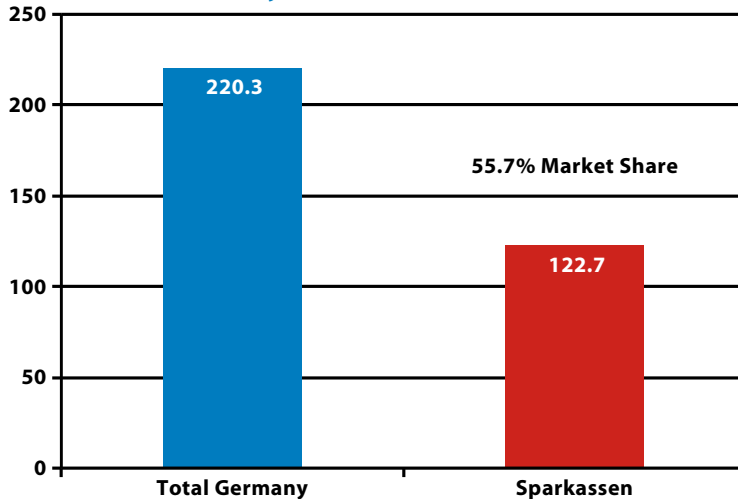
**Principal Bank Account: Percentage Market Share of Retail Customers**



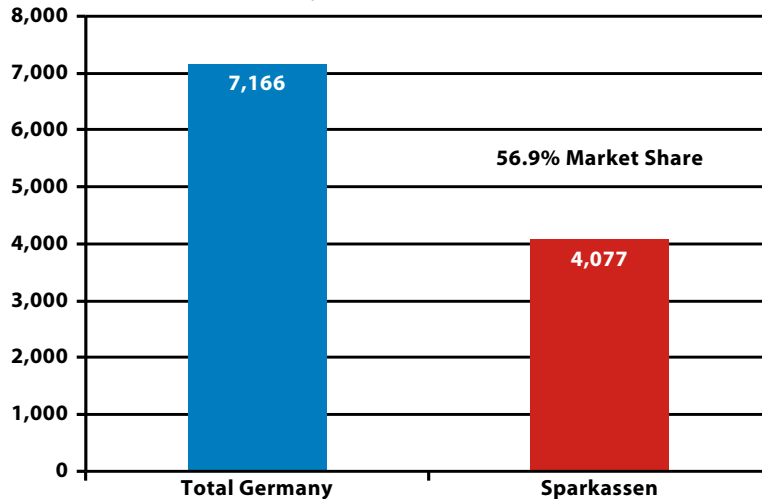
Quite extraordinarily, more than half of all German bank customers have their principal account with the Savings Banks.

Perhaps one of the most illustrative successes is the financing of small business start-ups with guarantees provided by the Kreditanstalt für Wiederaufbau (KfW)<sup>8</sup>, as is seen from the charts below:

**Finance of Business Start-ups in 2010 under KfW Programmes by Value (€ millions)**

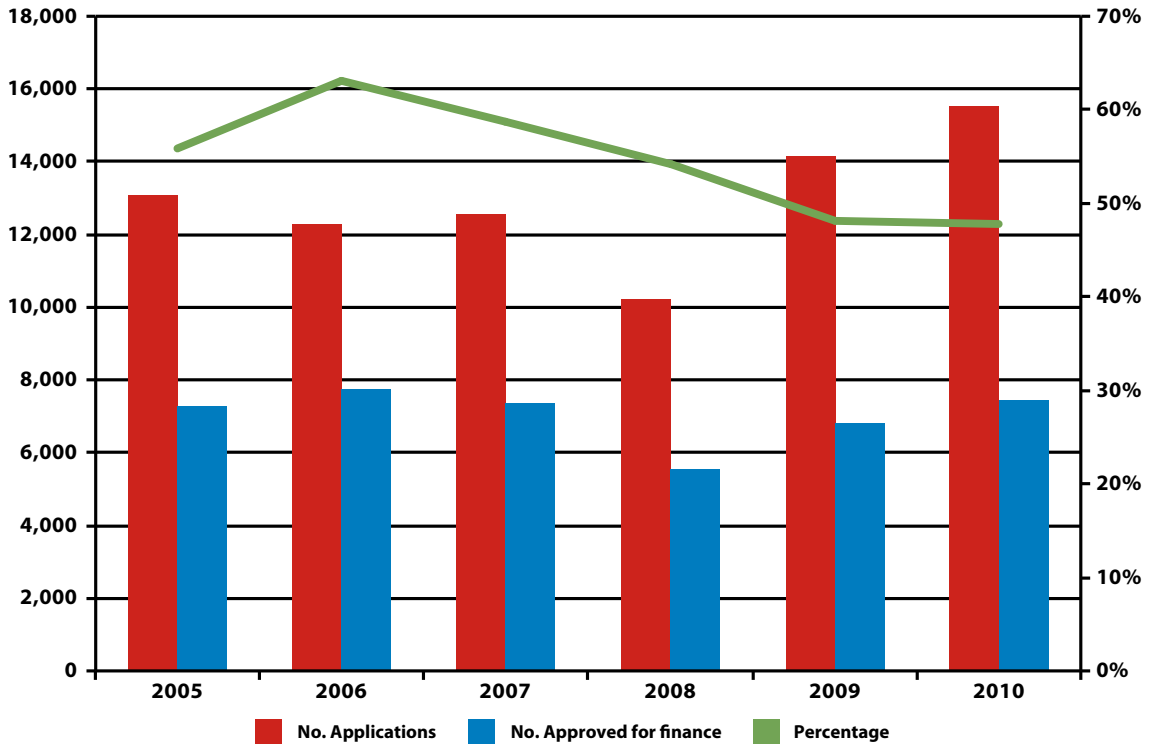


**Finance of Business Start-ups in 2010 under KfW Programmes by Unit Number**

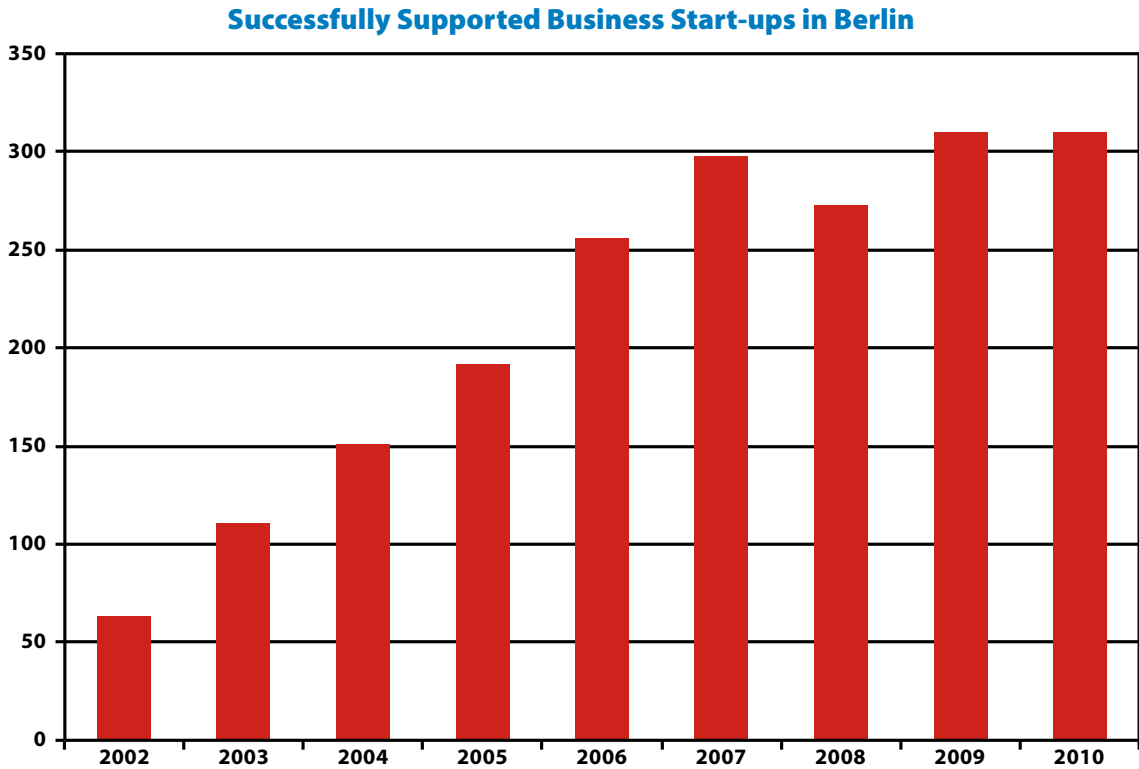


The trend over the years 2005 to 2010 in applications to the Savings Banks and acceptances for finance is illustrated in the next chart. The green line shows the percentage success rate. As may be anticipated, there was a decline in applications in 2008 reflecting the economic circumstances prevailing, but it is of note that the acceptance rate remained relatively high at nearly 55 per cent.

**Trend in Finance of Business Start-ups**



The national success is further supported by information provided by the Berlin Sparkasse as set out in the following chart.



There are approximately 1,000 inquiries each year with a very high survival rate of 85 per cent within the first three years after the establishment of businesses.

The Savings Banks Finance Group is:

- Germany's largest non-governmental sponsor of art and culture, and its largest non-governmental sports sponsor
- One of the country's largest sponsors in the social sector
- One of the country's largest scholarship sponsors

## 7. Financial Stability of the Savings Banks Finance Group

- In April 2012 Moody's re-confirmed its Corporate Family Rating of Aa2
- In March 2012 Fitch confirmed its rating of A+/F1+
- In April 2012 DBRS re-confirmed their Floor-Rating of A (high)/R-1

It can be concluded that the main contributory factors to this very high rating are:

- Stable financial returns
- Calculable risks with tight and efficient appraisal systems
- Strongly rooted in regional markets
- Sound diversification of risks through a de-centralised structure and the use of fully-developed risk management instruments
- The good reputation of the 'Sparkasse' trade name
- The high level of co-operation within the Savings Banks Finance Group

## 8. Joint Liability Scheme (Haftungsverbund)

The Joint Liability Scheme applies in cases of economic difficulty of individual members of the Savings Banks Finance Group. Savings Banks support each other at regional or supra-regional level to ensure the continued existence of an institution. To this end, monitoring committees of the 'Joint Liability Scheme' are given graduated rights of information and intervention, according to the specific situation. Constant monitoring of all institutions is carried out internally within the Group; with auditing carried out by the regional associations' auditing agencies.

The scheme comprises three individual but interlinked guarantee schemes:

- The Landesbank Protection Fund
- Regional Savings Banks' Protection Funds
- Regional Building Society Protection Fund

The objective is to determine when risk has reached an unacceptable level long before there is any

potential for default: 'The main thing is to ensure the customer is not even aware of any danger. We take action as early as possible to prevent any insolvency.' This is achieved by a very advanced and effective monitoring system operated by the DSGV.

There is a profit and risk indicator of a range of control parameters that forms part of an overall monitoring system with valuations based on a 'traffic light system'. The information flows into a ratio system comprising:

- Profit and risk indicator
- Risk capacity assessment
- Capital ratios
- Liquidity co-efficients

And from this a qualitative report is prepared and it is this report that allows the monitoring committee to downgrade an institution from green to amber or red, or from amber to red using the traffic light system. The concept is one of gradually increasing the level of intervention with a highly individual approach relevant for each case.

Cases requiring action vary considerably and are always decided on an individual basis. This has the merit of giving additional operational scope, which ensures the success of any necessary re-organisation and assists in reducing the demand on any funds to a minimum. Great emphasis is placed on what is described as 'moral hazard', by which is meant the Liability Scheme is not perceived as some form of insurance which thereby potentially reduces the level of responsibility assumed by the management board of a Savings Bank. Indeed, in the rare case of action being required, the penalties levied on the responsible management are draconian.

The objectives of the scheme are summarised as:

- Safeguarding of the continuity of each member institution
- Protection of the 'Sparkasse' name
- Preservation of customer trust

In the event of payments being required to support a Savings Bank, the funds are drawn upon in a cascading principle:

- Funds from the region in which the problem has occurred
- Funds from other regions
- Funds from Landesbanken and regional building societies.

If the Joint Liability Scheme is utilised, then the funds not only provide the necessary liquidity, but also enable the reorganisation of the bank and its management.

In the last 38 years only 33 support cases have been processed and with only four of these cases requiring compensation beyond the regional level. The above processes are undoubtedly rigorous but the most important safety factor is the provision of a local banking service. This results in local management knowing their loan clients intimately and thus being best positioned to assess risk. Further, they exercise an important advisory role so that they are able to provide businesses in potential difficulty with sound financial advice before the situation deteriorates further.

*Since the inception of the Joint Liability Scheme in 1973, no member institution has ever defaulted on its financial obligations.*

## 9. Financial Performance

As has been explained in some detail, profit maximisation is not the priority of the Savings Banks; yet they are entirely dependent on profit to support their balance sheets, raise equity and thus provide the necessary loan funds for their local community. Most international surveys conclude that German banks' profitability lies below that of other countries. There are two basic reasons why this could be the case: they operate less efficiently or competition results in lower margins. But a study by the KfW entitled 'The German Banking Industry in International Comparison' concluded that German banks achieved very high levels of productivity compared to other countries' banks. The following quotations define the key results:

Germany's banks and Savings Banks surpass those in all other European economies as well as those in the USA by a wide margin. (Productivity per person engaged in Germany: +4.1%; USA: +2.7%; UK: +3.9%; France: -0.9%; Italy: +2.6%).

Measured against the macroeconomic resources that are used, Germany is not over-banked. As in the other major economies, approximately two per cent of Germany's workforce is employed in the banking industry (USA 2.1%, Japan 2.0%, and UK 2.4%).

In Germany, it is mainly bank customers who benefit from the productivity gains within the banking industry – in the form of falling prices for bank services. This price slide is so steep that the nominal gross value added, which is a determining factor for the return on equity of the banks and Savings Banks, has stagnated. Such a distinct transfer of the productivity gains to customers could not be observed in any of the other countries included in the comparison.

Studies by the DIW<sup>9</sup> indicate that German Savings Banks work with profit margins comfortably higher than other commercial banks measured in terms of return on capital. It could be argued that banks that focused on steady business with small investors, home building loans and loans to small and medium-sized companies, have performed substantially better than banks that pursued other business strategies.

## 10. A Brief Interim Summary

The core principles of the Sparkassen are a public service ethos and the principle of regionalism. These have provided German industry, and particularly the Mittelstand, with invaluable long term secure and stable finance on which businesses could be built and expanded. It has resulted in money saved in a region being used as a priority to support the local economy and the local population.

The structure and assets of the Savings Bank Group have been developed over a period of many years and it would be unrealistic to anticipate that such a large and sophisticated organisation could easily be translated to another country.

But the attributes of a sense of dedication to the community, where profit maximisation is not regarded as the absolute priority and where there are banking services and skilled and professional financial advice available to support business clients at the local level, are surely capable of being adopted.





PART II

# **THE CASE STUDY**



# 11. The company on which the case study is based:

## 11.1. Introduction

The company has consciously been selected as one where there are significant financial challenges and therefore could not be regarded as being immediately eligible for an increase in its short term loan facilities. Indeed in a British context it is highly probable that there would already have been demands placed upon it by its bank to reduce the level of borrowings.

## 11.2. The background

The company is a privately owned manufacturer of specialist machinery and associated tooling, based in southern Germany with a number of overseas manufacturing operations and sales subsidiaries. It employs nearly 800 people and is regarded as a world leader in its particular industrial sector. The original founder and majority owner of the company, established over 50 years ago, still exercises significant influence. He is supported by a highly professional and extremely well qualified executive management. Remarkably, seen from a British perspective, the holding company is a 'Persönlich haftende Gesellschafterin' i.e. personally liable with no limited liability protection.<sup>10</sup> Because of the high value of much of the product range and the technical complexity, there is considerable emphasis in providing major customers with a comprehensive service covering design, manufacture and installation.

The products and services provided are at the forefront of technology, reflecting investment in research and development. Business comes from a wide range of industrial sectors with the automotive sector being of particular significance. Both standard machines and special purpose machines, usually incorporated into major projects, are manufactured. With the latter, lead times of a year or more are usual and although advance payments are negotiated, there is still considerable pressure on cash flow as a consequence. Manufacturing is based not only in Germany, but also in Eastern Europe and the USA. All major projects, however, are both designed and manufactured in Germany with overseas manufacturing operations producing standard machines, tooling and components. This allows machines for markets, particularly for the USA, to be supplied conforming to local standards and specifications.

As one of the most important employers in the region, the company is conscious of its responsibility economically and socially. Increasing success in world markets does not change this philosophy and indeed yet further emphasis is placed on the links to the local region as the company achieves the status of a 'global player'. In doing so, the company promotes the economic development of the region, retains the jobs and skills of local employees and reinforces the loyalty of staff and the local community. The company is founded on the principle of teamwork; 'solidarity' is repeatedly stressed as being a very important factor in the overall company strategy.

More than 12 per cent of employees are apprentices and, in addition to the wide range of appren-

ticeships, training for school and university students on project and degree studies is offered. There is close contact with universities and technology academies via seminars, papers and conferences. Membership of the trade association VDMA (Association of German Machine Manufacturers) is another significant channel through which ideas are shared.

It is a company that is typical of the many thousands of companies in the German Mittelstand.

### 11.3. The economic position

With a very high level of exports, it was inevitable that the company went through severe problems as a result of the worldwide recession. For manufacturers of capital equipment such as this company, the impact of changes in the economic cycle is both more immediate and usually more severe than for manufacturers of consumable products. Customers can often defer capital investment for an extended period without any significant impact on their business, but they are obliged to continue to purchase consumable goods and services, albeit at a reduced level. As a consequence, orders for capital goods reduced by 60 per cent or more over a very short period.<sup>11</sup>

The reaction of the company to this difficult situation was, as a matter of principle, to try to retain as many of the employees as possible by putting a proportion on short-time working. The focus was on increased training, a significant increase in the already high levels of research and development and – remarkably – to build a new works canteen and social facilities, all to a very high standard. It could be regarded as the very antithesis of the reactions in such circumstances of an Anglo-American orientated management with a focus on next quarter's financial results and a belief that employees can be hired and fired at will.

The company has emerged from the recession with an increased level of demand for its products, and this in turn has presented cash flow problems. Further, although the order book has improved considerably, because of the long duration of the major projects this has still not worked through into increased revenue and profits.

### 11.4. The financial position

Because of the absolute requirement for confidentiality, it is not possible to make public actual P&L and balance sheet figures. Factors have been applied to the original data; but the validity of key ratios remains and provides a good overall understanding of the financial position at the time of the loan application. Some basic data are:

#### *P&L Account*

	€ 000's
Operating revenue	74,426
Cost of sales	(44,268)
Gross profit	30,157

## PART II: THE CASE STUDY

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Other expenses	(29,187)
Depreciation	(3,585)
Operating profit	(2,615)
Interest paid	2,160
Cash flow	1,171

### *Balance Sheet*

Due to the considerable complexities of such an exercise, no attempt has been made to convert the original German balance sheet into a British style balance sheet, which would require a detailed evaluation and readjustment of basic bookkeeping entries.

	€ 000's
Fixed assets	39,806
Trade debtors	30,016
Stocks & WIP	32,776
Bank and deposits	2,920
Advance payments	10,418
Trade creditors	6,144
Bank overdrafts	17,682
Other short-term loans	1,877
Long term liabilities	
Bank loans	36,745
<i>(Note: For the purposes of confidentiality, some elements of the balance sheet are omitted)</i>	
Shareholders funds (Eigenkapital) <sup>12</sup>	36,631
Long-term loans (Fremdkapital)	64,174
Balance sheet value	100,805

Interim figures for the current year to date show a material improvement in the position with sales of €93,980k and profit before tax of €973k.

There are a number of immediate conclusions that can be drawn from the above information:

- The company has been in a loss-making position, but is rapidly improving its financial performance
- Stocks and work in progress are inordinately high, representing nearly 23 weeks of turnover
- Trade debtors are also very high

### **11.5. The Loan Application**

A further major project from one of the leading automotive manufacturers has been secured with a value of €4,670k and a forecast gross profit of €934k resulting in a requirement for an additional €4,000k of short-term funding for the duration of the contract. The amount of this additional funding to be made available by the Savings Bank is €1,276k, with the rest to be provided by the Landesbank. Current loans outstanding to the Savings Bank are €13,882k on which there is security of €3,352k, leaving a net uncovered amount of €10,530k i.e. 24.1 per cent cover.

The company has been a customer of the Savings Bank since 1985.

## **12. The Sparkasse Appraisal of the Loan Application**

### **12.1. The Process**

Much emphasis is placed on the longstanding relationship between the company and the bank; but behind this is a very sophisticated appraisal system incorporating considerable statistical analysis. The Association of Savings Banks produces regular detailed information on companies in each particular industrial sector divided by size of business and geographical region. It covers in total some 75 sectors ranging from water treatment to dental services. The scale of the operation is very large; just to illustrate, machine tools for metalworking, which is a subset of the machine tool sector, involves the detailed analysis of 855 sets of accounts. The information is translated each year into standard key performance indicators (See Appendix II) to provide mean and normal distribution data against which the performance of a company applying for a loan is assessed. This represents a formidable data bank of information and experience. It means that a company applying for a loan can be assessed not only against normal banking criteria, but also against the performance of the peer group.

In addition to the above, an annual report for each sector is published, which defines the key issues impacting on the particular sector and can be used as a source of reference when assessing the loan application. It includes:

*General information on the sector*

- Description
- Terminology
- Numerical data e.g. size, imports, exports etc.

*Market situation*

- Market volume
- Sector development in the current economic climate

*Market structure*

- Competition
- Fragmentation
- Potential for differentiation
- Substitution products
- Market barriers
- Value chain
- Insolvencies

*Leading companies in the Sector*

*Key performance indicators*

- Rates of financial return
- Key financial ratios

## **12.2. The financial analysis**

A 'rating' for the applicant company (See Appendix III) is determined by statistical methods in order to assess the probability of failure to adhere to their payment obligations over the next 12 months. It involves a calculation of all of the key financial indicators, assessment of qualitative factors and consideration of conventional credit ratings. The rating is also used to establish the interest rate and other conditions relating to the loan. Unless other factors intervene, an improvement in the rating results in an improvement in these conditions.

This rating method differentiates itself significantly from the conventional financial methods as specific factors and weightings are applied to the financial indicators, based on the empirical data generated from the reports referred to in 12.1 above. Thus it is possible to incorporate into the analysis all of the particular factors related to each industrial sector, including overriding economic and commercial influences.

The definitions of the key ratios and the calculations are summarised in Appendix IV. Below is a summary of these key ratios relating to the company loan application, together with some brief comments.

12.2.1. Cash Flow Ratio I = 2.86%

This measures the ability of the company to service the overdraft and pay creditors. It indicates potentially the time required to pay creditors and indeed (if future investment and dividends are ignored) the rate at which all debts can be paid back. A higher value clearly makes a positive contribution to the overall rating.

12.2.2. Cash Flow Ratio II = 1.58%

This simply confirms yet again the high level of debt in the business.

12.2.3. Creditor days = 50 days

12.2.4. Return on Investment = (2.59%) i.e. negative rate of return reflecting trading losses.

12.2.5. Interest Ratio = 2.70%

12.2.6. Gross Profit = 40.52%

12.2.7. Equity Ratio = 36.34%

By normal German standards, this can be considered high and will contribute strongly to the rating.

12.2.8. Liquidity Ratio = 169%

12.2.9. Capital Commitment = 32.10%

This is an unusual ratio seen from a UK perspective; it is designed to indicate how quickly revenue needs to be converted to pay off short term liabilities. The Sparkasse attaches significant importance to the ratio and it has a large impact on the ultimate rating. A figure of 32 per cent is regarded as unacceptably low and has a major negative impact on the rating.



12.2.10. The structure of the 'Fremdkapital' = 47.81%

This figure reflects the already existing high level of the short-term bank loans (overdraft).

12.2.11. Stock Ratio = 44.04%

This is an extraordinarily high level of stock and WIP. It carries the second highest weighting and hence a very negative impact on the overall rating.

12.2.12. Stock Turnover = 267 Days

This is an extremely high figure, but is no more than a further reflection of the stock ratio above.

### 12.3. Financial Rating Score

Once the key ratios are calculated, they are set out in tabular format and to each a weighted factor is applied. These weighted factors are then again factored using the data generated from the market analysis referred to in 12.1 above (the parameters are set out in Appendix II) to produce so called 'weighted points'. This latter process and the factors used are, for understandable reasons, regarded as commercially confidential.

The results of the first part of the overall analysis are set out in the table below:

#### Financial Score Rating

	Key Ratios	Weighting	Weighted Points
<b>Financial Status</b>			
Cash Flow I	2.86%	9%	-6.43
Cash Flow II	1.58%	10%	-8.73
Operating Profit	(6.39)%	0%	0.00
Creditor Days	49.98	4%	-0.16
<b>Earnings Status</b>			
Return on Capital	(2.59)%	6%	-4.67
Interest Ratio	2.70%	5%	-6.69
Gross Profit	40.52%	0%	0.00
<b>Assets</b>			
Equity Ratio	36.34%	18%	31.26
Liquidity	169%	0%	0.00
Capital Ratio	32.10%	14%	-14.72
Fremdkapital Ratio	47.81%	14%	-1.70
Stock Ratio	44.04%	17%	-37.49
Stock Turnover	266.54	3%	-2.30
<b>Total</b>		100%	-51.64

It is interesting to observe that two key parameters, Operating Profit and Liquidity, are given a zero weighting.

The total weighted points are converted using a further factor to produce the score. The score can then be adjusted manually if required and additional penalties applied to provide a final financial score. In this case, no adjustments were made and the final result was:

## **Financial Score Rating 12**

### **12.4. Qualitative Rating Score**

As has been set out above, the financial appraisal is detailed and comprehensive and uses sophisticated statistical methods. But this is only the first stage in the process. What follows is a description of the second stage, designed to assess the overall strengths and weaknesses of the business. It comprises the following sections:

#### *Management of the Business*

- Strategy
- Quality of management
- Personnel management

#### *Planning and Control*

- Management information
- Planning
- Financial control

#### *Market and Products*

- General development in the sector
- Dependencies and specific risks
- Overall position in the market
- The market
- Quality of products and service

*Value Added Chain*

- Organisation
- Research and development
- Purchasing and stock control
- Production and services
- Sales and marketing

Due to commercial confidentiality, it is not possible to illustrate in detail the precise process by which the above sections are evaluated; simply to state that the weighted qualitative scores are determined for each section and then cumulated and further weightings then applied to give a final result. This rating process is a standard procedure used by all of the Savings Banks and is validated and approved by the Bankaufsicht der Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) – the Federal Financial Supervisory Authority.

**Points for the Qualitative Rating = -0.79**

**Qualitative Rating Score = 9**

## 12.5. Final Rating Score

The final stage in the process is to combine the finance rating with the qualitative rating and also to allow for the introduction of further adjustments. There is also an opportunity to introduce ratings from external credit agencies and take account of any past ‘warning signals’ (see graphical flow chart in Appendix III).

The data is also compared with that generated with the last three loan applications:

**Current Final Rating Score = 9**

In coming to a final decision on the loan application, the following were regarded as key factors:

- The high level of equity, certainly seen in a German context, where generally gearing is much higher than for equivalent companies in the UK
- The company is exhibiting good future prospects coming strongly out of the recession and with expectations of returning to profit in the current year
- As a consequence, the ratings for the current year are expected to improve to rating score 6 to 7, which corresponds approximately to BBB

- There is confidence in the ability to service the interest on the additional loan
- The additional loan facilities are required specifically to cover the cash flow requirements of a supply contract with a highly reputable customer
- There is a very high confidence level with respect to the abilities of the management

### **Final Outcome**

#### **The Application was approved**

## 13. The Benchmarking Report

### 13.1

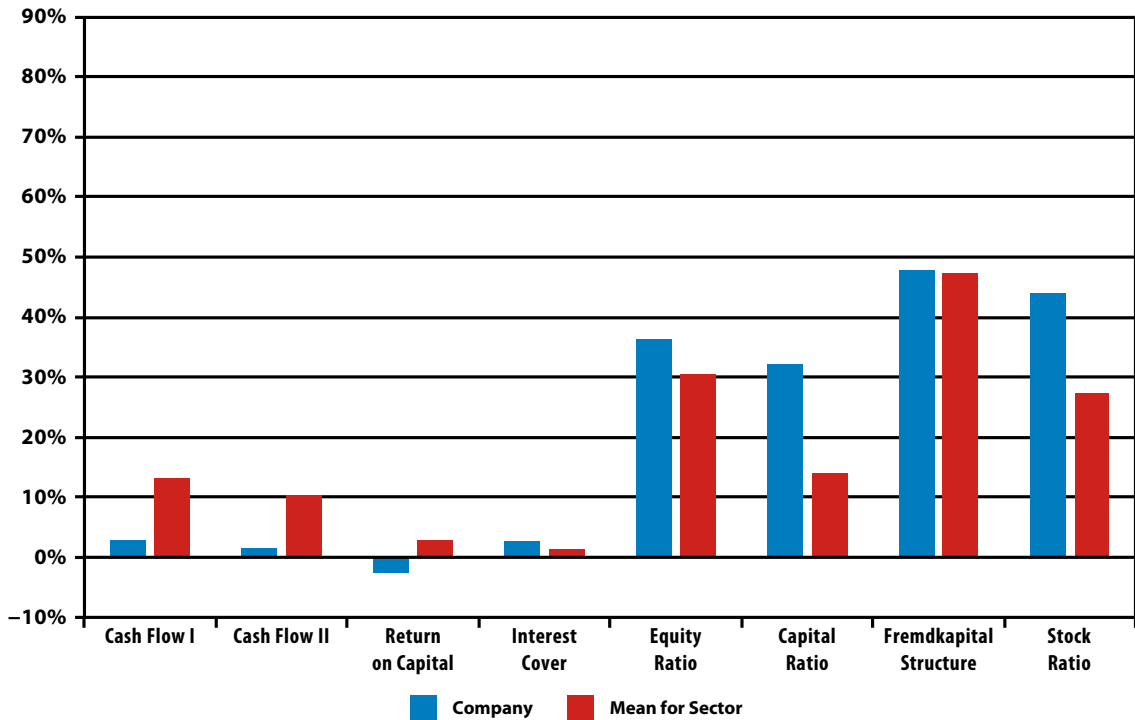
The Savings Bank provides the loan applicant with a comprehensive report (effectively a strengths and weaknesses analysis) advising in very considerable detail the results of the loan appraisal, but not including the factoring elements. In order to make the information easily understandable, the scores are converted into visual 'tachometers'. The information is accompanied by useful comments and recommendations as to where and how improvement can be achieved.

### 13.2

It also includes data set out in graphical format as to how the applicant's performance data compares with the peer group in the relevant industrial sector. The results for the case study company are set out below:

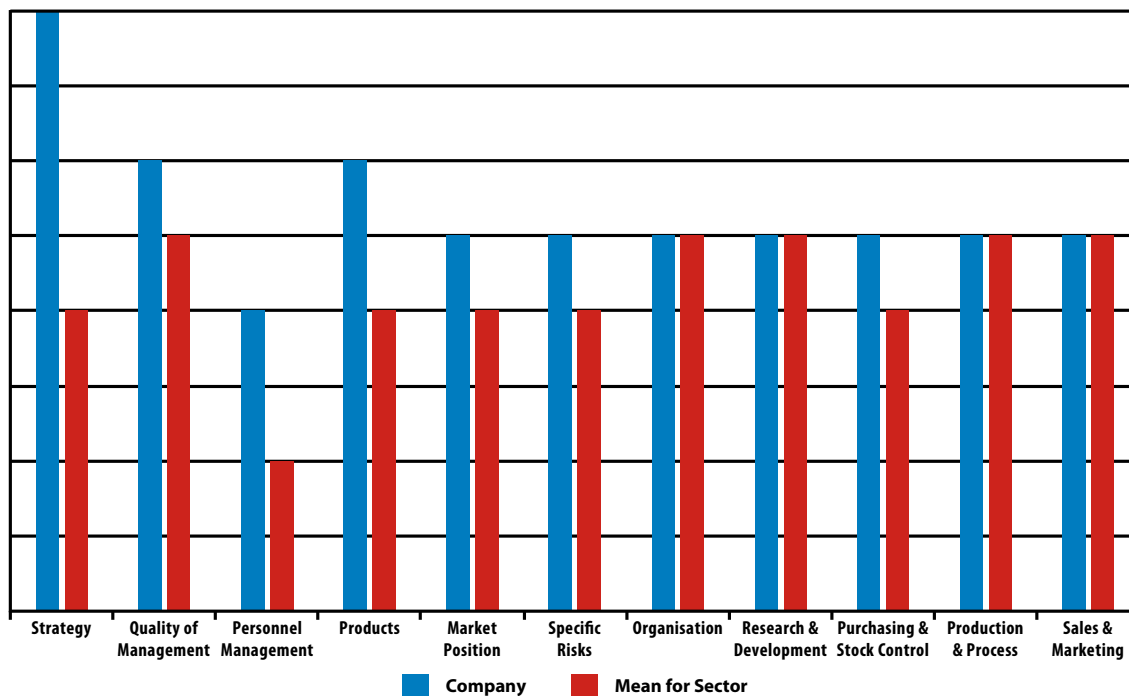
<b>Parameter</b>	<b>Company</b>	<b>Mean for Sector</b>
<i>Financial Performance</i>		
Cash Flow I	2.9%	13.3%
Cash Flow II	1.6%	10.4%
Return on Capital	-2.6%	3.0%
Interest Ratio	2.7%	1.4%
Equity Ratio	36.3%	30.6%
Capital Ratio	32.1%	14.1%
Fremdkapital Structure	47.8%	47.4%
Stock Ratio	44%	27.4%

### Financial Performance



Parameter	Company	Mean for Sector
<i>Management of the Business</i>		
Strategy	100%	80%
Quality of Management	90%	85%
Personnel Management	80%	70%
Products	90%	80%
Market Position	85%	80%
Specific Risks	85%	80%
Organisation	85%	85%
Research & Development	85%	85%
Purchasing & Stock Control	85%	80%
Production & Process	85%	85%
Sales & Marketing	85%	85%

**Management of the Business**



## 14. Summary

In order fully to appreciate the thought processes that inevitably play an important part in the loan decision process set out above, it is essential to understand first the framework under which the Savings Bank operates. Quoting from the Commentary: 'They provide not just finance but are obligated by their constitution to support the sustainable development of the total economy within their defined geographic business area. They also have very significant social responsibilities that extend well beyond provision of banking services. The Savings Banks are not state banks but are essentially credit institutions operating under public law. Their responsible public bodies (but not owners) are the local municipalities. Savings Banks are not a consolidated group; each Savings Bank is an independent credit institution and is highly autonomous.' They are, however, entirely reliant on their ability to generate profits, which are then transferred to the reserves that are their only source of funds for future loans. The basic principle is that local deposits are transformed into local loans.

The second point to consider is the extraordinarily close relations, seen from a British perspective, that exist between the Savings Bank and its business customers. They are all part of the same community and often went to school together. As was seen above, the bank has an in-depth understanding of the businesses and is in regular close contact so that they experience the challenges and opportunities at first hand. In an in-depth interview with the director of one Savings

Bank, who is responsible for credit control, the question was asked as to what actions were taken in the event of a company encountering serious financial difficulties. The first response was 'well you need to remember that probably half of the employees will hold current accounts with us'.

But if the impression is gained that this reflects a cosy, almost parochial, relationship, this has immediately to be rejected. The Savings Bank management is highly professional and well qualified: they cannot afford high levels of write-offs that would otherwise destroy their reserves. There are stringent overriding controls monitoring their operations. The extraordinarily low level of failures encountered within all the Savings Banks is clear evidence of how effectively these controls work. The penalties that are imposed on Savings Bank management if they transgress may well be described as draconian.

The third point is more difficult to articulate, but is of fundamental importance. There is a pervading atmosphere of ethics and a high moral code. On a visit to one of the other Savings Banks, the managing director presented a small book<sup>13</sup> on Christian ethics, written by a Benedictine monk, as a memento of the visit. It was clear that this was a small gift for all his visitors and is regarded by both donor and recipients as a perfectly normal action. To the reader, it may be regarded as an isolated example; but in the experience generated not only with this project, but over many years of working in Germany, it is believed this is a reflection of the general climate in which much of the business by and with the Mittelstand is conducted.

Seen from a British perspective, the financial performance of the company would be regarded as poor in the extreme. The current performance is in part a reflection of the very difficult trading conditions from which they have emerged. The very high levels of R&D maintained during the recession also contributed to the losses. In more normal periods, R&D investment also contributes to the company's relatively low profitability levels. These low levels of profit, however, provide owners, management and employees with a standard of living that in a British context could well be described as one of affluence. The overriding objective of this company is not profit maximisation – although they need profit to ensure survival so successfully over 50 years of operation – but (far more important) to grow the business. The order book and market share are the main drivers. This company and thousands like them in the Mittelstand have no outside shareholders requiring them to pay ever increasing dividends, nor are they obliged to pay inordinate fees to bankers, lawyers and accountants. Funds that are available are immediately invested in research, new product development and training. They achieve high levels of productivity due to efficiency and investment in automation. They are immune from takeover. They have the Savings Bank for financial support. This is how this company, subject to the most intense international competition, has become a world leader in its sector.





PART III

**CONCLUSION  
AND  
APPENDICES**



## 15. Conclusion

Until the financial crisis, the predominant financial paradigm consisted of global bankers, 'the Masters of the Universe', allocating funds where the highest rate of return was anticipated, irrespective of the social or environmental impact on local economies and the people within them.

Bankers and leading economists and politicians were fascinated by a financial system that could send trillions of dollars around the world almost instantaneously using computerised trading and capitalising on split second spreads. The volume of financial trading relative to the real economy increased hugely; a bubble was created by people who were basically betting against each other. It was supposed to be innovative. It turned out to be disastrous and unsustainable.

There has to be a part of the financial system in Britain that operates not as an end in itself, but to serve society and the real economy. Without this there is little prospect of rebuilding the economy on the basis of real products and real services that produce real wealth for the benefit of the nation.



# Appendix I

## The State-Owned Banks and the Public Bodies Who Hold Responsibility

### Landesbank Baden-Württemberg (LBBW):

State of Baden-Württemberg 40.534% (of which 18.258% indirectly through state holdings of Baden Württemberg GmbH and 2.706% through the L-Bank), Savings Banks Association Baden-Württemberg 40.534%, City of Stuttgart 18.932%

### Bavarian Landesbank (BayernLB):

Free State of Bavaria 94.03%, Bavarian Savings Banks Association 5.97%

### Landesbank Berlin AG (LBB):

Landesbank Berlin Holding AG 100%

### Bremer Landesbank Credit Institute Oldenburg – Giro Centre:

Northern German Landesbank Giro Centre 92.5%, State of Bremen 7.5%

### HSH Nordbank AG:

Free Hanseatic City of Hamburg 42.3% (of which 29.95% indirectly through HSH Financial Funds AöR), the State of Schleswig-Holstein 40.9% (of which 29.95% indirectly through HSH Financial Funds AöR), nine trusts (advised by J.C. Flowers & Co. LLC) 10.7%, Savings Banks and Giro Association of Schleswig-Holstein 6.1%.

### Landesbank Hessen-Thüringen (Helaba):

Savings Banks and Giro Association of Hessen-Thüringen 85%, State of Hessen 10%, Free State of Thüringen 5%

### Northern German Landesbank Giro Centre (Nord/LB):

State of Lower Saxony 41.75%, Savings Banks Association of Lower Saxony 37.25%, State of Saxony-Anhalt 8.25%, Savings Banks Investment Association of Saxony-Anhalt 7.53%, Savings Banks Investment Administration Association of Mecklenburg-Western Pomerania 5.22%

**Landesbank Saar (SaarLB):**

Bavarian Landesbank 49.9%, Land Saarland 35.2%, Savings Banks Association of Saar 14.9%

**WestLB AG: (Now merged with Helaba)**

NRW.Bank 30.862%, Westphalian-Lippish Savings Banks and Giro Association 25.032%, Rhenish Savings Banks and Giro Association 25.032%, State of North Rhine-Westphalia 17.766%, Regional Authority of Westphalia-Lippe 0.654%, Regional Authority of Rheinland 0.654%

**DSGV ö.K. 50%:**

Savings Banks Association of Baden-Württemberg 7.70%, Rhenish Savings Banks and Giro Association 6.56%, Savings Banks Association of Lower Saxony 6.46%, Savings Banks Association of Bavaria 6.31%, Westphalian-Lippish Savings Banks and Giro Association 6.17%, Savings Banks and Giro Association of Hessen-Thuringia 5.81%, Savings Banks and Giro Association of Rheinland-Pfalz 3.21%, Savings Banks Association of Berlin 1.90%, East German Savings Banks Association 1.83%, Savings Banks and Giro Association of Schleswig-Holstein 1.78%, Savings Banks Association of Saar 1.37%, Hanseatic Savings Banks and Giro Association 0.90%

**Deka Erwerbsgesellschaft mbH & Co. KG 50%:**

Savings Banks Association of Baden-Württemberg 8.14%, Rhenish Savings Banks and Giro Association 7.66%, Savings Banks Association of Lower Saxony 2.04%, Savings Banks Association of Bavaria 8.40%, Westphalian-Lippish savings and Banks and Giro Association 3.69%, Savings Banks and Giro Association of Hessen-Thuringia 5.47%, Savings Banks and Giro Association of Rheinland-Pfalz 1.87%, Savings Banks Association of Berlin 1.56%, East German Savings Banks Association 8.00%, Savings Banks and Giro Association of Schleswig-Holstein 1.48%, Savings Banks Association of Saar 0.43%, Hanseatic Savings Banks and Giro Association 1.26%

## Appendix II

### **Key Parameters Used in the Financial Appraisal Process<sup>14</sup>**

#### **Earnings parameters**

Profit Margin (%)

Cash Flow Rate (%)

Operating Profit

Gross Profit

Labour Costs

Depreciation

Interest Charges

Rental Costs

Return on Capital (%)

Return on Equity (%)

EBIT Margin (%)

EBITDA Margin (%)

Revenue per Employee

Gross profit per Employee

#### **Capital parameters**

Asset Turnover (times)

Ratio of Fixed Assets to Total Assets (%)

Debtor Days

Stock Turnover Days

Level of Investment (%)

### **Financial parameters**

Dynamic debt to equity ratio

Equity ratio

Equity to fixed assets ratio

Short-term liquidity ratio

Creditor days

Short-term debt

Self-financing ratio<sup>15</sup>

Bank loans

### **DSGV parameters**

Cash Flow Ratio I (%)

Cash Flow Ratio II (%)

Dynamic Operating Profit

Return on Investment

Liquidity ratio



## Appendix III

### Definition of the Ratings

The ratings provide a statistical assessment of the probability of a company not being able to make its payment commitments. The table below lists these probabilities:

**Rating Scores**

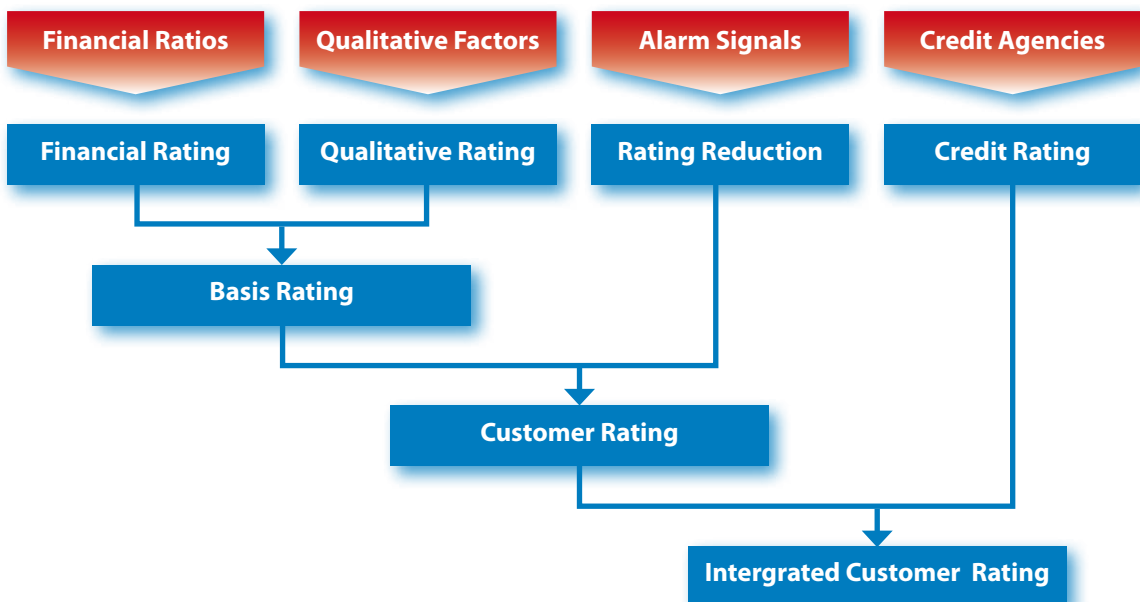
<b>Rating</b>	1(AAA)	1(AA+)	1(AA)	1(AA-)	1(A+)	1(A-)	1(A)	
<b>Probability</b>	0.01%	0.02%	0.03%	0.04%	0.05%	0.07%	0.09%	

<b>Rating</b>	2	3	4	5	6	7	8	
<b>Probability</b>	0.12%	0.17%	0.26%	0.39%	0.59%	0.88%	1.32%	

<b>Rating</b>	9	10	11	12	13	14	15	16
<b>Probability</b>	1.98%	2.96%	4.44%	6.67%	10.00%	15.00%	20.00%	Failure

With a rating of 9, (probability 1.98%) this means that out of 1,000 companies, within a period of the next 12 months, approximately 20 of these companies will not be able to meet their payment commitments.

The total rating process can be summarised graphically as follows:



# Appendix IV

## Definition of the Key Ratios and Calculation

### a) Cash Flow Ratio I

$$= \frac{[\text{Profit (loss) before tax} + \text{depreciation} + \text{increase in long term reserves}^{16}]}{\text{Short-term debt}} \times 100 = 2.86\%$$

This obviously measures the ability of the company to service the overdraft and pay creditors. It indicates potentially the time required to pay creditors and indeed (if future investment and dividends are ignored) the rate at which all debts can be paid back. A higher value clearly makes a positive contribution to the overall rating.

### b) Cash Flow Ratio II

$$= \frac{[\text{Profit (loss) before tax} + \text{depreciation}]}{[\text{Total debt}^{17} - \text{short-term assets}]} \times 100 = 1.58\%$$

This simply confirms yet again the high level of debt in the business.

### c) Creditor days

$$= \frac{[\text{Goods \& materials creditors} + \text{acceptances}]}{\text{Goods and materials expenditure}} \times 360 = 50 \text{ days}$$

This is a different ratio to that common in the UK, where it would be defined as creditors divided by operating revenue.

### d) Return on Investment

$$= \frac{\text{Profit (loss) before tax}}{[\text{Shareholders funds} + \text{long-term loans}]} \times 100 = (2.59\%)$$

### e) Interest Ratio

$$= \frac{\text{Interest}}{\text{Total revenue}} \times 100 = 2.70\%$$

### f) Gross Profit

$$= \frac{[\text{Operating revenue} - \text{cost of goods sold}]}{\text{Operating revenue}} \times 100 = 40.52\%$$

**g) Equity Ratio**

$$= \frac{\text{Eigenkapital}}{\text{Balance sheet value}} \times 100 = 36.34\%$$

Balance sheet value

By normal German standards, this can be considered high and will contribute strongly to the rating.

**h) Liquidity Ratio**

$$= \frac{[\text{Current assets} - \text{stocks}]}{\text{Current liabilities}} \times 100 = 169\%$$

**i) Capital Ratio**

$$= \frac{[\text{Short term bank loans} + \text{short term liabilities} + \text{acceptances}]}{\text{Total revenue}} \times 100 = 32.10\%$$

This is an unusual ratio seen from a UK perspective; it is designed to indicate how quickly revenue needs to be converted to pay off short term liabilities. The Sparkasse attaches significant importance to the ratio and it has a large impact on the ultimate rating. A figure of 32% is regarded as unacceptably low and has a major negative impact on the rating.

**j) The structure of the 'Fremdkapital'**

$$= \frac{[\text{Trade creditors} + \text{acceptances} + \text{short-term bank loans}]}{[\text{Long-term loans} - \text{advance payments}]} \times 100 = 47.81\%$$

Again, a very poor figure reflecting the already existing high level of the short-term bank loans (overdraft).

**k) Stock Ratio**

$$= \frac{\text{Stocks}}{\text{Operating Revenue}} \times 100 = 44.04\%$$

Operating Revenue

This is an extraordinarily high level of stock and WIP. It carries the second highest weighting and hence a very negative impact on the overall rating.

**l) Stock Turnover**

$$= \frac{\text{Stocks}}{\text{Cost of materials}} \times 360 = 267 \text{ Days}$$

Cost of materials

This is a very large figure, but is no more than a further reflection of the stock ratio above.



# Endnotes

- 1 The latest Bank of England figures show lending for real estate to be almost 45% higher than for the whole of manufacturing in the period April 2011 to February 2012.
- 2 Appointed President of the World Savings Banks Institute in Brussels in May 2012
- 3 IWH Research Institute Halle
- 4 Kurzarbeitregelung – Short Time Working Legislation
- 5 Although Landesbanken can literally be translated as ‘State Banks’, this has been avoided as it would create confusion with Staatsbanken, which are different entities.
- 6 Ausgewogene Strukturpolitik: Sparkassen aus regionalökonomischer Perspektive
- 7 This point is of great importance and will be developed further in Section 8 covering the Joint Liability Scheme.
- 8 KfW (Credit Institution for Reconstruction) was established as part of the Marshall Plan after the Second World War to assist in the economic recovery of Germany.
- 9 Deutsches Institut für Wirtschaftsforschung – The German Institute for Economic Research
- 10 This is not an unusual situation in Germany and there are some significantly larger companies with the same status. It is a reflection of their pride in the business and an absolute determination to retain ownership and ensure continuity to the next generation.
- 11 In the case of the machine tool industry, the peak to trough difference in demand measured on an annual basis was 85 per cent with a 75 per cent change in order levels from the home market and 90 per cent from exports.
- 12 Eigenkapital and Fremdkapital are important and precisely defined elements of a German balance sheet but are not capable of easy translation due to the different structure of the balance sheet compared with the usual UK format; literally translated they mean ‘own capital’ and ‘foreign capital’, which roughly equates to equity and long-term loans.
- 13 50 Engel für das Jahr (50 Angels for the Year) by Anselm Grün OSB
- 14 This is a list of key ratios that the Sparkassen use in their appraisal of each loan application. It is reproduced here to show the comprehensiveness of the overall appraisal process.
- 15 Proportion of undistributed earnings plus depreciation of gross capital investment
- 16 This is a reflection of the particular format of a German balance sheet where reserves (including pension reserves) are a notable feature
- 17 This is an approximate translation of ‘Fremdkapital’