IMPACT OF CHANGES IN GERMAN CAPITAL MARKETS ON THE EVOLUTION OF THE ECONOMY

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The manufacturing industry occupies a significant place in the German economy. It contributes more than one fifth of gross domestic product, more than in any other mature industrialized country except Japan. Moreover, it contributes a solid surplus to the current account balance. Nevertheless, the manufacturing industry underwent a major structural change during the 1990s and lost some of its importance. The industry's weight in GDP was well above the current one fifth at the beginning of the past decade. The sector employed 7.1 million people in West Germany alone in 1990, compared to only 6.1 million in the unified Federal Republic in 2000.

The manufacturing industry is perceived as one of the most important sectors in Germany and economic policy is aimed in particular at small and medium-sized manufacturing companies. In part, SMEs in the manufacturing industry are being hampered by the highly regulated labor market and the centralized wage bargaining procedure. But at the same time SMEs' traditional method of financing, which relies heavily on bank credits and close linkages to one or a limited number of banks, so-called “Hausbanken”, also contributes to their current difficulties.

New developments in the financial markets are posing a challenge to traditional German companies. Structural changes in the banking system and an increasing variety of financing tools that were not widely available in Germany require companies to adjust their financing strategies. Public authorities are designing economic policies to help companies meet these challenges. This chapter discusses recent financial market developments and policies from the point of view of their impact on the manufacturing industry in order to understand how German companies are changing their means of financing. The analysis focuses on the supply of long-term financing because this is what determines companies’ strategic options.

FINANCIAL STRUCTURE OF GERMAN MANUFACTURING COMPANIES

Company Size and Financing Structure

The Modigliani-Miller Theorem holds that under the assumption of perfect markets without asymmetric information and transaction costs a company's market value and capital costs are independent of its financing mix. Reversing the argument, we can conclude that discrepancies in financing structure can be explained by imperfect markets. Thus, typical discrepancies in size or legal form of companies can be understood as indicators of the degree of access to certain segments of the financial market. At the same time, such discrepancies are, among other things, indicators of the ability of financial institutions to assess the risks of various potential clients.

German manufacturing companies exhibit significant differences in the liabilities side of the balance sheet according to the size of the firm. Striking is the direct correlation between capital resources and company size, measured by revenues. The balancing item is long-term financing via bank credit. Small and medium-sized companies (SMEs) typically have a weaker liability structure than larger companies. In addition, companies located in the western part of the country have even lower equity ratios than companies in the former East Germany, where the opening balance sheets created for former state-owned companies after unification resulted in a better structure (Figure 1). Even so, it has often been difficult for companies in eastern Germany to utilize their underlying assets, and therefore their better financial structure has had limited impact on their credit standing.

Owners of SMEs gain significant leverage from their companies' low equity ratios and high indebtedness. Even with low net operating profits these companies show attractive returns on equity. If a company succeeds, the financing is to the benefit of the borrowing company and if not the risk is to the lending bank. The question arises why German SMEs adopted a financing structure that poses such a threat of moral hazard.

One explanation is the protection afforded to lenders by the country's regulatory framework and its implications for companies' balance sheets. The German Commercial

Code (HGB) follows the strict principle of valuing assets at the lower of market value or procurement cost (§253 HGB, § 155 AktG). It is widely agreed that as a result of this principle, many companies in Germany have undisclosed reserves and that closely related banks are inclined to lend to firms based on their knowledge of these hidden assets. The low valuation principle tends to reduce companies' actual capital base and lowers the equity shown in published balance sheets.[1] This is why the financing of SMEs in particular has become a closed shop, an insider business between a company and its Hausbank.

In a stable environment with close linkages between a company and its banks, a poor balance sheet structure poses no threat as long as undisclosed reserves satisfy the lending bank. But under the dynamic conditions of the recent past, such a situation endangers the efficiency of markets and threatens manufacturing companies that do not have broad access to financial markets.

Up to now, owners of SMEs have typically refrained from disclosing information on company performance to the business media. In combination with their poorly structured balance sheets, this lack of disclosure made it impossible for SMEs to access the financial markets. Although this pattern of behavior is changing, it is mainly newly created companies that are more likely to circulate business information. The typical mature company in the manufacturing industry remains cautious. It does not want to publish figures on profits and strategies because it fears that outsiders will use this information to the company's disadvantage.

Development of Company Funding

During the 1990s some important corporate financing trends took shape in Germany. On average the funding of private-sector non-financial companies evolved from banks to markets (Figure 2). In particular, the largest companies tapped into the capital markets and issued new

1. Pilhofer 1997. The former Daimler-Benz disclosed this relationship. During the mid-1990s the company published its balance sheet in line with both the statutory provisions of the U.S. Generally Accepted Accounting Practices (GAAP) as well as the German Commercial Code (HGB). The company's equity increased 23 percent under the GAAP provisions as a result of the reduction in reserves and market valuation of assets.

shares and industrial bonds, but other firms did not exploit this source of funding. Many medium- to large-sized companies, with more than 500 employees, shifted from external to internal sources of financing and utilized company pension reserves.[2] At the same time, the balance sheets of smaller companies worsened with equity ratios shrinking and indebtedness by credits increasing (Größl et al. 2001, p. 491–529). There is a noteworthy exception to this situation among companies with 500 or fewer employees. One study found that while 35.7 percent of smaller firms have an equity ratio of only 10 percent or less, a sizeable number, 18.3 percent of the sample, have an equity ratio of at least 30 percent.[3]

Although there is no empirical evidence to explain why during the 1990s financial performance generally worsened for SMEs but not for larger manufacturing companies, analysis of the evolution in employment suggests an intuitive explanation. An investigation of the German manufacturing industry over a long time period found no noteworthy discrepancies between SMEs (1,000 or fewer employees) and larger firms until the 1990s when employment patterns in SMEs and larger firms diverged. During that decade, smaller firms laid off only one tenth of their workforce, while larger firms shed one quarter of their workers (Kirchesch 2001, p. 473–490).

Both their worsening balance sheet structure and their smaller reduction in employment imply that the SMEs were in a critical situation during the 1990s. Specifically, they suggest that SMEs did not exploit the opportunities provided by globalization and the application of advanced IC technologies, Internet-based technologies in particular. Given their shrinking equity ratios and apparent failure to adapt to globalization and the IT revolution, it is not surprising that more and more banks are hesitating to lend to SMEs.

International Comparison

An international comparison of the structure of company funding conducted by the European

2. See Stark 2001. This is in line with an ageing workforce and growing pension obligations but poses some challenges for the companies because of the demographic development. This topic is not discussed further in this paper, however.
3. A commercial agency published the results with a representative sample of balance sheets of German medium-sized companies, but with no analysis or explanation. See Creditreform 2003.

Committee of Central Balance Sheet Offices (2000) confirmed the results of research on Germany alone. This study found that the average equity ratio of the manufacturing industry–calculated by the weighted mean–was higher in Germany than in Austria, France, Italy, or Spain, whereas the median equity ratio was lower for Germany than for the other European Member States investigated.[4] This indicates that the gap between bigger companies with a high equity ratio and smaller companies with a poorly structured balance sheet is wider in Germany than in other European countries. Moreover the lower median for Germany suggests that the financial situation of the majority of German companies is worse than the situation of companies in other European countries. Furthermore, the investigation disclosed that the equity ratios of SMEs in Germany declined over time even more than the ratios of smaller firms in neighboring countries.

Thus, during the past decade, not only did the financial performance of SMEs in Germany worsen in comparison with larger German firms but also it changed for the worse in relation to manufacturing companies in other Member States. This suggests that the introduction of the Single Market and the free movement of capital are a serious challenge to German companies, and economic policy in Germany has put top priority on easing the financial constraints on SMEs.

In the past, German companies enjoyed a financing advantage over foreign competitors because Germany had a large number of banks and a dense network of bank branches. Competition was tough and the public banking institutions had the explicit task to finance SMEs. As a result, borrowing was relatively cheap and German companies were more inclined to borrow than to raise equity.[5] This financing environment for German companies changed with the emergence of a European financial market. The Single Market induced a phase of convergence, and interest rate differentials between Germany and elsewhere in Europe shrank. Now, Germany can no longer pursue its traditional public policy of cheap

4. Median means the threshold equity ratio between half of the number of companies with a higher ratio and the other half with a lower ratio.

5. Expert interviews carried out by the ifo Institute disclosed that the interest rate differential between borrowing and raising equity is only 100 basis points as a result of tough bank competition in Germany,

credit and German companies must increase their equity ratios or improve their credit ratings in order to have access to financing.

STRUCTURE AND CHANGE IN GERMANY'S FINANCIAL MARKET

More than other countries, Germany depends on financial intermediation by the banking system, which takes deposits mainly from private households and grants loans to the private business sector. Direct access of German companies to the supply of capital is relatively uncommon. Therefore, Germany's financial market is described as bank-based in contrast to financial markets in the US and the UK, where the capital market is more important to financing companies.

Historical Development of the Bank-based Structure

Explanations for discrepancies in the structure of financial markets in different countries are of interest for assessing future trends and for designing an economic policy that will readjust the framework conditions in ways to allow nations to meet the challenges of globalization. One widely discussed thesis attributes differences in financial market structure among countries to the “timing of industrialization” (TOI, Gerschenkron 1962). According to this argument, latecomers to industrialization faced problems in financing the development of the private business sector. The existence of functioning financial markets and efficient companies in more developed countries induced an outflow of capital and made the domestic supply of investment capital scarce and expensive, handicapping dynamic internal development. Thus, latecomers needed a banking system to collect the amount of capital required for them to develop, and economic policy in these countries supported the banking system by creating a suitable regulatory system (Aoki and Patrick 1994).

The TOI argument does not adequately explain the differing structure of financial markets among advanced economies, however. In examining the evolution of financial markets Vitols found that the markets of the United States, Japan, and Germany were more

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compared with 250 basis points in the United States.

similar during the 1920s than after the Second World War. He attributes this divergent evolution to particular economic philosophies in the three countries and concludes that this result contradicts the TOI thesis. Even if one does not accept his conclusion, Vitols' analysis implies that financial market structure is influenced by other factors that are independent of the stage of industrialization, such as political philosophy.

After the global economic crisis of the early 1930s the United States introduced stricter financial regulation but also pursued a non-interventionist liberal market approach to create efficient financial markets. It established the Securities and Exchange Commission (SEC) to oversee the securities market and passed the Glass-Steagall Act, which separated the former mixed banking system into commercial banks and investment banks. But in this major restructuring of the financial markets, the United States did not give any special preference to commercial banks over securities markets. In contrast, reform of financial markets in Germany and Japan during the 1930s led to more bank-based systems that were dedicated not only to reducing the threat of crisis but also to supporting political objectives. Both countries were under totalitarian regimes and their decision-makers were critical of market capitalism. Germany relied strongly on a corporatist regulatory system and designed the banking system primarily to finance preparation for war by purchasing public bonds. Japan made the banking system part of a clear interventionist economic policy for the development and administrative guidance of certain sectoral activities.

After the Second World War both Japan and Germany withstood the initiatives of US occupying forces to introduce a US-style financial system as part of their democratization. Thus, in all three nations, the essential peculiarities of the financial markets that were formed during the 1930s are still observable today. The financial market systems in Germany and Japan are both bank-based, whereas the securities market dominates in the United States. Intervention remains prominent in Japan, with the government directing funds to specific policy targets through the financial system while Germany's corporatist system targets funds more generally to smaller businesses, primarily through savings banks and credit cooperatives (Vitols 2001).

Now, globalization and the opening up of financial markets have increased institutional competition, and the ability of national financial systems to meet these challenges will affect the future wealth of the nations. The US financial markets have been perceived as a quasi-benchmark of efficient regulation, although criticism and doubt arose after the bubble in the high-tech markets broke and falsification and mis-certification of balance sheets came to light. Since then, suggestions have been submitted to improve the US regulatory system for financial markets (See Glaeser and Shleifer 2002). But it will take time to adjust the regulatory framework to today's needs. Moreover, the US will not change its underlying liberal trust in market forces, judging, which received strong support during the 2002 mid-term elections (Labaton 2002).

Current Developments Affecting Market Structure and Company Financing

While banks remain well entrenched at the centre of Germany's financial market today, current developments within Germany and in the world at large are causing changes in that market structure and they will lead to changes in company financing as well. Below we discuss four current developments that are affecting the financial sector and we suggest how they influence the supply of medium- and long-term financing to German companies and, thereby, their strategic options.

The Banking System and Consolidation

Germany's banking system, the basis of the financial market, is characterized by its large number of institutions, which are mainly regional players held by public owners, and its high proportion of small banks. Eighty-two percent of German banks have a balance sheet total of under €1 billion. Such a large share of small institutions is unusual for a financial market as large as Germany's. The share of banks with under €1 billion is much larger in Germany than in France (73.4 percent) or Italy (79.1 percent), two other large economies in Euroland (Table 1).

Germany has a dense network of banking services. Even in small towns one can find several bank branches. This broad supply is provided largely by publicly held regional banks and credit cooperatives. The federal structure of Germany and the autonomy of federal, state, and municipal government budgets is one explanation for this structure, which differs significantly from the situation not only in Anglo-Saxon countries but also in most other industrialized countries. In 2001 Germany averaged only 1,450 inhabitants per branch establishment (Table 2). This was well below the average in most other EU Member States except Austria and Luxembourg, which were close, and Spain, which had a lower figure than Germany. Given Germany's high wages, staffing this dense network of branches must be an enormous cost burden for banks.

Most German savings banks are institutions under public law. The public guarantee authority covers the liabilities of savings banks within its jurisdiction, which is why they are not subject to the same capital requirements as private banks. Moreover, with the public guarantee these banks cannot become insolvent and they retain good ratings despite the lack of liable equity capital. Public institutions thus enjoy a competitive advantage over private banks in the form of cheap refinancing opportunities and freedom from servicing liable equity capital. Private banks in Germany appealed this unfair advantage to the European Commission, which decided in 2002 that state guarantees for loans are unfair subsidies and must be phased out by 2005.

Although this decision by the EU Commission will accelerate the consolidation within Germany's banking sector by reducing the number of institutions and branch establishments, it will not end the public ownership of savings banks or their public tasks. The current initiatives of the regional governments to adopt the agreement reached with the EU show that the public owners will retain a majority of the equity and continue to utilize saving banks for their political interests. Position papers by public banks that refer to necessary restructuring explicitly mention the common good as a guiding principle for future activities—this means regional policy and the supply of funds to private households and the business sector, namely SMEs. In addition, the public owners want to hold the majority of equity and most of the publicly held banking institutions will retain the legal form of public-law corporations.[6]

Strong efforts are underway in Germany to overcome the disadvantages of small institutions. Members of the German Savings Banks Association (Deutscher Sparkassen- und Giroverband, DSGV) formulated strategic guidelines for restructuring the public banking sector. The guidelines focus on exploiting economies of scale by better co-ordination of activities and of individual institutions and on supplying services more comprehensively through the umbrella organization. They also suggest there is a major need for restructuring and adjusting the labor force. The measures to accomplish this will lead to closer links within the public banking sector (Sparkassen Finanzgruppe 2002). The President of the German Savings Bank Association, who in late 2002 rejected a request by private banks to intensify co-operation between the different categories of banks to overcome the current earnings crisis, stressed that closer links are likely to develop within the public banking sector (Hoppenstedt 2002).

This indicates that the expected continuation of consolidation of the banking system will be characterized primarily by consolidation within, not across, bank categories. This will make it difficult for German banks to exploit synergies that could result from potentially large economies of scale. Although structural change of Germany's banking system has displayed great momentum, the distribution network still retains a higher density than in other EU Member States. The lack of interest on the part of public owners of savings banks to co-operate with private banks means that the structure of the German banking industry may not catch up to the Euroland average for years to come. Nevertheless, a growing division of labor between the umbrella organization and member savings banks will increase the synergies within this category of banking.

Consolidation will take place mainly among Germany's smaller banking institutions, savings banks, and credit cooperatives. The pattern of change observed during the 1990s will

6. See for instance the draft statute of Schleswig-Holstein: Schleswig-Hosteinischer Landtag (15. Wahlperiode, Drucksache 15/1768), Law for the revision of the savings banks law for Schleswig-Holstein.

continue, whereby mergers and acquisitions will reduce the number of institutions at a much faster pace than consolidation reduces the number of establishments (Table 3).

Potential Impact of IC Technologies

Traditionally, financial institutions are described as mediators that bring together suppliers of financial means and investors. The mediating service is necessary because of the de-coupling of decisions on income and investment. It can be carried out directly via auction markets (securities markets, stock exchanges, for example) or indirectly via primary assets (securities, credits), which are transformed into secondary debt claims against banks (bank deposits).

More recently, the essential core of the financial business has been described as the collection, evaluation, and distribution of information on market developments (Stieglitz and Weiss 1990). This description highlights banks' role in financial markets as mediators that provide services to overcome inefficiencies in financial markets. It implies that the importance of banking services depends on the ability of market participants to investigate markets and assess quality and prices of traded goods and services and on the costs of this investigation.

In a perfect market participants have no incentive to pay for mediating services. Increasing market efficiency reduces surveillance costs, making market participants less willing to incur the transaction costs of intermediation by banks. Accordingly, as financial markets become more efficient, the traditional banking business tends to become less important (Kotz and Francke 2000).

The dissemination of IC technologies is a major challenge for the banking industry in two ways. First, the application of IC technologies in distribution channels and back-office services offers opportunities to create more efficient internal procedures, which result in higher productivity. This has led to a noteworthy growth in labour productivity in recent years, although Germany continues to lag behind the United States (McKinsey Global Institute 2002). Second, the dissemination of the Internet increases the transparency of financial markets, which reduces clients' willingness to pay transactions fees. Banks must respond quickly to these IC challenges by preparing for tougher competition in the years to come. In particular, German banks, especially savings banks, will have to reduce their capacity in branch establishments.

Generally speaking, the German banking industry is more affected by the opportunities provided by IC technologies than banks of other EU Member States. Many of the establishments in the dense branch networks of German banks were only launched during the late 1980s and 1990s in a fierce competition to gain market share. High wages and low productivity of the distribution networks put a pressure on banks' profits. With the dissemination of online banking much of the past investment in establishments has become obsolete. In order to maintain the level of services for private and business clients without losing market share banks must not only reduce the number of establishments but simultaneously increase efficiency. One step into this direction is the automation of internal processes. Restructuring the back office is high on the agenda, but German banks will only be able to exploit the synergies incorporated in advanced ICT if they specialize and cooperate to a certain degree. Otherwise the disadvantages of small size–compared to foreign banks–will remain a threat for the competitiveness of German banks in international markets.

Integration of European Financial Markets

The signing of the Single European Act in 1986 created the basis for the unified Single Market, but it took until the early 1990s to transform the EU Directives into national laws. Since 1993 the Single Market has been in force, and the free movement of capital and the right of financial institutions to establish in other Member States were introduced. Introduction of the euro had its greatest impact on financial markets by reducing the risk of exchange rate variations and adding opportunities for the harmonization of financial markets. In toto these changes furthered cross-border financial transactions, most significantly in securitized asset markets. They will increase competition in the banking industry and result in more M&A activity.

Euroland is currently in a transition phase on the way to realizing a unified financial market. Stock markets and trade in securitized assets have become more integrated in recent years, but the situation is quite different in markets for non-securitized, less easy-to-evaluate financial assets. The delayed integration of these markets means that small and medium-sized companies do not have access to cross-border financial markets and that in the future their financial operations will depend on the specific conditions in the domestic markets.

Besides the lagging integration of some segments of European financial markets, the banking systems of Member States display some significant discrepancies. The number of cross-border mergers and acquisitions within the European banking industry has remained low in most Member States. Noteworthy exceptions are Ireland, Luxembourg, and the United Kingdom. A time-series analysis shows that many European countries experienced only a very gradual intensification of intra-EU cross-border linkages and that the decades long trend of slowly rising shares of foreign financial assets and liabilities did not gain much momentum during the 1990s. Even today in many countries, such as Austria, Finland, Germany, Italy, and Sweden, foreign banks hold less than 10 percent of the assets of the domestic banking industry. In countries with more extensive international linkages, such as the United Kingdom, Belgium, and the Netherlands, these cross-border linkages of equity and liabilities as well as assets intensified from the late 1960s until the late 1980s, not in conjunction with the move to the Single Market in the 1990s. Only for Spain and Portugal did the intensification of cross-border linkages coincide with accession to the EU in 1987 (Buch 2002, pp. 85–108).

Although German private banks have been acquiring financial companies abroad during the past decade, foreign investment in the German banking industry has remained at a low level. One reason might be the dense branch networks of domestic saving banks and credit cooperatives. Moreover the publicly held institutions in Germany might not be open to mergers with foreign companies. Last but not least, although its size should make Germany's banking industry attractive, low profitability may discourage foreign players from investing in the highly contested market.

Implementation of Basle II

In January 2001, the Basle Committee for International Bank Supervision at the Bank for International Settlement (BIS) submitted a proposal for an improved, internationally standardized procedure for valuing banks' equity, to replace the 1988 Capital Accord (See Bundesverband Deutscher Banken 2001). One goal of the so-called 'Basle II' accord is to create an incentive for banks to improve their risk management. The major objective is to increase transparency of existing risks and to prevent bankruptcies. The core innovation of Basle II is to require banks to back loans with different proportions of equity according to the risk of a credit. Currently, banks must back any credit–independent of the risk–with 8 percent of equity, but under the new rule the equity provision will vary between 1.6 and 12 percent. This variable equity provision will lead banks to differentiate loan fees based on maturity and other risk factors.

Though the overall objectives of Basel II were widely welcomed, some countries, particularly Germany, criticized the original proposal for providing too few opportunities to adjust the regulatory framework to national peculiarities. The German Parliament asked the German Federal Reserve Bank and the Federal Bureau for the Supervision of Financial Markets (BaFin) to safeguard German interests in the third round of consultations on the proposal. One reason for this initiative was that the initial proposal put German firms at a disadvantage because companies would have to pay a risk premium for long-term credits, and German firms depend heavily on such credit for their external funding.

A revised proposal, which the Committee agreed to in July 2002, addressed some of Germany's concerns, in particular by introducing new provisions for banks' treatment of SMEs.

- Banks can treat credits to SMEs (up to €1 million per company) like other, so-called 'retail credits,' which have lower risk weights and thus lower capital requirements.
- Banks' exposures to SME borrowers with annual sales of less than €50 million will be subject to capital requirements up to 20 percent lower than for exposure to larger firms.
- National bank supervisors may exempt banks from assigning additional risk based on maturity, for loans to domestic firms with sales and assets under €500 million (Bank for International Settlement 2002.).

The Basle II Accord, including these recently accepted revisions, will go into force in 2006. The new framework has three pillars, which harmonize the regulatory framework for banks to a certain extent:

- Minimum capital requirements, which take into account the risk associated with various debt claims.
- Surveillance of banks' internal rating procedures by the national market supervisory institution.
- Market discipline of banks through disclosure of risk structure, equity ratio, and risk assessment procedures.

Banks and companies must prepare themselves for the implementation of this new international regulation. Currently, public and private banks in Germany are designing rating procedures to apply by the 2006 deadline. The time schedule is tight because it takes long experience to develop reliable rating procedures. Indicators must be tested to make certain that they are useful and provide an unbiased assessment of risk.

Non-financial businesses in Germany and the rest of Europe must also prepare for implementation of Basel II. In Anglo-Saxon countries, where banks have long followed formalized lending policies, companies are familiar with procedures for risk assessment by rating agencies, but in continental European countries, lending has been a more informal process and long-term relations between companies and banks took the place of formal risk assessment. SMEs especially have no experience with ratings procedures. Moreover, it may be necessary to develop a specific rating procedure for smaller firms, which have less formalized business processes and documents than large companies. A top-down rating approach that starts with an analysis of explicitly stressed corporate strategies, decision making procedures and the like, can be applied to large companies. But such a procedure is not adequate for smaller firms, which usually follow more informal business processes. In this case, a bottom-up approach is appropriate since much of the information needed to come up with a rating must be collected and evaluated in discussions with firms' representatives. Public and semi-public agencies were founded to develop rating procedures, which meet the requirements of SMEs (Industrie- und Handelskammer Suhl 2000).

German SMEs usually see Basle II as imposing an additional burden on them because of the requirement to undergo a formal rating procedure.[7] To a certain extent this is true, but it is likely that German banks would introduce more formal risk assessment procedures even without Basle II. The changes in the banking industry that are already taking place and are expected to continue–consolidation, downsizing of distribution networks, and relocation of services in specialized departments–will weaken the former close linkages between non-financial companies and banks. Companies will have to meet formalized requirements to apply for loans, and loan officers not familiar with the firm will assess its risk. Thus, for companies, Basle II in fact only adds to trends that have been ongoing in the banking industry during the past decade.

Moreover, the rating procedure may actually benefit some companies. The objective of a rating procedure is to assess a company's risk of default. It involves not only analyses of the company's balance sheet and financial position but also evaluation of the efficiency of its internal procedures and of its prospects. This requires a comprehensive analysis of management and organization, personal, intangible assets, products and markets, and application of technologies. In addition to helping outsiders assess a company's borrowing capacity, such an analysis is useful within a company to improve consistency of strategies and efficiency of resource use. It can lead to changes in corporate governance and management and even to improvement in the company's competitive position. Thus, having to go through a rating procedure could benefit SMEs if it leads them to abolish, remove, or at least reduce hidden inefficiencies and typical management deficits that arise in doing business as usual.

New Financing Options for the Private Business Sector

The opening up of financial markets in Europe and changes in the regulatory system redefined the financing environment for German companies. In particular, the introduction of the euro had a tremendous effect on the securities and private equity markets. The hugely expanded

7. The estimated price for rating a small company ranges between €15,300 and €26,500. This means that a small firm with turnover of around €9 million and an average balance sheet structure for its size will not benefit much from the lower interest rates that having a good credit rating would bring. Under these circumstances a rating procedure would reduce the company's financing costs only if led to interest rates on all its liabilities that were at least 25 basis points lower than the rates available with no

currency area multiplied market opportunities not only for those interested in making new investments but also for those who wanted to divest, making capital market an alternative source of financing for some companies. The Single Market added to the attractiveness of the euro market by reducing the risk of exchange rate variations.

Companies responded to the new environment, just as they would to changes in the domestic regulatory framework, by readjusting their sources of financing. For example, after the middle of the 1990s German companies shifted significantly away from banks and toward capital markets as sources of external financing. Although bank credit remained the largest source of external financing for private companies in 2001, its 35.2 percent share was slightly more than half what it had been in 1996 (Figure 2). On the other hand the share of industrial bonds ballooned from under one percent of external financing in 1996 to twenty percent in 2001 as large German companies discovered the capital market.

The shares of two other types of external financing also showed significant increases between 1996 and 2001: new equity issues and private equity financing. The share of new issues increased by 7 percent coinciding with the introduction of a new stock market segment specialized in young growth companies, the “Neue Markt”. The share of private equity rose from under one percent in 1996 to 5.8 percent in 2001. In part, this increase reflected the growing number of foreign venture capitalists, who entered the German market during that time.

Figure 2 may somewhat overstate the shift in external financing by German companies because the data for 2001 still contain some of the distortions of the New Economy bubble. Since then, the number of IPOs has slowed down and venture capital companies have become more cautious in making new investments. This situation reflects the general weakness in global capital markets since the bursting of the bubble. It can be expected that when the markets recover, German companies will continue to utilize the new sources of funding that became attractive with the changes in the financial market. For that reason we discuss below

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rating. See Krämer-Eis 2001, pp. 21.

in some detail the growth oriented stock market segment and private equity financing in Germany.

Rise and Fall of the Neue Markt

Like most mature industrialized countries, which created markets for young, growing companies to emulate the success of the U.S. Nasdaq stock market in financing high-tech companies, Germany established the Neue Markt in 1997. Access barriers for this special segment on the Deutsche Börse AG were eased markedly compared to the official trading segment (Amtlicher Handel). Most important, the minimum age for a listed company was lowered from three years to just one year and the minimum equity requirement of 1.25 million euro was abolished.[8]

At the same time, the Neue Markt instituted other requirements, including investor protections, that were at least as strict as those for the official trading segment. Companies had to follow the same public listing procedure for the special segment as they did for the regulated exchange (Regulierter Markt) and they were required to produce quarterly reports, publish notices of shareholders' meetings, distributions, and other information, and have at least two Designated Sponsors (banks or brokerages obligated to make markets for their shares). To guarantee a sufficient volume of shares for free trading, the expected market capitalization of shares to be issued must be at least €5 million and at least 20 percent of the shares must be earmarked for portfolio investment. Finally, firms on the Neue Markt were required to report their financial condition according to the standards of the US-GAAP or the IAS, which are well known in international markets, and not according to the traditional German system of accounting standards. This was seen as a future-oriented step in the direction of opening the financial markets and attracting foreign investors.

The launch of the Neue Markt was quite successful. The market grew dynamically until 2000 when it had a market capitalization of €133 billion and listed around 400 companies, the

8. The €1.25 million minimum equity requirement for the official trading segment meant that before the Neue Markt was launched in 1997 companies with a turnover of around €13.5 million or less had no access to the stock exchange.

majority of which were initial public offerings (IPOs). Most firms listed on the Neue Markt are engaged in ICT, bio- and medical technology, or health care. Fewer than fifteen percent are in the manufacturing sector, and many of those that are deliver products to high-tech markets. According to the first analyses of IPOs on this market, most of the companies were research driven ones that usually have difficulty raising funds. Such companies cannot furnish much collateral, have low equity ratios, and their largest asset is intangible investment in human capital (Fischer 2000). Before the IPO the typical company experienced difficulties in financing its growing research efforts by borrowing.[9]

Companies' ready acceptance of the stock exchange for IPOs, spin-offs, and capital increase as a source of new funds can be explained by the availability of cheap financial resources up to 2001. In the late 1990s German private households abruptly shifted from decades of risk averse investment, trusting only government bonds, to become speculators who invested directly in the stock market and, in particular, in its most risky segment, the Neue Markt.

Since 2001, the Neue Markt has reversed direction. In mid-2002, two years after the peak, Neue Markt listings had fallen to around 330 companies and market capitalization had declined to less than €50 billion, roughly 2 percent of the market capitalization of all companies listed in Germany. The collapse of the New Economy bubble as well as discovery of insider trading, falsified balance sheets, and other breaches of trust kept investors away.

The breakdown of Germany's Neue Markt took place in parallel with developments in other countries. Many of the market's problems derived from the bursting of the New Economy bubble in 2000 and are not specific to Germany. Even the mature Nasdaq experienced similar problems; falsification of balance sheets and insider trading led to mistrust among investors. The problems of the Neue Markt that were specific to Germany relate to the transition from a bank-based towards a more market-based financial system.

9. In fact, investment in intangible assets should be financed via cash flow or at least fresh equity, not via bank credit. Banks' traditional approach to risk assessment hampers borrowing by research-oriented firms. Allowing the capitalization of intangible assets could help overcome this problem, but it would also create enormous difficulties for proper valuation and external realization of intangible

Inexperienced private households and a narrow market of experienced financial managers added to the potential risks.

Some of the faults in the market's new regulatory framework, which was designed to give emerging companies access to equity markets, have been addressed. Very important is the minimum listing age requirement companies, because the shorter a company's life span the greater the risk that its opening balance sheets are mis-valued.[10] In 2001 the exchange adopted stricter regulations on quarterly reports and insider trading and improved reporting requirements for trades initiated by companies themselves or their officers, and in 2002 the minimum age was raised to three years, the long-standing minimum for companies listing on the official trading segments. Now, the German Stock Exchange can impose sanctions and even publish the names of companies that violate the rules. Additionally the Neue Markt was split into two segments, a premium market “Prime Standard” and “General Standard”. All companies have to fulfill the minimum requirements of the official trading segment (Amtlicher Handel) or the regulated exchange (Regulierter Markt), but companies in the Prime Standard segment have to fulfill additional requirements on transparency, which are above all necessary to get access to foreign investors. These measures did not quickly restore investors’ trust in companies already listed in the Neue Markt.

One major problem that Germany has not yet tackled is the absence of an independent body to monitor firms' reporting and behavior. Effective market surveillance, whether by a public institution such as the SEC in the US or a private organization similar to that in the United Kingdom, is a necessary prerequisite for sufficient investor protection. A recently published study revealed enormous deficits in the quality of reporting by companies listed on the Neue Markt. Of 200 companies analyzed which all had balance sheets with unlimited certifications by external auditors, only few met the requirements of either the GAAP or IAS.

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assets. It would distort the informative value of balance sheets.

10. Usually, early stage companies seek venture capital funding from specialised investors who provide equity and advice and who intensively investigate a firm before investing. Companies doing IPOs, on the other hand, are commonly seeking to finance growth. Therefore, raising the minimum age to three years for listing on the Neue Markt should not significantly hamper the market in supporting the creation of firms and financing growth.

Inadequate surveillance is at least as important as low quality auditing bodies in explaining this extent of non-compliance. This is attested by the fact that a much larger proportion of the balance sheets of German firms that are concurrently listed in the United States meet the requirements of GAAP than those of firms that are only listed in Germany supports. The difference is attributed to the role of the SEC in monitoring and enforcing the obligations of firms listed in US exchanges.

Changing the regulatory framework for financial markets is a complex task, which needs a systemic approach. Many European countries that introduced new high-tech, growth segments to their stock exchanges attempted to replicate Nasdaq's success by adopting similar rules, for example, by introducing IAS reporting standards and improved information disclosure and transparency. However, they neglected the characteristics of the broader financial system in which the Nasdaq operated, elements such as an effective surveillance of market participants' behavior by an independent body are missing.

The brief history of Germany's Neue Markt illustrates the difficulties of changing the regulatory framework towards a more market-based financial system and simultaneously guaranteeing investor protection. This task cannot be accomplished by simply duplicating foreign examples. National conditions and even the experience of market participants must be taken into account. Although a shift towards a more market-based financial system is beneficial, a cautious approach should be pursued because the outcome is not fully predictable.

New Developments in Private Equity

The traditional centre of gravity of Germany's private equity market is in the financing of mature companies, not early-stage financing. Venture capital companies engage largely in management buy-outs (MBOs), management buy-ins (MBIs), turnarounds, bridge financing, leveraged buy-outs (LBOs), and replacement capital. This kind of activity accounted for around 70 percent of the new investment carried out by venture capital firms in 2001, a total volume of €10.3 billion, compared with only 20 percent of total investments in early-stage financing (Figure 3).

In line with this peculiarity the main recipients of private equity in Germany have been mature domestic industries, and venture capital companies regard their investment as a long-term involvement. In contrast to Anglo-Saxon private equity firms, which usually pursue a time-limited involvement, German firms do not consider exit opportunities to be that crucial. Structural changes towards high-tech companies have not been stimulated very much in the past. Although early-stage investment expanded markedly during the phase of the New Economy boom, the general situation has not changed very much. In 2001 early-stage and high-tech growth funding, most important for the creation of new jobs, raised only three billion euro. With early-stage funding at 0.08 percent of GDP, Germany stands at about the EU average, but the share is well above 0.1 percent in some countries, such as Finland, the United Kingdom, and the Netherlands, that lead in high-tech sectors (European Commission 2001).

Germany's bank-based financial market has a strong impact on the sources of funds raised by private equity firms. Insurance companies and banks are important investors, with about a one-third share. Pension funds gained much importance during the late 1990s and reached 27 percent in 2001 (Figure 4). With the introduction of a capital-based pension scheme in Germany, the importance of this source will further grow in the coming years. The business sector supplies around one tenth of private equity funds and this share has grown during the recent past. This development in corporate venture capital (CVC) indicates a shift in the organization of large research projects, which more and more are carried out in specialized, newly created companies, an approach widely applied in Anglo-Saxon countries.

According to the statistics of the German Venture Capital Association (BVK), the public sector contributed only six percent of funds raised in 2002. But it must be noted that public authorities also provide funds to the venture capital market via publicly owned banks. There is no hard information available on the amount provided by savings banks and other publicly held banks, but an industry expert estimated hat at least one-fifth of funds raised annually in Germany originates from public sources.

The creation of the Single Market has boosted the venture capital industry in Germany. International players have become of major importance. About half of the newly raised funds in 2001 were from international sources.[11] The driving factor for this positive development has been the increased exit opportunities via the Neue Markt stock exchange and better market opportunities due to the enlarged currency area.

The private equity market is currently undergoing a phase of consolidation. In particular investment in high-tech slumped in the aftermath of the New Economy bubble. But the venture capital market has remained liquid, although around 60 percent of the exits during the second quarter of 2002 were caused by total losses. Some companies–especially, independent ones–will leave the market, but the available liquidity, the high number of players, and particularly the numerous foreign venture capital firms indicate that the venture capital market will not shrink to its former insignificance. This will also be true for early-stage investment, which accounts for most of the losses.

The public programs for the venture capital market, which were initiated because of the inadequate supply of early-stage financing, have helped to accelerate the learning and maturation process. Particularly positive is the assessment of these activities in high-tech segments. The scale effects they brought about raised efficiency in a market that was formerly only marginally important. Therefore, under brighter prospects for the global development in high-tech markets, the available liquidity will induce private equity companies to overcome their current reserve and start a new investment cycle. This optimistic view is supported by an investigation that found that public support for venture capital investment led to the take-off in early-stage financing, available supply, and sufficient experience. The authors conclude that now public funds can be reduced and the public share in co-investment schemes should be cut back (Schertler 2001, pp. 99-115).

CONCLUSIONS AND RECOMMENDATIONS

The German financial market is a characteristic bank-based system and this orientation has influenced the financing of German corporations. During the 1990s the financial markets

11. It must be mentioned that much of the funds raised will be invested in Germany, but some of the financial means will flow into foreign companies.

became more open and the introduction of the Single European Market and the common currency expanded their dimensions. But while markets for securitized assets are highly integrated, markets for non-securitized, less easy-to-evaluate assets remain largely confined by national boundaries. The same is true for the banking industry, which still displays its traditional structure in Germany, which is "overbanked" with many small institutions.

In the past a strong banking industry served Germany's risk-averse private households with little idle money and business sector dominated by SMEs well. Imperfections were not a problem as long as the banking industry was a more or less closed national market, but the opening up of the financial markets, in particular the introduction of the common currency, changed the situation dramatically. For Germany's banking industry, the costs of refinancing have converged within Euroland but efficiency has not changed very much. The majority of German banks do not enjoy the same economies-of-scale as foreign competitors although their costs of refinancing are about the same.

Lending to non-financial companies was an important business for German banks, but yields were low due to the competitive situation in the domestic banking industry while costs of loan assessment and control were high and indirectly correlated to the credit volume. On the other side, German non-financial companies, particularly SMEs, relied heavily on bank loans. Company owners benefited from the leverage effect of external financing on the profitability while extremely low equity ratios meant bankruptcy would be to the disadvantage of the funding bank. Close, long-term and trusting relationships with borrowing companies helped banks assess lending risks and gave banks knowledge of companies' hidden reserves, which existed because of German accounting rules. On the basis of this "insider" information banks were willing to provide credit. Neither partner had much interest in leaving this closed shop, which was non-transparent to outsiders. The costs of change would be high.

Since the early 1990s, German banks have come under growing pressure from several different directions. Private households have become more yield-oriented and less risk-averse and refunding costs have converged within Euroland. Consolidation has taken place in the banking industry with banks restructuring their business areas, creating specialized branches, and reducing their costs of distribution. The once-close linkages between banks and their client companies weakened, and informal loan evaluations must be replaced by more formal risk assessment. In line with this development, the requirements of the Basle II Accord are widely welcomed in the banking industry.

At the same time, the integration of financial markets and, in particular, the Basle II Accord present a major challenge for companies in Germany and other countries with bank-based financial systems. They must adjust their balance sheet structure to a better functioning financial market where lending policy will be based on more explicit criteria and unbiased decisions should improve risk management. Companies with satisfactory equity ratios and good profitability are not likely to suffer, but other companies, especially highly leveraged German SMEs, will face severe financing problems. The increased efficiency of the financial market will improve the allocation of resources and contribute to a more viable economy.

Nevertheless, there are economic policy initiatives in Germany to induce public banks to provide cheap loans to companies that have low equity ratios and low profitability and that are threatened with bankruptcy. This scheme will not work unless the refunding is subsidized, but European law forbids this. Moreover, providing additional credit is not the appropriate way to overcome the current problems of German companies. Companies need to increase their equity ratios, which in many cases means that new owners must join the company because a capital injection is necessary. The government must reject pressure to supply cheap loans as an inadequate measure that would need continuous external funding without solving the problem of low equity ratios. Much preferred are schemes to encourage private persons to invest directly in companies or to provide management knowledge and capital injections as “business angels”. In addition, developing the private equity market could give numerous companies another source of financing that would help them escape the threat of bankruptcy.

Non-financial firms can only meet the challenge of the changes in the financial markets by becoming more open-minded. This means, on the one hand, that they must open internal procedures to permanent improvement. Responsibility and decision-making have to follow clear and explicit rules. On the other hand, German firms have to become more communication-oriented and willing to provide information that banks and other financial institutions can use to evaluate the company's prospects. An integral by-product of this greater openness on the part of companies will be their easier access to the financial market.

Since the early 1990s the German government has introduced new regulations on the framework conditions for some segments of the financial markets. Among them are regulations to improve shareholder rights and investor protection. At the same time, the German Stock Exchange, a privately held stock corporation, added a high-tech growth segment. Germany's experience with the Neue Markt, and its eventual breakdown, contains some general lessons on reforming structure and regulation of financial markets.

From its inception the Neue Markt imposed some requirements that were more stringent than those for the traditional exchange, and later it strengthened other requirements. These included stricter requirements for ad-hoc publications and permanent reporting and stronger rules against insider trading. In order to increase international acceptance of this market segment, the authorities required companies to publish balance sheets according to the statutory provisions of IAS or GAAP. An investigation found that the balance sheets of most companies failed to meet these provisions, however. We attribute this failure of companies to comply to Germany's lack of a market surveillance institution similar to the ones in the United States and the UK.

While the Neue Markt can be judged a success in terms of encouraging new companies and stimulating activity in high-tech and growth markets, poor reporting performance of most listed companies caused by insufficient rules eventually brought the market's downfall. This experience illustrates the necessity to adopt a comprehensive approach to adjusting financial market conditions and to evaluate measures to improve the efficiency of financial markets in a broad context. Mere duplication of measures that succeeded in other countries contains many dangers.

Globalization creates the tendency for financial systems to become more market-oriented and this will increase the efficiency of financial markets. Nations that adapt first to this challenge will have an advantage. Countries where decision-makers fear the unpredictability of the necessary economic and political measures and do not adjust the regulatory framework of the financial market will lose attractiveness.

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TABLE 1
Size Distribution of Banks in Euroland Countries
(Percent)

	Size of balance sheet:				
	< €100 million	€100 million - < €1 billion	€1 - < €10 billion	€10 - < €100 billion	> €100 billion
Belgium	16.9	43.8	31.5	5.6	2.2
Germany	29.0	53.0	15.7	2.0	0.3
Finland	80.6	16.3	2.5	0.6	0.0
France	33.6	39.8	23.2	2.9	0.5
Greece	34.1	26.8	29.3	9.8	0.0
Italy	37.0	42.1	16.6	4.2	0.1
Luxembourg	13.8	45.7	33.3	7.1	0.0
Austria	62.2	32.5	4.4	0.8	0.1
Portugal	69.4	15.5	11.9	3.2	0.0
Spain	34.6	34.1	26.6	4.4	0.3
Euro area total	**38.2**	**42.7**	**16.2**	**2.6**	**0.3**

Source: Bundesverband deutscher Banken, 2002, http://www.bdb.de/index.asp?channel=161010; ifo Institute for Economic Research.

TABLE 2
Structure of the Banking System in Euroland

	Employees		Balance sheet total		Branch establishments	Inhabitants per establishment
	Number	% Share	Number	% Share	Number	% Share
Belgium	75,800	3.6	777.4	4.3	5,727	1,785
Germany	751,050	35.7	6,303.1	34.6	56,627	1,450
Finland	24,870	1.2	166.7	0.9		
France	390,250	18.6	4,050.4	22.2	25,657	2,375
Greece	59,640	2.8	202.7	1.1	2,447	4,305
Ireland	52,200	2.5	531.9	2.9		
Italy	339,860	16.2	1,878.2	10.3	27,170	2,125
Luxembourg	23,890	1.1	816.6	4.5	6,310	1,395
Netherlands	12,000	0.6	1,273.8	7.0	830	2,315
Austria	65,000	3.1	573.3	3.1	5,391	1,500
Portugal	57,410	2.7	353.9	1.9	5,491	1,820
Spain	250,120	11.9	1,297.9	7.1	39,040	1,008
Euro area total	**2,102,090**	**100.0**	**18,225.9**	**100.0**	**174,690**	**1,750**

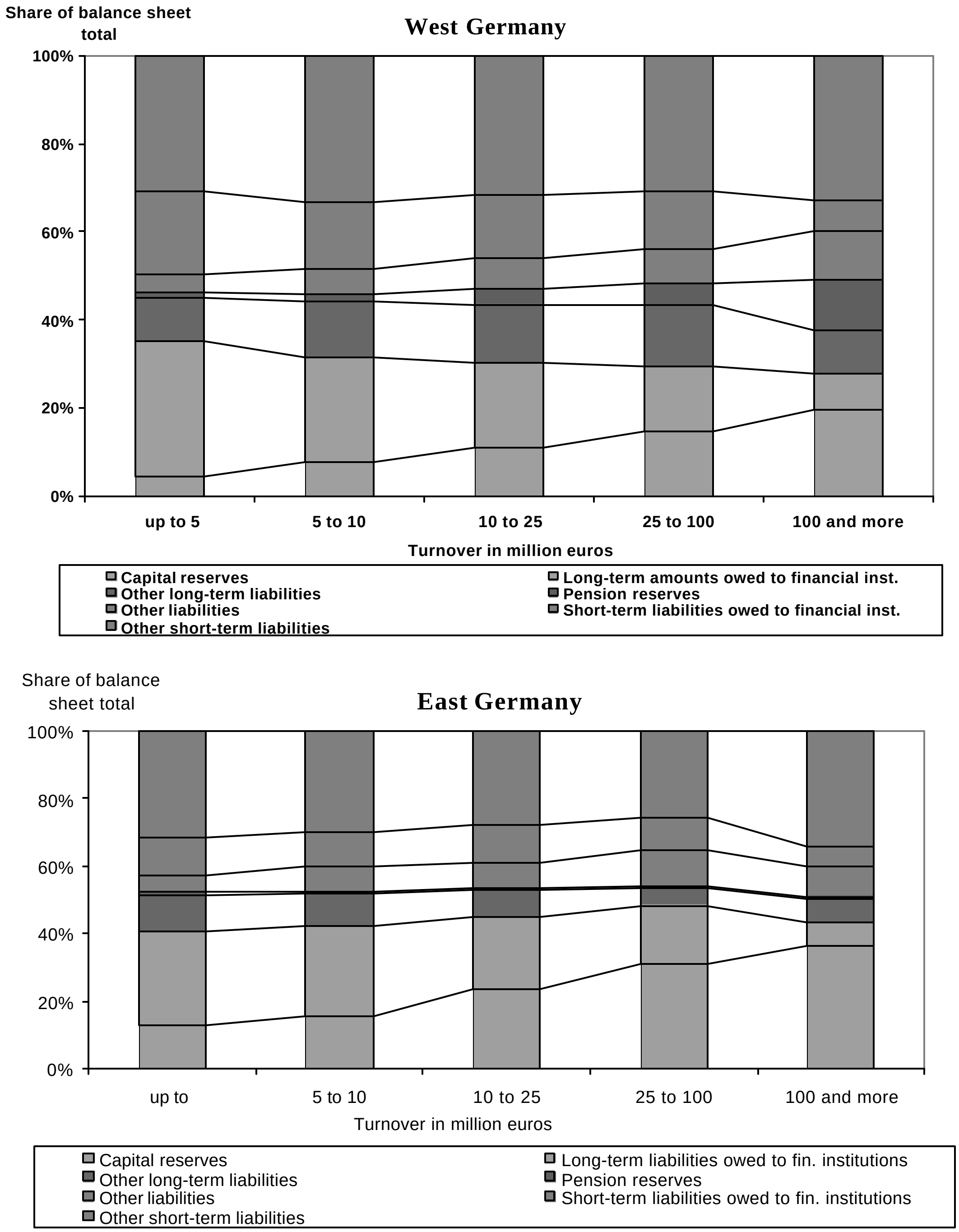
Source: Bundesverband deutscher Banken (ed.) (2002), http://www.Bankenverband.de/download/statistik-service/1-4-0-BankenstatistikEWU.pdf?channel161010; ifo Institute for Economic Research.

TABLE 3
Structure of the German Banking System, 1992 and 2001

	1992		2001	
	Institutions	**Domestic branch establishments**	**Institutions**	**Domestic branch establishments**
Private banks	334	7,637	303	6,834
Regional banks	13	444	13	651
Saving banks	717	20,295	534	17,454
Credit cooperatives	2,915	20,790	1,621	17,127
Total	3,979	49,166	2,471	42,066

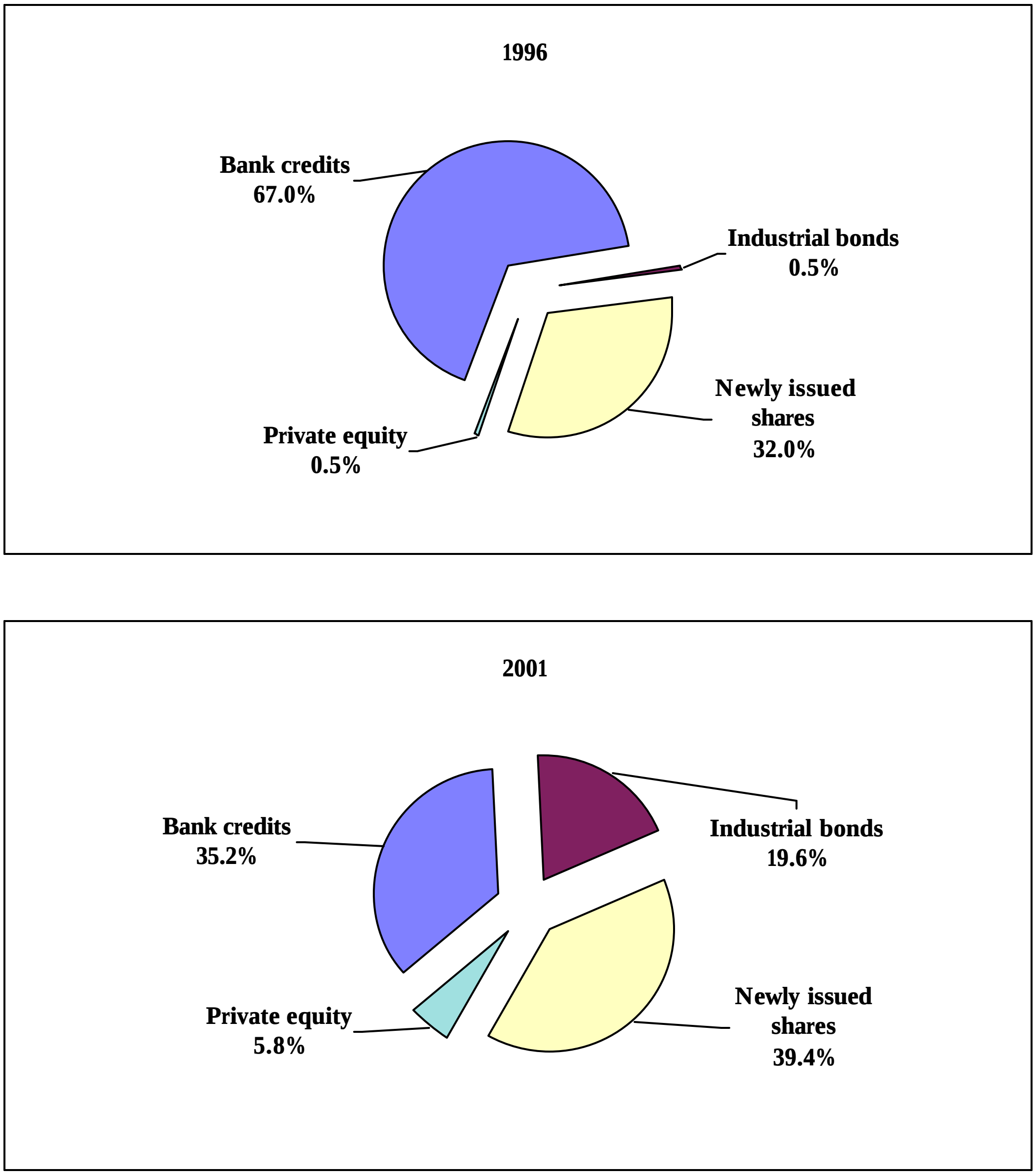
Note: Regional banks refers to public institutions. Credit cooperatives includes central organizations.
Source: Bankenverband, Banken in Zahlen & Fakten, http://www.bdb.de/index.asp?channel=161010 and ifo Institute for Economic Research.

FIGURE 1
Composition of Liabilities of Manufacturing Companies in West and East Germany by Size of Firm, 2000



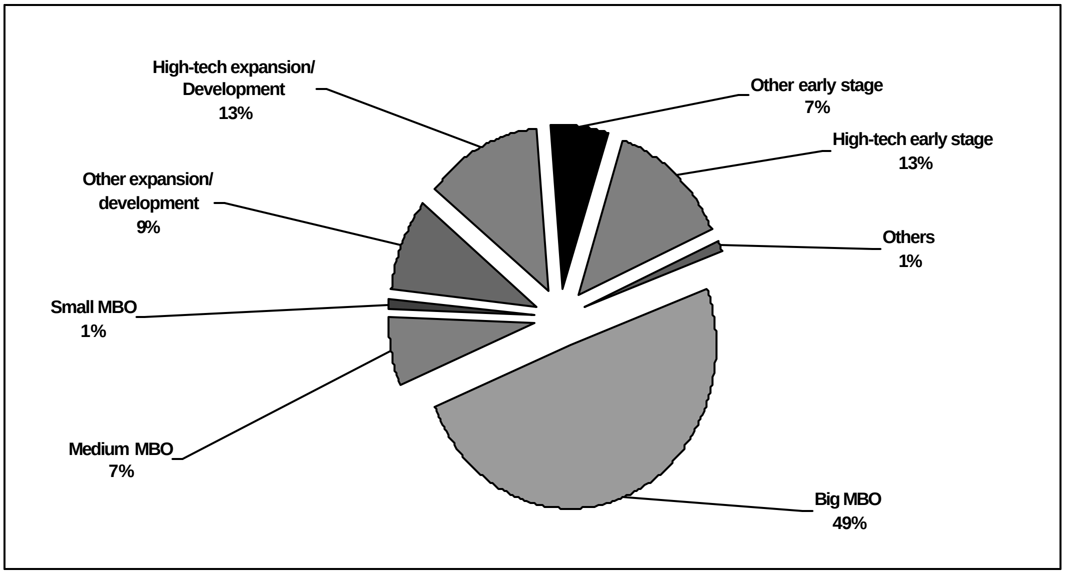
Source: Deutsche Bundesbank, ifo Institute.

FIGURE 2
Medium- and Long-term External Financing of Private-sector Non-financial Companies, 1996 and 2001
(Share of total net issues in %)



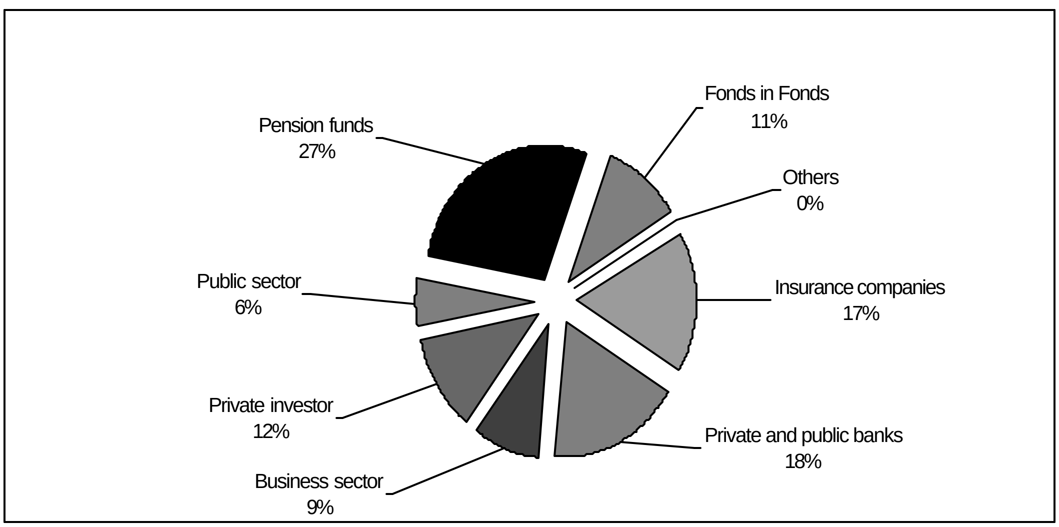
Source: Deutsche Bundesbank (Banking Statistics, Capital Market Statistics); German Venture Capital Association (BVK); ifo Institute for Economic Research.

FIGURE 3
Destination of Newly Raised Funds by Venture Capital Companies in 2001



Source: German Venture Capital Association (BVK), ifo Institute.

FIGURE 4
Origin of Newly Raised Funds by Venture Capital Companies in 2001



Source: German Venture Capital Association (BVK), ifo Institute.