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German Banks and Industrial Finance in the 1990s

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Abstract

This paper examines the role of the banking system in the German model of industrial development. It argues that the banks continue to fulfill several of their traditional functions in industrial finance, despite dramatic changes in financial regulation and the internationalisation of product and capital markets. This helps explain the successful adjustment of German industry since the early 1970s. The success of the traditional financial system, however, is at the same time a barrier to the creation of new high-tech industries - a major competitive challenge for Germany. Moreover, an emerging dualism in the banking system is evident as large German firms increasingly seek an Anglo-Saxon style financial market with emphasis on securities financing, while small and medium size enterprises continue to rely on the traditional system of long-term bank financing. In this sense Germany is attempting to combine its traditional bank-based finance system with Anglo-Saxon market-based finance, hoping to achieve the advantages of each system and eliminate the disadvantages. Success in this endeavor has been modest.

Zusammenfassung

In diesem Papier wird die Rolle des Bankensystems in Deutschland in dem deutschen Modell einer industriellen Entwicklung untersucht. Dabei wird die Meinung vertreten, daß die Banken trotz dramatischer Änderungen in der Regulierung des Finanzsystems und der Internationalisierung der Finanz- und Gütermärkte immer noch einige ihrer traditionellen Funktionen in der Unternehmensfinanzierung erfüllen. Dies erklärt teilweise die seit den frühen siebziger Jahren erfolgreiche Anpassung der Industrie in Deutschland.

Der Erfolg des traditionellen Finanzsystems ist aber auch gleichzeitig ein Hindernis bei der Entwicklung und Herausbildung neuer High-Tech-Industrien. Dies bedeutet für Deutschland eine gewichtige Herausforderung seiner Wettbewerbsfähigkeit. Darüberhinaus ist ein sich aufbauender Dualismus im Bankensystem immer deutlicher festzustellen: Große Unternehmen wenden sich immer mehr angelsächsisch geprägten Finanzmärkten mit ihrer besonderen Orientierung auf Finanzierungen qua Aktien und Schuldverschreibungen zu, während kleine und mittlere Unternehmen sich weiterhin auf das traditionelle System langfristiger Bankenfinanzierung stützen. In dieser Hinsicht wird in Deutschland versucht, das traditionelle, sich auf Banken stützende Finanzsystem mit dem angelsächsischen marktgestützten Finanzsystem zu kombinieren in der Hoffnung, die Vorteile beider Systeme nutzen und ihre Nachteile vermeiden zu können. Der Erfolg in diesen Bemühungen war allerdings bisher bescheiden.

Table of Contents

1. Introduction

The German financial system has long been viewed as one of the central ingredients of German industrial success.[1] The common view holds that the large German banks use a combination of direct share ownership in industry (enhanced by bank proxy voting of shares held on deposit by banks), bank representation on company supervisory boards, and high bank debt by companies to exercise considerable influence in industry. The advantages of this system of close bank-firm relations are presumably twofold: First, the banks, because of their strong position to monitor and influence corporate management, provide long-term funding or “patient capital” to companies. This, in turn, enables the latter to make beneficial long-term investments. Second, the banks guide the development of important sectors and are willing to lead the reorganization of troubled sectors. This may often mean bank rescues of failing firms (Zysman 1983). This system is typically seen as a source of Germany’s comparative industrial advantage because it enables firms to make long-term commitments and investments in "those intangible assets and capabilities required for competitiveness - R&D, employee training and skills development, information systems, organizational development, and supplier relations" (Porter 1992: 66). The United States and Britain, because their financial systems emphasize short-term securities-based corporate finance, are conversely viewed as comparatively weak at promoting these kinds of intangible and long-term investments (Porter 1992; Franks and Mayer 1994; Vitols 1995a).

Over the last ten or so years, the German financial system has been confronted with three major developments which challenge these traditional economic functions: These include German reunification, global financial market integration, and European integration with its accompanying regulatory changes. German reunification has had surprisingly modest - though not negligible - effects on the financial system as a whole. It neither led to significant changes in financial intermediation patterns in Germany, nor did it adversely affect bank profitability (Deeg 1994). Therefore in this paper we concentrate on analyzing the impact of international and European financial market integration and regulatory liberalization.

It has been widely posited that financial market integration and regulatory liberalization are driving a convergence process across financial systems. The global trend to securitization or disintermediation is seen to threaten the

[1] This paper is also forthcoming in the *Journal of Industry Studies* special edition on Modell Deutschland in the 1990s.

traditional functions of the German banks because of the predominance of bank intermediation in corporate finance in Germany. This leads to the question of whether the German financial system is losing its distinctiveness and along with it the competitive advantages it imparts to German industry. Will the short-termism of securities markets replace the long-termism of bank finance? Is the German bank-industry model still a viable model in a global financial marketplace? This paper argues that banks are still a central institutional element in the German industrial model. However, the specific functions of the banks in promoting German industry differ significantly from what is commonly understood, and, moreover, have changed substantially over the postwar period.

Since the early 1970s, the banking system has contributed to successful industrial adjustment through two of its key traditional functions: The provision of long-term finance, though mostly to small and medium sized enterprises (the so-called *Mittelstand*), and the promotion of stable, long-term shareholdership in industry. These two banking system functions contribute directly and indirectly to long-term investment perspectives in industry through the creation of a stable financial environment for firms. This notwithstanding, the best known and most frequently discussed traditional function of the banks has changed substantially. Namely, the power of the banks to promote new industries or reorganize ailing firms and industries is much more circumscribed than the traditional view depicts. Banks intervene less and less frequently into firm affairs and their ability to coordinate firm collaboration for purposes of sectoral rationalization has virtually vanished. Thus, the banking system's capacity for conducting "private" industrial policy is weakening. This declining bank capacity is a reflection of broader changes in the nature of the typical relationship between banks and large firms in Germany. These changes can be largely explained by the growing financial and managerial autonomy of large nonfinancial corporations.

In fact, it can be argued that the German financial model is increasingly becoming two distinct (though intertwined) models: a finance model for the *Mittelstand* and a model for large firms. The *Mittelstand* model rests on close, long-term relations between banks and firms in which banks provide not only long-term finance, but an increasing number of non-financial business services - notably management consulting - to their clients. This model corresponds most closely to the traditional view and is arguably most responsible for successful adjustment in German industry since the early 1970s. The large firm model is based on high levels of self-finance by companies and increasing use of securities markets (at home and abroad) rather than banks for external finance. Large banks have reduced the size of most of their equity stakes in nonfinancial companies in order to reduce risk exposure and the likelihood of having to bail-out a client. These changes in the large firm finance model began more than twenty years ago, though they have accelerated in recent years as a result of financial internationalization and the efforts of the German financial and industrial community to transform Frankfurt into an international financial center. The German large firm finance model is becoming more like the Anglo-Saxon model, but with at least one critical distinction remaining: large German firms continue to have stable, long-term shareholdership. This insider system of corporate control (Franks and Mayer 1994) is upheld through concentrated ownership and extensive equity links among large financial and nonfinancial companies in Germany.[2] As long as this ownership pattern holds, large German firms should be able to avoid much of the short-termism of Anglo-Saxon capitalism.

The fact that the German financial system so far continues to fulfill many of its most important traditional functions for industry does not mean, however, that the German model's international competitiveness for the second half of the 1990s is secured. On the contrary, the particular strengths of the German model are maintained with increasing opportunity costs. For example, the German focus on stable, long-term relationships between banks and firms is increasingly, and correctly, seen as inhibiting the formation and growth of firms in new sectors. The banking system is therefore one, though not the only, institutional feature of the German model that accounts for the its relative failure in spawning new, dynamic industries. For this reason, and because private bank-led industrial policy has weakened in general, pressure on the state to develop and extend public industrial policy has been rising since the 1970s. Accordingly, the German state has initiated a range of new policies designed to promote industrial innovation and adjustment. This is especially apparent in the growing attempts to create new, high-tech growth sectors such as biotechnology and microelectronics. Such policies rarely involve state dirigisme. Rather, they rely on increased cooperation between the state and various quasi-public and private organizations, including banks. Thus the future success of the German model will likely require even greater public-private collaboration in the formulation and execution of industrial policy.

The next section of this paper examinations the structure of the German banking system and the system of long-term finance (LTF) for firms. The third section examines the efforts to transform the German financial services industry since the mid-1980s and its effects on the banking system and relations to firms. The fourth section examines the problems which the financial system presents for firm startups and the development of new industries and the variety of policy initiatives intended to overcome this deficiency. The final section turns to a discussion of the future viability of the German model and whether the advantages of the German system for long-term industrial finance can be successfully captured by other nations.

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[2] Ownership in large German corporations is comparatively highly concentrated, with substantial family ownership in many large firms (Franks and Mayer 1994).

2. The Banking System and Long-Term Finance

The vast majority of corporate finance by banks is provided by three major banking groups: Private national and regional commercial banks (including the so-called Big Banks - Deutsche, Dresdner and Commerzbank); public savings banks; and private cooperative banks. All banks in these groups are universal banks, i.e., permitted to engage in nearly all financial activities, including securities and insurance. In 1994 commercial banks as a group accounted for 29.2% of total business lending; savings banks accounted for 33.7%; and cooperative banks accounted for 13.2% (Deeg 1995: 157).

Although the large majority of banks in Germany are universal banks, there are important distinctions among them which shape their respective relations to firms and their role in industrial development. The savings bank group or sector is based on a federal or three-tier associational model. On the primary level are 624 savings banks (end of 1995). These banks are legally independent banking organizations, but are owned and supervised by municipal or county governments. They operate in a wide variety of commercial markets and seek to make (but not necessarily maximize) profits. As public institutions they are required to support communal policy initiatives, especially through financing local infrastructure projects. In their lending policies these banks are required to take into consideration the general needs of the local economy. These banks are subject to federal and state (*Länder*) banking regulation, though primary supervisory responsibility for these banks falls on *Länder* governments (each savings banks is chartered under a *Länder* savings bank law).

The second level of the savings bank group consists of 12 regional savings bank associations and 13 regional banks known as *Landesbanken* (or Girozentrale). With some exceptions (notably among the five new federal states), there is one *Landesbank* for each federal state. In most cases ownership of the *Landesbank* is divided between the *Land* government and the regional savings bank association.[3] This division of ownership reflects the fact that most *Landesbanken* have multiple functions: First, they are state banks which serve their respective *Land* governments in financial matters. Second, they are commercial banks competing directly with banks outside the savings bank group. Third, they are "central banks" for local savings banks, providing internal capital market functions and numerous banking services that these local banks are not permitted to do, or, cannot do because they lack sufficient scale-economies.

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[3] In the last few years several of the larger *Landesbanken* have assumed significant equity positions in other, smaller *Landesbanken*. The *Landesbank* of Hamburg is owned 100% by the Land government, while the *Landesbanken* of Hesse, Saarland and Baden-Württemberg are owned 100% by the regional savings bank associations.

The tertiary level of the savings bank sector consists of a national association and a national central bank (DGZ Bank). For historical reasons the DGZ Bank plays a relatively limited role in the savings bank sector. The national association, in contrast, plays a major coordinating and policy leadership role in the group and represents the sector's interests in federal politics. In regards to firm finance, savings banks focus on lending to small and medium-sized enterprises. The Landesbanken, several of which are among the largest banks in Germany, focus on wholesale banking, investment banking and large firm financing.

The cooperative banks also have a three-tier associational structure. On the primary level are more than 2,600 (end of 1995) member-owned credit cooperatives. As cooperative organizations they are subject to the Federal Cooperative Law that, among other things, places special requirements and privileges on them. On the secondary level are (3) regional cooperative banks and (6) regional cooperative associations. On the tertiary level are the national cooperative banking association and a national bank (DG Bank). The DG Bank is one of the ten largest banks in Germany and, along with the national association, exercises a powerful leadership role within the cooperative banking sector. Like the savings banks, cooperative banks focus on *Mittelstand* lending. The regional banks and DG Bank focus on wholesale banking activities, large firm financing, and providing financial services to the small cooperative banks.

Both the savings and cooperative bank groups are characterized by extensive interorganizational cooperation and a group-internal division of labor that yields collective benefits for all member banks.[4] Individual savings and cooperative banks are bound by agreements within their respective associations to operate only within their local area (regional principle). This is intended to prevent competition among banks organized within the same group and thereby preserve the basis for cooperation within the broader group. The regional principle and the strong market share of the association banking groups also means that competition among banks in Germany is heavily defined by "group competition." This means that the savings and cooperative banks try to compete against other banks, especially the Big Banks, as a group and not simply as individual banks.

The commercial bank group does not rest on the same extensive interorganizational cooperation as the savings and cooperative banking groups. Rather, this group consists of several dozen independently operating national and regional banks (as well as numerous private banking houses). Nationally operating commercial banks have traditionally focused on large firm financing, both in the form of loans and equity capital. Since the early 1970s, however,

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[4] Membership in the associations is formally voluntary, though there are powerful market and regulatory incentives that ensure membership - especially in the case of savings and co-operative banks.

virtually all commercial banks have aggressively pursued *Mittelstand* finance as well. The largest of these banks, especially the Big Banks, also have significant shareholdings in non-financial firms and place their representatives on the supervisory boards of many of the largest corporations. Through bank equity holdings and board representation, large commercial banks play a significant (but not dominant) role in the network of interlocking directorates and cross-shareholdings that characterize relations among large German firms (a few of the *Landesbanken* are also part of this system: see Gottschalk 1988; Baums and Fraune 1995; Franks and Mayer 1994).

Special credit banks represent a fourth category of financial institutions with a significant role in industrial finance. This category consists of mortgage banks (public and private), public or quasi-public long-term credit banks, and the postal bank. In 1994, these banks accounted for 14.2% of total business lending. For long-term industrial finance, the most important banks are *the Kreditanstalt für Wiederaufbau* (KfW), the *Deutsche Ausgleichsbank* (DtA), and the *Industriekreditbank* (IKB). All of the German states also operate special credit banks that provide loans and grants to regional firms.

2.1. A System of Long-Term Financing

It can be easily argued that the single most important contribution of the banking system to German industrial success in the postwar period is the provision of long-term finance. Long-term finance (LTF) facilitates long-term investment in R&D, labor force skill development, and collaboration with other firms (Soskice 1995; Vitols 1994; Deeg 1995; Franks and Mayer 1994). The provision of LTF by the banking system was a central ingredient in the successful extension of diversified quality production during the 1970s and 1980s in German industry.[5] Moreover, during the turbulent 1970s it was the savings and cooperative banking groups - the two groups most committed to the *Mittelstand* and local economic success that were most aggressive in financing business, especially industry: Reflecting this fact, from 1972 to 1982 the market share of the Big Three in loans to manufacturing industry declined from 28.2% to 18.2%; in the same period the market shares of the savings and cooperative bank groups rose from 26.1% to 33.2% and 11.3% to 17.5%, respectively (Deeg 1995: 157). Thus, successful industrial adjustment in this period is attributable to a significant degree to the existence and responsiveness of the savings and cooperative banking groups.

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5 Diversified Quality Production focuses on the production of high quality, often customizable, products through the use of sophisticated production technologies and highly skilled labor.

Though Germany has a long tradition of industrial finance, long-term lending by banks only came to constitute a substantial portion of their business loan portfolio during the postwar period (the savings banks are an exception to this). From 1950 to 1993, the ratio of long-term bank loans (maturity of four years or more) to all bank loans to nonfinancial firms rose from 45% to 77% (Vitols 1994: 28). This high level of LTF, however, can only be explained by examining the interactive effects of several institutional mechanisms that make the provision of LTF rational market behavior for banks: The postwar German financial regulatory framework encourages LTF through, among other things, strict maturity matching requirements which help control the interest rate risk associated with long term loans (i.e. they are financed significantly through long-term, fixed interest deposits). The association structure of the savings and cooperative banks facilitates LTF because the internal capital market functions of their regional and national banks enables the transformation of short-term deposits into long-term loans (Vitols 1995a: 21). While interest rates are deregulated, several mechanisms are in place to stabilize interest rates, including the (quasi-public) Central Capital Market Committee which coordinates new securities issues. Last, but hardly least, long-term interest rate stability has been promoted by the consistently low and stable inflation rate secured through tight Bundesbank monetary policy.

To enable banks to increase LTF, the state also promoted bank access to long-term savings through three mechanisms: the creation of long term credit banks which provide universal banks with long-term loan refinancing; through long-term savings incentives provided to individuals; and by permitting banks to issue long-term bank bonds (much of which is sold to insurance companies; Vitols 1995a). Finally, growing competition among the three major banking groups, especially for *Mittelstand* business, provided further incentives for banks to provide the LTF firms demanded. As part of their strategy, banks have increasingly supplemented LTF with increased provision of complementary services to firms, primarily in the form of extended financial and investment planning and general business consulting (Deeg 1995).

This system of long-term financing for *Mittelstand* firms has been successfully maintained, even extended, during the 1990s. It was also extended successfully to eastern Germany and it has played a crucial role in restructuring the regional economy (Deeg 1994). It is essential to note, however, that the public long term credit institutes, most importantly the KfW, DtA, and IKB, are playing an ever more important role in the maintenance of the LTF system. While these banks have been operating several programs for the *Mittelstand* since the early postwar years, their lending to the *Mittelstand* expanded dramatically during the 1970s when many of these firms faced severe adjustment pressures.[6] The KfW, the largest special credit bank,

[6] In 1970 the KfW granted a total of DM 838 million in domestic loans; in 1986 the KfW granted a total of DM 9.8 billion in domestic loans, DM 6.2 billion of which went to the *Mittelstand*. In

estimates its market penetration in *Mittelstand* finance to be quite high: Of manufacturing firms with annual revenues less than DM 5 million in 1985, the KfW financed 45% of their total investment; for firms with revenues between DM 5 million and DM 100 million the share of the KfW in total investment ranged between 20% and 25%.[7] Vitols estimates that the seventeen special credit institutes in Germany currently account for just over one quarter of all long-term loans to manufacturing (Vitols 1994: 13).[8]

Indeed, over the last two decades the successful adaptation and extension of the *Mittelstand* finance model has relied increasingly on collaboration between governments and their public special credit banks and universal banks. This reflects the expanding industrial policy efforts of the federal and *Länder* governments which are based heavily on the provision of financial incentives to firms. This occurs in good measure through tax credits, but also substantially through low-interest loans granted for specific kinds of firm investment. Such loans (and many grants) are normally distributed through what is known as the *Hausbankverfahren* (or house bank procedure). Under this procedure, firms apply to their house bank for a government loan - whether for a startup, a technology project, expansion or modernization investment. The bank then evaluates the applicant according to normal credit criteria, since the bank generally carries the full credit risk of the loan. If the bank approves and the application meets program guidelines, the application is forwarded to the government bank (in some cases this is still done by government ministries). Loan officers from the government bank then seek an official opinion (*Gutachten*) on the application from the appropriate craft or industry chamber, or, in the case of technology-oriented loans, from an officially recognised technical expert. These opinions are intended to assess the technical or market viability of the planned investment. When all approvals are given, the house bank dispenses a loan on terms set by the government program and refinances this loan with a government bank. Such loans are normally long-term at fixed interest rates. Thus interest rate risk is carried by the government bank.

The house bank procedure offers the state, banks and firms several advantages: for the state it economizes on information gathering (credit risk assessment and loan monitoring) and loan administration costs; for banks it provides low cost long-term refinancing and improves the financial stability of its

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1991, loans for domestic investment peaked at nearly DM 32 billion (more than half went to the eastern *Länder*); DM 17.7 billion went to *Mittelstand* firms. In 1973 the DAB granted DM 33 million in loans for business start-ups, by 1983 such loans amounted to just over DM 1.4 billion. See the 1987 and 1993 Annual Reports of the KfW; and the 1983 and 1987 reports of the DtA.

7 Götte, Gerhard. 1988. "Anmerkungen zur Effektivität von Investitionsförderungsprogrammen am Beispiel des KfWs." *Der Langfristige Kredit*. 21/22:700-703. This only includes manufacturing firms with more than 20 employees.

8 This percentage would be even higher if the loans of all *Länder* development banks (in both the East and West) were fully accounted.

firm clients; for banks and firms it ensures that market criteria play the dominant role in allocating government credit since the bank normally carries the credit risk of the loan. The comprehensiveness and long-term nature of government loans also promote long-term collaborative relations between the state and banks, and between banks and their firm clients.

The extensive utilization of the house bank procedure is also favored by the state and market actors because it is held to minimize state dirgisme, i.e., to preserve the liberalism in state policy. While this may be true when compared to the kind of credit allocation practices long common in Japan or France, extensive German state lending is not without significant allocational effects. Loan programs are targeted to promote particular kinds of firm investment - startups, firm (technical) modernization, and technology projects are the major categories. The amount of funds made available for different kinds of investment has shifted over time in accordance with changing industrial policy objectives. For example, during the 1980s many *Länder* long-term credit banks shifted lending from startups to technology loans. It is very difficult to measure the extent to which firm investment patterns shifted in response to changes in government financial incentives, but it is equally difficult to believe that government incentives could have no effect. This is especially evident in eastern Germany, where massive government loans are all that is preventing the collapse of eastern industry. Thus, the state does influence credit allocation in the economy through the banking system. In contrast to other countries, however, the policy priorities embodied in these allocational objectives are generally determined through decision-making bodies involving representatives from government, industry, and the financial community and not the state acting over and above the private sector.[9]

In summary, the German system for long-term finance is a public-private system that rests on a complex of regulatory, legal, and institutional patterns. Consistent with the common view of the German economy, banks remain the most important financial intermediary for the nonfinancial sector. Some 60% of the financial liabilities of the nonfinancial sector consists of bank loans; stocks account for roughly 5% of liabilities and bonds for 13% (Vitols 1994). Thus, despite concerted efforts over the last decade to develop equity market finance in Germany - which we discuss next - firms continue to rely heavily on banks for their external finance. But this is mostly the case for the *Mittelstand*. Large firms, in contrast, are increasingly de-coupled from lending by the domestic banking system: From 1978 to 1989 the bank debts of large nonfinancial firms declined from 13.7% to 7.6% of balance sheet liabilities.[10] Large firms are increasingly borrowing directly from capital markets and foreign financial institutions. But borrowing by large firms is, on the whole, relatively limited

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9 For example, the oversight boards of the KfW, DtA, and IKB - which help determine bank policy - have representatives from all of these sectors.

10 "Longer-term trends in the financing patterns of west German enterprises," *Monthly Report of the Deutsche Bundesbank*, vol. 4, October 1992, p. 30.

since large German firms typically have extensive reserves (notably pensions) which they use to finance both current and long-term investment. Thus the system of bank-based LTF in Germany remains vital for successful adjustment by *Mittelstand* firms. Meanwhile, large German firms are developing a more securitized and internationalized system of finance.

3. Internationalization and Strategic Changes in Banking

It is widely understood that financial sectors have experienced sweeping, indeed revolutionary, changes in the last two decades. Briefly and generally stated, national financial sectors in all advanced industrial countries have been extensively liberalized and rapidly integrated with each other, thereby creating an increasingly global financial system (see, for example O'Brien 1992). In this section we highlight the major changes within the German financial services sector which have direct and significant consequences for the organization of the financial services sector and banks' role in industry.

Compared to most other national banking industries, the German banking system has long been lightly regulated. Universal banking has dominated the system since the early 20th century. Government interest rate regulation was abandoned in the late 1960s (though a certain amount of informal coordination among banks has continued to occur, especially in regard to deposit rates; Quack and Hildebrandt 1995). What has always been, and remains, relatively strict is prudential regulation. However, this presents relatively little problem for German banks, since European and international prudential standards are moving, in a broad sense, closer to the German position. For example, the widespread adoption of the Basle Committee capital adequacy standards marked the introduction of clear, numeric bank capital standards in many counties - something long-practiced in Germany. Moreover, European Union financial regulation is generally supportive of the universal banking model, and thus represents no major threat to the general German approach to banking. Consequently, banking regulation and the organization of the banking industry have remained comparatively stable in Germany. Germany has not seen anything like the kind of mergers, acquisitions or failures of financial institutions that have marked the UK and US financial systems in the era of liberalization. Rather, in Germany the real action has taken place in the area of securities markets and their regulation.[11]

[11] Because of universal banking and bank dominance in securities markets, changes in securities markets and their regulation invariably involves changes in bank regulation. However, in this paper we make an analytical distinction because most of the market and regulatory change in Germany is intended to address securities markets issues rather than traditional commercial banking activities.

As the world has moved toward more liberal financial market regulation, integration of national financial markets, and a general trend to securitization (disintermediation), the German financial sectors greatest comparative weakness - the relative underdevelopment of securities markets - has become increasingly conspicuous. Weak securities markets have come to be viewed by international investors, and eventually the German financial community itself, as a major problem for the international competitiveness of banks and Frankfurt as an international financial center, as well as the ability of German firms to raise capital efficiently and cheaply (Lütz 1996). Consequently, there has been significant regulatory liberalization in Germany since the mid-1980s intended to stimulate the development of securities and money markets in Germany.

Starting in 1985, several liberalization measures were adopted to permit the introduction of new financial products such as zero-coupon and floating-rate notes, and interest and currency swaps in deutschmark. To facilitate the introduction of more firms to the stock market, the Free Market was opened in 1987 for trading in unlisted shares. In 1989 the Stock Exchange Law was amended to permit trading in options and futures contracts. In 1990 the German Options and Futures Exchange was opened (*Deutscher Terminbörse*, DTB). In 1990 the First Financial Market Promotion Law was promulgated. Among other measures, the law eliminated many of the taxes that hindered securities trading and enabled German investment funds to trade in derivatives. This law, coupled with the Bundesbank's suspension of its approval requirements for debt issuance, enabled the creation of a deutschmark commercial paper (CP) market at the beginning of 1991. After years of opposition, the Bundesbank finally permitted the introduction of money market funds in 1994, thus helping to create demand for short-term commercial paper.

To facilitate cheaper and faster trading of Germany's leading stocks, an electronic exchange system (IBIS) was created in early 1991. While Frankfurt dominates German securities trading, market trading was long hindered by a fragmented exchange system built upon eight regional exchanges. The major German banks and federal government sought to unify regional exchanges for many years, but faced stiff resistance from *Länder* authorities who feared a loss of jobs and financial clout. In 1992 the German Exchange Company (*Deutsche Börse AG*) was finally established to control the Frankfurt exchange and link the regional exchanges.

These efforts to develop securities markets and promote Frankfurt as a global financial center have been recently promoted within Germany as the *Finanzplatz Deutschland* campaign. *Finanzplatz Deutschland* represents the cumulative efforts to liberalize German equity markets, to harmonize financial regulations with the EU, and to institutionalize new financial market regulation by codifying and elaborating rules, establishing legal controls and extending formal state regulation (Moran 1992). The *Finanzplatz Deutschland* campaign took a large step forward with the omnibus Second Financial Market Promotion

Law promulgated in mid-1994. The law significantly harmonized the content and form of German regulation with international norms. Probably of greatest significance was the creation of a new, independent securities supervisory office was established (*Bundesaufsichtsamt für den Wertpapierhandel*, BAWe) to oversee the transformation of German securities markets. The new watchdog agency will assume much of the self-regulation traditionally exercised by the financial community. The institutionalization of such authority in an independent public body is essential to establish the international credibility of capital markets regulation in Germany. One of the key functions of the agency will be to enforce a new legal ban on insider trading, a measure widely seen as necessary to win the confidence of international investors and to comply with EU banking directives. Strengthened information reporting rules will also be put in place, including the requirement that all stakes of 5% or more, and shareholdings moving over or under the 10%, 25%, 50% and 75% thresholds, must be publicly announced and registered with the new agency.[12] Such stringent information requirements represents a dramatic break with the past. German firms and banks are hardly accustomed to extensive public knowledge of their dealings. Even so, more stringent information reporting requirements, as well as further amendments made to the stock exchange law, are seen as necessary to promote the objective of greater market transparency and thereby attract more international investors (Lütz 1996).

All of these regulatory changes facilitated the further opening and deepening of German capital markets: From 1982 to 1990, equity market capitalization grew from DM 170 billion to DM 510 billion and trading volume grew from DM 40 billion to nearly DM 500 billion.[13] There is also a growing readiness on the part of medium-sized firms to go public. In the ten years from 1977 to 1986 there were 85 initial public offerings; in the six years from 1987 to 1992 there were 111 (Schuber, 1993). It is widely expected in that the going public trend will continue since thousands of mid-size companies suffer from a deteriorating equity position and face a succession crisis from company founder to non-familial management.[14]

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[12] Financial institutions will be required to inform the BAWe of all securities and derivative trading for their own and other accounts. All firms that have issued publicly traded securities must immediately and publicly disclose all information relevant to the value of their securities. It remains to be seen what the new `information culture' in Germany will consider relevant - a change that will be importantly shaped by how the new BAWe defines in practice what is `relevant' information. "Die neue Publizitätspflicht verunsichert Aktiengesellschaften," *Frankfurter Allgemeine Zeitung*, 23 June 1994. "Bei Insider-Handel künftig fünf Jahre Gefängis," *Frankfurter Allgemeine Zeitung*, 18 June 1994. "Bei Insiderverstössen droht künftig fünfjährige Haft," *Handelsblatt*, 13 July 1993.

[13] 'The 1992 Guide to European Equity Markets', *Euromoney*, January 1992 (supplement).

[14] In fact, some 700,000 *Mittelstand* firms in western Germany will be seeking new managers/owners in the next decade as the postwar entrepreneurial generation retires. `Westdeutscher Mittelstand: Gründer-Generation tritt ab', *IWD: Informationsdienst des Instituts der deutschen Wirtschaft* 15, 8.

3.1. Effects on Bank Organization and Strategy

Regulatory changes and growing domestic and international bank competition have had a direct impact on the organization and market strategies of German banks. Despite their long history as universal banks engaged in a wide range of financial services, during the 1980s all the major German banks and banking groups extended their *Allfinanz* (bancassurance) strategies by expanding into new services such as management consulting and, most notably, insurance. In other words, the Big Banks and the savings and cooperative banking groups are extending a strategy of financial conglomeration. This strategy is heavily driven by the group nature of bank competition, in which each big bank or banking group tries to match the others service for service.

Most importantly, the German banks realized that to be competitive in both domestic and international markets they must have much better developed investment banking capacities. The strategic push to develop investment banking is a response to five major market developments: first, the global and increasingly German pattern of securitizing debt demands stronger underwriting, trading and investment management capacities; second, global economic integration requires more and more interest and currency risk management; third, firms are demanding more financial consulting; fourth, new forms of equity finance are emerging and corporate restructuring through mergers and acquisitions, spin-offs, management-buy-outs and buy-ins is growing; and fifth, more sophisticated project-specific investments, especially for large-scale undertakings, is being sought by large firms (Reimpell 1990: 488-490).

Some German banks are seeking to be `global players.' To this end the Deutsche Bank bought a leading British investment bank - Morgan Grenfell - in 1989. Likewise, the WestLB took over the European operations of another British bank - Standard Charter - in 1990. During 1995 several large German banks went on a much-publicized shopping spree, buying investment banks and bankers in London and New York. For example, the Dresdner bought the British investment bank Kleinwort Benson in 1995. Other German banks are seeking to be `niche' players in the domestic or European markets. But whether global or niche player, investment banking has become a major strategic focus for all three major banking groups and they are modernizing their technological capacities, reorganizing departments internally, and retraining their personnel who are more accustomed to the traditional domestic credit business.

This new environment is clearly more favorable to initial public offerings and equity issues by dynamic young firms in Germany. It is also more favorable to corporate restructuring through mergers, acquisitions, and sell-offs. In short, the German "market for firms" is becoming more dynamic and more like Anglo-Saxon capitalism. In principle, a more dynamic firm sector should raise the possibility for new high-tech firms and sectors to emerge, since resources (capital and human) would more frequently become available for new entrepreneurial undertakings. However, German equity markets remain comparatively underdeveloped and IPOs, while increasing, are still relatively few in number: During 1995, there were 20 IPOs in Germany, bringing the total of listed firms to 678 with a market capitalization of ECU 438.6 billion; by comparison, there were 184 IPOs in the UK, and total listed firms were 1,745 with a market capitalization of ECU 1,038.3 billion.[15]

Growing bank competition and market integration are also straining the organizational capacities of the savings and cooperative banking groups. The chief problem both these association banking groups face is how to maintain an effective division of labor and cooperation among banks within the group. This problem arises primarily out of the desire by larger banks within each association to have greater market autonomy, which, among other things, tends to create competition among banks organized within the same banking association. Thus, over the last decade both the savings and cooperative banking groups have struggled with internal coordination problems. These have been most severe for the savings banks (Deeg 1995). Resolving such problems is essential to the long-term competitiveness of each of these bank groups, especially for the smaller banks within each group that are more dependent on the broader association for their own individual competitiveness. Maintaining effective group-internal cooperation is all the more important because of the group nature of competition among banks in Germany. If cooperation were to erode or dissolve within one group, the banks organized within it would be exposed to individual bank competition without the support of the broader group. An erosion of groups would have a far-reaching impact on bank-industry relations and Germany's system of long-term finance (LTF).

Competitive pressure on the two association banking groups is also reflected in the fusion of smaller savings and especially cooperative banks with other banks organized in the same group. This concentration may reduce the supply of services and LTF to *Mittelstand* firms in some areas. On the other hand, it may strengthen the capacity of remaining savings and cooperative banks to provide *Mittelstand* firms with the growing number of services they need to remain competitive. Moreover, concentration in Germany is occurring at a comparatively slow pace and is largely controlled by the associations. One of the implications of this relatively stable structure of the banking industry is that it continues to focus on *Mittelstand* firm clients as a key customer group. This means that the German system of LTF for the *Mittelstand* - and all the banking and public sector institutions which compose it - remains largely intact and is adjusting successfully to financial liberalization and market integration processes. Despite all the efforts to build up securities markets, German

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[15] "Banken 1996: Fakten, Meinungen, Perspektiven", *Bundesverband deutscher Banken*, Cologne, 1996.p. 68.

Mittelstand firms continue to prefer bank finance and maintaining close relations with their bankers.

In contrast, the reform of the German securities sector and the growing focus of banks on investment banking has accelerated the longer-term trends in bank-large firm relations in Germany. Large firms are exploiting the growing opportunities for domestic and international finance. These broad changes in industry and bank strategy also mean that big equity stakes in large firms are becoming less attractive to large banks (Deeg 1995; Sabel, Griffin, Deeg forthcoming). Banks are increasingly cautious about being caught in a situation where they must bail-out a firm client. Their investment strategies are shifting to a diversification logic as a means of reducing portfolio risk. Accordingly, the major banks have sold or significantly reduced many of their largest equity holdings in non-financial firms. This does not mean, however, that large German firms no longer have an environment supportive of long-term investment. On the contrary, large German firms are maintaining (if not actually increasing) their cross-shareholdings and interlocking directorates.

One of the presumed advantages of the German financial model is that banks are more willing to aid financially troubled firms or sectors (or to promote particular industries) through the assumption of firm equity, cancellation or restructuring of debts, extension of new credits (often with government guarantees), or even temporary bank involvement in decision-making. The change in bank equity investment strategies, however, also means that the trend away from bank-led corporate (and sectoral) restructuring will continue. The growing hesitation of banks to act as coordinators of private industrial policy is most harshly evident in eastern Germany where the banks have invested surprisingly little equity in firms. Several *Landesbanken* continue to engage in this kind of intervention, but for them direct large firm intervention is clearly made possible largely because of their public status and the financial backing of *Land* governments.

In summary, all the regulatory and market changes associated with the development of securities markets (and incorporate EU regulation) have not significantly altered the core institutions or functions of the *Mittelstand* finance model. The effects on the large firm finance model have been much more significant, but only in a manner that accelerated trends already underway.

4. Promoting New Industries: Challenge of the 1990s

One of the keys to successful industrial adjustment in Germany is LTF and long-term relations between banks and firms. Long-term investment horizons in industry are further promoted by the high concentration of ownership in large

German firms which promotes stability in ownership (and inhibits unwanted takeovers). State industrial policy, notably long-term lending by special credit banks, reinforces this system of long-term relations and financial stability. But are these successful institutions and policies of the 1970s and 1980s sufficient to meet the adjustment challenges of the 1990s?

Since the 1970s, the German federal and *Länder* governments have grown increasingly concerned with promoting innovative new companies and new growth industries, especially in biotechnology and microelectronics-related technologies. Indeed, for more than a decade German policymakers have come to see their lack of success in cutting-edge, high-tech sectors as one of the greatest threats to national economic competitiveness. While the German financial system and state industrial policy have been relatively successful in promoting startups and firm modernization in established sectors, they have not been especially successful in promoting firms in new sectors. Many have blamed the banks' high risk adversity for this problem (for example, Audretsch 1995). Is this, in fact, the major obstacle to the growth of new high-tech sectors?

To be sure, there are a number of institutional features of the German financial system which bias it against new firms in new sectors. First, only in the last twenty years have the major commercial banks begun to systematically court business with *Mittelstand* firms. Thus the banks which should have the strongest capacities to evaluate and promote riskier high-tech ventures have only recently begun to do so. Even so, the major banks are generally not strongly interested in financing startups. They prefer to focus on established *Mittelstand* firms with at least DM 5 million turnover (Deeg 1995). All of the three major banking groups have established equity participation and venture capital funds, but these funds invest largely in promoting the expansion of already firmly established companies in traditional, rather than new growth sectors. Second, strict prudential regulation and other institutional incentives lead banks to require high collateral for loans - something more easily satisfied by existing rather than startup firms (Quack and Hildebrandt 1995). Third, savings and cooperative banks are not permitted to own equity in nonfinancial firms. Only their regional/national banks or venture funds may do this. Thus the many smaller banks that are likely to have more intimate knowledge of new entrepreneurs cannot support them with risk-based capital. Fourth, the major banking groups are placing emphasis on building other capacities: The savings and cooperative banking groups are eager to build up their securities trading capacities; the major commercial banks are investing heavily in their overseas presence and in the expansion of investment banking services for larger firms. Finally, equity market finance for new companies remains comparatively lethargic. This is attributable to many factors, including the dearth of institutional investors willing to assume higher risk in exchange for higher returns. In short, the very strengths of the German model in promoting established firms are at the same time barriers to new, high-tech firms.

To be fair, there are also numerous nonfinancial barriers to the establishment of nontraditional firms and sectors. First, labor market institutions and cultural factors mitigate labor mobility and the emergence of a larger class of entrepreneurs willing to forego employment stability in the pursuit of their own businesses (Soskice 1995). Second, only in the last decade or so has the state promoted the more intensive university-industry research cooperation that in other countries, notably the US, has often spawned new firms and industries. Various studies have shown that spillovers from university research are more important for smaller firms than large (Acs, Audretsch, Feldman 1992). Third, successful innovation in Germany is largely incremental and accomplished by firms "embedded" in a rich institutional network: training institutions, interfirm collaboration, trade-association or sector-based collaborative R&D, and sector-based information dissemination mechanisms (Soskice 1995; Kitschelt 1991). These innovation-promoting institutions are heavily defined along sectoral boundaries (in good part because of strong trade associations and industrial unions) and thus not easily turned to new sectors. New sectors have a hard time getting established without being able to fully utilize the resources of these established institutions, since participation in them is often the portal to other resources, including state funds. Finally, entrepreneurship in high-risk technologies is discouraged by legal barriers such as the bankruptcy law which prohibits an entrepreneur from establishing a third firm if the first two ended in bankruptcies (Audretsch 1995).

In recognition of this problem, the state has adopted several measures to promote investment in new firms in general, and in high-tech firms in particular. For example, since the early 1980s, the state and financial community have adopted several regulatory changes intended to promote going public among smaller firms. While there was a significant increase in IPOs during the 1980s, equity finance remains relatively circumscribed in Germany, especially for *Mittelstand* finance. Since most SMEs in Germany are still reluctant to go public, banks and public authorities have sought to produce a functional equivalent through an alternative form of limited equity finance. This form of finance has grown dramatically since the early 1980s, as the banking industry was encouraged through regulatory and legal measures by the federal and state governments to expand funding for new and existing capital participation corporations (*Kapitalbeteiligungsgesellschaften*, KBGs). All of the three major banking groups operate KBGs. In each German state there also exists a state-supported, non-profit KBG (also supported by the major banking groups and local business associations).

KBG equity investments are made for a fixed period of typically five to ten years, receive an annual (in some cases profit-dependent) dividend, and generally do not involve a management role for the KBG. Some KBGs, however, function more like venture capital funds, investing in technology-oriented projects and realizing much of their profit only after ending their participation. These KBGs are more frequently involved in assisting firm management where they have invested. Firms use KBGs for a variety of purposes such as seed money, expansion finance, facilitating management-buy-outs, or leveraging additional bank loans.[16] From 1980 to 1989 the total number of equity participations in SMEs grew from 910 to 1,701, and total invested capital rose from DM 620 to DM 2,500 million:[17] At the end of 1993, KBGs held DM 5,400 million of equity in over 2,700 SMEs.[18]

To minimize the risks associated with investing in new and smaller firms, SMEs and their banks draw on several assistance mechanisms that involve close cooperation and risk-sharing between banks and government or government-supported institutions. First, in each German state there is a publicly supported loan guarantee bank and KBG.[19] Firms turn regularly to these organizations for equity injections or loan guarantees when their house bank(s) alone can no longer sustain them. In many cases, state governments also provide loan guarantees directly to firms. Many state development banks provide liquidity assistance through long-term loans to financially distressed SMEs. Such loans are usually provided when the firm's banks cannot provide sufficient liquidity to keep an otherwise competitive firm afloat. In the state of Baden-Württemberg, for example, several hundred SMEs received such liquidity loans during 1993 when the regional economy was in a severe recession. In the vast majority of cases state aid (regardless of form) is contingent upon continued bank participation in the firm's credit risk, thus reducing the likelihood that non-competitive firms will be sustained through state subsidies. Through these public-private finance mechanisms, banks and government increasingly share the risk of the riskiest SME investments such as start-ups and product innovation. They help viable SMEs survive through short-term downturns in demand or financial bottlenecks.

While all of these efforts have had considerable success in aiding existing firms or startups in established sectors, their success in promoting new high-

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[16] Fromman, Holger. "Die Rolle der Kapitalbeteiligungsgesellschaften in der Unternehmensfinanzierung", *Der langfristige Kredit*, No. 22/23, 1991, pp. 48-50; also Stedler, Heinrich R. "Beteiligungskapital im bankbetrieblichen Leistungsangebot", *Die Bank*, June 1993, pp. 347-351

[17] Gräshel, Ulrich. 1989. "Finanzdienstleistungen für wachsende Unternehmen," In *Corporate Finance*, eds. Hans J. Krümmel and Bernd Rudolph. Frankfurt: Fritz Knapp, pp. 53-55. This is still a modest sum when compared to the value of the banks' holdings of publicly traded securities; in 1989 banks held DM 15.6 billion of marketable equities. Deutsche Bundesbank, *Statistical Supplement* No. 1; See also Faselow, Karl-Heinz. "Eigenkapital: Die solide Basis," *Frankfurter Allgemeine Zeitung*, 28 May 1990. In 1988 less than one-third of the total invested by KBGs was accounted for by venture capital funds. "Beteiligungsvolumen kräftig aufgestockt," *Handelsblatt*, 2/3 June 1989.

[18] DM 511 million of this was invested in 343 firms in eastern Germany. Hummel, Marlies. 1995. "Kapitalbeteiligungen in den neuen Bundesländern." *IFO Schnelldienst* 48(13), 11-19.

[19] Public loan guarantee cooperatives and equity participation companies are actually public-private organizations, receiving public and private funding and overseen by boards consisting of government, business, and bank sector representatives.

tech firms/sectors is more doubtful. German equity participation funds, for example, have invested 14% of their capital in machinery companies, and only a combined 8.8% in biotech, telecommmunications and computer firms: In the US, by contrast, 38% of venture capital funds are invested in these last three sectors.[20] Government grants and loans for startups are widely dispersed and are generally not targeted on startups in specific sectors. The house bank procedure, with its reliance on expert opinions from chambers, likely reinforces investment in existing sectors, because the chambers are familiar with them. Indeed, the large majority of government startup loans goes to craft and service firms in traditional sectors. New firm startups based on more radical innovations, while increasingly enjoying state support, are still few in number. Even where such firms are viewed favorably by government agencies and banks, the frequently very long approval time for government technology loans/grants means that only firms which receive advanced loans from banks have a chance to survive. The growing number of equity participation/venture capital funds also tend to benefit existing firms with steady revenues and cash flow, since these funds typically expect annual dividends. The number of funds willing to invest in more radically innovative companies and wait several years for a pay-off is relatively limited.

Despite the shortcomings of the financial system in promoting new high-tech firm startups, it would surely be misleading to suggest that this is the primary barrier to high-tech startups. For just as the success of the German model is due not to one institution, but to the system created by a range of institutions, so too are the failures of the model. Simply raising the supply of true venture capital does not mean there would be commensurate demand. Thus, achieving the goal of new growth sectors requires broader institutional and policy changes; changes which ultimately may be incompatible with sustaining the traditional strengths of the German financial model.

5. Conclusion

In conclusion, we turn to the question of the future viability of the German model of industrial finance. As always, the further one tries to predict into the future, the greater the likely inaccuracy of any forecast. Nonetheless, the contours of change in the German system are clearly evident and may, within reason, be extrapolated into the near future. Perhaps the most significant contour of change is an emerging dualism in the industrial finance model between a *Mittelstand* finance model and a large firm finance model. The *Mittelstand* model resembles most closely the traditional model of close house

[20] "Beteiligungskapital: Meist nur Ehe auf Zeit," IWD: Informationsdienst des deutschen Instituts für Wirtschaftsforschung, 6 June 1996.

bank relations between bank and firm and heavy bank financing of firm investment. Through group competition and *Allfinanz* banks have sought to deepen their relations to *Mittelstand* firms by providing them not only with financing (both in the form of loans and increasingly in the form of limited equity participations), but with an ever-wider range of financial and business services. It is essential to note that this kind of bank behavior rests on specific institutional incentives which are themselves heavily shaped by state policies. Thus the importance of state policy in preserving Germany's system of industrial finance should not be underestimated. As regulatory harmonization and market competition in financial services grow, especially within the European Union, the future of Germany's financial model will ride on the ability of the state to maintain the institutional incentives which undergird it. Indeed, the state, at both the federal and *Länder* level, has worked hard to maintain and adapt this system to changes in broader structural market conditions. In sum, the traditional finance model seems secure for *Mittelstand* firms as far into the future as one can reasonably predict.

In contrast, the German model of large firm finance has undergone more extensive change in the last two decades and will likely do so in the near future as well. Large firms have attained a relatively high level of financial independence from domestic banks. They achieved this through growing rates of self-finance and increased competition among domestic banks for large firm business, while foreign banks and capital markets added new potential sources of finance. With this greater independence the relationship between large banks and firms has become more arms-length, as firms search for the cheapest source of capital. As the European and global capital markets continue their integration, this general line of development will continue. This does not mean, however, that large firm-large bank relations in Germany have moved wholly to the Anglo-Saxon model. While large German firms are placing greater emphasis on finding the best financial deal - whatever the source - they are still strongly interested in maintaining stable, long-term shareholdership. They are achieving this largely by holding large blocks of shares in each other. Large banks continue to play an important, but far from dominant, role in this insider system of corporate control. Again, while we can expect the future to bring further expansion of the German and European securities markets and a broadening of the number of shareholders in German firms, the pace of change is likely to be far slower than one might have predicted at the beginning of the 1990s. Thus, it seems very unlikely that large German firms will be subject in the foreseeable future to the short-term investment horizons more typical of the UK and US.

Given the shortcomings of the German financial model, notably in promoting new firms and sectors, is it still a desirable model to imitate? To what extent is institutional imitation possible? Obviously, it would be desirable to combine the advantages of long-term financing of the German model with the dynamism and risk-taking of the Anglo-Saxon model. The Germans are indeed trying to achieve this. Yet such a blending is extremely difficult to realize, given that the two systems rest on different logics - one essentially tries to minimize risk through collateralization of debt, long-term relationships, and modest state sharing of risks; the other tries to minimize investor/lender risk through portfolio diversification and quick entry/exit from relationships.

But difficult does not mean impossible. Some institutional features of the German model could improve the function of other financial markets and may be readily transferable, given the political will. For example, state credit banks which channel long-term funds to firms could make a considerable impact in other countries. This would not necessarily need to involve government subsidies (at least direct subsidies), since state banks can use their own high credit rating to borrow long-term funds at the lowest possible rates. These funds can then be used to lower capital costs for firms (especially small and medium size enterprises). The use of a house bank procedure would also ensure a central role of the banking system in allocating credit and that state banks do not compete with private banks.

On the whole, however, transferring the German financial model, especially the system of long term finance, would be very difficult since it rests on a wide range of institutions, policies, regulations and practices: The banking system must have access to long-term savings, savers must have incentives to save long-term, banking regulation must support long-term lending, and interest rate stability must be high (see also Vitols 1995a). Transferring only some elements of the model is likely to bring partial success at best and, if not done well, may actually introduce financial market inefficiencies. Even so, the German financial model still has strengths worthy of emulation. Given that the German financial model is itself a moving target, however, any attempts at institutional transfer should be done with great caution.

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