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Financial systems and industrial policy in Germany and Great Britain: the limits of convergence

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Sigurt Vitols

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Sigurt Vitols

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Abstract

A widely held view is that, since the 1970s, the nation-state has suffered a significant reduction in its capacity to achieve national economic policy goals through the regulation of the financial system; as a result, national political economies are now characterized by a market-driven convergence towards financial systems dominated by privately-owned, internationally-active “financial supermarkets” with weak links to both industry and government.

Through a comparison of Germany and Great Britain, this paper critically examines this thesis and poses the following two questions: (1) What implications do the lifting of capital and exchange controls and the reorientation of monetary policy to anti-inflationary policies have for the state’s capacity to regulate financial systems? and (2) What implications does this regulatory discretion (if any) have for industrial finance and the state's capacity to utilize the financial system to achieve microeconomic industrial policy goals? In response to these questions, it is demonstrated how the state has retained significant regulatory autonomy in ways which have significant consequences for industrial finance and industrial policy.

Zusammenfassung

Eine weit verbreitete Ansicht ist es, daß seit den siebziger Jahren die wirtschafts- und industriepolitische Steuerungskapazität des Staates durch die Regulierung des Finanzsystems erheblich zurückgegangen ist. Als Resultat erzwinge der Markt eine Konvergenz der nationalen Finanzsysteme zu einem Modell, das von privaten, international tätig Allfinanzkonzernen mit schwachen Verbindungen zum Staat und zu Industrieunternehmen geprägt ist.

Durch einen Vergleich Deutschlands und Großbritanniens wird in diesem Papier diese These kritisch geprüft, indem die folgenden Fragen gestellt werden: (1) Welche Bedeutung haben die Aufhebung der Kapital- und Devisenkontrollen und die Umorientierung auf eine stabilitätsorientierte Geldpolitik für die Fähigkeit des Staats, das Finanzsystem zu regulieren? und (2) Welche Bedeutung hat diese Regulierungskapazität (wenn vorhanden) für die Industriefinanzierung und die Möglichkeiten des Staats, industriepolitische Zeile auf der Mikroebene zu erreichen? Als Antwort auf diese Fragen wird gezeigt, daß der Staat immer noch eine bedeutende Regulierungskapazität hat und daß diese Kapazität eine erhebliche Bedeutung für die Industriefinanzierung und die Industriepolitik hat.

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1. Introduction

A widely-held view is that, since the 1970s, the nation-state has suffered a significant reduction in its capacity to achieve national economic policy goals through the regulation of the financial system.[1] According to this view, advances in information technology, the growth of the multinational corporation and the innovative capacity of financial institutions have resulted in an internationalization of financial markets; these changes have rendered the national systems of regulation erected in the 1930s and 1940s obsolete, and nation-states have like a row of falling dominoes willingly or unwillingly dismantled these systems. As a result, national political economies are now characterized by a market-driven convergence towards financial systems dominated by privately-owned, internationally-active "financial supermarkets" with weak links to both industry and government.

The causes of these regulatory changes are complex and are critically explored in other contributions to this volume. This essay takes as its starting point the reorientation of macroeconomic policy towards price stability and the associated lifting of capital and exchange controls and poses the following two questions: (1) what implications do these changes have for the state's capacity to regulate national financial systems, and (2) what implications does this regulatory discretion (if in fact any remains) have for industrial finance and the state's capacity to utilize the financial system to achieve microeconomic industrial policy goals? In response to these questions, I argue that the state retains considerable autonomy in the regulation of financial systems in ways which have significant consequences for industrial finance and industrial policy. The German and British financial systems are drawn upon for evidence to back up these claims; these two countries are generally taken to be exemplary cases of two radically different types of financial systems, the bank-based versus credit-market based system, and thus provide suitable test cases for the convergence hypothesis.

After critically reviewing the convergence thesis in the second section, the essay in the third section identifies four areas in which the state enjoys significant regulatory discretion and in which there is little or no evidence for convergence between the two countries: (1) the regulation of corporate governance, which structures the relationship between financial institutions and industrial companies, (2) the regulation of household savings, particularly of long-term savings, which has important consequences for the access of companies and financial institutions to long-term funds; (3) the regulation of the

[1] Thanks to Richard Deeg, Josef Esser, Paul Lovejoy, Colin Mayer, Christel Lane, John Mawson, David Soskice and participants in workshops at the Wissenschaftszentrum Berlin and the Center for European Studies for helpful comments and criticisms.

internal governance of the financial sector, which has important consequences for the preferences and strategies of financial institutions with regard to investment and industrial finance; and (4) the regulation of public and parapublic special credit institutes, which influence the behavior of financial institutions by altering the constellation of risks faced by these institutions in industrial lending. These regulatory differences have important consequences for defining the universe of institutions providing industrial finance, the spectrum of investments they will seek, and their access to and capacity to provide long-term capital.

The fourth section of the paper argues that this diversity in national systems of regulation results in significant differences in industrial finance and industrial policy capacity in the two countries. An analytical framework for comparing financial systems distinct from the usual bank-based versus market-based typology is developed; this framework focuses on the **capacities** of different systems to provide different types of capital (equity, short-term debt, and long-term debt capital) to different types of companies (small and medium-sized enterprises, or SMEs, versus large companies) situated in industries experiencing different types of growth patterns (stable, declining and new industries). The risk-adverse orientation of most financial institutions leads them to prefer investments in larger companies in industries with steady growth paths; however, the successful growth and adjustment of national economies depends on the provision of capital for the development of new industries and the upgrading of "declining" industries. Microeconomic industrial policy is understood as the attempt to influence the flow of capital to declining and growth sectors and of long-term capital to companies in industries with stable growth paths. The experience with different sectors in each country are drawn upon to illustrate the argument against convergence.

The final section critically confronts the argument that, while financial systems retain considerable diversity as of the mid-1990s, tendencies towards convergence are long-term and have just started to work themselves out. The roots of national regulatory discretion and diversity arises from the limits to internationalization of financial markets and the lack of organizational forms and regulatory systems which are clearly "best" across all states and in achieving all goals. The type of productive regime dominant within a national economy, for example, is a key determinant of the demand for various types of external finance. One consequence of this is that the reform of financial systems may have little consequence for the productive sector; a second consequence of this is that lack of convergence in the productive sphere may be another important factor supporting continued diversity in the financial sphere.

2. The Convergence Hypothesis

As outlined in other contributions to this volume, during the 1930s and 1940s there was a great increase in the scope of regulation of financial systems in the industrialized countries. In addition to exchange and capital controls designed to insulate domestic financial markets from external pressures, a host of internal regulations were imposed with the intent of increasing the stability of domestic systems. These domestic solutions varied widely and were greatly influenced by internal debates, the domestic balance of power and domestic economic goals. National regulatory regimes differed according to the degree to which they controlled interest rates and credit creation, to the degree to which they restricted the activities of different types of financial institutions, and to the extent to which financial institutions were nationalized. Comparative political economists view the 1930s and 1940s as a period in which the diversity in the variety of financial systems and their role in national industrial policy greatly increased. At least three distinctive types of financial systems can be identified according to their structural characteristics (Gerschenkron 1962; Sayers 1967; Schonfield 1965; Zysman 1983; cf also Introduction to this volume);

(1) a **market-based system,** in which a large proportion of financial assets are "tradeable" on securities markets. Industrial companies obtain much of their external funds on these markets. Financial institutions in this type of system are specialized in the services they provide, resulting in a segmentation of commercial banking, investment banking and trust fund functions. The UK and the US are typically cited as the leading examples of this type of system;

(2) a **bank-based system,** in which a high proportion of financial assets are held by banks. Industrial companies obtain much of their external finance from banks. Banks are relatively unrestricted in the types of financial services they may provide, and are in the limiting case "universal banks" providing the whole palette of financial services. Germany is the leading example of this type of system;

(3) a **state-based system,** in which the state controls or influences the allocation of a major portion of capital through the direct ownership of a significant proportion of financial institutions. Securities markets tend to play a small role in these systems. Industrial companies raise a major proportion of their external funds directly from these nationalized financial institutions or indirectly in the form of special refinancing mechanisms. France was the leading example of this system.

These structural characteristics at the same time define state capacities for using the financial system for achieving industrial policy goals, with the capacity for state action lowest in the market-based system and highest in the

state- based system.[2] In the bank-based system, the close links between banks and industrial companies (based in large part on the companies' dependence upon banks for external capital) create the possibility for the state to achieve industrial policy goals through negotiating deals with the banks. Thus in Germany the state has often been able to negotiate with banks in order to influence industrial adjustment; the British state in contrast has generally not been able to use the financial system to achieve its industrial policy goals, relying either on the market or on direct nationalization of industrial companies to influence industrial adjustment (Schonfield 1965; Zysman 1983).

According to the convergence view, a number of trends over the past decades have eroded the state's capacity to regulate financial systems. First, the growth of multinationals, which have the capacity to internally reallocate capital raised from different financial markets, has reduced the ability of states to influence the credit creation and allocation process within their national boundaries. Secondly, the growth of information technology has increased both the capacity of financial institutions to shift capital between different national markets and to innovate more rapidly than the regulatory system can react. Thirdly, the slowdown in economic growth and the rise in unemployment have squeezed state budgets, reducing the resources available to the state to influence the allocation of financial resources. The efficacy of existing controls is reduced by these tendencies, decreasing the incentives to retain them (Rybczynski 1984a, 1984b, 1988; Gardener and Molyneux 1993; Gentle 1993).

These changes, according to the convergence view, have rendered alternatives to the market-based financial system increasingly inviable. The most obvious victim of these changes is the state-based system, as illustrated by the experience with France in the 1980s. Upon coming into office in 1981, the Socialist government attempted to reflate the domestic economy, in part through greater control of the financial system through the nationalization of the remaining important private banks. Within a few years of coming into office, however, the Socialists began dismantling the system of selective credit allocation that they had strengthened. Speculative pressure against the franc as well as the capacity of multinationals to shift funds across borders forced the state to abandon controls on capital movement, to create short-term money markets, to liberalize foreign access to the stock exchange and to privatize a number of state-owned banks (Goodman and Pauly 1994; Loriaux 1991).[3]

These changes have also led to the undermining of the basis for the bank-based model. One of the sources of the banks' power to "steer" industry came from the lack of alternative sources of finance; capital markets for example

[2] Zysman (1983) provides the most extended analysis to date of the relationship between the structure of financial systems and national industrial policies.

[3] Note however that Loriaux (1991) advances the thesis that these measures were designed to increase state influence over the financial system in response to the new conditions prevalent under the post-Bretton Woods monetary order.

were relatively underdeveloped. The dependence of firms on their *Hausbank* for finance forced such companies to be responsive to the banks' wishes, thus allowing the state to influence the process of adjustment through negotiating with the banks. The development of German companies into multinationals with access to international financial markets has opened up alternative sources of external finance for German industry, thus weakening the banks' influence, and thus indirectly the state's influence, over industry (Deeg 1992; Sabel et al 1993).

These changes, furthermore, have driven even the most market-based systems further in the market-oriented direction. Throughout most of the postwar period, regulatory authorities in both the UK and the US had imposed formal or informal controls limiting the types of financial service activities different financial institutions could provide, effectively segmenting the financial system into different categories of specialized institutions; in addition, the US imposed significant restrictions on the geographical activity of banks, effectively segmenting commercial banks located in "money centers" such as New York and servicing large firms from the locally-based "community banks" servicing SMEs. This segmentation, however, has been undermined by the ability of financial institutions to innovate and provide new financial services which blur the distinction between market segments (e.g. NOW accounts in the US); segmentation has been further undermined by the entrance of a number of non-bank competitors providing a wide variety of financial services refinanced through short-term funds from the money markets. Financial institutions are thus increasingly providing a diversified set of financial services (Reid 1982; Moran 1984; Grady and Weale 1986; Rybczynski 1984a, 1984b, 1988).[4]

Thus, to summarize the convergence argument, the basis of state-based and bank-based financial systems have eroded through the decreasing efficacy of financial regulation, forcing regulatory agencies to sooner or later move towards a regulatory regime characterized by the free play of market forces. The type of financial institution emerging within this environment is the internationally-active "financial supermarket", offering a wide range of fee-for-service products and taking advantage of economies of scale created through size, diversified product offerings and the capacity to seek refinancing where it is cheapest. Unlike the traditional universal German *Hausbank* with its long-term relationships with customers, however, this financial supermarket is characterized by competition with other similar institutions on the basis of short-term price orientation for a pool of price-discriminating customers.

[4] Rybczynski even claims that these developments represent a trend towards a new type of financial system based on the securitization of all financial assets, e.g. even mortgages and credit card receivables. This securitized system is a third distinct stage in the development of financial systems after the bank-based system (first stage) and the market-based system (second stage).

An alternative view, while acknowledging the sea changes in monetary policy and the removal of exchange and capital controls, nevertheless emphasizes the persistence in regulatory discretion in ways which are significant for industrial finance. The sources of this discretion and the way this has played out in Germany and Britain are reviewed in the next section; the consequences of this discretion for industrial finance are reviewed in the section thereafter.

3. Persistence of Regulatory Discretion

This section identifies four aspects of financial systems in which the state maintains significant regulatory discretion: the regulation of **corporate governance**, which involves the relationship between financial institutions and non-financial companies; the regulation of household savings, which affects financial institutions' and non-financial companies' access to funds; the regulation of **financial sector internal governance**, which affects the goals and capacities of financial institutions; and the regulation of **special-purpose credit institutes**, which influences the risk profiles faced by financial institutes or allow the state to directly allocate resources to the non-financial company sector. In each case, Germany and Great Britain are analyzed to show how this discretion has been exercised, resulting in significant differences between the two countries.[5]

Regulation of Corporate Governance

Of the four aspects of financial system regulation examined in this section, national differences in the role of financial institutions in the governance of non-financial corporations have received the greatest attention.[6] The regulation of corporate governance involves the definition of roles that shareholders (including financial institutions) may play in the determination of corporate policy and appointment of key management personnel. In addition to the direct determination of policy through ownership of voting shares and the naming of representatives to company boards, corporate governance also influences corporate strategy through defining the openness of the market for corporate control and thus the ease with which hostile takeovers may be executed.

Germany is characterized by "insider" shareholder dominance of corporate governance and a relatively closed market for corporate control. Financial institutions are key shareholders in the majority of the largest joint-stock

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5 See Allen (1990) for another strong critique of the convergence argument in the context of a comparison of German and US patterns of financial regulation.

6 Recent comparative work includes Berglöf (1986), Franks and Mayer (1990), DeJong (1991) and Jenkinson and Mayer (1992).

corporations and have at their disposal a variety of mechanisms which allow them to "leverage" their influence (Pfeiffer 1994; Neuberger and Neumann 1991; Ziegler et al 1985). Banks are allowed to proxy vote on shares that are typically left on deposit with them by small shareholders. When more than one bank holds shares in a larger company, the banks often designate one bank to be the "lead" shareholder, holding the chair of the supervisory board and making decisions for the other banks on policy. A provision commonly included in corporate bylaws allows shareholders controlling 25% of the voting stock, when in agreement with management, to block outside proposals. Due to the lack of openness of the market for corporate control there have only been a handful of hostile takeover attempts in Germany. Long-term stability in ownership supports long-term investment planning, makes companies less prone to fluctuations in markets trends and eases corporate reorganization (Soskice 1992; Dyson 1986; Esser 1990; Sabel et al 1993).[7]

Great Britain in contrast is characterized by a relatively open market for corporate control and weak relationships between financial institutions and nonfinancial companies (Ingham 1984; Hall 1986; Lisle-Williams 1986; Scott and Griff 1985). Regulations such as the duty to maximize shareholder value strictly limit the defenses available to management to rebuff hostile takeover attempts. The fragmentation of ownership limits the capacity of shareholders to coordinate, and the trusteeship duty of many institutional investors (e.g. pension funds) to maximize return on investment often obligates them to accept such offers. The increasing importance of shareholdings by institutional investors such as pension funds and insurance companies have meant that even the largest blue-chip companies have become targets for hostile takeovers. The affect of this openness is to undermine long-term investment plans, since companies may have to cut investment when suffering short-term losses in order to avoid a decrease in share price which could trigger a hostile takeover attempt (Blake 1992).[8] Thus Germany and Great Britain are at opposite ends of the continuum between "insider" influence over management and corporate policy on the one hand and the discipline exerted by the external threat of hostile takeovers on the other hand.

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[7] These mechanisms have come under periodic attack from a variety of interest groups including the unions, the social democratic party and the liberal party; critique of the *Macht der Banken* (power of the banks) ranges from the issue of endangering economic democracy through a concentration of power in a few hands to the issue of economic inefficiency in allocating resources to the "insiders" with close connections to the banks at the expense of small shareholders and depositors.

[8] See for example the effect of Hanson's hostile bid for control of Imperial Chemical Industries (ICI), one of Britain's flagship manufacturing companies; ICI long considered itself to be to large for a hostile takeover, but after the bid it reoriented its investment policy towards its share price and shorter-term payoffs (Financial Times, 25 March 9, p. 12).

Regulation of Household Savings

In industrial economies, the household sector generally is the largest net saver and the non-financial company sector is generally a net debtor; the state and financial institutions sectors generally fall somewhere between these two sectors (Dean et al 1989). One of the key functions of the financial system is to make savings from the household sector available to the non-financial company sector for productive investment. Long-term savings in the form of supplementary pensions and insurance policies have become more important in recent decades, and regulation in the interests of protecting savers has increased; in addition, the level of savings in many countries has become a policy issue and governments have attempted to create incentives to increase savings. Aspects of regulation of savings include the determination of institutions savings may be vested in, types of investments these institutions may make, and conditions under which these savings may be withdrawn. These regulations affect the form, maturity profile and quantity of funds available for industrial investment.

In Germany, over the postwar period an increasingly large proportion of household savings have been channeled into forms which make long-term "patient" capital readily available to the non-financial company sector. From 1950 to 1990, the proportion of household financial assets held in the form of cash or short-term bank deposits has decreased from 33% to 8%.[9] At the same time, savings in the form of company pensions increased from almost nothing to 8% of household financial assets; unlike in the Anglo-American countries, where companies are allowed to retain funds set aside for future pension liabilities and reinvest them within the company. This mechanism is used extensively by large companies and now has become a more significant source of capital than long-term bank loans.[10] The direct access to pension commitments increases the predictability of financial planning and helps insulate companies from short-term fluctuations in financial markets (Deutsche Bundesbank 1984b; Davis 1991).

Another important repository of savings in Germany is the insurance companies, which have increased in importance from 17% to 22% of household

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9 Own calculations from Deutsche Bundesbank figures; see also Maier (1983).

10 In technical terms, companies create an item on their balance sheets accounting for the reserves they have set aside for future pension payments; companies are in effect allowed to reinvest this money set aside within the company, with future pension payments provided by the revenue stream produced by current productive investments. These companies are members of an insurance fund which assumes uncovered pension liabilities in the case of company insolvency (Hoppenrath 1994; Wiesbaden 1990). In 1989, pension commitments accounted for 14% of the value of large German companies; the comparable figure for bank loans with an outstanding maturity of 5 or more years was 4%. In 1978, the proportion of pension commitments and long-term bank loans was still roughly equal, each accounting for around 10% of the value of large companies (Deutsche Bundesbank 1992).

financial assets from 1950 to 1990. Unlike in other countries, German insurance companies invest heavily in long-term bank bonds and certificates of deposit, with these investment vehicles accounting for about 45% of insurance company assets (Deutsche Bundesbank 1987; GDV 1992). Long-term bank bonds allow insurance companies the advantages of predictable long-term fixed-interest income, the diversification of risk through a broad loan portfolio and the delegation of monitoring of this loan portfolio to the banks; at the same time this is an important source of long-term capital enhancing the banks' capacity to lend long-term to companies. This contrasts with insurance companies in other countries which invest mainly in the tradeable securities of non-financial companies and in real estate. The channeling of insurance company funds through the banks in Germany reinforces the position of banks within the financial system and has important consequences for the access of companies, primarily of SMEs, to long-term debt capital.

Finally, German banks themselves have become important repositories for long-term household savings through offering a variety of attractive savings vehicles. Short-term (sight) deposits have decreased in importance relative to longer-term forms of savings such as savings accounts and certificates of deposits; from 1950 to 1990, short-term deposits decreased from 60% to 18% of household deposits with banks. Access to these long-term forms of savings enhances the banks' capacity to provide long-term capital to industry.

In Britain, long-term savings have been channeled away from banks towards pension funds, insurance companies and building societies. The greater portion of household deposits with British banks are short-term in nature.[11] The short-term nature of these deposits and unpredictability in the costs of these deposits (due to fluctuations in the interest rate paid on these deposits) have been cited by the clearing banks in defense of the limited amount of long-term lending they do; since banks generally try to match the maturity and interest rate structure of liabilities with assets, this restricts the capacity of British banks to lend long-term and with fixed interest rates to industry (LCLB 1977). While restrictions on the type of investments building societies may make have been partially lifted in the 1980s, their investment activity is still overwhelmingly concentrated in real estate rather than in industrial lending (Callen and Lomax 1990).

In contrast with Germany, the regulation of company pensions in Britain has reduced company access to funds set aside for future pension payments by requiring companies to turn over these funds to independent pension funds. These funds in turn are required to follow a "prudent man" rule of diversification restricting the amount that can be invested in any one company. Pension funds thus have widely diversified portfolios, limiting their capacities to monitor investments in individual companies other than through general indicators of

[11] In 1990, sight deposits accounted for 60% of UK household sterling deposits with banks (own calculations from CSO 1993).

short-term performance such as sales or profitability; another source of pressure for short-term returns is the fact that pension fund managers are typically hired on a short-term basis and evaluated on the basis of the short-term results from their management of funds. The widely-held nature of many British publicly-traded companies and thus the difficulty of reaching shareholder agreement on restructuring plans encourages investors to follow the "exit" option of divestment with early warning signs of financial distress.[12] Most SMEs are cut off from access to pension fund capital, since pension funds concentrate on investments with high liquidity and low costs of evaluation and monitoring (i.e. securities of large publicly-traded companies).

Insurance companies are also important repositories of long-term savings in Great Britain.[13] Unlike in Germany, however, the supply of long-term bank bonds is restricted and British insurance companies have made direct investments in the tradeable securities of non-financial companies. With the increase in the level and volatility of inflation in the late 1960s and 1970s, insurance companies have preferred corporate equities to long-term corporate bonds. Insurance companies also are required to follow a diversified investment strategy leading to a similar bias in favoring the "exit" investment strategy outlined above for the case of pension funds; in addition, preference for securities of large publicly-traded companies excludes most SMEs from this source of long-term capital (Prodano 1987; Blake 1992).

Thus a major difference between the two countries in the regulation of savings is that a greater proportion of household savings is channeled into "patient" long-term capital for industrial investment in Germany; this occurs either directly, through pension provisions reinvested in the company, or indirectly through long-term household and insurance company deposits with banks. In Britain, banks have access mainly to short-term deposits and are constrained in the amount of long-term lending they may do; the channeling of long-term household savings through insurance companies and pension funds has the effect of cutting off SMEs from long-term capital and creating pressures on publicly-traded industrial companies for short-term financial performance.

Regulation of Financial Sector Governance

A third major aspect of financial system regulation in which the state has significant discretion is the internal governance of the financial sector. Given the strong tendency to concentration in financial services provision, the regulatory environment greatly influences the chances of survival for alternatives to large private financial services conglomerates. The British

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12 For the logic of these mechanisms in an Anglo-American style open and fragmented system of ownership of publicly-traded companies see Porter (1993) and Jacobs (1992).

13 In the late 1980s, claims on pension funds and insurance companies accounted for about 45% of all household financial assets (own calculations from OECD data).

regulatory system has constrained such alternatives and thus the domestic banking sector is dominated by four large clearing banks with a weak capacity to provide many forms of industrial finance. The German system in contrast has supported the development of two alternatives to large joint-stock banks; both of these alternative sectors have mechanisms which align their interests closely with the interests of industrial companies, particularly of SMEs.

Analyses of the German financial system have tended to focus on the role of the large joint-stock banks and their relationships with industry; since the 1950s this sector has been dominated by three large private banks (Deutsche Bank, Dresdner Bank and Commerzbank). This interest stems in part from historical accounts stressing the importance of the large joint-stock banks in the development of heavy industry in Germany, which lagged behind countries such as Britain and the US in industrial development (Riesser 1910; Gerschenkron 1962; Hilferding 1968). However, despite their importance for the large-firm sector, these three banks account for just 9% of total banking sector assets in 1990.[14] The two main alternatives to the large joint-stock banks for industrial finance, the public savings bank sector and the cooperative bank sector, grew in relative importance throughout the 1960s and 1970s, in large part by concentrating on the growing need for financial services by SMEs.[15]

The most important banking sector in terms of total assets is the savings bank (Sparkassen) sector accounting for 35% of banking assets in 1990. This sector has a three-tier structure; the bottom tier consists of about 750 public savings banks which are owned by cities or counties. These public savings banks have focused on lending to SMEs as well as to investment in municipal infrastructure; they have also increasingly become involved in local economic development, for example through the financing of technology parks. The relatively small size of many of these banks limits their access to national capital markets and their independent capacity to develop specialized services such as management consulting or brokerage services. The savings banks have nevertheless been able to provide these services to their customers through drawing on the regional and national tiers of the savings bank organization; these upper tiers are able due to their size to take advantage of economies of scale and provide the lower tier banks with these specialized services (Guthardt 1988). The Landesbanken at the regional level, which are owned by the states and regional public savings bank associations, have also become increasingly involved in lending to large firms as well as in the restructuring of regionally significant employers, often stepping in where the joint-stock banks have reduced their commitments (Poullain 1979; Girke and

14 Own calculations from Deutsche Bundesbank data.

15 For an excellent English-language account of these developments see Deeg (1992). The proportion of employment provided by SMEs in Germany is large in comparison with other industrialized countries; the importance of SMEs in Germany can in part be accounted for by the support given to modernization through the high quality of service provided by the public savings banks and cooperative banks (Vitols 1994).

Kopplin 1977). Both the local and regional banks in this sector are required in their charters to take into account the economic development needs of their jurisdiction and reinvest a significant proportion of their funds there, resulting in a greater commitment to supporting restructuring of distressed firms.[16]

The cooperative banking sector developed as part of the response of agriculture and small-scale craft production to industrialization in the 19th century and provided the capital needed for these sectors to modernize (Kluge 1991). This sector grew rapidly in the 1960s and 1970s and by 1990 accounted for 15% of all banking assets. Like the savings bank sector, the cooperative bank sector also has a three-tier structure; the lowest tier is composed of some 3,400 banks owned and governed predominantly by small firms. The regional and national levels provide the lower levels with the specialized financial services, refinancing and training services. Cooperative banking associations have the responsibility of auditing cooperative banks and controlling membership (e.g. through the authorization of entry) (Lightsome 1989). The fact that these cooperative banks are owned by their customers have led them to be especially supportive of modernization efforts in the SME sector (Deeg 1992).

The large joint-stock banks, which have historically concentrated on servicing large firms, have in the 1970s and 1980s become increasingly interested in small business lending. The volume of business coming from large firms has declined due to the growth of reinvested pension reserves and the provision of in-house financial services through the development of corporate treasury departments. However, in order to acquire small firm business the large banks have to compete with the high level of service provided by the public savings bank and cooperative banking sectors.

Great Britain in contrast is characterized by a paucity of alternatives to large joint-stock banks. Banking was dominated by small "country" banks at the beginning of the nineteenth century (Pressnell 1956), but the authorization of joint-stock banking with the Banking Act of 1926 led to a proliferation of joint-stock banks at the expense of the country banks. Legislation allowing the joint-stock banks to operate in London in competition with the Bank of England and a series of banking crises created tremendous pressures for concentration; joint-stock banks bought each other and the country banks up or forced them out of business. Alternative forms of ownership were prohibited or severely restricted, and since WWI the domestic commercial banking sector has been

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16 See for example Edwards and Fisher (1994) who generally argue that differences in bank behavior between the two countries are minimal; nevertheless, they show that German banks are more willing than British banks to support restructuring plans for distressed companies. Regional governments have resisted suggestions to privatize the savings banks out of the belief that they have a greater commitment to local and regional economies than the private banks (Financial Times, 28 September 1993, p. 2; 23 March 1994, p. 18).

dominated by a handful of London-based clearing banks (Sykes 1926; Sayers 1967; Sheppard 1971).[17]

The weakness of the clearing banks' industrial finance capacity has been the subject of a number of official inquires[18] and of extensive academic analysis (Ingham 1984; Lisle-Williams 1986; Carrington and Edwards 1979, 1981). Finance for SMEs has been a particular cause for concern, since their size limits their access to many forms of external finance such as the stock exchange; SMEs are thus dependent upon the four large London clearing banks for the bulk of their external finance. Partially due to their great dependence on short-term deposits, however, banks prefer to give SMEs short-term credits in the form of overdrafts (authorizations to overdraw checking accounts up to a certain limit) which are renegotiated periodically (Deakins and Philpott 1993; EOSME 1993). While overdrafts are often "rolled over" to finance long-term investments in equipment, the fluctuation of overdraft interest rates according to market conditions renders the costs of financing uncertain over the medium- and long-term. Additionally, shifts in the internal credit-allocation policies of banks mean that small businesses often gain easy access to credit during expansions but are one of the main types of customers to be "credit rationed" during recessions. The clearing banks are currently considering expanding their activity in the SME sector but are uncertain about how to do this as well as of the potential costs and benefits (BoE 1991, 1994; Economist, 13 November 1993, pp. 75-6; DTI 1991; Hutchinson and McKillop 1992).

Banks provide more medium-term finance to large companies, often in the form of syndicated credits, but have played a relatively modest role in the restructuring of distressed industrial companies relative to Germany; the non-renewal of short-term bank loans to companies is often the final step before receivership and/or government intervention. Indicators of dissatisfaction with British bank performance include the rapid growth of leasing and the expansion of the market share of foreign banks in lending to industry.[19]

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[17] At least some of the foundations for alternative banking sectors were present in the nineteenth and early twentieth centuries. See for example the extended debate about the establishment and powers of a municipal savings bank in Birmingham. The country banks could have in principle formed the core of a cooperative banking sector. The joint-stock banks however were able to hinder authorization in Parliament of permanent status for the Birmingham savings banks; and the Bank of England encouraged country bank dependence on the London-based banks rather than the formation of their own clearing and refinancing system.

[18] These include the Macmillan Committee on Finance and Industry in the early 1930s, the Radcliffe Committee on the Workings of the Monetary System of the late 1950s and the Wilson Committee to Review the Functioning of Financial Institutions of the late 1970s.

[19] Interestingly enough the expansion of foreign business has been with companies with better than average credit quality rather than with marginal firms (Financial Times, 25 July 1994, p. 6). While finance companies provide a medium-term financing alternative to short-term bank overdrafts through installment plans, this finance is generally limited to

Regulation of Special-Purpose Credit Institutes

A fourth area where the state has considerable discretion is the regulation of special purpose public or quasi-public credit institutes. These credit institutes are typically conceived of as correctives for deficiencies in financial markets in the provision of credit to types of clients. In some countries special credit institutes have been mechanisms for the deliberate channeling of capital towards "national champions". However, these institutes may also dramatically affect the pattern of capital allocation with relatively little public cost, either through a redistribution of the risks of industrial investment or through creating access to long-term capital where institutional mechanisms for channeling this long-term capital do not already exist. Special credit institutes may also play a role in supporting industrial restructuring, for example in supporting capacity reduction or in overcoming fragmented ownership structure. Special credit institutes exist in both Germany and Great Britain but play a much greater role in the former (Hu 1975, 1984).

The most important of the German special credit institutes is the Bank for Reconstruction (Kreditanstalt für Wiederaufbau), which was established to supervise the reconstruction of the West German economy after WWII (Pohl 1973; Hahn 1984). The large private banks traditionally provided short-term loans, and the German government felt it was necessary to create an agency which could bypass normal credit evaluation policies and "jump start" investment in the capital intensive energy and raw-materials sectors with long-term loans. With the successful completion of this assignment, the Bank for Reconstruction shifted its concentration to providing long-term finance for SMEs through issuing long-term bonds on national capital markets; these long-term funds would then be channeled to SMEs through their "house bank", with the house bank taking over responsibility for default risk and monitoring the loan (Menzel 1960). This source of long-term finance is especially important for smaller banks and smaller companies which have little or no direct access to long-term capital markets. The Bank for Reconstruction provides approximately one quarter of long-term loans to manufacturing in West Germany with relatively little public subsidy. The Bank for Reconstruction has been used as a tool for reorganizing sectors, e.g. the steel industry and the shipbuilding industries in the late 1970s and early 1980s; the rapid reduction of capacity and modernization investments in these sectors enabled them to regain profitability relatively rapidly in international terms (Vitols 1993, 1994).

The other major special credit institute for industrial finance is the Deutsche Ausgleichsbank (German Bank for Compensation). This was established after WWII to compensate refugees from the eastern provinces and help them start up in business in West Germany. Subsequently the Bank for

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easily-resealable assets such as standardized office equipment and autos (Financial Times, Special Section on Leasing, 1993).

Compensation has become the major source of public funds for business start-ups and small business successions. The Compensation Bank is funded mainly through the issue of its own long-term bonds with a small public subsidy to reduce financing costs; loans are typically provided for ten years with no amortization in the first years. As is the case with the Bank for reconstruction, loans are not made directly but rather through the company's *Hausbank*. The Compensation Bank has become particularly active in the development of a small business sector in East Germany after unification (Deeg 1994). Almost two thirds of industry startups receive financial assistance from either the Bank for Compensation or regional financing programs; due to the great selectivity in support for startups, however, relatively few of these ventures go bankrupt in internationally comparative terms, thus the cost to the public is relatively low (Braun 1989; Vitols 1994).

A number of special credit institutes were also established in Great Britain in the postwar period with the intent to correct for shortcomings of private financial institutions. One of the major problems identified in the 1931 final report of the Macmillan Commission was the lack of long-term capital, particularly for SMEs. At the initiative of the British government, two special credit institutes were formed in 1945: the Industrial and Commercial Finance Corporation Limited (ICFC) for equity and long-term debt capital for SMEs, and the Finance Corporation for Industry Limited (FCI) for long-term loans for large industry. FCI was however rarely used and was merged with ICFC in 1973 into Finance for Industry Limited (FFI); in 1983 FFI was once again renamed Investors in Industry or 3i; 3i currently accounts for about 2% of lending to manufacturing.[20] Unlike the German special credit institutes, 3i lends directly to companies; the clearing banks, which are its primary owners (the Bank of England has a minority share), have seen 3i as a competitor and have generally been reluctant to see it well-funded; only in 1959 was this institute allowed to raise funds independently through the issue of listed bonds and stock (Hu 1884).

In addition to special institutes for the provision of long-term capital, concern on the part of the Labour party with corporate investment and industrial reorganization led to the establishment of a number of other special agencies at the national and regional level. In 1966 the Wilson administration established the Industrial Reorganisation Corporation (IRC), which was given broad powers to acquire, hold and dispose of shares, to form new companies, to make loans and loan guarantees and to acquire on behalf of companies land, plant and equipment. The IRC quickly became involved in a series of reorganizations of companies in crisis in sectors such as autos, shipbuilding and machine tools. The IRC was however abolished by the 1970-74 Conservative government in favor of a market-driven approach to reorganization (Hague and Wilkinson 1983). In 1975 the new Labour

20 Estimate based on 3i annual reports and Bank of England (1993).

government established the National Enterprise Board (NEB) with an even broader mandate of selective nationalization of larger companies and the negotiation of planning agreements with companies; through these agreements, long-term finance would be provided in exchange for promises to invest in training, R&D and new plant and equipment. Like the IRC, however, the NEB became involved primarily in the reorganization or nationalization of a number of large companies in crisis such as British Leyland (autos), Rolls Royce (airplane engines) and Herbert (machine tools); it was abolished by the new Conservative administration in 1979 before it had a chance to implement its mandate to influence a broad segment of British manufacturing (Parr 1979). In addition to these national initiatives, a number of Labour-dominated municipal and county councils in the late 1970s and early 1980s set up Enterprise Boards to channel pension and tax funds to SMEs; however, the abolition of the municipal county councils and a variety of restrictions on municipalities imposed in the mid-1980s by the Thatcher government greatly constrained sub-national activities in this area (Spencer et al 1986).

4. Capacities of the German and British Financial Systems Compared

This section analyzes the impact of the differences in financial regulation identified in the last section on industrial finance and microeconomic industrial policies in Germany and Britain. The comparative framework used focuses on the capacity of financial systems to provide different types of financing to a variety of industrial companies in industries with different growth trajectories. Specifically, the analysis differentiates between the provision of short-term debt, long-term debt and equity capital. Furthermore, the strategic goals and risk preferences of financial institutions are analyzed in terms of the propensity to invest in different types of companies, namely SMEs versus large firms and companies in industries with "stable" growth paths versus those in new industries and those in declining industries. Each country's financial system can thus be analyzed in terms of a **matrix of capacities** (see chart I).

The "classic" preference of risk-adverse financial institutions is the provision of short-term credit to companies in stable industries; the earliest financial institutions started out providing trade credit to such companies. Since economic growth can be better supported by a financial system with a broad variety of capacities, industrial policy with regard to industrial finance can be conceived of as the attempt to enhance financial system capacities beyond the classic competence in short-term lending to stable companies. These can be summarized as three general industrial policy tasks: (1) the provision of long-term finance to companies in stable industries; (2) the provision of all types of finance to companies in declining industries; and (3) the provision of all types of finance to companies in growing industries. These can be achieved by the

state **directly**, through the conscious use of state power to allocate financing to specific companies, or **indirectly**, through influencing the framework within which financial institutes operate and thus their goals and risk preferences.

This capacity-based framework for analyzing financial systems thus differs from comparative models focusing on the structural characteristics of financial systems (e.g. bank-based versus market-based versus state-based); this alternative framework recognizes that financial systems with the same structural characteristics (e.g. different bank-based systems) may in fact have varying capacities to provide different types of finance (e.g. long-term finance to SMEs). Similarly, it differs from most principal-agent financial models in analyzing the refinancing constraints under which financial institutions invest rather than just on the characteristics of the microeconomic relationship between investor and entrepreneur. It thus has more in common with recent competency and evolutionary perspectives on organizations (Nelson and Winter 1982; Foss 1993).[21]

This framework emphasizes that financial institutions seek to achieve a variety of goals through managing investment risk under a variety of constraints. The major types of risk involved in domestic lending include default risk, liquidity risk, interest rate risk and inflation risk:

Default risk is the risk that the company a financial institution has provided capital to will not meet its obligations to repay interest and/or principle on an agreed-upon time schedule. This danger arises through the possibility of financial weakness, fraud, or other reasons. Part of the interest rate margin or capital gains financial institutions receive from their investment activities goes towards covering this risk;[22]

Liquidity risk is the risk that liabilities become due or are withdrawn without adequate liquid asset coverage. The financial institution may thus be required to recall its loans early, possibly facing a loss or forcing its customer into bankruptcy, or to raise funds from other more costly sources. One of the traditional "golden rules" of financial management is to try to match the maturity structure of liabilities with assets; the implication is that financial institutions are constrained by their liability maturity structure in the amount of long-term lending that they may do;

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21 Classic analyses using the structural framework are Gerschenkron (1962) and Zysman (1983); important examples of work using principal-agent models includes Cable (1985) and Berglöf (1991).

22 Most principal-agent investment models focus on the problem of reducing this type of risk, e.g. in improving information about the viability of investment projects or the effort level of the entrepreneur or in altering the incentive structure faced by the entrepreneur (Stiglitz and Weiss 1981; Williamson 1988; Berglöf 1991).

Interest rate risk is the risk that the interest rate a financial institution must pay on its liabilities will rise more rapidly than the interest rate received on loans made. Increasing volatility of interest rates in the last two decades have caused financial institutions to pay more attention to matching the interest sensitivity of their assets with their liabilities. Financial institutions depending heavily on interest-sensitive sources of funds for financing will thus be limited in the extent to which they can make fixed interest rate loans to companies. Increasing interest rate volatility since the 1970s has constrained the extent to which financial institutions can offer fixed interest rates on long-term lending;

Inflation risk is the risk that inflation will substantially increase, eroding the real value of long-term financial assets. The rapid increase in the level and volatility of inflation in the late 1960s and 1970s in Britain and thus the reluctance to invest in long-term financial assets is cited as a major reason for the decline in the use of long-term bonds to fund industrial companies (Benzie 1988).

These risks are to some extent interdependent, e.g. a bank which lends long-term but is refinanced primarily by short-term deposits with variable interest rates faces both liquidity, interest rate and inflation risk.[23]

In the attempt to manage these risks, financial institutions follow a variety of general procedures and rules of thumb in the search for profitable investment opportunities. The implication of this are two types of "market failure". Financial institutions will generally not search extensively for profitable investment opportunities or follow extended review procedures for projects.[24] One implication is the tendency for financial institutions to seek "safe" projects according to general criteria. Thus many projects that could be profitable but do not meet these criteria do not receive financing during periods of credit shortage **(credit rationing)**; on the other hand, projects of dubious merit will receive finance during credit booms when financial institutions are trying to "push funds out of the door". The other major type of "market failure" is the effective segmentation of different types of capital; for example, though demand for long-term capital may exist in industry, the institutional structure of long-term savings may not channel these funds to industrial companies.[25] Most

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23 Financial institutions which deal with two or more currencies must in addition deal with exchange rate risk, i.e. risk that the exchange rate between these currencies will change in a direction which increases the real value of the liabilities the financial intermediary faces relative to its assets.

24 Financial institutions' capacity to gather better "insider" information is limited and these institutions seek to minimize risk through the examination of credit histories as an indicator of the reliability of management, through preference for companies in industries with stable, less risky growth paths, and through requiring collateral to reduce losses in the case of company bankruptcy.

25 For discussions of the financial market segmentation hypothesis see Culbertson (1957), Modigliani and Sutch (1966) and Modigliani and Shiller (1973).

problematic for financial systems is the supply of long-term capital to SMEs and finance in general to new and declining industries.

Industrial Finance in Stable Industries

Financial systems generally have the greatest capacity to provide external capital to companies in stable industries. Financial institutions depend heavily on the credit histories of companies as an indicator of the probability of repayment in the future; credit history gives insight into the "character" of the borrower (i.e. whether he or she is a reliable repayer of loans) as well as into the financial strength of the company. Furthermore, the growth characteristics of the industry provide an indicator of the difficulty of the environment the company faces.

Both British and German financial institutions have a strong capacity to provide short-term credit to both large companies and SMEs in industries with stable growth paths (see Table I). This is the traditional area of strength of banks; the core competence of the financial system has historically been and continues to be the provision of short-term credit to companies in stable industries. The oldest function of banking, which originally was a side business of merchants, was to provide short term credit for trade (Cameron 1967; Pressnell 1956). Short-term lending involves a low degree of maturity risk (since the financial institution's assets are not locked into an investment for long periods of time) as well as of interest rate and default risk (since there is less time for economic conditions to change than is the case for long term capital). Credit evaluation is relatively easy for this type of financing, relying heavily on the financial history of the borrower, comparison of the borrower's balance sheets with other companies in the same industry, and the use of rules-of-thumb for the extent of credit granted. SMEs in both countries raise the bulk of external short-term capital from banks; in addition to short-term bank credits, larger companies in both countries also rely on money markets for short-term funds (Deutsche Bundesbank 1992; Benzie 1988; EOSME 1993).[26]

Most financial systems have since the 19th century expanded their capacities beyond the provision of short-term credit. Both the British and German financial systems have developed a strong capacity to provide equity capital to large companies in stable industries. The development of the joint-stock company, which allows for a large number of stockholders with changing identities, and of stock exchanges on which the shares of these companies may be traded, enabled the raising of large sums of equity capital needed for

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[26] Trade credit (i.e. short-term obligations between suppliers and their customers) is also an important short-term credit item; generally, however, a company's credit from suppliers is largely balanced out by obligations on the part of its purchasers, thus trade credit has relatively little net significance.

the development of large companies in both countries (Chandler 1990; Pohl 1992).

Both systems, however, have a weak capacity to provide equity capital to SMEs. Few SMEs in either country have outside participation by financial institutions, and the creation of means to channel equity capital to SMEs are public policy issues. In Germany the larger banks have set up investment companies (*Beteiligungsgesellschaften*) for SME participations, though the number of participations remains small (Kokalj 1989). Relatively few medium-sized companies are publicly traded, and small steps have been taken to make it easier for these companies to become listed; the *Landesbanken* for example are moving into market-making for medium-size companies listed on the regional exchanges (Deutsche Bundesbank 1984a; Westdeutsche Landesbank 1992).

In Great Britain the main financial institutions active in this area are venture capital firms; during the 1980s a large part of the increase in venture capital actually went to support the expansion of established companies or management buy-outs of branch plants rather than companies in new industries (Pratt 1990; Murray 1991; Mason 1987). Great Britain, which throughout the twentieth century has had a considerably greater number of publicly traded companies than Germany, has taken considerably greater steps to allow medium-sized companies to be publicly listed; the biggest step in this direction was the creation in 1980 of the Unlisted Securities Market (USM) with less regulation and fewer reporting requirements than the regular stock exchange. The experience with the USM has however been unsatisfactory for many companies, particularly during the last recession; many investment banking firms have reduced their services such as market-making to the USM and rating agencies have cut back their ratings of USM firms, hurting liquidity and making it difficult to get access to new investment. The London Stock Exchange is currently considering closing the USM (Financial Times, 1 December 1992, p. 16; 8 March 1994, p. 16).

The German financial system has developed a comparative advantage in the capacity to provide long-term debt capital to both SMEs and large companies. German banks throughout the first half of the 1900s were reluctant to provide long-term debt capital, and a debate ensued in the 1930s and postwar period about the need and possible sources for long-term debt capital. The Bank for Reconstruction and the Industrial Credit Bank (*Industriekreditbank*) were set up in order to directly provide these loans to companies and a division of labor was established between these banks providing long-term credit and the universal banks providing short-term credit (Weber 1954; Pohl 1973; Cassier 1977). The universal banks, however, overcame their reluctance to do this type of lending and by the late 1960s

approximately one third of bank credits to industry were long-term.[27] Little use was made by industrial companies of long-term bond markets; long-term household savings were instead channeled to industry through the banks in the form of deposits from households or the purchase of bank bonds by institutional investors such as insurance companies. The demand from large companies for long-term bank loans has decreased since the 1970s with the growth of own pension reserves. The demand from SMEs for medium and long-term loans, however, has increased greatly, from 14% of net worth in 1978 to 19% in 1989. Through the savings banks and cooperative banks long-term bank loans are available even for the smallest companies. By 1990 slightly over half of bank credits to industry were long-term in nature.

The British system in contrast has a low capacity to provide long-term debt capital to both large and small companies. The clearing banks depend mainly on short-term retail deposits and wholesale money markets for their funding; given the short-term maturity of these funds and the fluctuation of interest rates that must be paid on these funds, the banks have been reluctant to lend long-term and at fixed interest rates to industry (Wilson Committee 1980). An alternative for large companies is the issuance of long-term bonds, but since the inflation of the late 1960s and 1970s British investors have avoided these bonds; pension funds and insurance companies, which in many countries provide the bulk of long-term corporate debt, have instead sought to invest in equity with the expectation that the value of these securities would appreciate with inflation (Benzie 1988). SMEs rely mainly on short-term overdrafts on their bank accounts for external financing (Deakins and Philpott 1993; EOSME 1993). Finance companies have become an increasingly important source of external financing, but have focused on medium-term leasing of standardized equipment (e.g. data-processing equipment) and vehicles.[28]

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27 Own calculations from Deutsche Bundesbank statistics. According to the Bundesbank definition, long-term loans have maturities of four or more years, medium-term loans have maturities of between one and four years, and short term loans have maturities of one year or less.

28 In the postwar period there were debates in both countries about the extent to which financial institutions could act as maturity transformers, using short-term deposits to finance longer-term loans; deposit activity has a random component to it, thus withdrawals by one customer are often balanced out by increases in deposits from other customers. In practice banks act as maturity transformers to a certain extent, but the increasing volatility of depositor behavior and the financial environment has forced these financial institutions to limit the extent to which they violate the "golden rule"; thus the much greater reliance by British banks than by German banks on short-term deposits limits the capacity of the former relative to the latter to make long-term investments (Weber 1954; Carrington and Edwards 1979, 1981).

Industrial Finance in Declining Industries

Long-term reductions in demand create a number of problems for industrial finance in declining industries. These industries are typically characterized by overcapacity, leading to increased price competition and reduced profits as producers fight over a shrinking market. Low profitability reduces the capacity of companies in these industries to internally finance investment; at the same time, the companies' reduced capacity to make dividend and interest payments reduces financial institutions' willingness to provide external capital. Companies in declining industries may thus be caught in a vicious cycle of low profitability, low investment and low innovation (Harrigan 1980).[29]

Two strategies may be available to mitigate the industrial finance problems in declining industries. One way is through the rapid reduction of excess capacity, thus helping boost prices, profit margins and the capacity to finance investment. Since each company will be tempted to "free ride" on the capacity reductions of others, however, this may require coordination between different producers. Secondly, through product innovations it may be possible to slow down or reverse declines in demand, e.g. through developing demand for customized products or through increasing the attractiveness of the product relative to substitute products. This second strategy may have as a prerequisite the solution of the first excess capacity problem, since extensive investments are often required for product innovation; the provision of other resources such as increased training may also be required in order to implement higher-quality production strategies.[30] Financial institutions, however, may not have the ability to help coordinate elimination of excess capacity needed to reduce investment risk; they may also be uncertain about the probability of success of the product innovations undertaken. The contribution of industrial policy towards overcoming this situation thus can be to coordinate the reduction of capacity or to shift risk to other actors (such as itself), increasing the willingness of financial institutions to provide capital.

The capacity of the German financial system to provide finance to both large firms in declining sectors is greater than that of the British financial system. Many industries affected by decline are dominated by a few large companies with close connections with the large universal banks, and the large banks may use this system of extensive shareholdings and representation on the supervisory boards to help coordinate reduction of excess capacity. In Germany, however, the banks face limits in the capacity to autonomously coordinate restructuring and thus are typically reluctant to intervene beyond a

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29 Similar effects may be created by industries with stagnant growth paths but in which overcapacity has been created, e.g. due to overinvestment during previous growth periods or through new entrants such as the NICs.

30 For the possibility of restructuring traditional industries through innovation see the extensive literature on post-Fordist production models such as diversified quality production (Sorge and Streeck 1988) and flexible specialization (Piore and Sable 1984).

certain point without the intervention of the state. The state has done this in a number of crisis sectors, both acting as a mediator bringing together the various parties needed to develop and support restructuring plans and in taking over some of the risks of further investment in these industries. Both the Bank for Reconstruction and the regional public savings banks (*Landesbanken*) have been important providers of capital or of loan guarantees which have allowed for successful restructuring under the auspices of private ownership.[31]

The fragmentation of ownership in the British system and limited equity holdings by banks renders it more difficult for financial institutions to coordinate to influence the decisions of industrial companies. In contrast with Germany, the more typical pattern has been state assumption responsibility for restructuring problem through the nationalization of large companies in declining industries. [32]

In Britain as in Germany, the decline of industries dominated by SMEs poses a particular problem for financial institutions given the difficulties of developing a coherent and implementable restructuring plan for a large number of companies. Nevertheless, the German public savings bank and cooperative bank sectors have been more willing to continue lending to SMEs in declining industries than both private German banks and the British clearing banks; the public savings banks are obligated to take into account the economic development interests of their locality, while the cooperative banks are owned by SMEs and see their primary goal as the assistance of their membership. Nevertheless, this willingness to lend also has its limits, and is typically dependent upon the formulation of a credible restructuring plan by the company (Edwards and Fisher 1994).[33]

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31 Along with protection from hostile takeovers, this capacity to coordinate restructuring in declining industries may be the main contribution to corporate governance of the close links between the *Hausbank* and its industrial customers; the weight of evidence is that by the end of World War I, with the possible exception of the immediate post-WWII period, German banks had ceased playing the active role in "steering" the German economy often attributed to them (Feldman 1977; Esser 1990; Edwards and Fisher 1994). 32 33

32 Industries in decline or with major overcapacity problems since the mid-1970s and dominated by large firms include coal, shipbuilding, autos, steel and aerospace. In each of these cases, the British government nationalized (if not already in public ownership) and directly took responsibility for restructuring one or more major firms in these industries; in Germany, in the majority of these cases "private" solutions, with the state playing a supportive role, were found (Schaff 1978; Paar 1979; Esser and Väth 1983; Hague and Wilkinson 1983; Streeck 1984).

33 Declining industries dominated by SMEs in Germany which have been successful in restructuring towards higher quality production include machine tools, textiles and foundries; these industries in Britain have been less successful in restructuring. Interestingly, the average firm size in Britain in some of these industries is significantly higher than in Germany (Weißbach 1989; Whitston 1989; Herrigal 1990).

Industrial Finance in New Industries

The development of new industries is important for the long-term growth of national economies. Financial institutions are, however, generally reluctant to provide finance to companies in these industries for a number of reasons. Companies in new industries are often new themselves and thus lack the financial history which financial institutions use as an indicator of the financial strength of the company and the reliability of management. Secondly, companies in these industries tend to be research intensive or invest in specialized equipment, thus there is often an absence of easily-resealable assets which can serve as loan collateral. Thirdly, the potential of a new product may be difficult to judge since financial institutions generally lack this expertise themselves; even given the use of outside technical experts it may be extremely difficult to judge the potential of a new product. Finally, even if the firm is successful in developing its new product, new industries often undergo rapid product and process innovation, making it difficult to estimate the probability of the firm being able to keep up with new innovations.

Finance to companies in new industries is therefore generally provided by financial institutions with an explicit orientation towards high risk projects in the hope that large payoffs from a few projects will cover the losses from other failed projects. These institutes generally develop a specialized capacity to judge these risks; this typically requires a staff with technical knowledge or the use of outside experts as consultants. Furthermore, the management skills of the company are often underdeveloped and the ability of the financial institution to supplement these management skills can be important for the survival chances of the firm. These institutions take equity shares or options in order to share the gains of the projects with big successes. In the literature, these types of institutions have traditionally been referred to as industrial banks, although in the last few decades the term venture capital has become more predominant (Hu 1984).

The British financial system has a moderate comparative advantage in providing industrial finance to companies in new industries. Great Britain has developed the second largest venture capital market in the world after the United States. In the 1980s, institutional investors greatly increased their investments in venture capital funds, to a total of over £1 billion in the late 1980s. Much of the increase in the 1980s in fact did not in fact take the "classic" form of patient venture capital, and instead was invested in expansions of established companies and management buy-outs. Nevertheless about one fifth of projects supported were in the start-up phase in important new industries such as electronics, computers, biotechnology and medical technology. Thus, the British financial system can be said to have a moderate capacity to support companies in new industries (Pratt 1990; Murray 1991; Mason 1987).

The problem of providing finance to companies in new industries has been one of the dominant themes in the German discussions of industrial finance in the last decade (Albach 1983; Kokalj 1989). Although the German joint-stock banks have historically been admired for their entrepreneurial abilities in both identifying promising new growth fields, gathering the capital needed for product development and production facilities, and providing management skills, banks had apparently ceased playing this role by the interwar period. Both the reluctance of German banks to lend to companies lacking credit histories and the emphasis on equipment and property as collateral for long-term loans excludes companies in new industries from normal credit channels. Thus the lack of venture capital is generally acknowledged to be one of the factors explaining the weakness of the German economy in new high technology areas. Both the banks and the state have taken actions designed to counter this weakness but to date these efforts remain modest. The major banks have set up their own venture capital firms but the capital at their disposal as well as specialized staff remains small. Both federal, state and local levels of government have taken actions to foster industrial lending to companies in new "technology oriented" areas (Legler 1982; Legler et al 1992).

Comparative Capacities Summarized

This section has developed and applied an alternative framework for analyzing the differences between financial systems in terms of their impact on industrial finance (see Table I for a summary). Significant differences between the British and German systems have been identified as stemming from the differences in regulation discussed in the previous section, with no one system being equal or superior to the other in all respects. Accounts which have claimed that one financial system is superior have tended to emphasize one subset of problems; those claiming the superiority of the German system with its close bank-industry relations tend to focus on the problem of restructuring in declining industries, while those praising the Anglo-American venture capital funds tend to focus on the problem of developing new industries. The creation of appropriate institutions and incentives in both countries, however, could well improve the availability of finance in areas in which they currently have difficulties.

5. Conclusion: Possibilities for Future Convergence

The previous sections have established that national states retain considerable discretion in financial regulation (as reflected in continued divergence between the German and British financial systems) and that these differences have important consequences for industrial finance. In defense of the convergence argument, one might argue that convergence is a long-run tendency which has

just started to work itself out, perhaps with an accelerating dynamic. This section reflects critically on the convergence thesis by emphasizing the "social nature" of industrial finance, its embeddedness within a national institutional framework including the production regime, and the lack of an unambiguous definition of efficiency by which industrial policy can be judged.

The Social Nature of Industrial Finance and the Limits on Internationalization

The provision of industrial finance by the financial system is a labor-intensive process dependent upon the evaluation of risk, the monitoring of company financial performance, and the reorganization of financial claims in the case of financial distress. Greater competition amongst financial institutions and an increase in almost all types of risk are pushing financial institutions to isolate and manage the different sources of risk through more conscious matching of liabilities, greater attempts at diversification, and so forth. Greater use is being made of statistics to manage overall portfolio risk, to evaluate individual loan applications, and as an "early warning" device for company financial distress. Institutional investors rely largely on rating agencies for judgement about the riskiness of investment in specific companies.

Practitioners however stress the limits to the usefulness of these techniques, particularly in the case of industrial finance. Unlike other types of finance (e.g. residential mortgages), industrial finance is very difficult to standardize. The judgement of risk is dependent upon a fine sense of the character of a company's management and the environment within which the company operates in and is thus difficult to reliably quantify; lending officers stress the degree to which many years of experience are often needed to build up sufficient judgement capacity. Financial institutions are recognizing that the provision of labor-intensive advisory services covering areas like cash flow management and accounting systems can be both an additional source of income and can reduce default risk by improving customer performance. Furthermore, many companies have specific needs and are willing to pay a premium for customization of financial services. As evidenced by the discovery of "relationship banking", the social nature of industrial finance puts limits on the extent to which financial products can be standardized and centrally produced. Large financial institutions have thus been struggling with the problem of decentralization in order to have customer contact at the local level and to delegate decision-making authority to this level.

These characteristics of industrial finance constrain the extent to which economies of scale can be exploited and thus the extent to which smaller, nationally-based financial institutions can be driven out of business by large, internationally-active financial institutions. Internationalization of finance has been largely confined to interbank lending and to finance for the largest blue-

chip industrial companies and public authorities. The extensive efforts by banks to develop their international business by establishing foreign offices in the 1970s and early 1980s have been cut back; of the large US banks, only Citibank has not given up attempts to set up an international retail network. Banks have instead turned to a strategy of expanding by buying up banks in other countries, who however are subject to regulation by national authorities and follow national procedures. These limits on internationalization mean that national factors will continue to play a significant role in determining the characteristics of financial systems and industrial finance.

Interdependence with the Productive Sphere

A growing body of evidence shows that, after a period of hegemony of the mass-production system, in the 1970s advanced industrialized countries began to diverge in characteristics like the organization of work and the level of investment in equipment, training and research and development. A contrast is often drawn between the Anglo-American countries on the one hand and Germany and Japan on the other. In the former, companies have reacted to increasing instability in world markets by increasing their flexibility to lay off non-core workers and to quickly shut down unprofitable plants during downturns. In the latter, long-term attachments have developed between workers and (at least large) industrial companies and workers are kept on during downturns, allowing for the maintenance of human capital. These differences support the movement of companies in the latter countries into higher-quality, non-price competitive production; in the former, companies focus more on the reduction of costs for standardized goods.

A relatively unexplored area is the interdependence between the structure of the productive and the financial systems. It may well be that different types of production regimes have varying demands for different types of capital; companies relying on cheaper labor and less new equipment and placing great value on short-term flexibility are likely to have less demand for long-term debt capital than companies relying on greater quantities of new equipment and long-term planning. An increase in the supply of long-term debt capital in Britain thus might not be matched by unfilled demand for such finance from the productive sphere. Conversely, stability in industrial organization due to constraints on laying off labor may produce stability in industrial finance; the long-term stability of company workforce in Germany and Japan reduce the problem of moral hazard in allowing company management to reinvest pension provisions within the company. Thus significant differences in productive systems and their relations with financial systems may be an important factor constraining financial system convergence over the long-term.[34]

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[34] For a comparison of industrial finance and the modernization of the SME sector see Vitols (1994). One implication of this analysis is that financial systems may influence the development of industrial structure, e.g. in increasing the difficulties for survival of SMEs

Lack of "One-Best" Solutions in Industrial Policy

Finally, a number of factors are likely to constrain convergence in industrial policy styles between countries towards a "one-best" solution due to efficiency grounds. Industrial policy intervention may be relatively low-cost or even more efficient than market-driven restructuring. From the special credit institutes in Germany we see that institutional access to long-term finance for SMEs may be created at relatively little cost. The start-up costs of innovative new companies may be quite low, thus given a risk-acceptant orientation of investors the gains from the support of new industries may be quite substantial. Finally, the provision of financing for the restructuring of "old" industries may be quite successful given the solution of coordination problems. Thus efficiency grounds themselves do not lead to the provision of certain kinds of finance and not others.

The second point is that efficiency itself is an ambiguous concept and is in part politically defined. National goals may place greater emphasis on employment stability than on the profitability of industrial companies, for example; electorates may measure the success of governments on different grounds and be willing to support the allocation of resources towards different goals. The huge amount of resources allocated towards the restructuring of East Germany through the special credit agencies and the continued importance of the French state in the restructuring of national champions to be competitive on the Single European and international markets are significant examples of the continued importance of domestic factors in the determination of industrial policy.

through providing financing at much more favorable terms for large companies. In the long run, this may result in an institutional equilibrium (Soskice 1992), e.g. where there are few SMEs and thus limited demand for the type of financial services provided by the cooperative and savings banks in Germany to German SMEs.

TABLE 1: COMPARATIVE CAPACITIES OF THE BRITISH AND GERMAN FINANCIAL SYSTEMS

Fehler! Textmarke nicht definiert.		TYPE	OF	INDUSTRY
		Stable	Declining	New
TYPE	Short-term Debt	GB: SME + Lf + DE: SME + Lf +	GB: SME - Lf - DE: SME 0 Lf 0/+	GB: SME 0 DE: SME -
OF	Long-term Debt	GB: SME - Lf - DE: SME + Lf +	GB: SME - Lf - DE: SME 0 Lf 0/+	GB: SME 0 DE: SME -
CAPITAL	Equity	GB: SME - Lf + DE: SME - Lf +	GB: SME - Lf - DE: SME - Lf 0/+	GB: SME 0 DE: SME -

Legend:
+ = Positive Capacity
0 = Moderate Capacity
- = Low/No Capacity
Lf = Large firm
SME = Small and Medium-size Enterprise

More than two ratings means that capacity is further differentiated by type of company

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