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Introduction

Financial systems arise to intermediate between capital owners seeking productive investments and entrepreneurs with profit-making ideas but with insufficient funding. Why they emerge at particular points in time, and why they are organized as they are, remains to be understood in its entirety. From a theoretical standpoint, we have a number of explanations for the endogenous evolution of institutions to bridge the gap between the supply and demand for investment capital.[1] Beyond this simple brokerage function, financial intermediaries also change the nature of assets between borrower and lender; hence, the notion of qualitative asset transformation, or QAT. For the institutions of interest in this book, QAT typically means the alteration of the maturity or liquidity of assets – allowing investors to take part in large-scale, illiquid, and possibly high-risk and extended industrial investment with either a relatively low-risk, high-liquidity, short-maturity (even on-demand) depository account or a moderately risky yet relatively liquid – that is, tradable – equity position in the bank itself. This sort of QAT is effective, in large part, because the intermediary can invest in a wider range of projects than is feasible for the individual and thereby diversifies away some portion of the risk inherent in any one project.

The very fact that brokerage functions are necessary – because suppliers of capital may often be unacquainted with the full range of investment opportunities – raises another potential way that financial intermediaries alter assets: risk profile. In addition to diversifying away the natural risk of industrial investments, banks may also mitigate the problems that can arise when investors have poor information about the quality of investments or their true returns. Banks are well suited to serve this function by screening

[1] See Freixas and Rochet (1998) for a technical treatment of financial intermediation theory.

entrepreneurs before investing and monitoring the progress and performance of projects after investing. In all of these cases, financial intermediaries provide a key service to wealth holders and entrepreneurs, and the premium on their stock or the interest they earn on lending (net of their payments for deposits) constitutes their payment for this service.

Entrepreneurs, of course, can fund their projects in a number of ways, such as using internal cash flows, borrowing from either associates or intermediaries, or selling off ownership stakes in the venture. These options – and their maturity and liquidity profiles – parallel the offerings of a bank, where deposits to a bank represent borrowing by that bank. In a world of imperfect information, and where conflicts of interest can arise, the choice of financing type matters to entrepreneurs.[2] Indeed, in the worst case, these problems can prevent investors from providing funds altogether or cause entrepreneurs to use only internal funds. In deciding between debt and equity, or between bank lending and securitized debt, firms and investors face certain trade-offs. Equity can appreciate unbounded, and stakeholders therefore care much more about the firm's choices of projects and efforts to increase equity values. Because debt returns are limited to a contracted payoff, investors need only be convinced that the firm will perform sufficiently well to pay back the debt, and that they will repay. Clearly, then, debt and equity holders' interests, particularly risk tolerance, often diverge. The choice between bonds and bank debt hinges on similar, if milder, issues of information. Bank debt is thought to be subject to tighter control and monitoring and therefore represents the presumed first step in the pecking order of external funding.

Intermediaries may therefore facilitate transactions, allowing external finance, by providing efficient monitoring services, credibly transmitting information, or resolving conflicts of interest among contracting parties.[3] Such observations may also imply that the efficiency of financial intermediaries and their impact on the real economy may depend partly on their structure and practices – in particular, the range of services provided within one institution, the type of financing used to fund bank operations,

[2] Modigliani and Miller's (1958) well-known proposition that firms cannot alter the total value of their securities by varying the mix between debt and equity depends, of course, on assumptions of perfect information and markets. Many doubt the extent to which the real world fits these ideal assumptions.

[3] Jensen and Meckling (1976) is the classic article on problems arising from the separation of ownership from control of firms. Theoretical models comparing the costs of debt and equity finance include Myers and Majluf (1984), Diamond (1984), Gale and Hellwig (1985), and Townsend (1979). See Harris and Raviv (1991) and Hellwig (1991, 1997) for reviews of this and related literature.

and the extent and intimacy of relationships built up between banks and their clients.

Financial institutions and markets comprise the building blocks of financial systems. For the past century, economists have debated the relative advantages and disadvantages of different systems of finance and governance, many taking strong views. The universal banks are thought to have mobilized the financial resources that made industrialization possible for continental Europe – especially in Germany and Italy. The original statutes of one such bank in Germany, for example, empowered the bank "to bring about or participate in the promotion of new companies, the amalgamation or consolidation of different companies, and the transformation of industrial undertakings into joint stock forms."[4] As Chandler explains, "[T]hese banks provided initial capital for new industrial ventures and helped guide them through their early years of growth.... They supplied much of what today would be called venture capital."[5]

The view that, until very recently, heavily favored the universal banks gathered steam in the mid-twentieth century as countries with these systems rebuilt themselves in the wake of World War II. Surrounded by this apparent success, authors adopted many of their views from the late-nineteenth- and early-twentieth-century literature on industrialization. Among the contemporary observers of the rapid growth of pre–World War I Germany was Werner Sombart, who proclaimed, "Doubtless, a good portion of the increase in economic life in Germany is attributable to this interest of the banks and bankers in productive, economic activities. The banks have become the direct promoters of the spirit of enterprise, the pacemakers for industry and trade."[6] This sentiment was widely shared by his contemporaries and finds continued support among modern economists and historians – many of which use the German case to illustrate the great benefits of universal-relationship banking.

INSTITUTIONAL DESIGN AND FINANCIAL SYSTEM STRUCTURE

The theoretical literature places heavy emphasis on the costs of information asymmetry and the need to equalize it. These considerations lead naturally

[4] The clause referred to was Article III K of charter for the Bank für Handel und Industrie in Darmstadt. Translated and quoted by Whale (1930), p. 12.

[5] Chandler (1990), p. 417–419.

[6] Sombart (1909), p. 203, my translation. For a thorough bibliography of contemporary literature, primarily in German, see Riesser (1910 [German original], 1911 [English translation]). Whale's (1930) bibliography is a useful supplement and covers later works.

to the hypothesis that universal banking – combining as it does the range of financing options needed by any one firm – benefits from economies of scope: mostly from the reusability of firm- and market-specific information across time and products, but also from the reputation spillovers among branches of financial services.[7] Universal banking can arguably lead to, or even require, the formation of long-term relationships between banks and firms because these relationships theoretically enforce the repeated interaction that allows information cost savings. Even aside from their role in promoting and sustaining efficient universality of services, banking relationships might enhance banks' access to firm-specific information and thereby improve the accuracy of screening, monitoring of projects, and enforcement of repayment obligations. These information improvements may lessen the risk of investing in individual ventures and reduce the need for rationing of credit. Relationship building may also permit firms to take a longer-term view of their investment projects and possibly undertake investments that yield higher returns but over a longer horizon.[8] Similarly, information-yielding relationships can work as a certification device, enhancing a firm's appeal in equity markets and reducing the cost associated with adverse selection – that is, the problem that outsiders assume that insiders will only issue new equity when it is overvalued.

The theoretical literature indicates that financial intermediaries generally increase both the quantity and the quality of investment in the economy. More specifically, there is theoretical support for the argument that universal and relationship banking further raises the quantity of funds provided to industry and may also increase both the quality of projects undertaken and the long-term returns to investment. These benefits come with potential or hypothetical costs, such as systemic fragility, unwarranted concentration, excessive conservatism, and conflicts of interest (such as underwriting securities for poor-quality debtor firms). In other words, it is far from clear, even theoretically, what the net impact of financial structure might be at either the firm or economy-wide level.

The structure of financial intermediaries, particularly commercial banks, may influence real variables, because different institutions may handle their tasks with varying degrees of efficiency. Theoretical differences in growth effects may be inferred from some other recent work. Relative to

[7] See Greenbaum, Kanatas, and Venezia (1989) on theoretical economies of scope resulting from information reusability.

[8] Stein (1989), Dewatripont and Maskin (1995), and von Thadden (1995) offer models in which relationships prevent premature liquidation of projects that need a longer gestation period, but which eventually produce higher long-run returns.

specialized, arms-length systems, for example, universal and relationship banking may be better suited to perform the growth-enhancing functions described by King and Levine (1993) or Thakor (1996). Recent conceptions echo views put forth much earlier, largely in view of the German experience. Lavington (1921), for example, stressed screening, monitoring, risk management, venture capital activities, and economies of scale and scope:

> An organization of this kind, intermediate between the sources of enterprise and the sources of capital, must evidently possess machinery for investigating business ventures, financial strength adequate to sustain the heavy risks to which it is exposed and the reputation and business connexions necessary for the efficient sale of securities to the public. An organization such as the Deutsche Bank possesses these qualities to a high degree.... It is easy to see that, with able management and machinery of this kind, the risks of industrial banking are greatly reduced; business ventures in need of capital can be thoroughly investigated and the development of the more pioneering enterprises may be promoted with a reasonable prospect of success.[9]

In this line of reasoning, universal banks' combination of investment and commercial services promotes long-term relationships with corporate clients and thereby raises efficiency of financial transactions. Efficiency gains hinge not just on the reusability of information but on its quality as well. Thus, close, long-term relationships between banks and industrial firms are seen as central to the banks' acquisition and transfer of useful information – not just financial, but also strategic and entrepreneurial. Moreover, the banks are thought to have gained significant say in the use of funds and thus the types of investments made by firms. Such involvement and oversight is argued to have reduced banks' uncertainty about borrowers, mitigated risks of moral hazard or simple bad judgment, and facilitated long-term lending. The conventional view of the advantages of universal banking hinges on economies of scope that stem in large part from the perceived cradle-to-grave relationships between banks and firms. This view is evident from the earliest commentaries from bankers themselves: Jeidels (1905) argued that it was "in the interest of the security, profitability, and longevity of a credit institution to provide for all of the credit needs of a firm, from its formation to its liquidation."[10]

Formalized relationships between banks and firms – placement of bank representatives on firms' boards – are closely associated with universal banking functions in the literature. Gerschenkron, among others, claimed

[9] Lavington (1921), p. 210.
[10] Jeidels (1905), p. 63, author's translation. See also Gerschenkron (1962) and, for a modern restatement, Mayer (1988).

that "the German banks, and with them the Austrian and Italian banks, established the closest possible relations with industrial enterprises."[11] Gerschenkron echoed Jeidels, saying that "through development of the institution of the supervisory boards to the position of most powerful organs within corporate organizations, the banks acquired a formidable degree of ascendancy over industrial enterprises, which extended far beyond the sphere of financial control into that of entrepreneurial and managerial decisions."[12] Thus, bank seats on supervisory boards are traditionally thought to have permitted not just oversight, but also direct control, over firms' operations and decisions. Chandler (1991) notes, "The representatives of the German Großbanken participated to a greater extent in the top-level decision-making of new industrial companies than did representatives of financial institutions in the United States and Britain." He goes on to report that "the banks often had a significant say (particularly in the early years of a company's history) in investment decisions, in the selection of top and even middle managers, in establishing administrative procedures, and in reviewing the internal financial management of the enterprises that they had helped to finance."

Together, a system of universality and relationship formation is seen as more efficient than one of arms-length and specialized banking because it lowers the costs of finance and promotes industrial investment.[13] Even at the economy-wide level, universal banks are credited with promoting efficient allocation of the economy's investment portfolio, particularly historically, and in comparison with Britain.[14]

Banks versus Markets

Some of the existing literature focuses on the difference between banks and stock markets in the allocation of investment capital rather than the real effects of various types of banking institutions.[15] Although most of the

[11] Gerschenkron (1962), p. 14. Jeidels (1905), Riesser (1910), Schumpeter (1930), Wallich (1905), Whale (1930), Tilly (1994b), Chandler (1990), and most others writing on the subject also emphasize this point.

[12] Gerschenkron (1962).

[13] Economies of scope is a modern interpretation of the traditional accounts. Calomiris (1995), for example, advances such an argument and has argued that German companies faced lower costs of issuing new equity compared with their American counterparts. Tilly (1994a) produces similar figures for Germany.

[14] Tilly (1986) and Kennedy and Britton (1985), for example.

[15] Often, banking structure is conflated both with corporate governance issues and with financial market activity, probably because of the perception that universal, relationship-based

literature offers no comparison of the relative benefits of different types of financial systems, Greenwood and Smith (1997) find that, with sufficient risk aversion on the part of the investing public, equity markets produce stronger growth than do banks. In a series of papers, Boyd and Smith (1995, 1996, 1997) introduce the changing roles of debt and equity in the development process and argue that, although stock markets should develop after a period of intermediary dominance, both debt and equity remain viable and complementary sources of finance. Moreover, Greenwood and Smith (1997) show theoretically that growth rates obtained in economies with either banks or equity markets exceed those of economies without financial intermediaries.

Another line of research highlights the trade-offs between banks and financial markets in the revelation and transmission of information necessary for making optimal real decisions; the desirability of one system over another depends on the context. Allen (1992) reasons that, because markets aggregate information from a wide range of disparate sources, whereas banks depend primarily on their own assessments, markets dominate banks when technologies are new, complex, or rapidly evolving. Banks prevail when technologies are clearly understandable and optimal investment decisions are easy to make. Also, as Thakor (1996) argues, bank-dominated systems exacerbate effort aversion and overinvestment, whereas market-based systems lead to excessive reliance on borrower reputation as well as greater asset-substitution moral hazard.[16] Furthermore, the analyses of von Thadden (1995) and Dewatripont and Maskin (1990) suggest that banks tend to prolong low-quality projects for too long, whereas markets often liquidate good projects prematurely. All of these problems can lead to suboptimal investment decisions and lower real economic growth.

The Variety of Perspectives on Financial System Design

The existing literature combines a number of different approaches to the issue of financial system design. Many older studies, as exemplified by Gerschenkron's work, treat universal banks as a second-best substitute for missing markets. Recent research on modern institutions, on the other hand, conceives of the debate as a battle of competing systems arrayed on an even

banks dominate the financial systems in which they operate, and that financial markets dominate in systems in which financial intermediaries are specialized. See Helmut Dietl (1998) and Jonathan Story and Ingo Walter (1997).

[16] Thakor bases his argument on the predictions of Rajan (1992), Wilson (1994), and Diamond (1991).

playing field. The results to follow in this volume indicate that several countries maintained at least partially specialized, arms-length systems even in the absence of prohibitions on universal or relationship banking: British law has always permitted commercial banks to engage in universal and relationship banking, but the banks generally remained specialized. Until recently, the "battle of the systems" literature has represented universal, relationship banking as a superior solution to asymmetric-information problems. Traditionally, German banks were thought to have engaged in all of the activities seen as central to the promotion of economic growth, and to have executed these functions more effectively and efficiently than the British banks. In echoing the common perception that the British banks and securities markets heavily favored short-term and gilt-edged instruments, Kennedy (1987) attributes the lack of long-term lending and venture capital to the "informational weaknesses" of the British system. Much of what is seen as the decline of the British economy has been blamed on the failure of financial institutions. British industry is thought to have been constrained by a lack of capital; the banks, it is argued, held back necessary financing from industry. Many have chastised the British banks for avoiding engagement with domestic industry and leaving firms to find financing from other sources. The banks' involvement in foreign and imperial ventures is claimed to have drained away funds from domestic industry; firms' resultant recourse to securities markets is argued to have advanced investors' short-term profit motives at the expense of long-term growth.[17] Kennedy concludes that, "What was unique in Britain was not the existence of imperfect sharing of risk and control among those with a stake in corporate ventures but rather the unusually slow development of recognition of the extent of the problem and of effective means to rectify it."[18]

In other words, this strand of the literature interprets the British and American resistance to universality as, respectively, entrepreneurial and regulatory failure. The substitute-for-markets literature would see this persistence of specialization as a sign and natural upshot of the continued availability of the preferred market institutions. This divergence in perspectives is worth keeping in mind in analyzing the differences among financial systems as well as the factors that produce these divergent designs.

These perspectives on financial system differences may also be understood within the more recent literatures on varieties-of-capitalism (VOC)

[17] For a review of the literature on British banking and industrial development, see Michael Collins (1991, 1998). Also see Forrest Capie and Collins (1992). For a critical appraisal of the British banking system, see George Edwards (1987).

[18] Kennedy (1987), p. 127.

and law-and-finance that have primarily concerned political scientists and sociologists (in the first case) and legal scholars and economists (in the second case). The VOC literature differentiates between liberal and coordinated market economies, whereas the law-and-finance literature divides the world into common and civil (or statue) law tradition.[19] Both literatures would see each country as a member of or at least leaning toward one category or the other, and both paradigms suggest natural implications for financial system structure and economic development. Indeed, the two approaches may conceivably be merged, to the extent that the poles of one tend to match up with the poles of the other. Indeed, common-law countries appear to align with the "liberal" pole and statute law countries migrate to the "coordinated" pole. Even though the extremes are too extreme, it may prove useful to carve up the world in this manner, because doing so allows us to attempt quantitative analysis of the impact of institutional design. However, simple categorization is too blunt an instrument to fully explore the complexity and diversity of financial systems and to reveal the more nuanced story of their effects that I argue for in this book.

PLAN OF THE BOOK

The book is divided into two principal parts. The first part explores the key issues of interest for understanding financial development and growth, providing detailed comparisons across five exemplar countries: Germany, Italy, Japan, the United States, and the United Kingdom. The first of these chapters examines the patterns of industrialization and the emergence of banking institutions and capital markets primarily during the second half of the nineteenth century up to the start of World War I.[20] Because Japan developed later than the other countries, the analysis of Japanese development necessarily extends into the 1930s. Chapter 3 delves deeper into the industrial organization of each country's banking sector, the development of banking services, and the competitiveness and profitability of the banking industry. The final two chapters in this part investigate corporate governance relationships and the role of banking relationships in corporate financing.

[19] See La Porta, López-de-Silanes, Schleifer, and Vishny (1998) on the law-and-finance approach. Both hypotheses have been debated extensively in their respective literatures, with a consensus view similar to mine: Categorizing systems is useful for some exercises but misses crucial institutional detail much of the time.

[20] Even though the interwar period is very interesting, and a topic certainly in need of a unifying treatment, that period of upheaval and crisis would take us well outside the scope of this book, which is largely about the financing of long-run industrial growth.

This systematic comparative approach reveals that even though Germany and Italy did develop classic universal banking and relationship-oriented financial systems largely as described in the historical literature, their development varied in substantial ways from the standard views. Particularly in the case of Germany, many central features of the universal banking system developed late or not at all in the industrialization period. The Italian system appears more similar to the traditional conception on the surface. And yet the impact of the system on firms and on economic growth appears quite mild and even neutral in both cases. Japan, because of its dramatic cultural and technological differences with continental Europe, expands on the German and Italian cases and provides a richer view of universal-relationship systems and the paths systems take over time. Similarly, the United States and the United Kingdom, related in legal tradition at their core, differed remarkably in the implementation of those legal paradigms and the shape of their financial systems. In some cases, the UK institutions look and behave more like those in continental Europe than those in their former colonies.

These case studies reveal the variety and complexity of financial systems and hint at the difficulty of trying to categorize systems by type. Building on this idea, the second part of the book sets out to establish broader patterns in financial system design and economic growth. We would like to understand both the underlying causes of financial system structure – "why do certain kinds of financial institutions appear in some places but not others?" – and the possible consequences of systemic variation – "do certain kinds of institutions make the economy grow faster?" Older theories dictated that banks had to develop faster, and needed to provide more services, in countries that were undergoing rapid industrialization during the end of the nineteenth century. The most- and least-developed economies of the time, respectively, did not need or could not support such large-scale, industrial banks. Newer work, such as the VOC and law-and-finance literature, has brought political and legal factors to the fore, hypothesizing specific relationships between banking structure and state centralization and between financial development and legal tradition.

Chapter 6 begins the second part by laying out a framework for distinguishing among financial system types and then classifying all available countries into those categories.[21] Such a sorting exercise generalizes the more fine-grained portraits of the five country cases and confirms the findings of the in-depth studies: Few banking systems fit the extreme paradigms

[21] All countries for which pre–World War I data are provided in Maddison (1995).