Political and Social Sciences Department

Financial Capital Mobility and the Origins of Stock Markets

DANIEL VERDIER

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FINANCIAL CAPITAL MOBILITY AND THE ORIGINS OF STOCK MARKETS

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FINANCIAL CAPITAL MOBILITY AND THE ORIGINS OF STOCK MARKETS

ABSTRACT

Against the dominant view that financial assets are liquid within national borders, this study theoretically motivates and empirically demonstrates the existence of financial capital specificity. It uses the emergence of modern capital markets in the 19th century, a process that threatened to redeploy financial resources away from land and traditional sectors to heavy industry, as a test case to ascertain the degree of domestic financial capital mobility in nine advanced industrialized countries. The main finding is that cross-national variation in securities markets and capital mobility, holding level of economic development constant, reflected the degree of state centralization. In decentralized countries, a coalition formed between local nonprofit banks, local governments, and local farmers and small business to lock capital into local networks and prevent the redeployment of capital to new sectors. In centralized countries, in contrast, this coalition was impotent, and financial resources freely moved to the new sectors. The study also points to a correlation between domestic and cross-border financial mobility.

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Financial Capital Mobility and the Origins of Stock Markets

Following Stolper and Samuelson (1941), political economists have shown that capital mobility—how capital flows across regions or sectors of production—has redistributional effects. Redistributional effects, in turn, elicit lobbying and rent seeking on the part of potential winners and losers.[1] However, political economists are working with a notion of capital mobility that is more appropriate to machinery and the buildings that house them (*production* capital) than to financial assets (*financial* capital).[2] They ask how much it would take to relocate or convert an existing unit of capital to a different use. Applied to financial assets, this rule of thumb yields the conclusion that financial capital is perfectly mobile within the confines of a national economy. Consequently, asset holders are seen as irrelevant to policymaking, since they are more likely to bail out of a poorly performing sector than to join the ranks of its labor and management in lobbying for government aid. Jeffry Frieden writes: "*Assets that are not specific at all are those that can easily be redeployed—demand deposits, financial assets more generally. Holders of completely liquid assets are indifferent to policy, for they can move their funds to whatever activity is earning the highest rate of return*" (1991, p. 21).[3] This view has led political scientists to neglect the study of financial markets.[4]

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[1] See Alt and Gilligan 1994 and Alt et al. 1996 for a review of the literature.

[2] A standard estimate of capital mobility is *R&D* expenses; see Alt et al. 1999. One exception to the neglect of financial capital is Schonhardt-Bailey and Bailey 1995.

[3] See also Frieden and Rogowski 1996.

[4] Terminology matters. Corporate securities markets deal in long-term instruments (stocks and bonds) issued by corporations. The market for long-term securities is also referred to in textbooks as the *capital market*, in contrast to the *money market*, which includes short-term instruments (short-term bonds, commercial paper, bank notes, certificates of deposit, derivatives, and so

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Such neglect rests on false premises. Financial assets may not always be mobile, even in the age of fast communication. Financial capital mobility has redistributional effects, creating winners and losers, the former with an incentive to lobby for the deregulation of capital, the latter for rules to curtail such mobility. It is quite plausible that financial regulation plays the same role within the national borders as exchange controls across borders, viz. to curb the free circulation of funds across sectoral or regional boundaries.

The emergence of modern capital markets in the 19th century offers a dramatic illustration of how legislation can regulate the flow of capital. The second industrial revolution, characterized by large immobilization of capital, was financed by corporate security markets. Markets allowed banks to transform long-term loans to industry into securities, recoup their liquidity, and lend anew. Still, few individuals were willing to merely take over corporate financing from the banks and immobilize their savings into risky private ventures. The creation of a secondary market for corporate securities, allowing the owner of a security to sell it at any time, is what earned markets their mass appeal. Secondary security markets, however, needed—and still do—a lot of liquid assets to function well. Stable, reliable pricing requires thick trading, the constant short-term buying and selling by brokers, other intermediaries, and leveraged speculators, in constant need of vast sums of short funds. Where did markets find all this cash in the second half of the 19th century? The fact is that markets did not always find the required cash, not so much because it was scarce than because it was locked into the non-corporate sectors, such as governments, agriculture, and small business.

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forth). The two financial markets are integrated, as any long-term instrument can serve as collateral to short-term transactions or provide the basis for derivatives. *Corporate* refers to the non-government component of the market, which for the most advanced industrialized countries only emerged in the second half of the 19th century.

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Existing accounts of the origins of corporate security markets neglect redistributional issues. Besides the obvious role played by economic development, current accounts stress the respective roles of investment information and of government in absorbing the fixed costs involved in setting up securities markets. Common law, another argument goes, is more apt than civil law at reducing contracting uncertainty between the parties to a security issue. Common law countries, therefore, have larger corporate security markets than civil law countries. Without dismissing the role played by these factors, I point to redistributional issues. I argue that 19th century stock markets constituted, along with large commercial banks, a new "corporate finance," geared to the financial needs of the new industrial sectors. Land and other traditional sectors, in contrast, had no use for it, but, instead, were banking with the non-profit sector (savings banks, credit cooperatives, and mortgage banks). The two financial sectors were in competition for resources. The competition was adjudicated politically, through regulation. The outcome reflected the degree of political power of local governments, that is, the degree of decentralization of the state. Corporate securities, I show, flourished only in centralized states.

The present argument also has implications for financial internationalization. Cross-border financial capital mobility, like securitization, rested on domestic financial capital mobility. Securitization and internationalization, I show, were correlated.

I first present the literature on security markets, introduce my argument, and then test it. I establish a link between within-border and cross-border financial capital mobility in a penultimate section and last conclude.

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Current Accounts

Only recently have political economists sought comparative explanations for the cross-national variation in corporate security markets.[5] Several lines of argument have been offered. Historians generally hold the general level of economic development as the prime suspect for financial market development (Sylla and Smith 1995, p. 182). A larger pool of savings implied a higher demand for investment instruments.

A second explanation stresses the negative impact of information asymmetry between investor and entrepreneur on securities market development. Richard Sylla and David Smith (1995) account for the staggered fortunes of the London and New York stock markets over time as reflecting different timing in the adoption of rules favoring the disclosure of financial information and curtailing insider trading on privileged information. Jonathon Baskin and Paul Miranti (1997, p. 160) argue that the heavy reliance on bonds as opposed to common stocks in the 19th century reflected investors' risk aversion in an investment environment characterized by poor information.

A third explanation points to the role of fixed costs and government. Efficient stock markets, in addition to a building and special phone lines, require well-informed investors, reliable intermediaries, and reputable debtors. More importantly, they need to be liquid—demand must elicit supply, and supply must meet demand at all times and at low costs. There is "*a chicken and egg problem with liquidity*," Raghuram Rajan and Luigi Zingales aptly write, "*people will not trade in a particular market unless they think the market is liquid, but the market will not be liquid unless they trade*"

[5] Earlier accounts emphasized the interdependence of securities markets, focusing on the primary role played by London in the 19th century and the specialized nature of other markets. See De Cecco 1974 and Neal 1994. Se also Michie 1997. The present paper de-emphasizes the global links, stressing instead indigenous development.

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(1999, p. 17). Private entrepreneurs and investors could not overcome this free riding problem without government support. Corporate securities markets developed in the wake of public debt markets and railway bond markets, which were organized, guaranteed, or promoted by governments.

In turn, the government ability to build a large public debt market rested on the government's promise to repay. Looking at England, several scholars have argued that the switch from absolutist to parliamentary rule made such a promise credible (Dickson 1967, Brewer 1989, North and Weingast 1989, Jones 1994). Whereas it was difficult for a monarch holding the crown by divine right to commit not to repudiate past engagements, parliamentary rule, by securing individual rights and including wealth holders in the policymaking process, offered the required guarantee and reduced investment risk. The public debt was then instrumental in the latter acceptance of the private debt. France and Spain, who remained absolutist for another century, were unable to match British financial resources.

Induced from one observation, the checks-and-balances thesis lacks generality. Richard Sylla (1997, 1999) has offered an opposite account of the American Revolution. The source of the inefficiency resided not in absolutism, as in pre-Revolutionary England, but in excessive decentralization—each colony floated its own debt, fueling inflation and currency depreciation. The new constitution of 1787 solved the problem by giving the federal government the power of taxation. The US debt became popular with foreign investors, and, upon retirement, was replaced by the equity of incorporated business enterprises. Too many checks and balances could be as bad as not enough.

By 1815, in any case, most regimes in Europe, Russia excepted, had some form of checks and balances limiting monarchs' powers. As the theory would predict, these regimes had a debt that was traded both at home and abroad.

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However, the issuing of corporate securities was unevenly distributed across countries. Relatively high in France, Belgium, and Switzerland, it was low in Germany, Austria-Hungary, and Scandinavia. In Spain and Italy, a surfeit of public debt had the opposite effect of crowding out private debt. In Germany, the Junkers did their best to choke speculation, and with it, stock exchanges. The checks and the balances were insufficient when the public debt did not tail off and when policymakers did not favor the development of stock markets.

More fundamentally, checks and balances may not always favor corporate securitization. Checks and balances devolve veto power to small coalitions, including those opposing corporate finance.

The fourth and most recent theoretical foray into the growth of stock markets emphasizes the common law or civil law origin of the legal system. Rafael La Porta, Florencio Lopez-De-Silanes, Andrei Shleifer, and Robert Vishny (1997a) have shown that countries with poorer investor protections against expropriation by insiders, as reflected by legal rules and the quality of law enforcement, have smaller and narrower capital markets. These rules and the quality of their enforcement, they show, vary systematically by legal origin—common law and civil law. In the common law system, the judge de facto makes the law, whereas in the civil law system, it is the legislator. Civil law systems are further divided into three families—French, German, and Scandinavian types. Common law countries, the authors argue, protect shareholders the most, French civil law countries the least, and German and Scandinavian civil law countries somewhere in the middle. Law enforcement is also lowest in French civil law countries (La Porta et al. 1998).

The legal origin argument has the merit to provide a rationale for a well-known, yet poorly understood, stylized fact—the greater market-orientation of Anglo-Saxon countries. Furthermore, the direction of the causal relationship,

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if any, is beyond doubt—legal systems were adopted either long ago or in response to conquest or colonization (La Porta et al. 1998, p. 1126). They are not endogenous to financial development. The question arises as to how convincing the causal argument is. Too much investor protection, Rajan and Zingales (1999) counter, would merely lead firms to prefer debt to equity. The two economists point, instead, to another causal mechanism. The common law due process, they argue, is better at legalizing complex ownership structures, as well as notions of trust and good faith, which are typical of the arms' length contracts between firms and investors in financial markets (Rajan and Zingales 1999, p. 29).[6] But why don't legislators in civil law countries, they ask, introduce the valuable statutes as modified by judges in common law countries? After all, one advantage of civil law over common law is a greater capacity on the part of the legislator to act expeditiously. The two authors answer this counterfactual by arguing that governments are not ordinarily interested in ensuring investors' property rights against expropriation or, even if law-bound, they prefer to deal with banks than with markets. Governments are also responsive to anti-market coalitions—the landed gentry in the 19th century, the masses following the market crash of the 1930s. The decentralized nature of law making in a common law system, they argue, makes it more difficult for the government to alter the status quo (1999, pp. 6-7). In sum, common law is friendlier toward markets than civil law; it is also a better shield against market foes.

I share Rajan and Zingales' idea that security markets suffer when governments tamper with financial mobility. Government intervention is usually motivated by the purpose of compensating market losers. Not all market losers get compensated, however—only those that are politically

[6] In a different piece, La Porta et al. (1997b) argue that "trust," in turn a reflection of the existence of a "hierarchical religion" such as Catholicism, Eastern Orthodox, and Muslim, influences the development of all institutions in a country, including laws and capital markets.

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smart. Inept ones have no chance to entice politicians to prevent capital from freely roaming the land and limit, reverse, or avert the potential losers' loss. Sorting the smart from the inept is where the theoretical difficulty lies. Economists traditionally endogenize politics by equating power with wealth. Political scientists, instead, customarily point to the selection bias introduced by institutions, a bias that wealth alone cannot circumvent. The present argument belongs to the second tradition. The next section recalls the early days of corporate security finance, maps its potential winners and losers, and assesses the institutional capacity each group had to press their preferences on governments.

Policy Preference Formation: Traditional against Corporate Finance

The second half of the 19th century was characterized by a change in the scale of production that opened a gap between modern industrial sectors and traditional sectors. Traditional sectors included agrarian, artisans, shopkeepers, self-employed, workers skilled in traditional crafts and, more generally, sectors characterized by small enterprises.[7] The setback for agrarians was particularly severe. The transportation revolution, which transformed the European rural poor into an American or Australasian settler and exporter of cheap farm products to Europe, brought in its wake an agricultural depression. Agricultural prices dropped, wage costs rose, and farm profits fell below industrial profits. The second industrialization revolution also victimized industries with a high density of small firms. The products of large industry made strides in their markets, forcing them to

[7] French political scientists refer to this motley group as "*les classes moyennes*;" a phrase that translates into, but does not connote, the Anglo-Saxon notion of "middle class." If one were to categorize producers into the three categories of employer, employee, and self-employed, the *classes moyennes* would include small employers and the self-employed.

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adjust, by working for larger concerns or seeking out specialty markets. Large distribution threatened boutiques and small stores.

Changes in industrial production ran parallel to changes in finance. The liberalization of incorporation laws caused an unprecedented growth in stock and bond underwriting. The simultaneous appearance of joint-stock banking not only led to bank concentration, but also to a rise in the market share of large commercial banks—today's center banks. Center banks were in competition with three other types of banks—country, local non-profit, and state banks. Consider the four-sector breakdown of a generic banking system in Table 1. Two intersecting cleavages—center versus periphery and profit versus non-profit—yield four sectors: (1) *center* includes all the centrally-headquartered banks, the incorporated commercial banks and the prestigious banking partnerships; (2) *local for-profit* (country banks for short) includes the local commercial banks, private and incorporated; (3) *state* refers to the postal savings system, the Belgian national savings system, and all state-run credit banks (French *Crédit Foncier*, Belgian *Crédit Communal*, etc.); and (4) *local non-profit* includes all other savings banks, credit cooperatives, as well the German *Landesbanken* and the Swiss *Kantonal* banks, mortgage and multipurpose banks owned and run by local governments. The two non-profit categories, state and local non-profit, were subsidized, paying no taxes and benefiting, in the case of savings banks, from a state guarantee on collected deposits.

[Table 1]

The financial innovation of the late-19th century led to the growth in market share of the center banks. They absorbed the country banks and began

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to attract individual deposits which, until then, had been with the local non-profit sector.[8]

The disappearance of the country banks accentuated the specialization of banking. In the first half of the century, earlier in Britain, the wealthy banked with the center banks (mostly private back then), the poor with the savings banks, and all the intermediate groups banked with the country banks. As the latter merged or were absorbed, their clienteles parted ways; industrial sectors on the rise logically went to the center banks, whereas agrarians and small business fell back on the non-profit sector.

Consider the case of the agrarians first. They had little to gain from incorporation and stock markets. Niel Koning (1994, p. 26) argues that the agricultural depression destroyed any prospect for agrarian capitalism in the world. Large farms closed and, with them, ended early agrarian support for corporate finance. Small farmers, who could work harder and accept lower profits, became the dominant force in the agricultural sector. Even Dutch and Danish farms, who managed a conversion away from traditional grains to animal husbandry, thereby becoming the number-one supplier of bacon and eggs for the British breakfast table, remained small. Even in the United States, where mechanization allowed farms to be larger than in Europe, farms were family-owned, with no prospect for incorporation.

Farmers had no use for the newly established joint-stock banks either. The center banks could not accommodate farmers' demand for long-term finance, needed for land purchase, mechanization, or land improvement. Borrowing short, these banks could not easily lend long, otherwise, a rise in interest would force them to pay high interest to depositors while still collecting low

[8] On the disappearance of the country banks, for Britain, see Cottrell (1980, p. 194); for France, see Nishimura (1995). Admittedly, bank concentration proceeded more slowly in Germany and Switzerland.

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interests on borrowers (interest risk). The absence of secondary market in loans also made it impossible for a banker to liquidate farm loans, were he in need of doing so (liquidity risk). The situation was different for industrial firms, as a banker could usually recoup long-term advances to an industrial firm by turning them into shares.[9]

Farms all over the industrializing world raised long-term finance by mortgaging land with specialized financial intermediaries of four types. (1) Credit cooperatives, known in Germany as the "Raffeisen system," were created in the second half of the century; farmers would pledge an equal sum and be allowed to bid for a loan, which some or all the other members would guarantee. (2) Savings banks, whose risk was covered by a local government guarantee.[10] (3) Public mortgage securitization; a bank benefiting from government guarantee (central government in the case of the French *Crédit Foncier*, local governments in the German *Landesbanken* and Swiss *Kantonal*) would finance mortgage loans by issuing default-free bonds. (4) Private mortgage securitization, similar to the precedent, but without public guarantee, was practiced in Anglo-Saxon countries.

The first three mechanisms shared three characteristics: they were non-profit and tax-exempt; they benefited from a guarantee on their liabilities, supplied by solidarily-responsible peers in cooperatives and local or central governments in the other two; and they were stable. The fourth mechanism, in contrast, was for-profit, unsecured by government, and unstable; mostly encountered in the United States and British Dominions, it rarely managed to outlast more than one—two at best—business cycles. Kenneth Snowden (1995) chronicles four successive attempts in the United States to develop

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[9] Prudential rules were thrown to the wind, however, in periods of—and countries subject to—land speculation. The most famous instance is the Australian financial panic of 1896.

[10] On credit cooperatives and savings banks see Vittas 1997.

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private mortgage securitization, at first in the 1870s, then in the 1880s, then with the Federal (yet private) joint-stock mortgage banks in the 1920s, and last with the private issuing of mortgage-backed securities since the 1970s (although the latter is mostly about housing and commercial real estate). Of all four, only the last has not ended up in collective bankruptcy.[11]

Like agrarians, small businesses' financial needs went ignored by large center banks, which saw them as poor risk. Smallness foreclosed underwriting, the bank's main exit strategy. Credit for small business, as for farmers, would come from credit institutions other than the rising commercial banks—credit cooperatives and the last country bankers. Small business would have to wait until after World War I for central governments to establish specialized credit agencies.

My point is not that local, small enterprises were unable to get loans from the local branch of a large center bank; after all, the business of the local agent of a center bank was not merely to collect savings but also to sell loans. Local agents, however, were not as free as local bankers to meet the financial needs of local firms, which generally differed from the needs of large firms. Too small to enable market investors to evaluate their earning potential with a modicum of confidence, small- and medium-sized firms had to rely on bank loans, and more specifically on "relationship banking" (Lamoreaux 1994, Petersen and Rajan 1995). A durable relationship spread across a wide array of products allowed the bank to smoothen the cost of capital to the firm over the firm's life cycle. Center banks' local agents, however, could not commit to a long-term relationship. They had to meet lending standards decided by headquarters, with the consequence that their portfolio had to be flexible enough to meet liquidity requirements that kept changing with the overall

[11] Congress also established a successful system of central mortgage banking enjoying federal guarantee, the Federal Land Bank System in 1916. See Neufeld (1972, pp. 175-212) on Canada.

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position of the bank. Headquarters would typically make it difficult for local branch directors to fill in the shoes of country bankers. As headquarters often could not trust the local directors to enforce the lending preferences of their bank, the former multiplied impersonal decision criteria. Like French prefects, local agents were rotated, for promotion purposes but also to prevent local mores from eroding the bank's corporate culture. As a result, the center banks' capacity to tap local information networks—trade suppliers, chamber of commerce—was limited. Finally, a bank was unlikely to invest in a long-term relationship with a firm if the firm, in turn, could not credibly commit not to defect from the relationship once it would grow out of its early teething problems. A time-honored way of enforcing relationship banking is the existence of a banking monopoly able to enforce exclusivity over the long run. Rarely, though, did center-bank branch directors enjoy a local monopoly.

Farms and small business failed to take advantage of the emergence of corporate finance. Instead, they banked with the local non-profit sector (savings banks, credit cooperatives, and local mortgage banks). They also banked with the government-run non-profit sector, which at the time only included central mortgage banks—specialized government banks for small business at large would not appear until World War I and after. Farms and small business finally banked with country bankers in the United States, where they were protected by the law against banking concentration. The industrial revolution thus caused a specialization between two types of financial intermediaries. On one side, serving the needs of the new industrial sectors, stood center banks and corporate security markets. On the other side, serving the needs of the farming and small business groups, stood the non-profit banking sector, reinforced by country bankers in the United States.

The specialization on the assets' side of the banks' balance sheets was not matched by a similar specialization on the liabilities' side. Although for-profit

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and non-profit banking sectors did not compete for the same borrowers, they did compete for the same resources—deposits. Deposits were the single most important source of funding for banks from the mid-19th century onward. Joint-stock banks strove to open a branch in every town in order to tap local deposits, pool them, and invest them into large, scale-efficient placements—sovereign debt, infrastructure-related projects, and large firms. In contrast, savings banks sought to develop local monopolies, capable of deterring entry from center banks. The central treasury, in turn, used the Post Office network and other national savings schemes to channel local savings toward the financing of the public debt. Each sector vied to crowd out the other two from the deposit market.

The existence of a large non-profit credit sector had detrimental consequences for corporate security markets. The money that went into the financing of the assets held by the non-profit sector was as much that was lost to the for-profit sector for two reasons. The local non-profit sector, first, had minimal links with the corporate security markets, either as financial intermediary or mere investor. Savings banks invested their resources in mortgages and local and central government bonds. Savings banks and credit cooperatives located in areas with a chronic surplus of resources over investments deposited this surplus with their respective regional federations, which, in turn, lent it to savings banks and credit cooperatives in areas with permanent deficits. Remaining imbalance between regional federations would be similarly offset by their national federations.

Surely, the separation between the for-profit and non-profit sectors was not complete. Any residual at the level of the national federation would find its way into the financial markets. Timothy Guinnane (1997, p. 269) reports cases of German cooperatives that had long-term relationships with private bankers. The *Deutsche Gennossenschaft*, a central cooperative association,

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failed and was acquired in 1904 by the Dresdner Bank, one among the largest Berlin banks. These leaks, however, were insignificant. An operating principle of the cooperative movement was to find a local use to local funds, leaving little for investment outside the district. Moreover, private bankers did not like cooperatives as borrowers, writes Guinnane (1997, p. 269) with respect to the German case, "not because they were unsafe, but because the cooperatives retired loans quickly and unpredictably." This unpredictability stemmed from the right farmers had to repay their mortgages at any time before expiration.

Some complementarity may have existed between country and center banks, where correspondent relations helped bridged the divide. However, there is little doubt that country banks hindered the centralization of resources. Cash initially deposited with a local bank would be re-deposited by that bank with a center bank only if it had found no takers among local insiders. Only in such a case, would country banks play the role of deposit collector and feeder for the center banks. The US case may, a priori, be constructed as an exception to this generalization because of a particular rule, mandating country banks to keep cash reserves, yet allowing them to hold this cash in the form of interest-earning deposits with center banks. This practice brought about the so-called "pyramiding" of reserves in New York (James 1978). Relativizing the impact of this centripetal effect on stock markets development, however, was another peculiarity of Wall Street—the practice of next-day settlement--, which more than tripled the amount of loans that bankers would have otherwise had to extend to brokers had settlement been fortnightly or monthly as elsewhere. Pyramiding and next-day settlement probably offset each other, making the net impact of country banking on Wall Street largely negative.

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Some complementarity may have also existed between center and state sectors, with respect to land mortgages: if a *crédit foncier* existed, the land mortgages made by this institution were securitized in the form of risk-free, state-guaranteed bonds, liberally-traded in the market. More generally, the impact of a large public or semi-public debt on the development of the corporate security market was positive in the long-term once, and provided that, it was retired. Such was usually the case of war loans. The limitations of the *crédit foncier* venue, however, ought to be stressed. It applied only to countries equipped with central mortgage state banks (France, Scandinavia) and on the farm fraction of mortgages extended by these banks, which were usually more attracted to urban real estate. Furthermore, the immediate effect of an issue of bonds bearing the public guarantee, though not its long-term one, was to crowd out corporate bonds. The overall impact of a large state banking sector on corporate securities is a priori indeterminate.

Many agrarians in the second half of the 19th century saw the development of commercial banking and security markets as diverting financial resources away from mortgage lending. The difference in financial instruments—loans versus mortgages—and, with the exception of the United States, the separation of financial channels—for-profit banking versus non-profit banking—provided concrete references to their beliefs. A common claim of all farmers at the turn of the century was that the growth of industry raised interest rates above their historical level, draining resources away from land and stifling investment in agriculture. To remedy this problem, they opposed the gold standard, actively in Britain, the United States, and Germany, passively elsewhere. They fought with industrialists over the control of the central bank, successfully so in Norway and Sweden, with partial success in the United States and Switzerland, and unsuccessfully in Germany. They checked bank concentration in Norway and the United States,

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obtaining that branch banking be regulated by law. Finally, they tried to check the emergent markets. A common agrarian claim was that short selling (a sale involving a future delivery of goods or stocks) fueled bearish speculation, depressing the price of produces.[12] Like farmers, traditional urban sectors did not identify with modern finance, blaming it instead for speculation and recurrent financial panics.

Interest Articulation: Center Against Periphery

Group consciousness does not always translate into effective lobbying. It depends on the issue. The tariff was a great federating platform, universally pursued by agrarians and traditional sectors, as well as by some sectors of heavy industry; in contrast, silver had a disappointing run, reaching party platform status in the United States only. What about corporate finance? There were two ways in which the defensive claims of the periphery could be channeled to the decision making process: (1) as a horizontal debate about the relative importance to be given to for- and non-profit banks between political parties with a distinctive socio-economic profile; or (2) as a vertical dispute on the protection of peripheral banks in the face of competition from center banks between levels of government. The two types of interest articulation co-existed, but the success of the former was contingent on the success of the latter.

Most of the evidence for the partisan articulation focuses on lobbying by agrarians, of which the two opposite paradigms were the French and the German. The two national groups differed in their goals and impact on corporate securities markets. In 1852, the year he was elected Emperor by a plebiscite, thanks to the rural vote, Louis Napoléon chartered the *Crédit Foncier*, a special agricultural credit institution. According to Karl E. Born

[12] On the German Agrarian party, see Emery (1908).

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(1983, p. 104), "Napoléon was returning a favour to his supporters among the rural population." The French agrarian response to the rise of corporate finance was to take advantage of it. The German response, in contrast, was to nip corporate finance in the bud. The German Agrarian Party, in the name of a rural elite of large landowners, launched on a crusade against "speculation." The new company laws of 1884 restricted the liberal incorporation law of 1870, raising the minimum size of shares, lengthening the time lag between incorporation and listing, and strengthening the position of the supervisory board (Tilly 1986, p. 126). The law of 1896 prohibited futures in grain and flour, dealings for the account in the shares of mining and industrial companies, and requested that all parties to deals in industrial futures enter their names in a register, denigrated as the "gambling register." The law, according to Henry Emery (1908), increased cash transactions, demoralized the money market, increased the business of the great banks at the expense of their smaller rivals, increased costs and legal uncertainty, and led to the migration of business to London. The agrarians also lent a hand to the doubling of the 1881 turnover tax in 1894, which also diverted business to London.[13]

The more negative attitude of German agrarians in contrast to their French equivalents makes sense in light of the greater vulnerability of corporate finance in Germany. Unlike their French counterparts, German agrarians had no need for bond markets, for most of their credit needs were financed by very well-established local non-profit banks, collecting than 70 percent of all deposits, and investing half of it in mortgages and the other half in local government securities.[14] Their attitude was essentially defensive. The French local non-profit banks were weak in comparison, controlling no more than 15

[13] Also nervous about speculation was the American public. For technical examples of legal prohibitions based on popular suspicion, see Parker (1920, p. 10).

[14] See Cahill (1913, p. 75).

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percent of deposits. Unlike their German equivalents, however, they did not lend to agrarians or local investors or local government projects, but placed all their resources in French State *rentes perpétuelles*. French agrarians had little to defend. Although both were politically powerful groups within their respective regimes, German agrarians differed from their French cousins in that the former were dealing with corporate finance from a position of financial strength, the latter, instead, from a position of weakness.

The key to the difference behind the relative strength of local banks in Germany and elsewhere holds in one simple proposition: The single most important and most consistent political actors with an interest in preserving local banking were (and still are) local governments. Banking concentration threatened to depress the industrial vitality of regions with small- and medium size firms. The foreseeable monopolizing of deposit-taking by a handful of center-located banks, each at the head of a countrywide network of branch offices, threatened to drain local districts from individual savings and channel it instead into national and foreign government-backed paper. Were this centralization left unchecked, local governments would find it harder to finance infrastructure projects by local investors while the industrial vitality of regions with a concentration of small- and medium-size firms would be depressed. Local governments also wished to preserve the deposit base of savings banks, which they more or less managed. Savings banks were useful on three counts: they were a source of revenues, an important and reliable financier of local infrastructure projects, and, often, an investor in municipal bonds. There was a triangular interdependence between prosperous local sectors, well-entrenched local banks, and politically powerful local governments. Local firms needed local banks to satisfy their specific investment demand, local banks needed the political protection of local governments to hold back competition from the center banks, and local

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governments needed prosperous local banks and firms to maintain their relative fiscal independence from, and power vis-à-vis, the central government.[15]

Not all peripheral districts would necessarily suffer from the centralization of capital markets. Those districts that accommodated the rise of large, vertically-integrated, "autarkic" (in Herrigel's [1996] terminology) firms, which were large enough to efficiently tap equity markets, would not necessarily be harmed by the decline of local, industrial banking, as the rise of large industry would compensate for the decline in craft-oriented sectors. One would expect these districts and the firms to which they were home to espouse the cause of centralization or, at least, be conflicted—indeed, although the large firm provided local employment, its interest in the welfare of its local host was circumstantial and reversible.

Except in those districts, local governments, wherever they enjoyed the power to, sought to block the penetration of the countryside by center banks. The chosen political arena, in representative regimes, was the upper (lower in Scandinavia) chamber, dedicated to representing the interest of local governments against encroachments of the central government regulatory agencies. The policy vehicle was bank, financial, and related monetary legislation, which, having to be regularly updated, would give an opportunity to the profit and non-profit sectors to denounce, the former, the unfair privileges of the latter, the latter, the monopolistic proclivities of the former. The central government would most often side with the large banks (and the state banks as well, of course), and a majority of the upper chamber would side with the local banks. Not all constitutions provided for upper chambers,

[15] Hartmann (1947) conducted a comparative study of France and Germany, at the end of which he concluded that the relatively decentralized nature of the German banking industry helped maintain more even levels of economic development between regions within Germany than in France.

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or, even in the case they did, not all of them granted meaningful power to them. In centralized regimes (Britain, France, Belgium), upper chambers were weak, and the debate between center and periphery settled in favor of the center from the outset.

Any measure that tended to increase the market shares of any credit sector other than center banks had the effect of diverting liquidity from the corporate securities market. Two issues mattered: branching and the product mix. Branch banking was regulated in Norway, the United States, and deterred by subsidies to local banks elsewhere.[16] The product mix—who could sell what—was the subject of regular debate in Italy and Germany. Richard Deeg (1998) has chronicled with wondrous details the German debate on the extent to which the non-taxed, state-guaranteed, nonprofit sector should be allowed to offer services overlapping with those offered by for-profit, taxed, and uninsured banks.[17]

The present argument yields two empirically observable hypotheses. The first hypothesis ("crowding out") states that local banking crowded out corporate security markets. Capital that was locked in a local financial network was unavailable for redeployment toward the center. The impact of state banking was indeterminate. The second hypothesis ("centralization")

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[16] On the regulation of branch banking in Norway, see Lange 1994 and Knutsen 1991. In the United States, the last joint-stock bank to enjoy branch banking was the Second Bank. From 1833 on, legal restrictions prevented joint-stock banks from developing interstate branch networks; only private bankers could do so. In Switzerland, until the creation of the central bank in 1905, the cantonal banks held the right of issuing notes, whereas center banks did not. It took fifteen years (1891-1905) of trial and a couple of referenda to the Swiss *Großbanken* to strip the local banks from their inflationary note-issuing privileges and centralize note-issuing in a more orthodox central bank. They had to overcome the opposition of local interests in alliance with the left, who supported nationalization (Zimmerman 1987). After 1905, note-issuing banks received subsidies in the form of the state guarantee on deposits and tax exemption (Hartmann 1947, pp. 50, 53, and 56).

[17] In Britain and France, in contrast, the debate mostly concentrated on the rivalry between the private savings banks and the Postal savings system, with central government favoring the latter over the former (Duet 1991, Moss 1997).

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posits that the size of the local banking sector, and by extension the size of the corporate securities markets, were a function of state centralization.

The Crowding Out Hypothesis

The crowding-out hypothesis states that the development of corporate security markets was a function of the banking structure; corporate capital markets were starved by a large local banking sector. The dependent variable is the ratio of a country's corporate stocks and bonds to total financial assets. I try two variants: stocks alone and stock and bonds aggregated. Both data are taken from Raymond Goldsmith's (1985) study of national balance sheets, which he established for various countries and benchmark years. Measures for only ten countries are available for at least one of the three years preceding World War I. Figure 1 displays the relative size of the corporate stock and bond markets in relation to government bonds, bank loans, mortgages, and other financial assets. Foreign financial assets are not included in financial assets.

[Figure 1]

The independent variables are the market shares of three sectors—country, local non-profit, and state—measured in deposits. The choice of deposits over total assets is mandated by the role played by the money market in the hypothesized logical cause.[18] Although most data on these sectors are available, they present one difficulty. Separate data exist for state and local non-profit banks, but data for center and country banks are aggregated, except in the cases of Germany, Switzerland, and the United States. The difficulty is not insurmountable, however. Starting at the turn of the century, the trend in all but one country was toward banking concentration

[18] Note, however, that results are almost identical when using assets as opposed to deposits, despite some clear cross-national variation in average equity-deposit ratios of center banks.

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and the absorption of country banks by center banks. The exception was the United States, a country in which center banks were forbidden to branch out of their State of origin (in certain cases, even out of the district in which they were headquartered) to compete with other for-profit banks. This so-called "unit banking" legislation made it possible for country banks (the State-chartered banks) to preserve their local market share. In countries other than the United States, however, the 19th-century country banks could not represent a large segment of the for-profit sector. Surely, their disappearance was gradual and uneven across countries; Germany and Switzerland lagged France and Britain.[19] Some local banks formed regional combines, buying them another decade of relative independence. The centralizing trend, however, was unmistakable, and the country banks that managed to escape outright absorption were forced to acknowledge the pull of the center, often by becoming junior partners in an implicit alliance with a center bank. In light of this, I will assume for all countries, except the United States, that for-profit banks, whether center of local, were center banks. Only in the US case will the country bank sector show a proportion greater than zero. Thus re-aggregated, the data are shown in Figure 2; countries are sorted by center banking magnitude. The data validate the economic historians' use of Britain and Germany as two opposite paradigms.

[Figure 2]

I alternatively use four control variables. GNP per capita is included to control for the demand for securities. I could not directly control for the common law origin of the legal system due to a case of multicolinearity with

[19] Even then, the combined assets of the 7 to 9 Berliner Groβanken represented 44 percent of for-profit bank assets in 1890, 53 in 1914, and as much as 77 in 1922 (Deutsche Bundesbank 1976, pp. 56-58). Equivalent data for the 6 to 8 Swiss Groβbanken were 37, 67, and 77 percent respectively (Ritzmann 1973, Table 1). In contrast, the US National banks controlled 50 percent in 1914 (there are no earlier data) and only 46 in 1922 (Bureau of the Census).

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GNP per capita—Anglo-Saxon countries were the wealthiest of the sample. I used, instead, French civil law origin (France, Belgium, and Italy), a proxy for the legal environment that is considered as the most hostile to security markets (La Porta, Lopez-De-Silanes, Shleifer, Vishny 1997a). I control for information asymmetry, third; drawing on Baskin and Miranti's (1997) finding that poor information led investors to choose bonds over stocks, poor information is proxied by the proportion of corporate bonds among corporate securities. The relative size of the public debt, fourth, is trickier to model, given its hypothesized opposite effects in the short and long terms. I proxy these two opposite effects with two ratios: public debt/total assets and public debt/financial assets. The intuition is this: The case in which the debt carries little weight in the overall economy as a whole but represents a substantial share of financial assets typifies crowding out. Conversely, a relatively large debt that would represent a comparatively small proportion of all financial assets ratio corresponds to the seeding effect. Further multicolinearity (the bane of small N's research designs) between the last three series of control variables forced me to include them one at a time.

The method is ordinary least squares. All the tests have a small number of observations making them case sensitive—it takes but a few outliers to make or break a correlation. I compensate for this limitation by performing two kinds of diagnostics. I first calculate the DFITS statistic—a measure of the degree to which each observation has a deviant residual or pulls the regression line toward itself. This allows me to identify potential outliers, some mild, some strong.[20] I then exclude these outliers from the regression and run the regression a second time. Because exclusion is a drastic solution, I try each

[20] I use standard definitions of strong and mild. A strong potential outlier is one with a DIFTS value superior to what is known as the "high cutoff "point—the square root of p, with p being the number of variables plus one (the constant). A mild potential outlier is one whose DFITS statistics is situated between this high cutoff and the so-called "low cutoff" point—2*square root of p/n, with n the number of cases. See Bollen and Jackman 1990.

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time to find a substantive rationale for doing so. I complement this method with the less rigorous, but more informative, inspection of the partial regression plots. The partial regression plot is the multivariate analog of the bivariate scattergram.[21] [22]

Results are reported in Table 2. The first result of note is the coefficient for the wealth variable (regression 1). Relative wealth is a powerful determinant of securitization: a one standard deviation increase in GNP per capita (=$262) yields an increase in the dependent variable of almost one (84 percent) standard deviation (=0.09). This is a very powerful impact and an accurate one as well, since the relationship is significant at the 1 percent level. This finding confirms the historians' hunch that the size of security markets in 1913 reflected levels of development. I will use wealth as a control variable across specifications.

[Table 2]

Of greater interest to the present argument are the coefficients for the various banking sectors. The strongest impact is that of the local non-profit sector. The coefficient is statistically significant (at the 1.1 percent level) and a one standard deviation (=0.37) increase in that variable corresponds to a decrease of almost one (0.82) standard deviation in the dependent variable. Also significant, but less strong, is the impact of the country bank variable (a 20 percent decrease calculated in standard deviations). Recall that this is a quasi-dummy variable (coded 0.42 for the US, 0 for others). The coefficient indicates that the presence of a large State-chartered banking system in the US

[21] Each plot generates a coefficient and a fit that are equal to the coefficient and fit of the dependent variable against the chosen right-hand-side variable, while simultaneously controlling for the effect of the other right-hand-side variables on both variables.

[22] Readers should be aware that the use of OLS in the presence of so few observations makes the results suggestive at most. The alternative method of cross-tabulation is cumbersome and even less precise.

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had a moderately negative impact on corporate stock holdings. The coefficient for the state bank variable is not significantly different from zero, suggesting no net effect.

Several results are modified when the dependent variable includes both bonds and stocks (regression 5). The impact of wealth is reduced (only 42 percent of one standard deviation), suggesting that the corporate bond market was less a function of wealth than its stock equivalent. The negative impact of local non-profit banking is increased (125 percent), perhaps because savings banks, the institutional investors of the day, invested so much in public bonds, in direct competition with corporate bonds. The negative impact of state banks becomes significant, but is moderate (27 percent), further suggesting that state bonds competed with corporate bonds. The negative impact of country banks lapses into statistical insignificance. Contrasting regression 1 and 5 suggests that public bonds crowded out corporate bonds, but that only the two local banking sectors (especially its local non-profit component, to a lesser extent the country component) had a negative impact on corporate stocks.

The case sensitivity analysis identified several potential outliers in regression 1. However, consultation of the partial plots for that regression suggests that these cases are not real outliers but merely result from the small number of observations (Figure 3). Figure 3 brings home a fact that I have never seen mentioned in prior studies. Controlling for GNP per capita moves the United States from being the country with the largest GNP-weighted stock holdings in the prewar world to a country with lower than average holdings, in keeping with the small domestic market share of its center banking sector.

[Figure 3]

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Further specifications include the additional control variables. I deleted the two least performing banking variables (state and country) to save degrees of freedom.[23] The present results concord with the claim that information asymmetry had a marginally significant negative impact on markets (regression 2); countries where holders of corporate securities preferred bonds to stocks were also countries where markets were less developed. Legal origins also had an influence on corporate securitization. French civil law countries had corporate stock holdings that were smaller by 0.06 points (=2/3 of one standard deviation of the stock variable) than the rest (regression 3)—a rather strong influence.

The proxy for the negative short-term effect of public debt is negatively correlated with the corporate securities market, suggesting a crowding out effect of the order of two-third of a standard deviation (regression 4). The sign of the long-term effect is positive, as expected, but not statistically significant. Examination of the partial regression plots for regressions 2-4 (unreported) suggests that the potential outliers identified by the DFITS diagnostics are an artifact of the small number of observations.

Therefore, the 1913 data indicate that the share of corporate stock holdings among financial assets is a function of the level of economic development primarily and of the size of the local non-profit banking sector secondarily, even after controlling for all other presumed determinants. The poorer the economy and the stronger the savings banks, the smaller the market. US country banks were also found to be negatively correlated with stocks. State banks, in contrast, were not found to correlate negatively with markets. The center-periphery cleavage affected securities markets most; the for- non-profit cleavage, in contrast, did not. French legal origins, a

[23] A further advantage of this specification is to avoid making any assumption about the relative sizes of center and country banking sectors.

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preference for bonds, and public debt were also found to have a concurring negative effect on stock markets. I now raise the question of the origins of the banking structure.

The State Centralization Hypothesis

The main (though not necessarily unique) channels of articulation of the non-corporate sectors' claims were local governments; the preferred policies were geared toward the promotion of local banks. As a result, one should observe positive statistical relations between the degree of centralization of the state, on the one hand, and the degree of centralization of the deposit market and the size of the corporate securities markets, on the other hand.

The independent variable, state centralization, is measured by the proportion of government revenues drained by the central government. The exact measure is a fraction having as numerator the sum of central government receipts and as denominator the sum of all government receipts (social security payments excluded) calculated for 1880. The date was chosen to allay any suspicion about the direction of the causal relationship (I initially wanted data for 1850 but had to give up). At any rate, state centralization is a variable with a long memory, most unlikely in the short run to be endogenous to financial development. Both dependent variables, the aggregate size of the local banking sectors (country plus local non-profit) and the corporate stock share of domestic financial assets, were defined in the previous section. Data are available for fifteen countries.

Table 3 reports the results. Consider first the impact of state centralization on local banks. The coefficient for state centralization is significantly different from zero, negative, and large—a one standard deviation increase (=0.19) in state centralization yields a corresponding decrease of 62 percent of a standard deviation (=0.24) in the market share of the two local sectors

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(regression 1). The test for case sensitivity points to Australia as potential outlier. Australia is a dominion and the case can be made that all dominions should be dropped from this regression because they fall out of the scope of the present theory. Their centralized banking systems owed more to their prior colonial status and the lasting influence of the Bank of England than to their respective degree of political centralization in the closing decades of the 19th century. The dominions violate an assumption of the present theory according to which political institution existed before market institutions rather than reflecting them. All dominions showed a high degree of banking centralization despite wide variations in revenue centralization (high in Canada and New Zealand, low in Australia).[24] Dropping the dominions in regression 2 increases both fit and coefficient (a one standard deviation increase in state centralization yields an almost equivalent, 85 percent, decrease in local bank market share). The results are robust to the inclusion of various control variables: logged GNP value, logged population value, and GNP per capita (results unreported). There is strong empirical evidence of the existence of a negative relation between the degree of centralization of the state and the relative size of the local banking sectors, country and non-profit combined.[25]

[Table 3]

The next step is to calculate the impact of state centralization on securities market size. This is done in regression 3, which also includes GNP per capita as control variable. The dominions are automatically excluded for lack of data on stock holdings. The impact of wealth, of the order of one (one standard deviation increase in wealth corresponds with a one standard deviation

[24] The Australian figure for state centralization is for 1907, right after the Commonwealth was formed; it significantly increased in the following decades.

[25] The findings hold for each component of the local banking aggregate—country and local nonprofit.

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increase in stock holdings), is stronger than that of state centralization, of the order of one-third. The DFITS diagnostics identify no potential outlier. The partial plot for regression 3 are shown in Figure 4. Despite the small N, the relationships are persuasive. The results are robust to the inclusion of any of the additional control variables (French legal origins, preference for bonds over stocks, and public debt). None of these control variables, however, exhibit coefficients that are statistically different from zero (results unreported). A possible cause may be the presence of multicolinearity between state centralization, on the one hand, and French origins, a large public debt, and a preference for bonds, on the other. It would take a larger sample to unravel this tangle.

[Figure 4]

The present findings have one main implication for the institutionalist interpretation advanced by North and Weingast. It may be true that the existence of checks and balances were a requisite for treasuries to issue debt on a large scale. It is also the case, however, that a particular type of checks and balances, decentralization and the concomitant representation of local governments in powerful upper chambers, had a largely negative impact on the development of corporate security markets.

Securitization and Cross-Border Capital Mobility

The development of international markets tends to run parallel to the development of domestic securities markets. Such is the case today. So was it before World War I. Consider the findings reported in Table 4, where a measure of financial internationalization is regressed against stock market holdings and level of development. The financial internationalization measure is the stock of foreign investment (portfolio mainly) held in 1914 divided by GNP. I use absolute values, so as to measure the relative dependence of the

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economy on foreign investment in and out, without distinction between debtor and creditor status, but add a dummy variable coded "1" for creditor, "0" otherwise to guard against a possible bias. The number of observations is very low and few degrees of freedom are left.

Regression 1 fails to show any interesting results. The DFITS statistic diagnoses three potential outliers—Switzerland, the United States, and Germany. The partial regression plots show that the US and Germany are no outliers, but Switzerland is (Figure 5).[26] Run again without the Swiss observation, the regression reveals the existence of strong coefficients relations for wealth and stock—a one standard deviation rise in stocks corresponds to a 1.4 standard deviation rise in foreign investment, whereas an equivalent rise in wealth corresponds with a 1.2 rise. A shift from debtor to creditor increases the dependent variable by one standard deviation.

[Table 4

Figure 5]

Did securitization invite internationalization, or did internationalization foster securitization? None of the above. Both internationalization and securitization were the product of one common cause—the existence of a broad, centripetal money market, that is, domestic financial capital mobility. It has been shown elsewhere that, like securitization, internationalization was negatively correlated with the market share of the local banking sectors and positively so with state centralization (Verdier 1998). Combining these results suggests that state centralization, along with economic development, fueled both domestic and cross-border capital mobility.

[26] Switzerland is an exception, a country with an unusual share of international banking owing to factors that are left out of the present argument—international financial specialization, low tax rate, political stability, and neutrality in foreign affairs.

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Summary and Implications

The paper theoretically motivates and empirically demonstrates the existence of financial capital specificity. The industrial revolution touched off a concomitant process of banking concentration and market securitization (corporate finance) that threatened to divert capital from traditional sectors. In decentralized countries, corporate finance elicited the common opposition of local banks, local governments that ran or regulated these banks, and sectors that were slated to lose from the impending changes in financial systems—land, traditional sectors, and small business. These local coalitions checked the redeployment of liquidity from the periphery toward the center. The financial center languished, securities markets remained illiquid, and, with the exception of Switzerland, international business remained limited. In centralized countries, in contrast, local coalitions did not form or were impotent because local banks were economically weaker and local governments enjoyed little power. Capital flowed naturally to the financial center, where it helped lubricate the corporate securities markets or found its way in foreign issues. By promoting securities exchanges, geographic capital mobility promoted capital mobility across sectors of production. By promoting internationalization, it promoted cross-border capital mobility.

Financial capital mobility stemmed from an economic fundamental—the level of economic development—and a political fundamental—state centralization. The paper provides strong evidence that political institutions played a role in determining factor mobility. Political economists often claim that factor mobility is responsible for the manner in which lobbying coalitions form. This way of explaining coalition formation and policy outcomes assumes that factor mobility is external to policymaking, viz. reflects

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technological and global trends.[27] By selecting financial capital, I chose a case in which factor mobility, since the advent of the telegraph, should be the closest one can ever get in practice to textbook perfection. The specificity I found is irrefutable proof that politicians do tamper with financial capital mobility, as they probably do with any other type of factor mobility.

The role played by state centralization helps contextualize existing findings on markets and political regimes. Douglas North and Barry Weingast (1989) argued that the capacity for the monarch to commit to repay the debt was a prerequisite for the emergence of an efficient public, and then private, debt market. Theorizing about England, a centralized state, they missed an equally important requisite—the power of the state to free capital from local networks. The eradication of local financial privileges was necessary to release local capital from its local uses. They also missed that state centralization had to come before checks and balances, for the introduction of checks and balances froze state centralization at its existing level, empowering local interests in decentralized countries. Checks and balances, to which the common law was an integral component, may have been indispensable to secure a credible commitment, but it also could, as in the United States, empower local interests, thereby hindering capital mobility. One better appreciates the predicament of the French and Spanish monarchies during the 18th century. Indeed, why did not the Bourbons match Albion's financial resources by conceding enough power to parliament? We know that the French and Spanish states had not reached a level of centralization comparable to England yet.[28] Limited government may have backfired, merely reinstating local privileges and past impediments to exchange.

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[27] See Magee 1980, and Frieden and Rogowski (1995).

[28] Hoffman and Norberg 1994.

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The absence of a well-functioning security market denied investors the capacity to diversify their investment portfolio beyond the region in which they resided. Holders of securities were unable to exercise "exit," but had to fall back on "voice," to use Albert Hirschman's terminology. Territorial specificity forced investors to join the political fray, both corporate and regulatory. On the corporate side, they became involved in monitoring entrepreneurs. Large lenders exercised monitoring directly, by acquiring controlling positions in firms. Rather than using markets to spread their resources thin over a diversified portfolio, as in countries of high capital mobility, they used markets to concentrate their resources in a few companies and monitor management. Bought at primary auctions, shares were kept indefinitely, stunting growth in the secondary market. Smaller lenders would hold debt in the form of bonds or, when concerned about staying liquid, of bank deposits. Banks would then use the deposits to extend loans to, and monitor, borrowers. For banks too, monitoring required concentrating assets on a limited number of large companies.

Did voice and monitoring stop at board meetings, or were they also directed at government regulators? There is no doubt that agrarian organisations and local governments lobbied for their local banks if they happened to have any. The question is whether lobbying for rents also extended to non-financial policies, such as tariffs and subsidies. Although beyond the empirical scope of this study, a logical implication is that holders of territorially specific financial capital should have lobbied on behalf of the firms and sectors situated in the locales in which they had their investments. Undiversified Westphalian savers, should have lobbied for rents for Westphalian producers. Diversified savers from Lyons or Birmingham, in contrast, should not. Our knowledge in this area is scanty. We know that German and US bankers had a personal stake in the cartelization of heavy

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industry and import tariffs to insure revenues against price volatility, whereas French bankers, let alone bankers from the "City," did not. We also know that all the great parliamentary tariff inquiries that took place around the turn of the century were replete with instances of local representation. The consequences of variations in financial capital mobility for economic policies is a field for future research.

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TABLE 1. *A typology of banking sectors*

	FOR-PROFIT	NON-PROFIT
CENTER	*center banks* (joint-stock, partnership)	*state banks* (postal savings, national savings schemes, credit state agencies and assimilated)
PERIPHERY	*country banks* (joint-stock, partnership)	*local non-profit banks* (savings, cooperatives, mortgage, local government-owned banks)

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TABLE 2. *The Crowding Out Hypothesis*

	Dependent variable:				
	Corporate stocks, c. 1913				*Corporate stocks and bonds, c. 1913*
	1	2	3	4	5
Local non-profit banks 1913	-0.20 (-4.54)**	-0.19 (-5.54)***	-0.24 (-6.86)***	-0.19 (-5.08)***	-0.44 (-5.85)***
Country banks 1913	-0.14 (-2.14)*				-0.006 (-0.06)
State banks 1913	-0.10 (-1.37)				-0.32 (-2.67)*
GNP per capita 1913	0.00029 (6.49)***	0.00024 (8.27)***	0.00018 (5.19)**	0.00019 (4.48)**	0.00021 (2.74)*
Corporate bonds in % of corporate securities c. 1913		-0.10 (-1.97)*			
French legal origin (dummy)			-0.06 (-3.20)**		
Government debt /National assets c. 1913				0.01 (1.17)	
Government debt /Financial assets c. 1913				-0.66 (-2.20)*	
Intercept	0.01 (0.20)	0.05 (1.26)	0.12 (2.69)**	0.09 (1.21)	0.24 (2.61)*
Adj. R-sq.	0.96	0.96	0.97	0.98	0.96
Num. of obs.	9[a]	9[a]	9[a]	9[a]	9[a]
POTENTIAL OUTLIERS strong[b]	France, Norway	None	US	US, Norway	None
mild[c]	None	US, Belgium	Switzerland, Italy	Italy	France

Data Description and Sources: The dependent variables and the *Government debt/financial assets* variable are calculated as a percentage of all financial assets circa 1913, For these variables and *Government debt/National* assets, see Goldsmith 1985. *Local non-profit banks, State banks,* and *Country banks* are the

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market share of these respective categories calculated in deposits, but assets in the Swiss case. Sources are, for Australia: Butlin, Hall and White, 1971, 114, 503, 525; Austria-Hungary: Mitchell 1992, 774, 781; Belgium: Société des nations 1931, 116, Mitchell 1992, 781, 784; Britain: Société des nations 1931, 260; Canada: Société des nations 1931, 329; Denmark: Société des nations 1931, 125; France: Mitchell 1992, 774, 782; Germany: Deutsche Bundesbank 1976, 57, 63, 65, 76, 102, 112, 120; Italy: Mitchell 1992, 774, 782, Société des nations 1931, 187; the Netherlands: Nederlandsche Bank 1987, 34, 48, 52; New Zealand: Société des nations 1931, 447; Norway: Société des nations 1931, 199, Mitchell 1992, 782; Spain: Martin-Ace¤a 1995, 522, Mitchell 1992, 782; Sweden: Société des nations 1931, 275, Mitchell 1992, 783; Switzerland: Ritzmann 1973, Tab. 1; the United States: Société des nations 1931, 346, Mitchell 1983, 775, 785. The source for *GNP per capita* is Bairoch 1981, p. 10. *French legal origin* is a dummy variable coded "1" for Belgium, France, and Italy and "0" otherwise.

Note: Values of *t*-statistics are given in parentheses.

[a] Belgium, Denmark, France, Germany, Italy, Norway, Switzerland, UK, US.

[b] with a DFITS absolute value > sqrt(p), with p the number of right-hand-side variables plus one.

[c] with a DFITS absolute value between sqrt(p) and 2*sqrt(p/n), with n the number of observations.

*,**,*** *t*-values significant at the 10%, 5% and 1% significance levels respectively.

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TABLE 3. *The Centralization Hypothesis*

		Dependent variable:		
		Local banks, 1913		*Corporate stocks, c. 1913*
		1	2	3
State centralization c. 1880		-0.78 (-2.96)**	-1.05 (-4.81)***	0.19 (3.23)**
GNP per capita 1913				0.00034 (8.55)***
Intercept		0.82 (4.82)***	1.05 (7.30)***	-0.25 (-4.27)***
Adj. R-sq.		0.36	0.66	0.90
Num. of obs.		15[a]	12[b]	9[c]
POTENTIAL OUTLIERS	strong[d]	None	None	none
	mild[e]	Australia	UK	none

Data Description and Sources: The independent variable measures central government revenues as a percentage of general government revenues circa 1880. Sources are: For Western Europe, excluding Spain, Flora 1983, p. 273. Data for Austria-Hungary could not be used, because of the exclusion of the non-Austrian part of the Empire. For 1913, for Spain, Bernis 1919, pp. 338, 347; for the United States, U.S. Bureau of the Census 1975, p. 1119; for Canada, Canada Department of Agriculture 1890, pp. 104, 117. Data for Australia are for 1907, Mitchell 1983, p. 802; Commonwealth Bureau of Census and Statistics 1908, p. 668. Data for New Zealand are for 1913, G.T.Bloomfield 1984, pp. 333, 352. Other variables are defined in Table 2.

Note: Values of *t*-statistics are given in parentheses.

[a] Australia, Belgium, Canada, Denmark, France, Germany, Italy, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, UK, US.

[b] Same as in [a] with Australia, Canada, and New Zealand dropped.

[c] Belgium, Denmark, France, Germany, Italy, Norway, Switzerland, UK, US.

[d] with a DFITS absolute value > sqrt(p), with p the number of right-hand-side variables plus one.

[e] with a DFITS absolute value between sqrt(p) and 2*sqrt(p/n), with n the number of observations.

*,**,*** *t*-values significant at the 10%, 5% and 1% significance levels respectively.

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TABLE 4. *Securitization and Internationalization*

		Dependent variable: *Absolute value of foreign investment stock weighted by GNP, 1914*	
		1	2 (=1 without Switzerland)
Corporate stocks c. 1913		4.52 (0.94)	7.95 (4.33)**
GNP per capita 1913		-0.0012 (-0.74)	-0.0024 (-3.79)**
Creditor (dummy)		0.88 (2.20)*	0.57 (3.70)**
Intercept		0.62 (0.75)	1.07 (3.46)**
Adj. R-sq.		0.39	0.89
Num. of obs.		8[a]	7[b]
POTENTIAL OUTLIERS	strong[c]	Switzerland, US	US, UK, Germany
	mild[d]	Germany	None

Data Description and Sources: All data are gross foreign investments stocks as of 1914, except in the case of the United States, the only country with known significant two-way flows, for which data are net. Foreign investment stocks in 1914 U.S. dollars were found in Cameron 1991, 13, except for Sweden and Norway, for which the data were found in Bloomfield A. (1968, 43-44) and converted in U.S. dollars at the old gold parity of 0.2680 krone to the dollar (Svennilson 1954, 318). Data used in the computation of stocks for Sweden and Norway only start in 1861 and 1871 respectively, with the effect of slightly underestimating Swedish liability while slightly overestimating Norwegian liability. GNP data are for 1913: 1913 GNP data in current prices (Mitchell 1983, 1992; for Austria-Hungary, Komlos 1990, 126) were converted in U.S. dollars using 1913 exchange rates (Svennilson 1954, 318-9).

Note: Values of *t*-statistics are given in parentheses.

[a] Belgium, France, Germany, Italy, Norway, Switzerland, UK, US.

[b] Same as in [a] with Switzerland dropped.

[c] with a DFITS absolute value > sqrt(p), with p the number of right-hand-side variables plus one.

[d] with a DFITS absolute value between sqrt(p) and 2*sqrt(p/n), with n the number of observations.

*,**,*** *t*-values significant at the 10%, 5% and 1% significance levels respectively

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FIGURE 1
Selected Financial Assets in percentage of total financial assets 1912-14

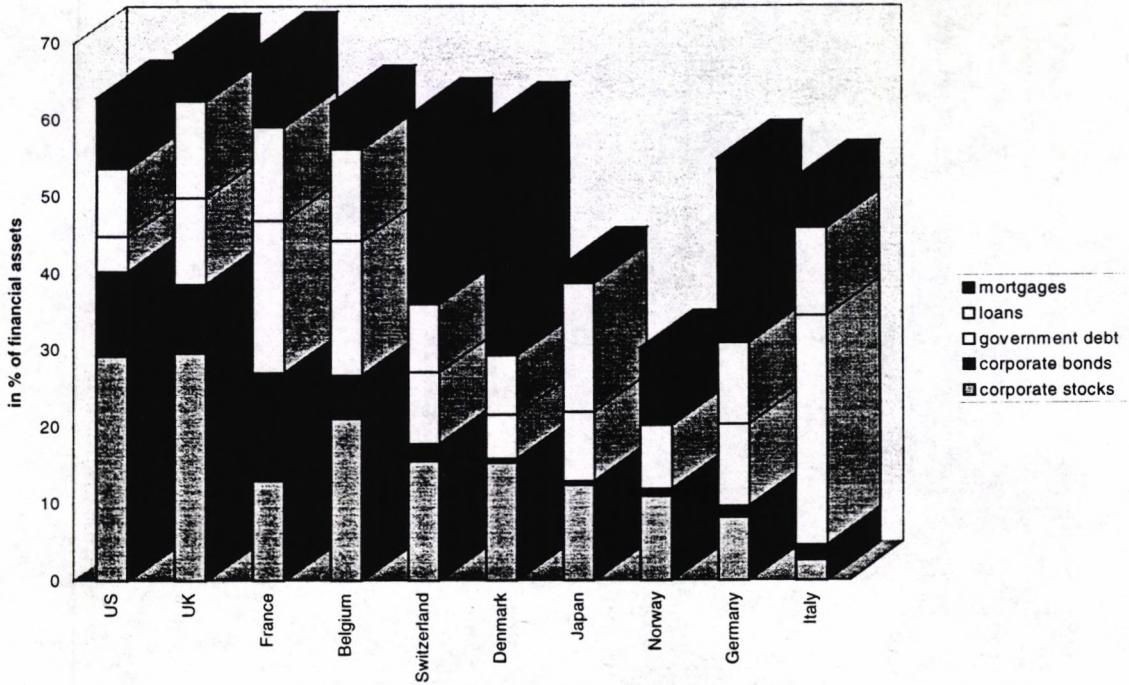

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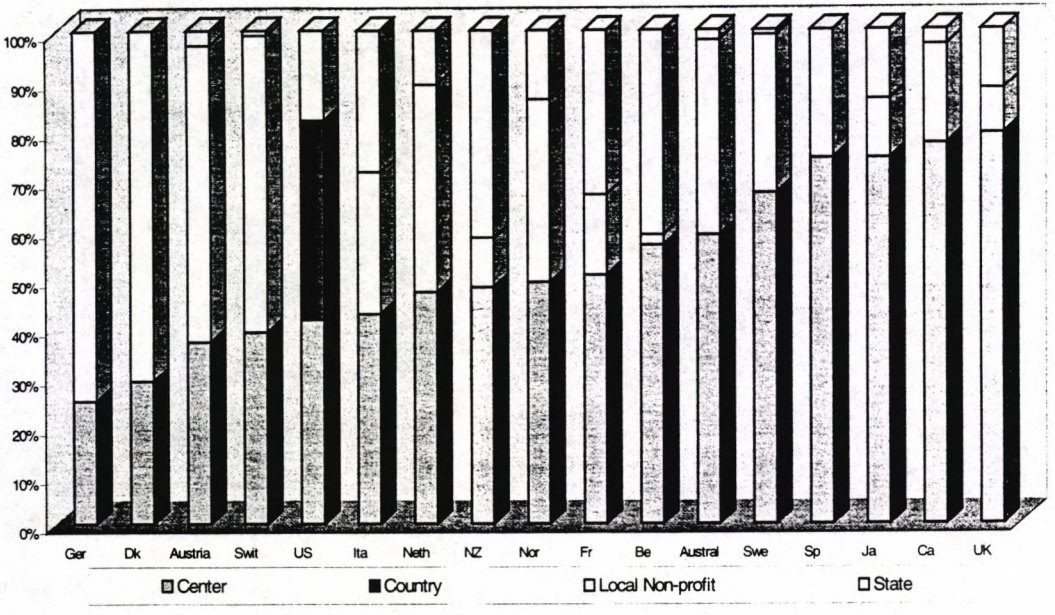
Figure 2. The Four Banking Sectors, 1913 Assets



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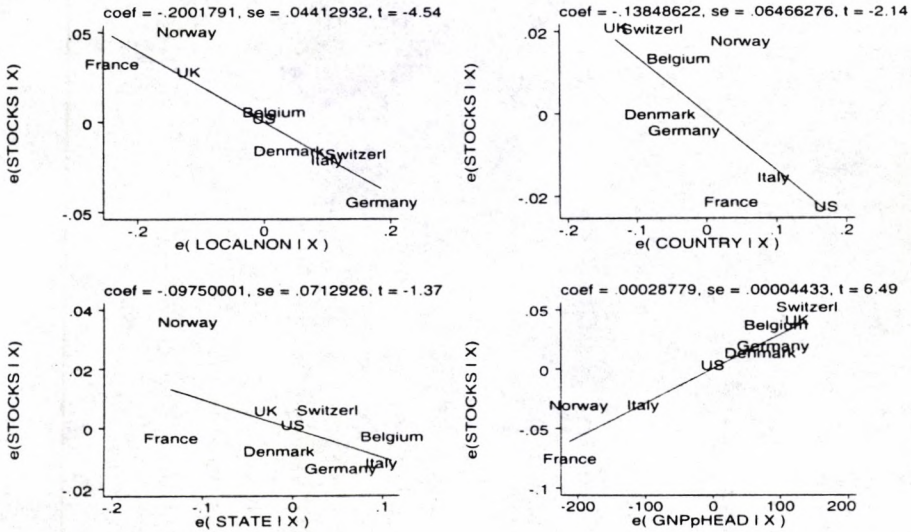

FIGURE 3. *Partial Regression Plots for Regression 1, Table 2.*

Note: *X* stands for right-hand side variable(s) other than the one reported on the horizontal axis; *e(VARIABLE|X)* stands for residuals of *VARIABLE* regressed against *X*. It is a property of partial regression plots that the coefficients, standard errors, and *t* statistics for each plotted independent variables should be the same as in regression 1, Table 2.

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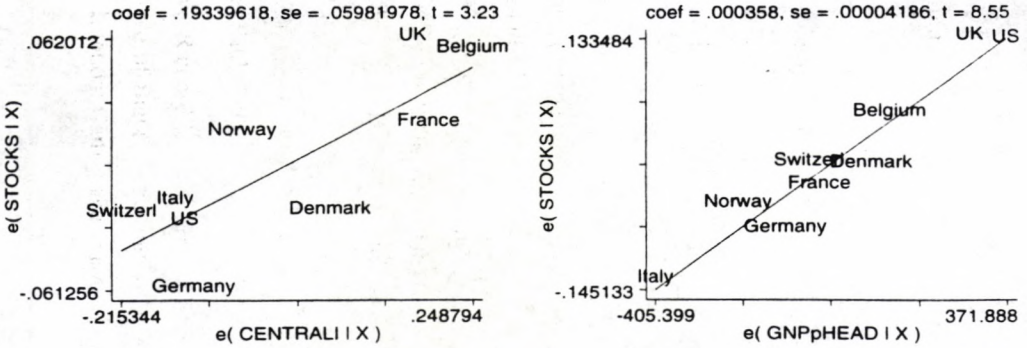
FIGURE 4. *Partial Regression Plots for Regression 3, Table 3*



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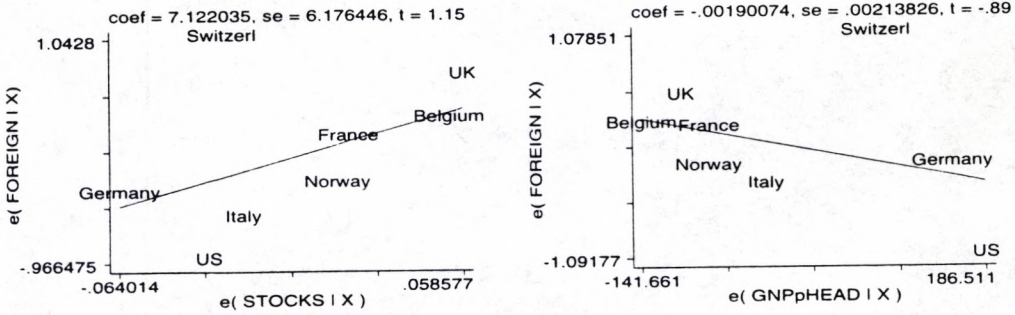
.FIGURE 5. *Partial Regression Plots for Regression 1, Table 4*



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