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Differential Paths of Financial Development
Evidence from New World Economies

Stephen Haber

One of the central questions of economic history is the impact of inequality on long-run paths of economic development. Ideas about the impact of inequality on growth have a long pedigree, but one of its most powerful recent articulations can be found in the work of Stanley Engerman and Kenneth Sokoloff, most particularly their 1997 paper "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies." Engerman and Sokoloff hypothesize that natural environments that gave rise to social structures of evenly matched citizens produced, over the long run, institutions conducive to sustained economic growth, while natural environments that gave rise to social structures characterized by small elites dominating economically and politically disenfranchised masses produced institutions that benefited incumbent elites, at the expense of long-run growth.

This chapter builds upon the theme of inequality and long-run paths of growth by focusing on how differences in initial levels of inequality in human capital and political power affected the development of financial systems—the network of banks and markets that mobilize capital for both private investment and government spending—across three New World economies, Mexico, Brazil, and the United States. While one can point to mechanisms by which inequality affects financial development via the demand for credit, the emphasis of this chapter is the supply side: when human capital and political power is unequally distributed, elites can lobby on entry in order

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to control the flow of capital and its terms. The barriers to entry they erect not only generate rents in the financial sector itself, but also preserve rents earned by elites in any area of the economy in which access to finance is crucial.

The institutions that govern entry in the financial sector are inherently complex, but their basic shape is dictated by the degree to which the consumers of credit—farmers, artisans and manufacturers, merchants, and households—are able to project sufficient power to force political elites into coalitions that broaden access to capital. The task facing the consumers of credit is difficult. Financial incumbents and political elites are natural allies: Financial incumbents want to earn rents, and they therefore need the government to create and enforce regulatory barriers to entry; political elites need to finance the state or risk losing power, and their control of the government means that they regulate banks and securities markets. What is to stop political elites from imposing controls on the licensing of banks and the formation of publicly traded limited liability companies in order to preserve the rents of financial incumbents, in exchange for which the incumbent financial elite make loans to the government at attractive terms? Indeed, what is to prevent the financial incumbents from aligning the incentives of political elites by sharing some of the their rents directly with political elites through bribes, corporate board seats, or business partnerships?

There is, as yet, no real science of this, but a partial answer is that the consumers of credit have to be able to structure the incentives of political elites, which means that they have to be able to credibly threaten elites with removal from power. This implies, in turn, that the consumers of credit have to be informed enough to understand the game that is being played and powerful enough to create the political institutions necessary to sanction political elites who act against their interests. Foremost among these institutions are universal suffrage, free and fair elections, and freedom of association, which eases the creation of political parties.

The implication, I hope, is clear: the study of finance cannot be separated from the study of political power without serious analytical loss. Just as one can define finance as a set of contracts that are inextricably linked to the legal system, the entire financial, contractual, and legal apparatus is embedded in a political system. That political system is, in turn, shaped by the distribution of power among members of society—and that distribution of power is in no small part an outcome of the distribution of human capital.

Tracing the complex ways in which inequality in human capital and power becomes embedded in institutions, how those institutions then affect the coalitions that can be formed by financial incumbents and political elites, and how those coalitions then result in institutions that regulate entry and structure the flow of capital is a task better suited to historical narrative than it is to econometric hypothesis testing. Thus, the bulk of this chapter focuses on the process by which coalitions between political elites and financial incumbents were formed in three New World economies—Mexico, Brazil, and the United States—during the period from independence to roughly 1914. We will, at the end of the chapter, explore whether the patterns revealed by the case studies are supported by the large-N literature.

We focus on Mexico, Brazil, and the United States for three reasons. First, they allow us to observe variation across countries in terms of the distribution of human capital. Second, they allow us to observe variation over time in their political institutions, including the breadth of the suffrage. Third, they allow us to observe variation both across cases and over time within cases in terms of the specific features of financial regulation, as well as the size and structure of their resulting financial systems.

3.1 Mexico

Mexico is one of the cases that looms large in Ken's papers on inequality, institutions, and long-run growth. And for good reason: Colonial Mexico was extremely wealthy, but that wealth was distributed unequally between a small elite of Spanish descent and a large mass of illiterate and politically disenfranchised Indians and Mestizos. The weakness of the latter group is underlined by the process of Mexican independence. An independence movement that championed their rights, and that directly threatened the Spanish elite—the Hidalgo Rebellion of 1810—was soundly defeated by the elites, who quickly made common cause with the Spanish Viceroy and his army. When Mexico achieved independence eleven years later, it was as a reaction to a successful liberal revolution in Spain that threatened the colonial status quo. As a result, Mexico's independence did not produce a republic, but a constitutional monarch, who quickly proclaimed himself emperor and closed Congress.

Emperor Iturbide lasted only eight months in power, but even after he was removed political power remained concentrated among a narrow elite. One subgroup of this elite, the conservatives, sought to maintain all of the political and economic institutions of the colony, including the centralization of political power and exemptions from trial in civil courts for the army and clergy. A second subgroup, the liberals, wanted a federal republic in which states would be granted considerable autonomy and in which the political economy of the country would be guided by laissez faire principles. Both sides agreed on one issue: suffrage would be restricted and Europeanized elites should run the country (Costeloe 2002). Not surprisingly, the right to vote in nineteenth century Mexico was constrained by both literacy and wealth requirements (Engerman and Sokoloff 2001). These were binding constraints, because there were no public schools and most of the population eked out a living as subsistence farmers and day laborers.

While the conservatives and liberals agreed on the disenfranchisement of the mass of the population, they could not agree on much else. They therefore engaged in a series of coups, countercoups, and civil wars from independence to 1876. In the fifty-five years after independence Mexico had seventy-five presidents. For every constitutional president there were four interim, provisional, or irregular presidents. One military figure, Antonio López de Santa Ana, occupied the presidential chair on eleven different occasions. All sides in these conflicts preyed on the property rights of their opponents. Every government that came to power also inherited a depleted treasury and no ready source of income. To meet their need for large infusions of cash, Mexico's nineteenth century governments borrowed from the country's wealthy merchant-financiers. When governments changed, or when governments faced sufficient threat, they reneged on these debts (Tenenbaum 1986; Walker 1987).

Given this environment, the country's financial incumbents—the wealthy merchant-financiers—had very weak incentives to obtain bank charters: deploying their capital in a visible manner would only create a target for expropriation via forced loans. The severity of this problem is made evident by one of the Mexican government's most desperate moves. Precisely because there was so little bank credit, in 1830 the country's manufacturers pressured the government into founding a government-owned industrial development bank—the Banco de Avío. In 1842, desperate for cash, the government ransacked its vaults, which is to say that it expropriated its own bank (Potash 1983). Not surprisingly, Mexico had no private, chartered banks at all until 1863. To the degree that there was any financial intermediation, it was via notaries—who, as Levy (2003) shows, linked mortgagees with mortgagors, much in the way that Hoffman, Postel-Vinay, and Rosenthal (2001) document for eighteenth century France. In addition, credit was available for short-term commercial transactions via the private banking houses of the country's merchant-financiers. Neither of these forms of intermediation possessed the advantages of a chartered bank: the ability to mobilize capital by selling equity to outside investors who would be protected by limited liability, primacy as a creditor in the event of borrower bankruptcy, and the ability to issue banknotes that had the status of legal tender. These notarial and private banking operations were thus necessarily limited in scale. When Mexico did finally charter its first bank in 1863 it was to a foreign entity (the British Bank of London, Mexico, and South America) and the charter was granted by the puppet government of a foreign power (the Emperor Maximilian, who had been installed by the French).

In the last decades of the nineteenth century, a political-military leader, Porfirio Díaz, finally brought political stability to Mexico—but he did so by creating a dictatorship that endured from 1877 to 1911. The Díaz dictatorship was characterized by three phenomena: the centralization of political power, heightened inequality, and rapid economic growth centered in large-scale enterprises owned by politically connected elites. Mexico nominally remained a federal republic, but Díaz quickly undermined whatever bite the institutions of federalism and suffrage had. He gradually appointed men loyal to him as governors—typically choosing individuals who were from outside the state and had few local ties, and thus owed their political survival to Díaz (Haber, Razo, and Maurer 2003, chap. 3). He then had the governors and other local officials he had appointed rig the elections for the federal Congress and Senate, even sending them a list of the desired outcomes before the election took place. As Razo (2008) has shown, by 1888 the federal Congress and Senate were little more than rubber stamps for Díaz's decrees.

Centralized political power then became a vehicle to transfer wealth upward in order to create incentives for investment in an economy that had been moribund since independence. One area where this phenomena has been intensively studied is agriculture, where a host of studies all point in the same direction: state governors and other members of the local political elite allied with a subset of the large landowners in the state to dispossess small farmers and Indian villages. In some cases—Chihuahua being the most notorious—governors ran their states as family business enterprises, using their power to expropriate everything worth owning. Though the data on land tenure for this period are rough, the evidence indicates that by 1910 95 percent of rural heads of families had no land of their own. Attempts by small farmers to resist the onslaught of the planters were dealt with by state-administered brutality (Womack 1969; Wasserman 1984; Markiewicz 1993; Holden 1994; Katz 1998).

Even with the growth created by the special deals between political and economic elites, Díaz still confronted the same problem as every government before him: he lacked sufficient tax revenues to finance a government capable of unifying the country and putting an end to internecine warfare. Borrowing his way out of this situation was difficult, because Mexico had a long history of defaulting on its debts to its international and domestic creditors. In fact, Díaz himself had reneged on debts to some of the banks that had been founded in Mexico City during the early years of his rule (Marichal 2002; Maurer and Gomberg 2004).

The solution that Díaz and Mexico's financiers hit upon was one that had been used by European governments since the late seventeenth century: create a semiofficial super bank whose investors would be compensated for the risk of expropriation by extremely high rates of return. They did this by engineering the merger of the two largest banks in Mexico City in order to establish the Banco Nacional de México (Banamex). The deal was simple: Banamex got a charter from the government that gave it a set of extremely lucrative privileges and, in return, Banamex extended a credit line to the government. These privileges included the right to issue banknotes up to three times the amount of its reserves, to act as the treasury's fiscal agent, to tax farm customs receipts, and to run the mint. In addition, the government established a 5 percent tax on all banknotes, and then exempted Banamex notes from the tax. Díaz simultaneously got congress to pass a commercial code that removed the authority of state governments to issue bank charters. Any bank that wanted to compete with Banamex had to obtain a charter from Díaz's Secretary of the Treasury (Maurer 2002; Haber, Razo, and Maurer 2003, chap. 4; Maurer and Gomberg 2004).

Mexico's already extant banks, some of which were owned by powerful provincial politicians, realized that the commercial code and Banamex's special privileges put them at a serious disadvantage. They therefore obtained an injunction against the 1884 Commercial Code, citing the 1857 Constitution's antimonopoly clause. The ensuing legal and political battle ground on for thirteen years, until Secretary of Finance José Yves Limantour finally hammered out a compromise in 1897. Under this agreement, Banamex shared many (although not all) of its special privileges with the Banco de Londres y México, state governors chose which business group in the state would receive a bank charter from the federal government, and that state bank would effectively be granted a local monopoly. Legal barriers to entry into banking could not be eroded by competition between states, or between states and the federal government, because states did not have the right to charter banks (Maurer 2002, chap. 5).

Mexico's 1897 banking law was deliberately crafted to limit the number of banks that could compete in any market. First, the law specified that bank charters (and additions to capital) had to be approved by the secretary of the treasury *and* the federal Congress, which was a rubber stamp for the dictator. Second, the law created high minimum capital requirements—more than twice the amount for a national bank in the United States (Haber 1991). Third, the law established a 2 percent annual tax on paid-in capital. The first bank granted a charter in each state, however, was granted an exemption from the tax. Fourth, banks with territorial charters were not allowed to branch outside of their concession territories, preventing banks chartered in one state from challenging the monopoly of a bank in an adjoining state. In short, the only threat to the monopoly of a state bank could come from a branch of Banamex or the Banco de Londres y México (Maurer 2002).

These segmented monopolies were made incentive compatible with the interests of Mexico's political elite, who received seats on the boards of the major banks (and thus were entitled to director's fees and stock distributions). The board of directors of Banamex, for example, was populated by members of Díaz's coterie, including the president of Congress, the undersecretary of the treasury, the senator for the federal district, the president's chief of staff, and the brother of the secretary of the treasury. Banks with limited territorial concessions were similarly populated with powerful politicians, the only difference being that state governors, rather than cabinet ministers, sat on their boards (Haber, Razo, and Maurer 2003, chap. 4; Razo 2008).

The resulting banking system had one major advantage, and one major

Table 3.1 The Mexican banking industry, 1897–1913

Year	Number of banks[a]	Total assets (millions of nominal pesos)	Assets as percent GDP	Average equity ratio[b] (%)	Deposits as % of assets[c]	Bank of issue assets as % of total assets
1897	10	147	12	32	2	93
1898	16	175	15	32	3	94
1899	18	211	18	31	2	90
1900	20	259	20	31	5	90
1901	24	264	15	35	4	87
1902	25	317	19	31	5	88
1903	31	380	20	31	4	86
1904	32	435	24	30	3	88
1905	32	535	24	28	6	87
1906	32	629	28	32	9	88
1907	34	724	31	30	9	83
1908	34	757	31	31	9	81
1909	32	917	35	26	16	80
1910	32	1,005	32	24	16	80
1911	33	1,119		22	13	81
1912	34	1,086		23	15	78
1913	28	1,105		21	15	77

Source: Calculated from Secretaria del Estado y del Depacho de Hacienda, y Credito Publico y Comercio, *Anuario de Estadistica Fiscal, 1912–1913.*

[a]Includes banks of issue, mortgage banks, and investment banks (bancos refaccionarios). The 1913 figure does not include six banks that did not report because of the revolution.

[b]Weighted by assets.

[c]Weighted by market capitalization.

disadvantage. The advantage was that the construction of Banamex created, for the first time in Mexican history, a stable banking system. As table 3.1 shows, this banking system was, by the standards of typical less developed countries (LDC) banking systems today, quite sizable: in 1910, bank assets were 32 percent of gross domestic product (GDP)—about the same ratio as in 2006. Moreover, this banking system provided the government with a stable source of public finance, which allowed Díaz the financial breathing room he needed to slowly redraft tax codes and increase tax revenues to the point that he ran balanced budgets. It also allowed Díaz, with the help of Banamex's directors, to renegotiate Mexico's foreign debt—which had been in default for several decades. State governors obtained a similar advantage: the banks within their borders were a steady source of loans to the state government (Marichal 2002; Maurer 2002; Aguilar 2003; Cerutti 2003; Gamboa Ojeda 2003; Ludlow 2003; Oveda 2003; Rodríguez López 1995, 2003; Romero Ibarra 2003).

The disadvantage was that Mexico had a concentrated banking system. In 1911, there were only thirty-four incorporated banks in the entire coun-

Table 3.2 **Industrial concentration in cotton textiles—Mexico, Brazil, India, and the United States**

	Four firm ratio					Herfindahl index		
Circa	Mexico (%)	Mexico Expected (%)	Brazil (%)	India (%)	U.S.A. (%)	Mexico	Brazil	India
1888	18	19	37		8	0.022	0.058	
1893	29	15				0.038		
1895	33	17	35			0.042	0.059	
1896	30	16				0.041		
1900	30	14		19	7	0.038	0.028	0.018
1904	33	15	21			0.042		
1909	38	15				0.045		
1912	30	14		19	8	0.039		0.018
1913	31	14	14			0.041	0.014	

Source: Maurer and Haber (2007).

try. Half of all assets were held in just two banks: Banamex and Banco de Londres y México (Mexico, Secretaria de Hacienda 1912, 236, 255). The vast majority of markets had, at most, three banks: a branch of Banamex, a branch of the Banco de Londres y México, and a branch of the bank that held that state's territorial concession. The high level of concentration of the banking system had a variety of negative effects on the rest of the economy. As Maurer (2002) has shown, Banamex and the Banco de Londres y México acted like inefficient monopolists, driving up their rates of return by holding excess liquidity. As Haber (1991, 1997) and Maurer and Haber (2007) have shown, the concentrated nature of the banking industry gave rise to concentration in the rest of the economy. Mexico's banks tended only to allocate credit to firms owned by their own board members. The logical implication of a small number of banks and insider lending was that there was a reduced number of firms in finance-dependent, downstream industries. The phenomenon is shown in the structure of Mexico's cotton textile industry as compared to the cotton textile industries of the United States, Brazil, and India (see table 3.2). Not only did Mexico have higher concentration indices than Brazil, India, and the United States, but concentration actually increased as the industry grew in size. This is not the result that one would anticipate from an industry characterized by constant returns to scale technology—but it is what one would expect when the largest firms in the industry shared directors with the largest banks in the country.

Financial markets did not serve as a substitute for the banking system. The reason was that it was very difficult for outside investors to monitor the activities of firm directors and managers because financial reporting requirements were not enforced. As a result, individuals tended to invest only in publicly traded firms if those enterprises were founded and controlled by important financial capitalists with proven track records. As a practical matter, this meant that they only bought stock in firms that were already tied to a bank, which is to say that there were very few publicly traded companies. Cotton textile manufacturing provides a relevant case in point. Of the 100 firms operating in the industry in 1910, only five were publicly traded companies, and all of these were tied to a bank.

The coalition that supported the Díaz dictatorship fell apart after three decades. The same set of institutions that underpinned growth in banking—an alliance between economic and political elites that came at the expense of everyone else—also existed in other sectors of the economy. Indeed, restrictions on bank charters were a fundamental weapon in the arsenal of tactics employed by the country's largest industrialists to constrain competition in manufacturing (Haber, Razo, and Maurer 2003, chap. 5). As was the case in banking, the resulting growth in those sectors tended to heighten inequality, and produced, in time, organized resistance to the dictatorship. That resistance took up armed force in 1910, removing Díaz from power in 1911, and opening up a decade-long period of coups, rebellions, and civil wars.

Every side in the Mexican Revolution preyed upon the banking system. The lack of political stability meant, once again, that it was not possible for Mexico's bankers to forge durable coalitions with the country's political elites. By 1916 the financial system had become a shell, stripped of its liquid assets (Maurer 2002; Haber, Razo, and Maurer 2003, chap. 4). The outcome can be seen clearly in table 3.3: circa 1921 the total assets of Mexico's banks were only 5 percent of the GDP, as compared to 32 percent in 1910.

Space constraints prevent us from exploring in detail how Mexico's revolution did little to broaden the distribution of wealth, increase investment in human capital, or decrease the degree to which political power was centralized. Suffice to say, however, that Díaz was replaced by a party-based dictatorship—the Partido Revolucionario Institucional (PRI), which ruled until 2000. While the PRI was rhetorically redistributionist, as a practical matter its major accomplishments were to centralize power even more effectively than Díaz and to provide very little in the way of public education or other public goods. It also managed to create an alliance of convenience with Mexico's financial incumbents (Haber, Klein, Maurer, and Middlebrook 2008, chap. 2). One basic element of that coalition was the creation of a banking system that was remarkably similar to the one that had existed under Díaz: the number of banks was limited, bankers tended to make loans to enterprises that they controlled, and everyone else was starved for credit (Del Ángel-Mobarak 2005). These features of the Mexican banking system have been loosened only in recent years, as a result of the country's transition to democracy (Haber 2009).

Table 3.3 **The Mexican banking industry, 1897–1929**

Year	Assets as Percent GDP
1897	12
1898	15
1899	18
1900	20
1901	15
1902	19
1903	20
1904	24
1905	24
1906	28
1907	31
1908	31
1909	35
1910	32
1921	5
1922	3
1923	3
1924	4
1925	4
1926	8
1927	10
1928	10
1929	12

Source: Haber, Razo, and Maurer (2003, chap. 4); Maurer and Haber (2007).

3.2 Brazil

Brazil is a prime example of a country in which political elites and financial incumbents forged a durable coalition to limit competition and constrain access to capital. One key to the durability of this coalition was binding constraints on suffrage. These arrangements came under threat only once, when the monarchy was overthrown in 1889 and the new government allowed virtually unlimited access to bank charters. Nevertheless, within a few years of the creation of the republic, the old set of arrangements was re-created and Brazil went back to a system in which the government limited the number of banks, and, in exchange, the banks extended credit to the government. Indeed, Brazil ultimately created a banking system that was dominated by a single bank of issue that was the country's largest commercial bank and the government's fiscal agent.

Banking in colonial Brazil was handled by the private banking houses of the merchant-financiers who dominated the import-export trade. This pattern was broken in 1808, when King Dom João VI was transported to Brazil by the British Navy following the invasion of Portugal by Napoleon. Dom João faced a difficult problem: he needed a source of revenues to run his court and administer his empire, but Brazil lacked an administrative structure to collect sufficient taxes. He therefore adopted a solution that European monarchs had long used when expenses outran their ability to tax: charter a bank whose purpose was to finance the government. This created an obvious commitment problem from the point of view of the investors in the Banco do Brasil, because Dom João could repudiate the bank's loans with impunity. He therefore had to coax Brazil's financial incumbents into deploying their capital by granting the bank lucrative privileges. These included a monopoly on the issuance of paper money, a monopoly on the export of luxury goods, a monopoly on the handling of government financial operations, the right to have debts to the bank treated as having the same legal standing as debts owed to the royal treasury, and the right to collect new taxes imposed by the king—and to then hold those taxes as interest free deposits for a period of ten years (Peláez 1975, 460–61).

The problem was that there was nothing to stop the king from reneging on these privileges. The merchants and landowners who the government needed to buy the bank's shares remained so wary that the Banco do Brasil was unable to achieve its original capitalization goals until 1817, eleven years after it was founded. Their wariness was well founded: most of the bank's business consisted of printing banknotes that were then used to buy bonds issued by the imperial government. As the amount of banknotes increased, so too did inflation. In effect, the bank was the government's agent in creating an inflation tax, and that inflation tax hit everybody, including the bank's shareholders, who likely did not receive an inflation-adjusted rate of return adequate to compensate them for the opportunity cost of their capital. As table 3.4 shows, the nominal rate of return on owner's equity in the Banco do Brasil from 1810 to 1820 averaged 10 percent per year, which, as near as it can be known, probably did not exceed the rate of inflation by a wide margin. Not surprisingly, as table 3.4 shows, the shareholders of the bank paid out virtually all of the available returns to themselves as dividends. Worse, in 1820, Dom João reneged on the arrangement by which the bank could hold the proceeds from the new taxes that he had created. The following year he returned to Portugal and took with him all of the metals that he and his court had deposited in the bank, exchanging them for whatever banknotes they had in their possession. The Banco do Brasil then continued to function through the rest of the 1820s and was used by Dom Joáo's son, the Emperor Dom Pedro I, much in the same way as it had been used previously—to finance government budget deficits through note issues (Peláez 1975).

In 1822 Dom Pedro, at the urging of local elites and with the consent of his father, declared Brazil independent. Independence did not do much to change the status quo ante for the great mass of slaves, free blacks, and native-born Brazilians of humble social origin. It did, however, allow the incumbent financial elites to constrain the emperor, forcing him into a

Table 3.4 **Accounts of the First Banco do Brasil, all units in thousands of contos de reis**

	Subscribed capital	Reserve fund	Annual taxes transferred to bank as deposits	Owner's equity[a]	Estimated earnings[b]	Return on equity (%)	Dividends as % earnings
1809	116	0	0	116	0	0	
1810	120	0.3	0	120	1.3	1	77
1811	122	1	0	123	4.7	4	85
1812	172	2	0	174	6	3	83
1813	397	5.6	63	403	21.6	5	83
1814	502	14	58	516	51.4	10	84
1815	581	29	62	610	89	15	83
1816	690	53	88	743	144	19	83
1817	1,189	83	65	1,272	183	14	84
1818	1,719	122	75	1,841	241	13	84
1819	2,037	163	73	2,200	249	11	84
1820	2,215	207	16	2,422	271	11	84
1821	2,235	275	0	2,510	421	17	84
1822	2,248	329	0	2,577	336	13	84
1823	2,357	404	0	2,761	467	17	84
1824	2,662	482	0	3,144	502	16	84
1825	3,600	570	0	4,170	539	13	84
1826	2,600	692	0	3,292	762	23	84
1827	3,600	819	0	4,419	796	18	84
1828	3,600	954	0	4,554	851	19	84
1829	3,600	1083	0	4,683	815	17	84

Source: Calculated from data in Peláez (1975, tables 3 and 4).

[a]Capital plus reserve fund.

[b]Dividends plus change in reserves from previous year.

coalition. The elites who drafted the Constitution of 1824 gave parliament, and not the emperor, the ultimate responsibility to tax, spend, and borrow. They also specified an elected lower house of parliament, and restricted the vote on the basis of wealth so that the lower house represented their interests. As Summerhill (forthcoming) has pointed out, this had two consequences: the emperor could not default on loans that he had contracted from the incumbent financial elites, and the financial elite could use its influence in parliament to make sure that competing economic groups could not obtain bank charters. In point of fact, from the closing of the Banco do Brasil by parliament in 1829 to the mid-1850s, parliament permitted only seven new banks to be formed—all of which had limited provincial charters that created local banking monopolies.

This set of arrangements worked well for the incumbent bankers, but it came at a cost to the emperor: after 1829 the imperial government did not have a bank that it could use to finance budget deficits. Finding a solution was difficult because creating a national bank large enough to finance the government required aligning the incentives of all the incumbent bankers—some of whom were able to use their influence in parliament to undo whatever deals the emperor struck. Thus, parliament authorized a second Banco do Brasil in 1853, but then removed its right to issue banknotes just four years later (Peláez and Suzigan 1976, 82–87).

A compromise was only reached in the 1860s when a coalition was formed between the bankers and the imperial government. An 1860 law specified that corporate charters, including those for banks, not only needed the approval of parliament and the emperor's cabinet, they also required approval from the emperor's council of state, whose members enjoyed life tenure. In 1863, the Second Banco do Brasil merged with two other Rio de Janeiro banks, the Banco Comercial e Agrícola and the Banco Rural e Hipotecario, which transferred to the Banco do Brasil their rights of note issue, thereby creating something that the emperor had been seeking for a decade: a note-issuing bank that acted as the government's fiscal agent (Peláez and Suzigan 1976, 103). The government got its bank, and the economic elite got their banks, but no one else could get a bank charter—and no one from outside the small group of "barons" who sat on a bank board was eligible for a loan (Hanley 2005; Summerhill, forthcoming).

Some sense of how restricted the banking industry in Brazil was can be gleaned from table 3.5, which contains estimates of the size of the Brazlian banking system based on information retrieved from the Rio de Janeiro stock exchange. In 1875 there were only twelve banks in the entire country. The number of banks then increased at a snail's pace throughout the rest of the imperial period: at the end of the first semester of 1888 there were only twenty-seven. Moreover, their combined capitalization had only increased by 53 percent over the thirteen-year period since 1875. Twenty-two percent of this capital was concentrated in one bank, the third Banco do Brasil. Let

Table 3.5 **Size estimates of the Brazilian banking system, 1875–1935**

Year	Operating banks	Estimated total paid-in capital (millions 1900 milreis)
1875	12	234
1880	12	197
1882	22	296
1888	27	358
1889	81	1,447
1890	112	2,048
1891	133	1,413
1892	127	922
1893	116	576
1894	110	486
1895	106	537
1896	0	487
1897	104	455
1898	102	384
1899	96	400
1900	86	311
1901	84	385
1902	81	445
1903	70	422
1904	67	380
1905	63	413
1906	62	356
1907	62	363
1908	55	326
1909	50	336
1910	51	341
1911	45	327
1912	46	393
1913	48	438
1914	48	563
1925	49	346
1926	50	323
1927	47	382
1929	47	369
1930	46	406
1931	45	486
1934	45	397
1935	36	237

Source: Berg and Haber (2009).

us put this into comparative perspective. In 1888, bank assets per capita in Brazil totaled $2.40 U.S. In Mexico in 1897, they were nearly three times this level, at $6.74. In the United States, in 1890, they were $85.

The coalition between the political elites who ran the government and the incumbent financial elite came under threat when the monarchy was overthrown and a federal republic was created in 1889. Space constraints prevent us from exploring how and why the coalition that had supported the emperor fell apart, but one crucial piece of the story was the abolition of slavery in 1888. Abolition drove a wedge between Brazil's planter class and the imperial government. In an effort to placate the planters by making credit more easily available, the imperial government awarded concessions to twelve banks of issue and provided seventeen banks with interest-free loans. The easy credit policies of 1888 were not enough, however, to stem the tide of Brazil's Repúblican movement. In November of 1889, Dom Pedro II was overthrown in a military coup and a federal republic was created.

The creation of a federal republic undermined for a time the arrangements that had supported a small and concentrated banking industry. The 1891 Constitution gave each of Brazil's twenty states considerable sovereignty, ending the central government's monopoly on the chartering of banks. This put the federal republic's first finance minister, Rui Barbosa, under considerable pressure: if he did not grant additional charters to new banks in order to satisfy the demand for credit from Brazil's growing regional economic elites—most particularly planters and manufacturers—those elites would get their own state governments to do so. As a result, Rui Barbosa quickly pushed through a series of financial reforms, one of whose features was that the federal government allocated bank charters to virtually all comers through a general incorporation law, and another of whose features was that banks could engage in whatever kind of financial transactions they wished. The results of these reforms were dramatic. Recall that in 1888 there were only twenty-seven banks in the entire country. In 1891, as table 3.5 indicates, there were 133. Moreover, their total real capitalization (in 1900 milreis) was four times that of the 1888 banks.

Brazil's central government soon found itself in a difficult position. The 1891 Constitution denied it access to a crucial source of tax income, revenues from export taxes, which were now collected directly by states. The government therefore contracted gold-denominated foreign loans to make up for the budget shortfall. The government also allocated the right to issue banknotes to a number of banks, each of which aggressively printed and lent currency. Their note issues, in addition to driving a speculative boom in the stock market, also drove up inflation (Hanley 2005). The result was a currency mismatch: a hard-currency denominated debt, a domestic-currency denominated source of income (taxes paid in Brazilian milreis), and an inflation that drove down the international value of the domestic currency. The central government had three options: spend less, raise taxes, or curtail the growth of the money supply. It chose options two and three. In 1896 the government decided once again to restrict the right to issue currency to a single bank—the Banco da República, which was a private commercial bank that had a special charter that made it the agent of the treasury. Two years later, the government increased taxes and restructured its foreign debt.

These moves, coupled with the already shaky financial situation of many of the banks, produced a massive contraction of the banking sector. In 1891, as table 3.5 shows, there were 133 banks operating in Brazil. Ten years later there were eighty-four, and their combined capital was only one quarter that of the 1891 banks. The numbers kept falling, so that by the end of 1905 there were only sixty-three banks in operation with a total capital still only one quarter that of 1891. Moreover, one-third of this capital was concentrated in the single bank that served as the government's financial agent, the Banco da República.

The contraction of the banking sector brought about yet another round of reform—one that recreated the coalition between financial incumbents and political elites. End users of credit lost out in this reform, and they did so because they had weak levers with which to structure the incentives of political elites. In the first place, less than 5 percent of the population had the right to vote. In the second place, power was concentrated in a strong presidency: Congress was more a consultative forum than a legislative body (Triner 2000, 18). In the third place, Congress selected the president, which allowed the political elites of the two largest states, Minas Gerais and Sao Paulo, to form a coalition and trade the presidency between them.

Essentially, the government nationalized the insolvent Banco da República, converting debts owed by the bank to the treasury into equity and created a new bank, the Fourth Banco do Brasil. Like the Banco da República, the fourth Banco do Brasil was a commercial bank fully capable of taking deposits and making private loans. It differed from the Banco da República, however, in that the central government was a major stockholder, owning almost one-third of its shares, and the president of the republic had the right to name the president of the bank, along with one of its four directors (Topik 1980). In addition, the Fourth Banco do Brasil was not permitted to make loans with terms greater than six months and was not allowed to purchase stock in other companies. These restrictions were designed to guarantee that the bank would retain high levels of liquidity so that it could purchase treasury notes and bills, as well as to act as a lender of last resort in times of economic crisis (Topik 1987, 39).

For the better part of the next six decades, the Brazilian banking system was dominated by the Fourth Banco do Brasil, which acted both as a commercial bank and as the treasury's financial agent. The charter that created the bank included a number of lucrative privileges, including the right to hold federal balances, issue banknotes, and have a monopoly on interstate branching. These privileges appear to have constituted a barrier to entry: the Banco do Brasil earned a rate of return on equity more than twice that of its competitors (Berg and Haber 2009). As a result, to the degree that there were competing banks in Brazil they were few in number. As table 3.5 shows, as late as 1930, when the First Republic was overthrown in a coup, Brazil had fewer banks than it had in 1899.

In short, the political economy of Brazilian banking was not dramatically different from that of Mexico: regardless of which particular political elite was in power, that elite forged a coalition with incumbent financiers, and the arrangements they created provided bankers with oligopoly rents and the central government with a bank to fund its budget deficits. In the years following World War I, state governments began to copy the model of the Banco do Brasil, establishing joint state-private banks whose purpose was to finance their budget deficits. That is, the banks took deposits from private individuals, and then invested the proceeds in the bonds of state governments. The disadvantage of this system was that it allocated credit very narrowly: to state governments, the federal government, and large business enterprises whose owners were tied to the banks (Bornstein 1954, 312–13).

Brazil did, however, depart from the experience of Mexico in terms of the degree to which securities markets served as substitutes for banks. Rui Barbosa's general incorporation law gave rise to the widespread sale of equity and bonded debt to the investing public in order to mobilize long-term capital. Thus, Brazil had, by 1913, a well-developed stock and bond market. This market was used to make public offerings for a wide variety of enterprises including large-scale manufacturing, railroads, shipping, and land colonization companies. This market, however, began to go into decline in the 1910s as the government's strategy of inflationary finance made it increasingly difficult for investors to value their assets. By the late 1920s the markets were no longer important sources of new capital (Haber 1998; Musacchio, 2009).

3.3 The United States

One of the central themes of Ken and Stan's work on differential paths of growth was the impact of a society of highly literate and evenly matched citizens in New England and the Middle Atlantic States on the course of American economic development. The United States may have had a plantation economy in the South, but even the U.S. South never became as reliant on slave labor as Brazil—nor did colonial Brazil have the equivalent of a Massachusetts or New York to balance the regions dominated by slavery, as the United States did. The upshot was that at independence the United States already had a much more democratic political economy than either Brazil or Mexico. Indeed, the percentage of adult white males voting in America's first elections was extraordinarily high—more than 80 percent in some states (Engerman and Sokoloff 2001). American states restricted the suffrage to property owners, but at least until the country began to fill up with immigrants in the 1810s and 1820s that was not a binding constraint in a frontier society where a large percentage of the population were property owners.

This is not to suggest that America's elites did not try to blunt the political power of ordinary citizens. That was the whole point of creating a bicameral legislature and selecting the upper house by indirect election. It was also the motivation behind the creation of the institution of the presidency—an indirectly elected, temporary monarch who could veto any populist legislation that got past the indirectly elected Senate. The president and the Senate then appointed the Supreme Court, crucially without any input from the directly elected lower house of Congress. Institutions at the state level had a similar antipopulist design, but added another twist: states decided the laws regarding the suffrage, and all of them initially imposed restrictions based on wealth or social standing.

This is also not to suggest that America's elites did not use their political power in order to generate rents for themselves by constraining access to finance. As we shall discuss in detail, the initial organization of U.S. banking was predicated on explicit deals between bankers and politicians, both at the state and national level, to create and share rents.

It is to suggest, however, that the underlying distribution of human capital in the United States was inconsistent with an elite-dominated political economy. Elites in the United States were forced to bargain with citizens. One reflection of this was the political annihilation of the Federalist Party. A second reflection was the ascendance of the Jacksonians, America's first genuinely populist political movement. A third reflection was that the laws that blocked access to finance by limiting the number of banks began to be undermined as early as the 1810s. America's bankers did not, of course, passively accept the idea that they should allow all of their rents to be dissipated by competition. They found ways to join coalitions—ironically, with antibank populists—that afforded them local monopolies and quasi-monopolies. The history of U.S. banking is, in fact, the story of how these monopolies were progressively made smaller and their rents disspated—until they were finally undermined entirely in the 1990s.

Governments need banks in order to finance their survival, and banks need governments to grant them the privileges that make them attractive investments. America's first chartered bank, the Bank of North America (BNA), was not an exception to this general pattern. In order to finance the war for independence, in 1781 the Congress of the Confederation granted a charter to a group of shareholders to create a commercial bank that would also serve as the government's fiscal agent, the BNA. Right from the beginning, however, the idea of a privately owned national bank that had a special relationship with the central government ran into trouble. The fundamental problem was that the BNA competed with local banks that operated without charter (meaning that their shareholders had unlimited liability). The wedge that local banks were able to drive between the BNA and its charter was that the Articles of Confederation were ambiguous as to whether the central government actually had the authority to charter a bank. The BNA, therefore, had to be rechartered by the state of Pennsylvania. No sooner was this charter granted, however, that, at the behest of local unchartered banks, the BNA came under attack in the Pennsylvania State Legislature, which revoked the bank's charter in 1785. The legislature restored the charter two years later, following an agreement by the BNA to accept a series of restrictions on its activities that effectively meant that it could not serve as the banker to the central government (Bodenhorn 2003, 128).

The Articles of Confederation were soon replaced by the Constitution of 1789, but the basic problem of state finance remained. The new central government lost little time in chartering a bank to replace the BNA—the Bank of the United States (BUS), founded in 1791. The BUS was a commercial bank that took deposits and made loans to private parties. The federal government subscribed 20 percent of the BUS's capital without paying for those shares; instead, it received a loan from the bank and then repaid the loan out of the stream of dividends it received as a shareholder in the bank. In exchange, the BUS received a set of valuable privileges that were afforded no other bank: the right to limited liability for its shareholders, the right to hold federal government specie balances, the right to charge the federal government interest on loans from the bank (notes issued by the bank to cover federal expenses), and the right to open branches throughout the country. In short, the BUS was the product of a deal: the bankers financed the state, and the state gave the bankers a set of lucrative privileges.

Had America's political institutions granted the federal government the sole right to charter banks, the BUS might have completely dominated the financial system. The federal organization of the U.S. government prevented that from happening, however. The Constitution provided that any power not explicitly delegated to the federal government could be exercised by the states. Under the Constitution, the states lost both the right to tax imports and exports and the right to coin money—both of these powers were vested with the federal government, in exchange for which the federal government assumed the considerable debts that the states had amassed under the Articles of Confederation. Having been denied their traditional sources of finance, the states began to search for alternative sources of revenue. The Constitution said nothing about the state's right to charter banks of issue, whose banknotes would circulate as currency.

States, therefore, had strong fiscal incentives to sell bank charters—and strong incentives to do whatever was necessary to maximize the value of those charters. States obviously received no charter fees from banks incorporated in other states; therefore, they prohibited interstate branching (Kroszner and Strahan 1999). States could earn income by selling the charter and by owning stock in the bank; therefore, they were almost universally major owners of bank shares, and they typically paid for those shares with a loan from the bank, which they then repaid out of the dividend stream. States received a larger stream of dividends when the banks earned monopoly rents; so, they constrained the number of banks within their own borders.

Table 3.6 State-chartered banks in the United States, 1790–1835

Year	New England		South		U.S. total	
	Number of banks	Authorized capital (millions)	Number of banks	Authorized capital (millions)	Number of banks	Authorized capital (millions)
1790	1	0.8			3	3.1
1795	11	4.1			20	13.5
1800	17	5.5			28	17.4
1805	45	13.2	6	3.5	71	38.9
1810	52	15.5	13	9.1	102	56.2
1815	71	24.5	22	17.2	212	115.2
1820	97	28.3	25	28.6	327	159.7
1825	159	42.2	32	33.3	330	156.1
1830	186	48.8	35	37.3	381	170.4
1835	285	71.5	63	111.6	584	308.3

Source: Sylla (2007).

States might extract additional income from banks by threatening them with new entrants to the banking market; in that event, they accepted "bonuses" from incumbent banks to deny the charter applications of potential competitors (Bodenhorn 2003, 17, 244). While there was a high degree of variance across states circa 1810 to 1830, bank dividends and bank taxes often accounted for one-third of total state revenues (Sylla, Legler, and Wallis 1987; Wallis, Sylla, and Legler 1994).

Banking in the early republican United States was therefore characterized by segmented monopolies. The four largest cities in the United States in 1800—Boston, Philadelphia, New York, and Baltimore—had only two banks apiece. Smaller markets typically had only one bank, if they had a bank at all. As table 3.6 shows, in 1800 there were only 28 banks (with a total capital of only $17.4 million) in the entire country (Wallis, Sylla, and Legler 1994, 135–9; Bodenhorn 2003, 142; Majewski 2004).

The system of a single national bank and segmented state monopolies was not stable given American political institutions. One crucial source of friction was the different incentives that faced the states and the central government. Bankers with state charters, and hence state legislatures, had opposed the BUS from the time of its initial chartering in 1791. The reason for their opposition was straightforward: branches of the BUS undermined local banking monopolies. State bankers, therefore, had incentives to form a coalition with the Jeffersonians, who were ideologically opposed to chartered corporations and "aristocratic" bankers, to oppose the BUS. They initially tried to tax the banknotes of the BUS in order to constrain it from competing against their own state-chartered banks. When that failed, they successfully lobbied state representatives to not renew its charter, which expired in 1811 (Lane 1997, 601–12; Wettereau 1942; Sylla 2000; Rockoff 2000). The War of 1812 demonstrated, however, the importance of a bank that could serve as the financial agent of the federal government, and thus a new charter (for a Second Bank of the United States) was granted in 1816. The Second Bank of the United States was founded on the same principles as the first bank, and it met the same fate when Andrew Jackson successfully vetoed the renewal of the bank's charter, forcing it to close in 1836 (Hammond 1947; Temin 1968; Engerman 1970; Rockoff 2000).

A second source of friction was the interaction of federalism, an expanding frontier, and a broad suffrage. States had incentives to compete against one another for business enterprises and population—and this pushed their legislatures to undertake steps that ultimately undermined the monopoly banks they had earlier erected. First, state legislatures sought to construct canals that would funnel commerce from the expanding interior of the country through their states. They tended not, however, to have sufficient tax revenues to fund those public works projects. One response by states was to issue bonds, but another response was to charge a "charter bonus" on new bank charters. Such charter bonuses created, of course, an incentive for state legislatures to renege on the monopoly deals that they had already made with the incumbent banks (Grinath, Wallis, and Sylla 1997; Sylla 2000; Bodenhorn 2003, 86, 148, 152, 228–34). Second, state legislatures had an incentive to ratchet downward restrictions on the right to vote. New states, eager to attract population, eliminated or reduced voting restrictions, forcing the original thirteen states to match their more permissive voting laws, or risk losing population. By the mid-1820s, property qualifications had been dropped or dramatically reduced in virtually all of the original states (Engerman and Sokoloff 2001; Keyssar 2000). The extension of the suffrage, in turn, allowed citizens to bring pressure to bear on legislatures, voting in legislators who were willing to remove constraints on the chartering of banks.

Political competition within and among states undermined the incentives of state legislatures to constrain the numbers of charters they granted. Massachusetts began to increase the number of charters it granted as early as 1812, abandoning its strategy of holding bank stock as a source of state finance and instead levying taxes on bank capital. Pennsylvania followed Massachusetts's lead with the Omnibus Banking Act of 1814. The act, passed over the objections of the state's governor, ended the cozy Philadelphia-based oligopoly that, until then, had dominated the state's banking industry. Rhode Island also followed Massachusetts's lead. In 1826 it sold its bank shares, increased the numbers of charters it granted, and began to tax bank capital as a replacement for the income it had earned from dividends. It soon became, on a per capita basis, America's most heavily banked state.

These reforms did not allow all comers to charter banks or permit banks to open branches at will. Pennsylvania's Omnibus Banking Act of 1814, for example, divided the state into twenty-seven banking districts and then allocated charters to forty-one banks, with each district receiving at least one bank charter. A crucial aspect of the law was that banks were constrained from lending more than 20 percent of their capital to borrowers outside their districts, thereby limiting the amount of competition within any particular banking district. Additional restrictions placed on the banks favored local economic incumbents: 20 percent of banks' capital had to be lent to farmers, mechanics, and manufacturers; interest rates were capped by statute; bank indebtedness was capped by statute; and no more than 20 percent of capital could be invested in corporate or government securities. The rents earned by these local banking monopolies were then shared with the state government. Banks had to pay a 6 percent tax on dividends, and banks were required by law to pay dividends or risk the revocation of their charter. In addition, the banks had to make loans to the state government, at the government's discretion, at an interest rate that could not exceed 5 percent (Bodenhorn 2003, 142–3). In short, Pennsylvania's Omnibus Banking Act was a compromise between potential debtors who sought increased access to credit; incumbent bankers who sought rents by limiting competition; and the state government, which needed a source of income and a mechanism to fund a public debt. The core feature of the deal was that banking monopolies would be allowed to persist: they would just be made smaller.

While the rate at which states reformed varied—with Southern states lagging the Northeast by a wide margin—the U.S. banking system grew remarkably quickly. As table 3.6 shows, in 1820 there were 327 banks in operation with $160 million in capital—roughly three times as many banks and four times as much bank capital as in 1810. By 1835, there were 584 banks with $308 million in capital—a nearly two-fold increase in just 15 years. At this point, larger cities often had a dozen or more banks, while small towns had as many as two or three (Bodenhorn 2003). As the density of banks increased, competition among them increased as well, so much so that they began to extend credit to an increasingly broad class of borrowers. Banks, particularly in the Mid-Atlantic States, lent funds to a wide variety of merchants, artisans, and farmers (Wang 2006). Even in New England, where insider lending dominated, the shear number of banks and ease of new bank formation removed access to credit as a barrier to entry in the real economy (Lamoreaux 1994).

The result, as Rousseau and Sylla (2005) have made clear, is that the United States banking system outgrew that of England and Wales—which is usually though of as the world's nineteenth century financial center. In 1825, the United States had a slightly smaller population than England and Wales (11.1 versus 12.9 million), but it had roughly 2.4 times England and Wales' banking capital (Rousseau and Sylla 2005). Indeed, Rousseau and Sylla suggest that the early nineteenth century United States was a successful example of "finance led growth."

By the late 1830s the de facto policies of Northeast states to grant virtually all requests for bank charters became institutionalized in a series of laws known as free banking. Under free banking, bank charters no longer had to be approved by state legislatures. Rather, individuals could open banks provided that they registered with the state comptroller and deposited state or federal bonds with the comptroller as a guarantee of their note issues. Readers may wonder how such a system of free entry could have been compatible with the fiscal needs of state governments. The answer lies in the fact that under free banking all banknotes had to be 100 percent backed by high-grade securities that were deposited with the state comptroller of the currency. Free banks were forced, in essence, to grant a loan to the state government in exchange for the right to operate.

The first state to make the switch to de jure free banking was New York, in 1838. From the 1810s to the late 1830s, bank chartering in New York was controlled by the Albany Regency—a political machine run by Martin Van Buren. Bank charters were only granted to friends of the Regency, in exchange for which the legislators received various bribes, such as the ability to subscribe to initial public offerings of bank stock at par, even though the stock traded for a substantial premium (Bodenhorn 2003, 134, 186–8; Bodenhorn 2006; Gatell 1966, 26; Moss and Brennan 2004). The Regency's hold on bank chartering came to an end when the state's voting laws were amended in 1826, allowing universal manhood suffrage. Within a decade the Regency lost its control of the state legislature, and in 1837 the now dominant Whig Party enacted America's first free banking law. By 1841, New Yorkers had established 43 free banks, with a total capital of \$10.7 million. By 1849, the number of free banks mushroomed to 111 (with \$16.8 million in paid capital). By 1859 there were 274 free banks with paid in capital of \$100.6 million (Bodenhorn 2003, 186–92; Wallis, Sylla, and Legler 1994; Moss and Brennan 2004). Other states soon followed New York's lead—with the liberalization of banking laws correlating with the liberalization of suffrage laws (Benmelech and Moskowitz 2005). By the early 1860s, twenty-one states adopted some variant of the New York law, and as they did so, they encouraged bank entry and increased competition (Bodenhorn 1990, 682–6; Bodenhorn 1993, 531–5; Economopoulos and O'Neill 1995; Ng 1988; Rockoff 1974; Rockoff 1985).

Free banking did not mean that the supply constraints on the credit market were completely eliminated. The free banking laws of most states precluded the chartering of branch banks. Thus, with the exception of Southern states, where free banking did not catch on, the banking systems of virtually all states were composed of unit (single branch) banks. This unusual organization of the banking system was the outcome of an unlikely political coalition: populists opposed to aristocratic bankers allied with bankers who wanted to create local monopolies. In short, free banking was not a complete rethinking of the earlier system of segmented monopolies. It simply expanded the number, and reduced the size, of those monopolies. The results were twofold: some of the rents that had been earned by bankers were dissipated, and borrowers who had earlier been closed out of credit markets now had access to finance, though it came from a bank that had a great deal of local market power.

Readers may wonder why, if banks could not open branches in underserved markets, farmers, merchants, and manufacturers in those markets did not simply obtain credit from banks in larger towns? The answer is that, until the computer revolution, obtaining information about the quality of potential borrowers was very costly. Bankers assessed the creditworthiness of borrowers on the basis of personal relationships: sets of repeated interactions that allowed the banker to assess what was going on inside an informationally opaque enterprise or household. As a result, until the 1990s most small business loans were made by banks that were less than fifty-one miles away (Petersen and Rajan 2002).

Readers may also wonder why the South lagged the North when it came to the passage of free banking laws. Recent work by Rajan and Ramcharan (forthcoming) provides the answer. The U.S. South was characterized by concentrated landholding and large landowners opposed legislation designed to facilitate bank entry because, in the absence of banks, they were the only source of credit and could therefore extract rents from small, tenant farmers.

From the point of view of the federal government, allowing the states to charter banks had a major drawback: it did not provide the federal government with a source of finance. This problem came to the fore during the Civil War, when the financial needs of the federal government skyrocketed. The federal government therefore passed laws in 1863, 1864, and 1865 that were designed to eliminate the state-chartered banks and replace them with a system of national banks that would finance the government's war effort. Federally chartered banks had to invest one-third of their capital in federal government bonds, which were then held as reserves by the comptroller of the currency against note issues. That is, banks had to make a loan to the federal government in exchange for the right to issue notes. Consistent with the goal of maximizing credit to the federal government, the National Banking Act made the granting of a charter an administrative procedure. As long as minimum capital and reserve requirements were met, the charter was granted. It was free banking on a national scale (Sylla 1975).

The federal government could neither abrogate the right of states to charter banks, nor could it prevent state-chartered banks from issuing banknotes. It could, however, impose a 10 percent tax on banknotes, and then exempt federally chartered banks from the tax, thereby giving state banks strong incentives to obtain new, federal charters. In the short run, the response of private banks was as the federal government expected. As table 3.7 shows, the number of state-chartered banks declined from 1,579 in 1860 to 349 by

Table 3.7 **Number of U.S. commercial banks, 1860–1934**

	State-chartered banks		National banks		Total banks		National banks as % of total	
Year	Number	Assets (millions $)	Number	Assets (millions $)	Number	Assets (millions $)	Number	Assets (millions $)
1860	1,579	423			1,579	423		
1865	349	231	1,294	1,127	1,643	1,358	79	83
1870	325	215	1,612	1,566	1,937	1,781	83	88
1875	1,260	1,291	2,076	1,913	3,336	3,204	62	60
1880	1,279	1,364	2,076	2,036	3,355	3,400	62	60
1885	1,661	2,005	2,689	2,422	4,350	4,427	62	55
1890	4,717	3,296	3,484	3,062	8,201	6,358	42	48
1895	6,103	4,139	3,715	3,471	9,818	7,610	38	46
1900	9,322	6,444	3,731	4,944	13,053	11,388	29	43
1905	13,103	10,186	5,664	7,325	18,767	17,511	30	42
1910	18,013	13,030	7,138	9,892	25,151	22,922	28	43
1914	20,346	15,872	7,518	11,477	27,864	27,349	27	42

Sources: Lamoreaux (1994, 540); Davis and Gallman (2001, 268); Calomiris and White (1994, 151). U.S. Federal Reserve (1943, 24).

1865. Federal banks grew dramatically from zero in 1860 to 1,294 in 1865. They then continued growing, reaching 7,518 by 1914, controlling $11.5 billion in assets in that year.

In the long run, however, the political institutions of the United States frustrated the federal government's goal of a single, federally chartered banking system. They also undermined the barriers to entry in banking that had been created by the National Banking System. The federal government had effectively nationalized the right to issue banknotes by creating a 10 percent tax on the notes of state-chartered banks in 1865. The law did not, however, say anything about checks drawn on accounts in state-chartered banks. State banks, therefore, aggressively pursued deposit banking and checks drawn on those accounts became an increasingly common means of exchange in business transactions (Moss and Brennan 2004; Sylla 1975, 62–73; Davis and Gallman 2001, 272). The result was that state-chartered banks actually outgrew federally chartered banks during the period 1865 to 1914. As table 3.7 shows, in 1865 state banks accounted for only 21 percent of all banks and 13 percent of total bank assets. By 1890 there were more state banks than national banks, and state banks controlled the majority of assets. Circa 1914, 73 percent of all banks were state banks, and state banks controlled 58 percent of assets.

The result was a banking system with a most peculiar competitive structure. In 1914 there were 27,349 banks in the United States, 95 percent of which had no branches! The banks that did have branches tended to be small; the average number of branches operated by these banks was less than five (Calomiris and White 1994, 145–88; Davis and Gallman 2001, 272). The reason for the preponderance of "unit banks" was that most states had laws that prevented branch banking, even by nationally chartered banks. Those states that did not explicitly forbid branch banking had no provision in their laws for branches. In fact, unit bankers formed numerous local and state organizations to lobby against the relaxation of branch banking restrictions. Restrictions on branching likely had little effect on urban consumers of credit because there were usually multiple unit banks operating in any mid-sized city. But, these restrictions had real bite in rural markets where consumers faced a local monopolist.

Why did rural consumers go along with this arrangement? Why didn't they form a coalition with urban bankers who wanted to open branches in their underserved markets? Calomiris (2010) summarizes a long line of research on this question. One reason is that unit bankers formed a coalition with agrarian populists, who viewed big city business enterprises—as well as their plutocrat owners—as a threat to their way of life. One reflection of this coalition was the fact that William Jennings Bryan, the presidential candidate for both the Populist and Democratic Parties in 1896, was a strong antibranch banking advocate. A second reason is that one particular subgroup of farmers—those in prosperous farming districts, who used unit banks to fund their operations and acquisitions—calculated that they had something to gain from unit banking. A local banker who was not part of a branch network had to lend to them, or lend to no one. From their point of view, unit banking provided loan insurance. The higher interest rate they paid the unit banker for the loan was simply the premium for the insurance policy.

In sum, the outcome in the United States was dramatically different from that in Mexico and Brazil. This was not because there were not attempts by bankers to constrain supply. Rather, it was because attempts by bankers to form coalitions with political elites to constrain supply were undermined by countercoalitions, composed of the consumers of credit and political elites with populist orientations. America's bankers responded in the only way possible: they joined the coalition, at times making common cause with populists who were opposed to banks of any kind, and in so doing were able to preserve monopolies at the local level.

3.4 Conclusions and Implications

This chapter has looked at the political and economic histories of three New World economies in order to assess how the distribution of power across society shaped the institutions that governed entry into banking. The results are broadly consistent with the view that the distribution of human capital and the ability to project power exert an effect on an economy's economic institutions. One clear pattern that emerges from these case studies is that representative institutions alone—such as Brazil's parliament in the nineteenth century—are necessary but not sufficient conditions to generate economic institutions that give rise to broadly based financial development. Financial incumbents can either capture the representative institutions or form coalitions with their members; effective suffrage is necessary in order to align the incentives of political elites with the end users of credit.

Are these results generalizable? Obviously, more detailed case studies beyond the three studied here are necessary before any firm conclusions should be drawn, but the available evidence from large-N studies is broadly consistent with the patterns we find in Mexico, Brazil, and the United States. Barth, Caprio, and Levine (2006) analyze a cross section of sixty-five countries in 2003 and find that democratic political institutions are associated with greater ease in obtaining a bank charter and fewer restrictions on the operation of banks. They also find that the tight regulatory restrictions on banks created by autocratic political institutions are associated with lower credit market development and less bank stability, as well as with more corruption in lending. Bordo and Rousseau (2006) analyze a panel of seventeen countries over the period 1880 to 1997, and produce similar results: there is a strong, independent effect of proportional representation, frequent elections, female suffrage, and political stability on the size of the financial sector. The result, while qualified because of the small cross-country sample, is impressive as it is robust to controlling for initial per capita income. Quintyn and Verdier (2010) analyze more than 200 episodes of "financial acceleration" around the world since 1960, and find that the likelihood of an acceleration leading to sustained financial development increases when the underlying political system is democratic. Taken together, the case studies offered here, and the available statistical studies point in the same direction, and provide, we hope, a guide for further research.

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