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Political Institutions and Banking Systems:
Lessons from the Economic Histories of Mexico, and the United States, 1790-1914

by

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The banking crises of Asia and Latin America have increased the awareness of economists of the ways that politics influence economic outcomes. Indeed, it is a commonplace to ascribe the origins and persistence of recent LDC banking crises to political factors. Yet, while our analyses of the economics of banking crises are systematic, our analyses of the underlying political institutions that structure banking systems tend to be ad hoc.¹

This paper seeks to address the relationship between political institutions and the regulation and performance of banking systems in a systematic manner. I focus on two questions: how does the organization of decision making in the political system affect the economic institutions that govern banking; and how those economic institutions then affect the size and competitive structure of the banking system.² I explore the multiple channels through which political institutions that encourage political competition limit the discretion of

¹ Political institutions include all of the formal rules that govern the functioning of the political system. They include the rules that govern the legitimate extent of government authority, that specify the division of labor in decision making, and that specify the mechanisms by which the government is selected. Political institutions also include the rules that specify how a government may change its own institutions. These are rules about the reform of rules, so to speak, and are typically embodied in a constitution.

² Economic institutions are the laws, rules, and regulations that govern contract and property rights.
policy makers. I then demonstrate how the mechanisms that limit policy maker’s discretion gives rise to competitively structured markets in banking services.

The theoretical point of departure of this paper is simple: banking systems are highly sensitive to changes in the rules and regulations that govern them. Banks (and the financial systems of which they are a part) allow claims on real—and often relatively immobile and illiquid—assets to be represented by relatively liquid contracts. Rules laid down by the government determine the enforceability of those contracts, and how easily they may be traded or transferred. In fact, the government not only determines the security of financial contracts, it also plays a role in determining who can create them and the circumstances under which they may do so. (The government determines who can receive a charter to operate a bank and determines the types of contracts into which the bank may enter). Third, the government is not a disinterested party: it simultaneously specifies and enforces the rules that govern the banking system and looks to the banks as a source of credit. This conflict of interest means that the government has strong incentives to behave opportunistically: it may structure the institutions that govern the banking system so as to maximize its own access to credit, at the cost of economic development.

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3 Banks are an essential part of a network of markets, brokers, and non-bank financial institutions that value and trade financial contracts. Until fairly recently in most countries, the small and thin nature of securities markets meant that, as a practical matter, there was little distinction between the banking system and the financial system.

4 The government may also structure institutions so as to reward groups of politically favored constituents. As a practical matter, the maximization of government credit and the distribution of political favors often go hand-in-hand: governments restrict entry so as to allow some politically favored group to earn monopoly rents; in exchange for which some of the rents earned by the banks are shared with the government through taxation, government ownership of the bank stock, below-market rates of interest on loans to the government, or a number of other mechanisms. In some cases, rents are also shared with members of the government as individuals. Banks that hold monopolies might pay bribes or provide government officials with shares in the bank in order to provide a personal incentive for them to protect a bank monopoly.
I argue that precisely because governments have the incentive and ability to behave opportunistically, the structure and performance of banking systems are decisively influenced by the political institutions that limit government opportunism. Economic institutions do not come out of thin air. Rather, they are the product of political competition, and that competition is structured by exogenously determined political institutions. All other things being the same, the greater the extent to which the political system is characterized by institutions that encourage political competition, the less able is any actor in the government able to behave opportunistically vis a vis the banking system. All other things being equal, the greater the extent to which government actors are constrained from opportunistic behavior, the larger, the more competitively structured, and the more efficient will be the banking system.

Competition within the government can take three forms: electoral suffrage; separation of powers; and federalism. Political competition accomplishes two goals: it

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provides ex ante vetos on policy making; and it provides sanctions on public officials who do not abide by their promises or who engage in rent seeking.

Electoral suffrage is an obvious form of political competition, and it has received considerable attention in the literature on institutions. It is not, however, the only, or necessarily the most effective, way to constrain public officials from behaving in an opportunistic fashion. The reason is that suffrage—even universal suffrage—provides only for ex post sanctions, not ex ante vetos. Moreover, being voted out of office is a very weak sanction that may only be applied at prescribed times. Suffrage is therefore almost always accompanied by separation of powers or federalism. In fact, electoral suffrage is not a necessary requirement for these other forms of political competition to function—although they will operate more efficiently if there is electoral suffrage.

Governments with separation of powers are divided into multiple branches, where each branch plays a role in the process of policy formation. Overlapping authority over policies creates multiple veto points in the decision making process. It also provides for ex post sanctions if any branch of government exceeds its authority or does not carry out its


7 In addition, the sanction of being voted out of office requires that voters be sufficiently informed that may vote retrospectively.

8 Separation of powers and federalism exist in political systems that have only the most limited and indirect forms of electoral suffrage. One implication of this is that it is possible to constrain electoral officials, and produce growth enhancing policies, even in the absence of electoral democracy.

9 If the separation of powers is absolute, with different branches of government having completely independent policy making authority, then there will not be multiple veto points. To be effective, separation of powers requires that different branches of government have overlapping authority over the same policies.
legislative mandate. Separation of powers works to constrain the discretion of public officials because different interests among actors in the different branches of government will give those actors the incentives to police the actions of other branches. The more branches there are, the greater the probability that actors in different branches will have different interests. This will limit the number of possible policies that can be pursued.\textsuperscript{10}

Federalism also produces ex ante vetos and ex post sanctions. In federal systems there are actually two types of political competition taking place. One is horizontal competition \textit{across states or municipalities} for population and tax revenues. Precisely because capital and labor are mobile, states or municipalities have incentives to replace policies that provide monopoly rents via restricting market entry with policies that provide level playing fields. States or municipalities that fail to do so will be sanctioned with the loss of population (and hence have a reduced voice in the central government, provided that there is proportional representation) and will see their tax revenues decline as business enterprises relocate elsewhere. The second form of competition that exists in federal systems is vertical—across different levels of government. In some federal systems, there is overlap in policy authority across municipal and state governments, and, more fundamentally, across state and national governments. When this is the case, similar mechanisms to interstate competition come into

play: the federal government will face de facto sanctions from the states. Business enterprises will choose to be chartered and regulated by state authorities, rather than federal ones.  

Sustaining the hypothesis that the structure and performance of banking systems is in large part a function of a society’s underlying political institutions will obviously require the analysis of a large number of country case studies—far more than be tackled in any single paper. This paper provides only a first pass, based on two extreme cases—the United States and Mexico during the period 1790-1914. As we shall see, however, the evidence is strongly consistent with the hypothesis. In both cases, public officials sought to behave opportunistically, monopolizing the chartering and regulation of banks. In the case of Mexico, the lack of effective political competition made this an easy task. In the case of the United States, however, political competition on a wide variety of dimensions made this impossible. Any equilibrium that involved banking monopolies at the either the federal or state level was unsustainable. The results, in terms of the structure and performance of banking systems, could not have been more different. Even normalizing for GDP or population, Mexico had a smaller, more concentrated, and more inefficient banking system than did the U.S.

The United States

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11 Although it fairly rare, political systems can be characterized both by separation of powers and federalism. The United States is the most obvious example.

12 We focus on these two cases because they provide for a natural experiment. Until the mid-twentieth century, the U.S. was among the most federal of countries, and the executive branch of the government was weak relative to the legislative branches. In Mexico, on the other hand, the period 1876-1911 was characterized by an absence of institutionalized political competition within the government.
The United States is a strong example of the phenomenon of political competition producing a highly competitive structure of the banking industry. Circa 1913, there were several striking features of the U.S. banking system: it was made up of tens of thousands of banks; the vast majority of banks were unit banks (they did not branch); and there was no interstate branching. Even more striking, at the time that the U.S. Constitution was put into effect in 1789, U.S. banking looked nothing like this. Instead, it was characterized by a series of segmented monopolies that shared rents with state governments via taxes or state ownership of bank stock. In some cases, banks also shared rents directly with the legislators who regulated them.

During the colonial period of U.S. history there was neither a banking system nor centralized government. Financial intermediation was carried out by merchants, who issued and discounted bills of exchange. Paper money was issued by the governments of each colony, and each colony operated with complete autonomy from the others. Other than a Board of Trade, which sat in London and whose goal was to maximize the income of the Crown from the colonies, the American Colonies had no central governance at all.

This colonial political structure, and its attendant absence of a banking system, carried over after independence. The initial political institutions of the United States established 13 independent states (each of which had been a former colony) with a central government so weak as to be virtually non-existent. This left the central government, unfortunately, with neither independent sources of tax revenue nor with a banking system from which it could borrow. As a practical matter, this meant that it could not even carry out the one duty with which it was charged.
The unworkability of this system soon became obvious, and resulted in a scrapping of the Articles of Confederation in favor of the Constitution of 1788 (adopted in that year, but which went into effect in 1789). While the central government gained a great deal of authority as a result of the Constitution, the resulting political system was still strongly federal: all policy making authority not explicitly delegated to the central government by the Constitution were vested in the states. Since there were, as yet, very few banks in the formal sense of the word, the framers of the Constitution made no mention of who would charter and regulate them. De facto, this meant that states had the power to charter and regulate banks.

The states, it turned out, had strong incentives to charter banks. Under the constitution, the states lost both the right to tax imports and exports and the right to issue paper money—both of these powers were vested with the central government. 13 This created two problems for state finances: tax revenues were dependent on cumbersome poll and property taxes; and states could no longer finance their expenditures in excess of taxes by issuing paper money. The response of the states was to sidestep the federal constitution. It might have been the case that states could no longer issue paper money, but the constitution said nothing about states chartering banks of issue, whose banknotes would circulate as currency. 14

The chartering of banks solved the problem of state government finance. As Sylla, Legler, and Wallis have shown, state governments chartered banks with an eye to providing the government with a source of revenue. 15 They did this either by holding stock in the banks

13 In exchange for giving up these rights, the federal government assumed the (quite considerable) state debts.


(receiving a stream of dividends from the bank) or by taxing the profits, dividends, capital, or deposits of the banks. States also required banks to make lump sum “bonus” payments (essentially franchise taxes) in order to grant or renew their charters. The revenues from bank taxes and bank dividends provided the states with considerable revenue. Circa 1830, the states of Pennsylvania, Rhode Island, North Carolina, Delaware, and Massachusetts generated from 23 percent (Pennsylvania) to 61 percent (Massachusetts) of their total revenues from bank taxes and dividends.\textsuperscript{16}

The financing of state expenditures via bank dividends and bank taxes created a problem of moral hazard: it was not in the interest of state governments to charter large numbers of banks and create a competitive market for banking services. Rather, it was in the interest of state governments to restrict entry into banking in order to maximize the amount of rent earned by banks, rent which would then be shared with the state government in the form of dividends, stock distributions, or taxes of various types.\textsuperscript{17} In some states, New York being the best-documented example, problems of moral hazard extended beyond the incentives of the state treasury. As of the late 1810’s bank chartering in New York was controlled by the Albany Regency, the policy-making committee of the New York Republican Party. Charters


\textsuperscript{17} In order to restrict entry, most states passed laws that required private banks to incorporate. In order to incorporate, however, they needed authorization from the state legislature, which was not always granted. By 1831, there was only one unchartered bank in operation in the entire country. J. Van Fenstermaker, “The Statistics of American Commercial Banking, 1782-1818,” The Journal of Economic History 25:3 (Sept. 1965), p. 403.
were only granted to friends of the Regency. The incentives of the legislators were aligned with the banks by allowing the former to subscribe to initial public offerings of bank stock at par, even though the stock traded for a substantial premium because the banks earned monopoly rents.\textsuperscript{18}

Banking in the Early Republican United States was therefore characterized by segmented monopolies. The early history of banking in Massachusetts provides a relevant example. Prior to 1812, the state of Massachusetts was a major investor in two of the state’s most important banks: the Union Bank (chartered in 1793) and the Boston Bank (chartered in 1803). The $1 million investment by the state in these banks gave it control of one-eighth of all banking capital. Precisely because it wanted to maintain a stream of dividend earnings from the existing banks, the state government blocked most new bank charters. With the exception of Boston, only one chartered bank was permitted in any town. Private banks (those without charters) were restrained by law from operations.\textsuperscript{19} In Pennsylvania the story was much the same: until the 1840s the state was a major owner of bank stock, and dividends (as well as franchise taxes on charters and charter renewals) made up 40 percent of the state’s revenues from 1795 to 1825. Not surprisingly, the state restricted the number of banks that could do


business within its borders. \(^{20}\) Lest readers think that this was a purely Northeastern phenomenon, consider the state of Virginia, which was the largest state in the South. The state subscribed to one-fifth of the stock of the Bank of Virginia in 1804, which opened branches in several towns. The state government occasionally granted charters to other large banks, provided that they pay a sizable franchise tax to the state, but the basic pattern in Virginia was that entry into banking was severely restricted to a few large banks in which the state took an ownership stake. In fact, the state did not actually pay for the shares that it held. Instead, the state’s shares were paid for gradually out of the dividends that accrued on them, “a sort of tax on the private shareholders, who were also charged bonuses [franchise taxes] and required to make loans to the state in return for further favors.”\(^ {21}\)

Not surprisingly, there were very few state-chartered banks in the early United States. In 1789, when the Constitution went into effect, there were only two banks in operation. By 1800 there were still only 28, and by 1810 there were 102. The capital stock of these banks was also modest, totaling $2.8 million in 1789, $17.4 million in 1800, and $56.2 million in 1810.

The federal government pursued a similar strategy to that of the states, and chartered its own bank, the Bank of the United States (BUS), in 1791. Unlike the states, the incentive of the federal government was not to produce a source of income (dividends from the BUS were on the order of one percent of total federal revenues). Rather, it was to provide the


federal government with a financial agent that could issue banknotes against customs’ duties and that could hold federal balances. Nonetheless, the BUS was founded and operated much the same as the segmented monopolies created by the states: it was a commercial bank fully capable of making loans to private individuals, and 20 percent of its stock was owned by the federal government. Like some state banks, the federal government did not actually pay for its $2 million stake in the bank: rather, the bank lent the government the money for the shares, which the government then “paid for” out of the flow of dividends. In other words, the BUS allocated a 20 percent ownership stake in the bank to the federal government (which the federal government could later sell or earn income from) in exchange for a series of valuable concessions: 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 sole right to open branches throughout the country. This gave it a tremendous competitive advantage over state chartered banks, which were not allowed to branch across state lines, and which did not have the advantage of having the federal government as their biggest depositor. Needless to say, the existence of the BUS generated considerable resentment from bankers who held state charters, and therefore from state bankers.

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legislatures. Some states even tried (unsuccessfully) to tax the bank notes of the BUS in order to constrain it from competing against their own banks. 24

The strategies of the state and federal governments made sense from their individual points of view, but it was not a sustainable equilibrium. There were competitive pressures that were undermining it, almost right from the beginning.

The first source of competition involved states competing against one another for business enterprise and population. The fact that the United States had a rapidly expanding frontier, with new states entering at a rapid clip, meant that population and business enterprises could easily relocate to other states. This meant that state governments were under pressure to grant increased numbers of bank charters—lest their population move to a state in which it was easier to obtain a bank loan and their entrepreneurs move to a state in which it was easier to obtain a bank charter. The pressure to hold labor and capital in the state was reinforced by a second, related, factor: the broadening of the suffrage. Circa 1815, only four states had adopted universal manhood suffrage. The very same threat that population would move to new states, which typically offered universal male suffrage as an inducement to immigration, meant that the old states were forced to ratchet their voting restrictions downwards, or risk losing their population. By the 1840s, most states had dropped all property and literacy requirements, and by 1850 virtually all states (with some minor exceptions) had done so. 25 The broadening of the suffrage, however, served to undermine the political


coalitions that supported restrictions on the number of bank charters. That is, it created a second source of political competition—competition within states over who would hold office and the policies they would enact.

A third source of competition was that between state governments and the federal government. In the early republic, both were chartering banks. In fact, branches of the federally chartered BUS could undermine the local monopolies held by state chartered banks, and vice versa. Not surprisingly, state bankers clamored for the revocation of the BUS’ charter.26

The outcomes of the political competition within states, among states, and between states and the federal government could be predicted from knowledge of the players. First, the BUS did not get its charter renewed when it expired in 1811. The elimination of the BUS left the banking system without a lender of last resort, but it did mean that local bankers could pick up a share of the profitable commercial business controlled by that quasi-central bank. Second, states began to issue large numbers of bank charters. The first state to shift was Massachusetts, which began to increase the number of charters it granted as early as 1812. These charters still had to be approved by state legislatures, but many legislatures—particularly those in New England and later those in the Mid-Atlantic states—increasingly granted charters almost as a matter of course. This meant that the value of the stock they held in the monopoly banks decreased. Consequently, during the period from the 1810s to the late 1830s, many states—particularly those in New England the Mid-Atlantic region—liquidated their banking investments and began to tax bank capital as a replacement for the dividend.

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income that they had previously earned. Interestingly, southern states were quite slow to make this shift, and tended to be underbanked compared to their northern and midwestern counterparts.²⁷

The result was the rapid expansion of the state-chartered banking system, particularly in New England. In 1800, New England had 17 banks, whose combined capital totaled only $5.5 million. By 1819 it had 84 banks with a capital of $16.5 million. This swelled to 172 banks with $34.7 million in capital in 1830.²⁸ Data on the size of the banking system as a whole in Table One indicate a similar growth on a national level. In 1818 there were 338 banks in operation, with a total capital of $160 million—roughly three times as many banks and bank capital as in 1810.

In the decades after 1830 the competition within states, among states, and between states and the federal government intensified. One outcome of this intense political competition was an assault on the Second Bank of the United States from Jacksonian populists that resulted in that bank’s closure in 1836. The Second Bank was chartered in 1816 by Congress along the same lines as the original Bank of the United States. The bank was a private enterprise, but 20 percent of the bank’s stock was held by the federal government, which it paid for with government bonds. Much as happened with the its predecessor, the holders of state banking charters, as well as state governments, resented the fact that the Second Bank held tremendous government balances—balances which state bankers believed should be part of their reserve base. They also resented the fact that the Second Bank, like its

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predecessor, could compete in their markets by opening branches at will. The history of the closure of the Second Bank would take us beyond the space limitations of this paper. Suffice to say, however, that in the end the state bankers prevailed. The Second Bank was closed in 1836 when its charter expired.\textsuperscript{29}

The second outcome of political competition, this time within and among states, was that the de facto policies of many states to grant virtually all requests for bank charters became institutionalized as a series of laws known as free banking. Under free banking, bank charters no longer had to be approved by the legislature: they were approved as an administrative procedure by state agencies who were charged only with determining whether the applicants had met certain requirements regarding the number of directors, capital minimums, and bond securities. Recent research by Kenneth Ng has shown that the free banking acts, with the exception of that of New York State, did not have a dramatic effect on reducing barriers to entry.\textsuperscript{30} There, the Republican Party, which had granted bank charters only to the friends of powerful party members, was soundly defeated in the legislative elections of 1837. The next year the victorious Whig Party passed the New York Free Banking Act. John Joseph Wallis, Richard E. Sylla, and John B. Legler, “The Interaction of Taxation and Regulation in Nineteenth Century U.S. Banking,” in Claudia Goldin and Gary D. Libecap eds., The


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previously existed. Nevertheless, one can still take the free banking acts as an index of the degree to which states had basically given up on constraining the numbers of charters granted by the legislature. The first state to make the switch to free-banking was New York in 1838. Other states soon followed New York’s lead: Georgia passed a free banking law in 1839; Alabama passed one in 1849, and then New Jersey, Illinois, Massachusetts, Ohio, Vermont, Connecticut, Indiana, Tennessee, Wisconsin, Florida, Louisiana, Iowa, and Minnesota all followed during the 1850s.

The lack of barriers to entry in American banking, and its attendant system of unit banks, had its advantages and its disadvantages. The obvious advantage was that the number of banks and bank capital mushroomed. Circa 1860, the United States had 1,579 banks, with a total capital of $422.5 million. Roughly 30 percent of all banks and all bank capital was clustered in the states of New England, which had led the way in moving away from the original system of state-owned monopolies. The New England States had an amazingly high density of banks: one for every 6,600 people, which was roughly three times the national average of one bank for every 19,900 people (See Table 2).


31 Free banking laws contained a bond security provision that provided for approved bonds to be deposited with the state on a dollar for dollar basis as a condition of issuing banknotes. If a bank failed, the state could sell the bonds and use the proceeds to compensate note holders. Ng argues that the bond security provisions created a barrier to entry no higher than that created by the need to negotiate an individual charter with a state legislature. Kenneth Ng, “Free Banking Laws and Barriers to Entry in Banking, 1838-1860,” The Journal of Economic History 48:4 (Dec. 1988), pp. 877-89.

32 Michigan was actually the first state to pass a free banking law, in 1837, but revoked the law in 1839. It re instituted free banking in 1857.

Large numbers of fairly small banks (the average capitalization was only $268,000) spread around the country conferred an advantage on the U.S. at this stage of its economic and institutional development. Bankers always face a problem of information asymmetries: borrowers know more about their creditworthiness than do bankers. Prior to the existence of modern credit reporting, standard accounting procedures, and independent auditing, problems of information asymmetries were even more severe. The only reliable information that bankers had about borrowers was what they could obtain via repeated business dealings with them, via information obtained from local (and informal) networks of businessmen and farmers, or via their kinship ties. This meant that bankers only lent to people that they knew personally. Under these circumstances, a system made up of large numbers of small banks embedded in even small communities was an efficient way to organize the banking industry.

As Naomi Lamoreaux has shown, this fairly unusual organization of the banking industry allowed New England banks in particular to operate as investment pools—the nineteenth century equivalent of modern mutual funds. New England's banks were not the independent credit intermediaries of economic theory. Rather, they were the financial arms of kinship groups whose investments spread across a wide number of economic sectors and a wide number of enterprises. Basically, kinship groups tapped the local supply of investable funds by founding a bank and selling its equity to both individual and institutional investors. The founding groups then lent those funds to the various enterprises under their own control. They lent very little money to anyone outside of their immediate network. Investors in the banks knew full well that the banks only lent to insiders. They bought bank stock precisely in

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34 Even in 2002 such informal networks continue to be important in the allocation of bank credit, particularly in rural communities. Credit reports and financial statements are often taken as complements to, rather than replacements of, information gathered through local business networks.
order to invest in the broad range of business enterprises controlled by the founding group of entrepreneurs. 35 Had legal restrictions been placed on the founding of banks, these insider arrangements would have concentrated capital in the hands of a small number of kinship/business groups. The fact that entry in banking was essentially free, however, meant that large numbers of entrepreneurs could tap the capital of non-group investors by using banks as investment pools. The crucial point is that the rules of game were not constructed so as to allow some entrepreneurs to play while excluding others. Free banking did not provide for a completely equal distribution of investable funds, but it did allow a large number of players to enter the game.

The United States’ unusual system of bank chartering had disadvantages as well. One peculiar feature of most state banking laws was that they almost uniformly precluded the chartering of branch banks. Virtually all banks in the nineteenth century United States, except those in some southern states—which tended to hold on to older forms of state-administered monopolies—were unit (single branch) banks. Unit banking was often defended on ideological grounds: it prevented the formation of monopolies. It was also the case, however, that unit banking protected local bankers in distant rural communities from competition, hence allowing them monopoly rents. Regardless of the motivation for unit banking, it presented two potential problems, one of which was solved by the market, and the one of which was only solved by federal deposit insurance in 1933.

The first problem with unit banking was that there were literally of thousands of different bank notes in circulation, which potentially meant that few people would have
actually accepted paper money at all. States chartered thousands of small banks and these small banks were allowed to issue currency up to some multiple of their specie reserves (the exact ratio being specified in the charter, and in theory enforced by state banking regulators). Given the administrative difficulty of policing hundreds of far-flung small banks, there were inevitably going to be banks which issued far more banknotes than they could redeem for “legal tender” (which is to say for specie). How then could an individual or business when presented with one of these bank notes know that it had any value at all? Given the possibility (and the actual occurrence) of swindles involving unscrupulous bankers in remote locales, why would anyone, including other banks, been willing to accept bank notes as money? Potentially, the entire system could have broken down. Two factors prevented this from happening. The first was the existence of a specie standard, against which all banknotes could be discounted. The second was the response of the market to the problem of multiple bank notes. This response, known as the Suffolk System, was named after the Suffolk Bank which was the bulwark of a system of large New England banks that agreed to purchase the bank notes of all other New England banks at a discount, thereby acting as a clearinghouse for the notes of even the smallest and most distant of banks. The Suffolk Bank published the discount rate it applied to the notes of other banks, allowing individuals and institutions to assess the quality of bank notes before they accepted them.36

The second problem potentially posed by unit banking was that individual small banks are very susceptible to failure because of changes in local business conditions or because of


bank runs. This problem would have been mitigated had there been branch banking, which would have allowed banks to transfer funds from one branch to another in the event of a run on any single branch. It also would have been mitigated had there been a central bank, which could have acted as a lender of last resort, by buying and holding the notes of banks that were in trouble. Unfortunately, the U.S. banking system after the closure of the Second Bank of the United States in 1836 had neither. To a remarkable degree, this problem was largely mitigated by the specie standard and the Suffolk System during the antebellum period. As recent research by Rockoff has shown, the failure rates of were surprisingly low.37

Unit banking had another major drawback: it did not provide the federal government with a source of finance. This had not been a major problem during the 1840s and 1850s (after the closure of the Second Bank of the United States in 1836), because the federal government was able to sell treasury bonds to the public and to European investors. The Civil War, however, dramatically increased the financial needs of the federal government. The response of the federal government was to do what most governments do when they need to finance a war: they turn to the banking system. It therefore passed the National Banking Act in 1863.

The goal of the National Banking Act was to centralize bank chartering in the federal government, and in so doing provide the federal government with a source of finance. The National Banking Act did not abrogate the rights of states to charter banks—that would have

violated the constitution. It also did not abrogate the right of state-chartered banks to issue bank notes, as that too would have been unconstitutional. The National Banking Act did, however, impose a tax on bank notes, and then exempted federally chartered bank from the tax. This created a strong incentive for state banks to obtain new, federal charters. The expectation of the federal government was that virtually all state banks would obtain federal charters and that state-chartered banking would disappear. The incentive of the federal government for doing this is not obvious until you consider a principal feature of the new law: federally-chartered banks had to hold their reserves either in specie or in federal government bonds. Essentially, banks had been told that if they wanted to issue bank notes, they were going to have to hold some of their reserves in the form of a loan to the federal government.

In the short run, the response of private banks was as the federal government expected: the number of state chartered banks declined from 1,579 in 1860 to 349 by 1865. (See Tables Two and Three). 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.\footnote{For a discussion of the growth of the banking system under the National Banking Act see: Richard Sylla, The American Capital Market, 1846-1914: A Study of the Effects of Public Policy on Economic Development (New York: Arno Press, 1975).}

In the long run, however, the existence of political competition undermined the federal government’s goal of a single, federally-chartered banking system. The National Banking Act effectively nationalized the right to issue bank notes. It did not, however, say anything about checks drawn on accounts in state-chartered banks. Checks therefore became a common means of exchange in business transactions. Moreover, the states rewrote their banking laws,
reducing even further the requirements to obtain a charter.39 This gave a state charter a tremendous advantage over federal charter: the National Banking Act stated that in the event of a bank failure “stockholders, in addition to losing their investment, could be assessed an amount equal to the initial par value of their stock.”40 State banking charters carried no such provisions.

The result was that state chartered banks actually outgrew federally chartered banks during the period 1865-1914. 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. (See tables 2 and 3).

The end result of this competition between states and the federal government was a banking system that had a structure unlike that of any other country. In the first place, circa 1914 there were 27,864 banks in the United States. Total bank assets totaled $27.3 billion. In the second place, virtually all of these banks were unit banks: many states had laws that prevented branch banking, even by nationally chartered banks; most other states did not explicitly forbid branching, but their laws provided no provision for branch banking. Thus, in 1900, there were only 119 branches operating anywhere in the United States, only five of which were branches of National Banks. As late as 1915, there were only 785 branches in operation in the entire country.41 Indeed, as Calomiris and White have shown, the vast


majority (well over 80 percent) of banks in 1933 were unit banks.\textsuperscript{42} This created problems of volatility, which were only partially compensated by the fact that the national banks had correspondent relationships.\textsuperscript{43} It did, however, confer two advantages. First, the existence of a national banking system allowed capital to flow inter-regionally, from low return to high return investments. Second, unit banking created a competitive market for banking services: no single bank could dominate any one market. Third, embedding banks into communities meant that bankers could overcome information asymmetries by tapping into local (and informal) networks for information about potential borrowers. Indeed, one feature that is particularly striking about this system was how many banks there were per person in the United States, and how geographically dispersed banks were. (See Table 5).

**Mexico**

Mexico’s experience stands in stark contrast to that of the United States. Nineteenth century Mexico had neither a strong central government with checks and balances nor a strong federal system. Rather, what it had for most of the nineteenth century was a crumbling, peripheralized federalism over which a central government without resources tried to exert its authority. Once Mexico finally established a viable set of political institutions during the last decades of the nineteenth century, the central government moved to concentrate all power in Mexico City. Rights that formerly been conferred to the states, including the regulation and taxation of mining, the regulation and taxation of ground water and petroleum, the taxation of interstate commerce, and the chartering of banks, were all centralized in the federal


government. Moreover, they were centralized in the hands of a single federal executive, Porfirio Díaz, who ruled from 1876 to 1911.

Thus, Mexico had no institutions that could generate effective political competition. Mexico was nominally democratic, but the outcomes of elections were decided beforehand. Mexico nominally had a bicameral legislature that was supposed to represent the interests of the states, and which was supposed to check presidential power, but it did not do so. Indeed, as recent work by Armando Razo has shown, after the mid-1880s virtually all roll call votes in the Mexican Senate were unanimous.\footnote{This topic is pursued at length by Armando Razo in a dissertation in progress at Stanford University.} Congress was a rubber stamp. Mexico was nominally federal, but state governors gradually lost power to the federal executive. In fact, by 1910 70 percent of Mexico’s governors were cronies appointed by the federal executive. Many of them had no ties at all to their local constituents.\footnote{Stephen Haber, Armando Razo, and Noel Maurer, The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876-1929 (Cambridge University Press, forthcoming May 2003), Chapter 3.}

The result was that Mexican banking laws looked a lot like U.S. banking laws during the period 1790-1810—but even more so. Mexico had a series of segmented monopolies that were awarded to a group of insiders. The outcome, circa 1910 could not have been more different: the United States had roughly 25,000 banks and a highly competitive market structure; Mexico had 42 banks, two of which controlled 60 percent of total banking assets, and virtually none of which actually competed with another bank.

One of the most curious features of Mexico’s financial history is that Mexico had no chartered banks at all until 1863, when the government of Archduke Maximilian granted a charter to a branch of the British Bank of London, Mexico, and South America. Prior to that,
banking services in Mexico were provided by private moneylenders. Private banking had existed in Mexico well back into the colonial period, and had played an important role in providing working capital for Mexico’s silver mines.46 After independence, many of these private bankers made (and lost) considerable money speculating on the public debt.47 They also financed domestic commerce.

Why these private bankers did not seek formal charters, which would have given them the right of note issue, granted them limited liability, and thereby allowed them to mobilize capital from an extended group of investors, is something of a mystery. One might argue that Mexico’s banks remained informal, personal, and small because there was not sufficient demand for larger, more formal banks. Such an argument would not, however, square with two pieces of evidence. The first is that Mexico’s fledgling industrialists were clamoring for more credit than could be provided by the private bankers. For that reason, they convinced the government to create a national industrial development bank, the Banco de Avío, in 1830. This bank was financed out of a share of the tariff revenues collected on cotton textile imports, and its portfolio of loans included the country’s largest cotton textile manufacturers.48 The second is that the Mexican government was itself clamoring for more credit at lower interest rates than could be provided by the private bankers. Clearly, it was in the government’s interest to create a semi-official commercial bank, such as the early Bank of


England or Banc de France, which would provide loans to the government in exchange for a set of special privileges. Such a super bank also have been in the interest of the largest private bankers, as they almost certainly would have comprised the stockholders of the bank. Moreover, the existence of such a super-bank would have allowed them to solve a coordination problem that allowed the government to behave in an opportunistic fashion. Because it was dealing with multiple bankers, the government could renege on some of its debts at the same time that it honored others. A super-bank would, however, have had a monopoly on providing credit to the government. The government would have had to either renege on all loans, or renege on none of them. This would have raised the cost of opportunism, because the government would have been unable to contract additional loans once it behaved opportunistically. The fact that the government so often reneged on its debts was, in fact, the reason why the private bankers charged extremely high interest rates (sometimes as much as 300 percent) in the first place.

Whatever the reason for the slow development of chartered banks, the fact remains that as late as the early 1880’s there were only eight chartered banks operating in the entire country. About half of these were located in the mining state of Chihuahua, and operated under concession from the state government.49

The fact that the Mexican federal government was continually broke, however, created a strong incentive for the federal government to monopolize bank chartering as a means to

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48 The Banco de Avío was closed by the government in 1842, which essentially ransacked its vaults in order to cover government deficits. Robert Potash, The Mexican Government and Industrial Development in the Early Republic: The Banco de Avío (University of Massachusetts Press, 1983).

49 Mexico’s Constitution of 1857 left the taxation and regulation of most economic activities up to state governments.
provide itself with a ready source of credit. The government of dictator Porfirio Díaz (who ruled from 1876 to 1911) therefore made two moves. First, in 1884, the Díaz government engineered the merger of Mexico City’s two largest banks creating the Banco Nacional de México (Banamex). The intention of the government was to model Banamex on the early Bank of England, granting it a monopoly over the issuance of paper money in return for providing a credit line to the federal government and acting as the treasury’s financial agent. Second, the government simultaneously federalized the chartering of banks. As of 1884, states could no longer grant charters. The fact that few states had, as yet, granted any bank charters, meant that there was little political opposition to this move from the state governors. Opposition by the small number of existing banks operating under state concessions was overcome by grandfathering them into the new arrangement.

What was crucial, from the point of view of Banamex, was that the commercial code of 1884 erected high barriers to entry. Not only had the federal government monopolized the granting of charters, it also required that new banks obtain the permission of Congress and the Secretary of the Treasury in order to obtain a charter. They also had to pay a five percent tax on the issuance of bank notes. Banamex was exempted from the tax. Finally, Banamex was permitted to issue banknotes up to three times the amount of its reserves. Other banks were not afforded this privilege. In short, the federal government was attempting to exchange a set of special privileges for access to credit.

Mexico’s already extant banks, particularly the Banco de Londres y México, realized that the commercial code and Banamex’ special privileges put them at a serious disadvantage.

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They therefore sued in federal court, and managed to obtain an injunction against the 1884 Commercial Code. The ensuing legal and political battle ground on for 13 years, until a compromise was finally hammered out by Secretary of Finance Limantour in 1897.51

There were four groups that pressured the federal government in the crafting of the 1897 General Credit Institutions and Banking Act: the stockholders of Banamex; the stockholders in the Banco de Londres y México; the stockholders in other, smaller, state-level banks; and the state governors (who wished to award cronies with bank charters). The resulting law could easily be predicted from knowledge of the players in the negotiations: Banamex shared many (although not all) of its special privileges with the Banco de Londres y México; the state banks were given local monopolies; and the state governors were able to award concessions to their cronies. Holding the arrangement together was the fact that the federal government monopolized bank chartering. Legal barriers to entry into banking could not be eroded by competition among states for bank business, because states did not have the right to charter banks.52

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51 Unlike English common law, in which any activity is legal unless it is specifically prohibited by law, Mexico’s Spanish legal tradition held that all economic activities undertaken without authorization from either a general law or a specific concession were illegal. During the years from 1884 to 1897 Mexico possessed no body of banking law. Thus, bank charters had to be obtained by a special concession granted by the Secretary of the Treasury. Changes in the identity of the Treasury Secretary had a direct impact on the ease with which a bank could obtain a charter.

52 Had states had the right to charter banks, they would have been tempted to ratchet downwards the minimum requirements for a bank charter as they competed against one another for bank business. For discussions of the 1897 law see: Stephen Haber, "Industrial Concentration and the Capital Markets: A Comparative Study of Brazil, Mexico, and the United States, 1830-1930." The Journal of Economic History, 51:3 (1991), pp. 559-80; Noel Maurer, The Power and the Profits: The Mexican Financial System, 1876-1932 (Stanford University Press, 2002), chapter three; and Stephen Haber, Armando Razo, and Noel Maurer, The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876-1929 (Cambridge University Press, forthcoming 2003), chapter four.
The resulting competitive structure had the following features. Banamex and the Banco de Londres y México were granted a duopoly in the Mexico City market. In addition, only Banamex and the Banco de Londres y México had the right to branch across state lines. They were also permitted to hold lower ratios of reserves to banknotes than the state-level banks: 33 percent as opposed to 50 percent. Banamex was also granted an exclusive privilege of providing financial services to the government: collecting tax receipts, making payments, holding federal deposits, and underwriting all foreign and domestic federal debt issues. In short, the compromise was that Banamex would retain the special privileges granted to it in 1884, and some of these privileges would also be extended to the Banco de Londres y México.

State level banks, and their patrons—the state governors—were also protected from competition. The law was written in such a way that, as a practical matter, only one bank could be established in each state, although existing banks were grandfathered in. The law specified that bank charters (and additions to capital) had to be approved by the Secretary of the Treasury and the Federal Congress. In order to make this commitment credible beyond the tenure of José Limantour as Treasury Secretary, the law also created three other barriers to entry. First, the law created very high minimum capital requirements, U.S. $125,000 (later raised to U.S. $250,000). Even the initial figure of $125,000 was more than twice the minimum capital required for a national bank charter in the United States, which was set at $50,000. Second, the law established a two percent annual tax on paid-in capital. The first bank granted a charter in each state, however, was granted an exemption from the tax. This gave that bank an insuperable advantage. Third, state banks were not allowed to branch outside of their concession territories. This prevented banks chartered in one state from challenging the monopoly of a bank in an adjoining state. In short, the only threat to the
A monopoly of a state bank could come from a branch of Banamex or the Banco de Londres y México.53

The result was that Mexico had a very small and concentrated banking sector. In 1910, even if we include mortgage banks and count Banamex branches as independent banks, there were only 42 formally incorporated banks in the entire country. The United States, for comparison purposes, had 25,151 banks and trust companies in that year.54 The capital available to the Mexican banking system was also small: total assets in 1911 totalled approximately U.S. $400 million.55 (See Table 6). For comparison purposes, total assets of the U.S. banking system were $22.9 billion.56 Finally, not only were Mexico’s banks few in number and of small size, but the level of concentration was extremely high: Banamex and Banco de Londres y México accounted for more than 60 percent of all assets.57 Estimates of the Herfindahl Index put it at .2, which is to say that even had there been interstate competition, the competitive structure of the industry would have been identical to that of an industry with only five, equally-sized banks. (See table 7).

53 The law also allowed for the establishment of mortgage banks and “bancos refaccionarios,” which were allowed to make long term loans. These banks were not granted, however, the right to issue bank notes and were subject to a variety of restrictions on the types of investments they could make. Without the right to issue notes, and with few ways to actually foreclose on a mortgage (because of peculiarities of the Mexican legal system), these banks could not compete. Few charters for mortgage banks were ever taken out. For a discussion of Mexican mortgage banking see Paolo Riguzzi, “The Legal System, Institutional Change, and Financial Regulation in Mexico, 1870-1910: Mortgage Contracts and Long Term Credit,” in Jeffrey Bortz and Stephen Haber eds., The Mexican Economy, 1870-1930: Essays in the Economic History of Institutions, Revolution, and Growth (Stanford University Press, 2002), pp. 120-160.


55 Mexico, Secretaria de Hacienda, Anuario de Estadística Fiscal, 1911-12, p. 255.


57 Calculated from data in Anuario de Estadística Fiscal, 1911-12, pp. 236 and 255.
One might argue that differences in population or GDP would explain the differences in the U.S. and Mexican banking systems. In this view, Mexico had a fewer banks and less bank capital because Mexico had a small and poor population. This argument does not, however, stand up to the evidence. In table 8, I normalize banks and bank assets by GDP and population. The results are unambiguous. Compared to the United States, Mexico had less bank assets per capita by an order of magnitude and less banks per capita by two orders of magnitude. Comparing bank assets to GDP, Mexico had a ratio of .20, compared to .65 for the United States.

A skeptical reader might be tempted to argue that this data does not, in and of itself, prove that Mexico’s banking system was inefficient. In this view, the small number of Mexican banks might have been caused by economies of scale in banking. This hypothesis can be subjected to two kinds of tests against evidence, neither of which supports it.

The first test of the efficiency of Mexico’s banking system is an analysis, carried out by Noel Maurer, of excess liquidity in the leading banks. Using panel data techniques, Maurer has demonstrated that the largest banks in Mexico acted like inefficient monopolists. Banamex and the Banco de Londres y México held excess liquidity in order to ratio credit and drive up their rates of return. As a result, their stockholders earned substantial rents (measures of Tobin’s $q$ for both of these banks were substantially higher than one) while they incurred very little risk (their yields were about equal to that on government bonds).58

The second test of the efficiency of Mexico’s banking system focuses not on the banks, but on the firms to which banks could have lent resources. This research, carried out

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by Maurer and Haber (and building on earlier work by Razo and Haber), uses panel data techniques to track all cotton textile manufacturers in Mexico over the period 1878-1913. It codes textile firms for connections to banks (measured by interlocking directorates), and then assesses the impact of access to bank credit on the size and productivity of firms. The results are straightforward. Manufacturing firms that were connected to banks grew faster because they were less liquidity constrained. These firms were not, however, more efficient than the universe of textile manufacturers. The regression results indicate that they were indistinguishable from other firms in terms of levels and rates of growth of TFP. Perhaps most remarkably, the data indicate that at the time that banks and textile firms developed interlocking relationships, the textile firms were no more efficient or profitable than their competitors. The implication is that Mexican banks picked insiders, not winners. They did not allocate capital to the most efficient manufacturing firms.59

The implication is that Mexico’s banking system strategies made a great deal of sense from the point of view of the stockholders in the banks, but they were inefficient from the point of view of economic growth. If this arrangement was suboptimal from the point of view of growth, one might wonder why the government went along with it. First, the government was not thinking about the long run when it made this deal. The appropriate time horizon for the government was the very short run. It needed credit today, or it would not have

been in power tomorrow. Second, the resulting non-competitive arrangement was made incentive compatible with the country’s ruling political elite, who received seats on the boards of the major banks. This entitled them to director’s fees, as well as potentially entitled them to shares in the bank. The board of directors of Banamex, for example, was populated by members of Díaz’ coterie, including Pablo Macedo (the President of Congress and long-term congressman from the Distrito Federal), Roberto Nuñez (the Under-Secretary of the Treasury), Sebastián Camacho (Senator for the Distrito Federal), Pablo Escandón (Congressman from Guanajuato, Governor of Morelos, and Porfirio Díaz’ Chief of Staff), and Julio Limantour (the brother of the Secretary of the Treasury). The Chairman of the board of the country’s second largest bank, the Banco de Londres y México, was none other than the Secretary of War (and former mayor of Mexico City, former Secretary of the Interior, and former Secretary of Development), Manuel González Cosío. Joining him on the board was Rafael Dondé (Senator from the State of Sonora). In addition, Julio Limantour (the brother of the Secretary of the Treasury) was a major stockholder in the bank. The Banco Internacional e Hipotecario (a mortgage bank) was similarly populated with political notables, including Julio Limantour, Porfirio Díaz jr. (the dictator’s son), and Emilio Pardo (federal deputy from the states of Hidalgo, México, and the Distrito Federal, Senator from Tlaxcala, and ambassador to Belgium and the Netherlands). The Banco Mexicano de Comercio e Industria was also a who’s who of insiders. Its board chairman was Pablo Macedo (see above). Joining Macedo on the board was Guillermo de Landa y Escandón (Senator from the State of Chihuahua and Governor of the Federal District). A similar phenominon occurred with the banks that were chartered to

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60 Board members from The Mexican Yearbook, 1908, pp. 269-278; political careers from Roderic Camp, Mexican Political Biographies, 1884-1935 (University of Texas Press, 1991). For more detail about the social
operate in particular states: their boards of directors usually included the state governor (or former governor). 61

The problems posed by a small and concentrated banking sector were compounded by the fact that banks had no way to assess the creditworthiness of potential borrowers, other than to rely on the personal connections of their directors. The result was that most lending went to insiders: bank directors, members of their families, or close friends. 62 This was a common practice just about everywhere in the world in the nineteenth century—even in the United States. 63 There was a difference, however, between Mexico and the United States: Mexico had a few dozen banks; the United States had tens of thousands. Thus, the potential number of entrepreneurs who could tap the banking system in Mexico was very small.

Essentially, banks in Mexico worked in much the same way as banks in nineteenth century New England—they were investment clubs. A group of entrepreneurs, after obtaining a bank charter, would pay in the required minimum capital and then immediately lend the money to themselves. They would then sell shares in the bank to outside investors, and in that way attract outside capital for their own business activities. Investors in the banks knew full well that that they were actually investing in the business enterprises of the bank’s directors,


but they preferred bank stocks over direct investments because the banks were lower risk: bank directors had strong incentives to carefully monitor one another; and investing in banks spread risk across a number of investments.

One implication of this system is that most entrepreneurs would have been unable to obtain bank loans—precisely because there were very few banks. It is not possible, of course, to observe the universe of potential entrepreneurs who did not found firms for lack of credit. It is possible, however, to determine whether industries that are usually characterized by near-perfect competition, were structured that way in Mexico. If we observe that industries with modest scale economies were competitively structured in Mexico, the implication would be that entrepreneurs did not face financial barriers to entry. If we observe, however, that industries with modest scale economies had competitive structures similar to industries characterized by high returns to scale, then the implication would be that entrepreneurs faced barriers to entry. In order to control for barriers to entry that might have arisen because of patents, access to raw materials, advertising, or access to foreign technologies, I focus on an industry in which the technology was freely available, raw materials could be purchased on a world market, and consumers (cotton cloth merchants) were expert judges of quality—the cotton textile industry. In table 9, I develop estimates of the Herfindahl Index and Four Firm Concentration Ratio for the cotton textile industry of four countries: Mexico, the United States, Brazil, and India.

The evidence is straightforward. The cotton textile industry of the United States had the competitive structure that one would associate with an industry characterized by constant returns to scale: the four ratio for the industry was typically in the area of .1 (the largest four firms controlled only 10 percent of the market), and the trend was for concentration to decline
over time. Much the same was true for India and Brazil. Indeed, in the Brazilian case, the
trend was much like that of the U.S.: the industry developed a more competitive structure over
time. In Mexico, on the other hand, the textile industry behaved like an industry characterized
by substantial returns to scale. Not only was the level of concentration always higher than the
United States, the trend went in exactly the wrong direction. In the years after the creation of
Mexico’s peculiar banking system, the Mexican cotton textile industry actually became more
concentrated, even though the industry was growing rapidly. The implication is that some
entrepreneurs were awash in funds, while other entrepreneurs (as well as potential
entrepreneurs) were starved for capital.

In short, all of the evidence strongly supports the view that Mexico was not just
underbanked. The banking system it did have was inefficient.

Conclusions and Implications:

This paper has presented a theory about how political institutions that create
competition gives rise to banking systems that are competitively structured. It has also
provided two case studies, the United States and Mexico during the period prior to 1914,
which are consistent with the hypotheses advanced by the paper. Obviously, sustaining the
argument that political institutions that encourage political competition translates into
economic institutions that encourage competition will require more empirical testing than I
have provided here. Additional case studies, which focus on cases intermediate to the United
States and Mexico, are required.

Nevertheless, the analysis presented here makes a strong case for the argument that
competitive markets do not happen all by themselves. All markets are embedded in political
systems, and some of these markets—banking in particular—are highly sensitive to regulation by governments. One implication of this is that it may not be possible to create competitive markets without also creating political institutions that encourage effective political competition.