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When the State is Untrustworthy: Public Finance and Private Banking in Porfirian Mexico

Noel Maurer
Instituto Tecnológico Autónomo de México

and

Andrei Gomberg
Instituto Tecnológico Autónomo de México

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Col. Héroes de Padierna
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NOEL MAURER AND ANDREI GOMBERG

Noel Maurer is Associate Professor of Economics, Instituto Tecnológico Autónomo de México (ITAM), Camino a Santa Teresa 930, 10700 México, D.F., Mexico. Email: nmaurer@itam.mx. Andrei Gomberg is Assistant Professor of Economics, Instituto Tecnológico Autónomo de México (ITAM), Camino a Santa Teresa 930, 10700 México, D.F., Mexico. Email: gomberg@itam.mx.

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ABSTRACT: All sovereign governments face a commitment problem: how can they promise to honor their own agreements? The standard solutions involve reputation or political institutions capable of tying the hands of the government. Mexico's government in the 1880s used neither solution. It compensated its creditors by enabling them to extract rents from the rest of the economy. These rents came through special privileges over banking services and the right to administer federal taxes. Returns were extremely high: as long as creditors believed that the government would refrain from confiscating *all* their assets (let alone repaying their debts) less than twice a decade, they would break even.

There exists a commonly-accepted view about why governments charter banks to serve as their exclusive financial agent. In that view, a government chooses to grant a single institution a monopoly over its borrowing because a monopolist can credibly punish defaults by denying future credit, whereas multiple creditors would be unable to sustain a boycott. The result is more credit for the government, and more security for its creditors. The Bank of England was born in such an arrangement.[1]

We do not know much, however, about cases where the government makes such a deal and then reneges. Should its demand for credit rise, its time horizon fall, or new sources of credit become available, the government has incentives to borrow from third parties, or even default on its debts.[2] If the government then defaults on its debts, how can it receive credit in the future? It would have to provide very high returns to creditors. The government cannot simply pay higher rates, however, because creditors know that the higher the cost of borrowing, the more incentive a debtor has to default in the future.

Rather than pay higher interest rates, however, the government can create arrangements that allow its creditors to compensate themselves for the risk of lending to the government by extracting rents from the rest of society. How might such an arrangement work? Mexico provides an example. Mexico's weak central government was incapable of raising the tax revenues it needed. It could not resort to international borrowing: Mexico's previous international bond issues were in default. In order to solve this problem, in 1880 the government chartered a bank that would finance to the government. Yet despite issuing illegal debts and

[1] The logic behind this is discussed in Bulow and Rogoff, "A Constant Recontracting Model"; and Weingast, "The Political Foundations."

[2] New sources of credit, for example, or threats which shorten the sovereign's time horizon, such as war or political instability, have prompted sovereign defaults. See North and Weingast, "Constitutions and Commitment," p. 807. Political instability also shortens the time horizons of despotic governments, making them less likely to respect their own agreements. For examples, see Olson, "Dictatorship, Democracy, and Development"; and DeLong and Shleifer, "Princes and Merchants."

then defaulting in 1884-85, the government succeeded in getting the *very same bank* to lend it new money in 1886 and underwrite its return to international credit markets in 1888.

Mexico persuaded its creditors to continue to provide it loans by enabling them to extract rents from the rest of the Mexican economy. These rents came in three forms. First, Mexico's creditors, organized into the Banco Nacional de México (Banamex), were granted special privileges in the banking market. Second, they were given the keys to the mint—literally. The country's mints were turned over to the bank. Third, Banamex was given the right to administer and collect certain taxes, including customs and excise taxes. Banamex's branch network gave it an advantage over the government in collecting taxes.[3] In other words, the Mexican government compensated its creditors for the risk of lending to it by enabling them to extract rents from the rest of the economy. The returns from these rents were so high that the government's creditors would earn a positive return as long as the government refrained from confiscating *all* their liquid assets more than twice a decade.

Protecting Banamex's privileges in the banking market was easy even for Mexico's relatively disorganized government. All Porfirio Díaz had to do was fail to enforce the property rights and contracts of any potential competitors. Díaz's government, as a practical matter, lacked the capability to provide property rights as a public good. It could, however, selectively and differentially enforce the property rights of particular private parties. All other things being equal, the more clearly-defined and better-enforced the rights to use or transfer an asset, the greater the value of that asset. Banamex, by enjoying better (if still not particu-

[3] In fact, Mexico had no centralized system of tax collection until 1906. See Carmagnani, "El liberalismo," p. 488.

larly good by the standards of, say, contemporary England) defined and enforced property rights than its competitors, could enjoy a very large competitive advantage over them.[4]

What kept the government from diluting Banamex's privileges in the private credit market or its monopoly over tax collection? Why not allow competitors more leeway in the banking market, or give other creditors the right to collect taxes and run some of the mints? The answer is threefold. First, it is not clear that the penurious and disorganized Porfirian government of the 1880s could have effectively enforced the property rights of new entrants. The result might have been a reduction in the rents Banamex earned and shared with the government, with no commensurate gains among the entrants. In fact, even had the government been able to extend Banamex's privileges to new entrants in the 1880s, doing so would have destroyed the monopoly rents extracted from consumers in the banking market, and reduced the total surplus available to be shared with the government. Second, an outright takeover of the banking sector was largely impossible, since it would have required capital and access to outside credit—that is, precisely what the government lacked, but the foreign financiers behind Banamex enjoyed. Third, the government had little incentive to dilute Banamex's monopolies over various taxes and the mint, since allowing competitors to challenge the monopoly would have reduced the available revenue by reducing Banamex's incentives to improve the efficiency of tax collection and the mint.[5]

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[4] See Haber, Razo, and Maurer, *The Politics of Property Rights*, for more on the issue of selectively-enforced property rights, particularly Chapter 2.

[5] In some respects, the relationship between Banamex and the Mexican government is similar to the arrangement that existed between the tax farming cartel of the *Ferme Générale* and the Crown in the eighteenth-century France. Johnson, "Banking on the King," provides a model of tax farming in the presence of transaction costs of collection. Johnson's model suggests that the explanation behind the French transition, at the end of the 17th century**,** from competitive auctioning of tax farms to a monopoly cartel is the need to invest in specific tax-collection infrastructure and technology. The multiple monopolies enjoyed by the tax farmer were essential to its relative immunity from government predation. Like Banamex, the *Ferme Générale* amounted to a tax farming monopoly which doubled as a creditor for the government. The *Ferme Générale* extracted revenue from the population and forwarded it to the government. The exposure to predation by the government was limited, since, in the absence of other organizations in the ready with the infrastructure, expertise and financial re-

In the long term, the result was an uncompetitive financial system and slower economic growth.[6] In the short term, however, the result was financial stability, and a government capable of financing both an army capable of enforcing internal peace and a railroad system essential to generating economic growth.[7]

This paper is constructed as follows. The first section details the history of Mexican debt defaults from independence until the 1880s. The second briefly discusses the nature of the commitment problem. The third section discusses the government's credit crunch and default in 1883-85, and discusses the nature of the agreement with Banamex. The final section quantifies Banamex's supernormal profits between 1884 and 1890.

MEXICO'S FISCAL PROBLEMS IN THE NINETEENTH CENTURY

Mexico's debt problems started at independence in 1821, when the Mexican Empire recognized 30 million dollars worth of colonial debts owed to domestic merchants. The debts were never repaid.[8] The first Empire collapsed in 1823. In the following two years, the Republic contracted 32 million dollars of debt in London. By 1827, it had suspended payments. Debts contracted in the 1830s and '40s also went into default. In 1851 the government refinanced the suspended loans of 1824-25. In 1857, however, Mexico defaulted yet again.

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sources, the *Ferme Générale* could not be costlessly replaced. Allowing competition to the *Ferme Générale* would reduce the *Ferme Générale*'s monopoly rents, but it would reduce the overall stream of rents shared between the farmer and the treasury by even more. For more details on tax farming in France, see White, "France's Slow Transition."

[6] For more on the negative long term consequences of Mexico's uncompetitive financial system on the country's economic growth, see Haber, "Industrial Concentration"; Maurer, "The Internal Consequences"; Maurer and Haber, "Institutional Change and Economic Growth"; and Maurer and Sharma, "Enforcing Property Rights."

[7] For evidence on the importance of railroads in Mexico's economic development, see Coatsworth, *Growth Against Development*.

[8] For the story of the colonial debt, see Marichal, *La bancarrota del virreinato*.

The French government used Mexico's debt arrears as a pretext to invade in 1862 and install Archduke Maximilian in Mexico City. Facing opposition from Benito Juárez's U.S.-backed guerrilla forces, the French pulled out in 1866, and Maximilian fell within a year. Unsurprisingly, the Restored Republic under Benito Juárez refused to recognize the debts contracted under Maximilian. In addition, since the British government had supported Maximilian, the Restored Republic suspended payments on all existing British debts. By the 1870s, unmet interest obligations on the British debt alone had ballooned to US$120 million.[9]

(TABLE 1 AROUND HERE)

Sebastián Lerdo de Tejada succeeded Benito Juárez upon Juárez's death in 1872. Porfirio Díaz overthrew Lerdo in 1876. Díaz ceded the Presidential sash to Manuel González in 1880. (He would take it back in 1884.) While all three governments neglected the foreign debt, they all tried to amortize some of the domestic debt. Juárez bought back a small amount of debt in 1868, for 31 percent of its face value. An 1870 report to Congress indicated that the 1850 convention bonds traded at 8 to 9 percent of their face value, while more recent debts could be purchased for 15 percent.[10] In 1876, Porfirio Díaz's new government purchased debt with a face value of Mx$2.1 million at 25 percent of par. In 1876, financiers held debt with a face value of 45 million pesos: the market value of this debt was closer to 11 million pesos.[11]

Unfortunately, the government's need for credit had grown. Díaz needed to equip an army capable of facing down threats from regional challengers. He also to pay the army

[9] The government tried to maintain interest payments on the loans Americans had advanced to the rebel movement, but these debts amounted to only US$5 million. Marichal, "Financial Market Reform," pp. 95-96.

[10] Carmagnani, *Estado y mercado*, p. 231.

[11] SHCP, *Memoria*, pp. 113-18.

enought to keep the its loyalty. His government, however, lacked the resources to effectively tax Mexico's impoverished economy. In 1877, Mexico's per capita GNP (in 2001 dollars) was only $456.[12] Foreign trade was a potential source of revenue, but the country's small economy generated little foreign trade.

Mexico's leaders believed that railroads would open Mexico's economy to foreign investment, increase trade and tariff revenues, and allow Mexico to repay its obligations. Mexico had no decent navigable waterways, and half of all roads were unsuitable even for beasts of burden. Mexico's first railroad did not open until 1873, and by 1877 the country enjoyed only 400 miles of track.[13] Constructing railroads, however, required federal subsidies. Railroads were capital intensive, required long time-horizons, and demanded detailed knowledge of the terrain, economic conditions, and prospects for future growth. They also required specialized engineering and management skills. In an unstable polity, few private investors were prepared to risk substantial amounts without federal subsidies.[14] The federal government, therefore, found itself trapped in a fiscal Catch-22. Without railroads, there was little economic activity to tax; without subsidies, there were no railroads. This was recognized by Mexico's foreign creditors in 1878, when they agreed link the renewal of debt service to future railroad growth. In the words of the Finance Secretary, Matías Romero:

> It does not appear too hazardous to assert that, if railroads were constructed in the center of the country, and between the principal towns … in order to have access to both oceans, the nation would receive an impulse such that its wealth would be sensibly augmented, and with it the income of the Federal Treasury, which would admit of the punctual payment of the interest on the national debt. The credi-

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12 See Coatswroth, "Obstacles to Economic Growth." The figure in 1950 dollars as computed by Coatsworth was $62. Coatsworth's 1950 estimates have been recalibrated by changing the base year of the index to 2001.

13 Coatsworth, *Growth Against Development*, p. 35.

14 See Maurer, "Banks and Entrepreneurs."

> tors of the country appear to have recognized the truth and force of these considerations.[15]

Mexico's existing sources of credit were not sufficient. A money market of sorts existed in Mexico City. The federal government issued customs certificates. These certificates entitled the bearer to physically go to a specific customhouse and collect a stated amount. Gross issues of customs certificates rose precipitously between 1876 and 1882. (See Table 2.) Most funds, however, were paid back in six months, and net long-term borrowing was zero until 1882. Before then, railroad subsidies came out of the military budget, a dangerous policy in a country prone to regional revolts and military coups. If the government were to build railroads quickly, it needed to borrow more than this thin market could finance. (See Table 3.)

(TABLES 2 AND 3 AROUND HERE)

There is no evidence that the Mexican government considered printing money to cover its deficit. There is a reason for that: inflationary finance had not been particularly successful elsewhere in Latin America. Argentina provides an example. On multiple occasions, Argentine governments filled fiscal shortfalls by printing money. None of these episodes raised revenues for more than a few years, and all were followed by painful efforts to re-establish convertibility. The mechanism behind inflationary finance in Argentina was not the issuance of government fiat money. Argentine governments (like Mexican ones) lacked the credibility to force people to accept its notes. Rather, the mechanism was to establish private banks that would issue notes redeemable in gold, and then suspend the convertibility of those notes.[16] It was, in short, not unlike issuing interest-free bonds with a promise to repay in the

[15] Romero, *Report of the Secretary*, p. 40.

[16] For more on Argentine inflationary finance in the nineteenth century, see Bordo, "What If Alexander Hamilton Had Been Argentinean?"

future. Even had the Mexican government wanted to follow the Argentine example, it could not have persuaded the public to accept its note issues because it had already defaulted on its debts and its bonds traded for as little as 8 centavos on the peso.

The government, therefore, decided to create a bank. Emilio Velasco, a lawyer from northern Mexico acting in the employ of the federal government, used his contacts with Gustavo G. Godowa, the Polish publisher of the Mexican publication *Le Nouveau Monde*, to open negotiations with the Banque Franco-Egyptienne over the establishment of a bank that would serve as the primary financial agent for the federal government.[17] After a year, an agreement was signed on August 11th, 1881, between Edouard Noetzlin, the Banque Franco-Egyptienne's representative, and the Finance Ministry. The agreement established the bank as the federal government's financial agent, and stipulated that its banknotes would be the only ones recognized for federal taxes.[18] Most of the new bank's capital came from overseas.[19] Credit from the Banco Nacional Mexicano allowed the government to run a small budget deficit in the 1881-82 fiscal year.

The Banco Nacional Mexicano was not the only bank in Mexico. Four other formal institutions existed in 1881. One was a small bank founded by Americans in the frontier state of Chihuahua. The second was the Banco de Londres, México, y Sud-América, a British bank that had operated in Mexico since 1864.[20] The third was the Nacional Monte de Piedad. The Monte de Piedad began operations during the colonial era, advancing small amounts against goods presented to it as guarantees.[21] On September 6th, 1879, Governor

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17 Ludlow, "La construcción de un banco," p. 303.

18 Ludlow, "El Banco Nacional Mexicano," p. 985; and Martínez Sobral, *Estudios elementales*, p. 27.

19 Ludlow, "La construcción de un banco," p. 321.

20 Labastida, *Estudio histórico*, p. 64.

21 Labastida, *Estudio histórico*, p. 73.

José Ceballos of the Distrito Federal proposed that the Montepío be permitted to discount commercial paper and issue "deposit certificates" that could be turned in for specie. President Díaz agreed, and the Monte de Piedad became a bank on October 1st, 1879.[22]

The fourth bank was founded as a response to the Banco Nacional Mexicano. A group of enterprising merchants decided to found their own bank, claiming that it was their "patriotic duty" to invest in a "free" bank in order to stop Mexican capital from leaving "to increase other nations' prosperity."[23] Ironically, most of the merchants who subscribed to the Banco Mercantil's stock had been born in Spain.[24] The Banco Mercantil claimed that competition between different banks for federal business would benefit everybody.[25]

THE COMMITMENT PROBLEM

Why would the simple act of chartering a bank aid the government in solving its credit problem? After all, the French and Mexican owners of the new bank faced the same uncertainty as other creditors. The government could as easily suspend payments on bank debt as on bond issues. Of course, foreign powers could use military force to collect their debts. In fact, President Benito Juárez's refusal to honor the debts of the previous Conservative government prompted a French invasion in 1862. That adventure, however, turned into a fiasco. The only power that might be capable of forcing Mexico to repay its debts in the 1880s was the United States, but there is no evidence that the American government had any interest in doing so.

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22 Labastida, *Estudio histórico*, p. 74.

23 Archivo Histórico del Banco Nacional de México [hereafter AHBNM], 29 August 1881, *Actas de la fundación del Banco Mercantil Mexicano*.

24 AHBNM, 17 September 1884, *Actas de consejo*, vol. 1.

25 AHBNM, 18 March 1882, *Actas de la fundación del Banco Mercantil Mexicano*.

The only recourse creditors had to induce repayment was the threat of denying future credit. Therefore, the largest penalty which they could impose upon the Mexican government was the present value of any future borrowing.[26] It is difficult, however, for multiple lenders to effectively enforce a credit boycott. Boycotts hurt lenders almost as much as they hurt borrowers. The government will be denied credit, but its creditors will be denied the opportunity to make profitable loans.[27] With a multiplicity of lenders, the government can default on some while continuing to borrow from others. In fact, the government has no incentive *not* to default on any single lender. After all, the marginal value of the last loan the government takes at the prevailing interest rate was presumably zero, and therefore so is the cost of default and alienating that particular creditor.[28]

Of course, lenders are presumably alert to this sort of thing. Therefore, one would expect lenders to organize a boycott if the government began defaulting on only some of it debts. Unfortunately, collective boycotts are not credible without an enforcement mechanism. This is because the government can offer extraordinarily good terms to violators. The more restrictive the boycott, the greater the government's need for credit, and the more credible its offers of good terms for violators. The value of the punishment lenders can levy on the government will be low, and so will be its credit limit.

Therefore, by concentrating its borrowing in a single institution, the government can raise the amount of pain caused by a default, since a single lender can credibly impose a credit boycott. The result, in theory, is an increase in the government's ability to borrow. The rub is that the government has no binding *ex post* reason to limit its borrowing. If the government's demand for credit increases, then it will happily pledge to give one creditor a

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[26] See Eaton, Gersovitz, and Stiglitz, "The Pure Theory of Country Risk."

[27] See Bulow and Rogoff, "A Constant Recontracting Model."

[28] Weingast, "The Political Foundations," p. 215.

monopoly over lending while surreptitiously seeking out additional creditors. That is precisely what happened after 1884.[29]

MEXICAN DEFAULT IN THE 1880S

In 1883 and 1884, the Mexican government reneged on its agreement with the Banco Nacional Mexicano. In order to circumvent its 4 million peso debt ceiling with the bank, Manuel González's government surreptitiously borrowed from a widely dispersed group of creditors, ran up a huge debt, and finally suspended payments. This behavior should not be surprising. Many of the trunk lines had already been constructed by 1884, and as the year drew on it became increasingly obvious that President González lacked the political support to keep himself in power. Why not borrow as much as you can, while you still can? What is surprising about this episode is not that the Mexican government defaulted, but that it managed to regain access to credit within two years. By 1888, in fact, the Banco Nacional's successor bank would underwrite Mexico's return to the international credit markets.

What prompted the default? In 1882-83, federal spending began to outpace revenues. (See Table 3.) The government began issuing customs certificates faster than it redeemed them. It also requested advances from Mexico's other banks, in contravention of its agreement with the Banco Nacional. Changes in tariff schedules kept the deficit from growing in 1883-84, but the respite was temporary. In May 1883 the Banco Nacional Mexicano lent the federal government 150,000 pesos, followed in November by an additional loan of

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[29] Mexico in the 1880s is not the only example of this. Phillip Hoffman found that the 17th century French monarchs often played various lenders off against each other, defaulting on one while borrowing from another. When lenders developed new ways to coordinate their punishments under Louis XIV, the amount the French government could borrow *increased*. Similarly, the recent Latin American debt crises follow the pattern, where the largest problem the banks faced was coordinating their actions in the event of a default. These and other examples can be found in Weingast, "The Political Foundations," pp. 229-230.

Mx$700,000 in exchange for Mx$1,000,000 in customs certificates due six months later.[30] The effective annualized interest rate was 104 percent.[31] By mid-1884 the government had mortgaged 60% of the port of Campeche's customs revenues, 84% of Veracruz's, and 90% of Matamoros's and Tampico's.[32] Despite the fiscal constraints, the government continued to promise future railway subsidies. This hidden debt grew even faster than open borrowing.[33]

Federal deficits caused foreign railway investors to doubt that the government could cover its subsidy promises. Therefore, they ceased investing. Imports of manufactured iron and steel, used primarily in railroad building, provide a rough proxy for investment. After rising from US$1.3 million in 1880 to US$4.2m in 1882, they fell to US$3.8m in 1883, slid to US$2.4m in 1884, plunged to US$1.2m in 1885, and bottomed out at US$904,554 in 1886.[34]

The fall in foreign investment occurred at a bad time, because Mexico suffered a crop failure in 1884. With the government gobbling up domestic credit, foreign capital drying up, and specie flowing out to pay for imports of basic foodstuffs, rural bankruptcies multiplied. This slowed business activity, which caused imports to drop, which lowered the government's tariff revenue. That, in turn, increased the fiscal deficit, thereby worsening the credit crunch and exacerbating the crisis. Banks ceased lending.[35] In fact, the crisis brought down

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30 Marichal, "Foreign Loans," p. 348. The Mexican merchant houses involved in the deal included Bermejillo Hermanos, Benecke Sucursales, Félix Cuevas, Gutheil y Compañía, Ramón G. Guzmán, Lavie y Compañía, and Antonio de Mier y Celis. AHBNM, Contract #1, Syndicate "Ordenes del Pacífico," *Libro de Contratos Originales de Empréstitos*.

31 The implicit interest rate on this loan was calculated as $(1{,}000{,}000/700{,}000)^2 - 1$.

32 SHCP, *Memoria*, pp. 70-79.

33 Marichal, "Foreign Loans," p. 348.

34 Since they were not taxed, the decline in these imports did not directly affect the government's fiscal situation.

35 AHBNM, 28 March 1883 and 4 April 1883, *Libro de Actas del Banco Nacional Mexicano*.

one of Mexico's bank, the Nacional Monte de Piedad.[36] In January 1884, the government requested five million pesos from the Banco Nacional Mexicano. The bank could not meet this demand.[37]

The solution was to engineer the merger of the Banco Nacional and the Banco Mercantil into a new bank called the Banco Nacional de México (henceforth Banamex). Edouard Noetzlin, the chief representative of the bank's French owners, arrived in Mexico in February 1884 to begin the negotiations over the merger. President González placed Porfirio Díaz in charge of the government's team.[38] The new bank was largely owned by Mexican residents.[39]

The agreement gave Banamex a monopoly over all lending to the federal government.[40] The bank was also exempted from all federal taxes, except the stamp tax, while the government promised to subject the other banks to a 5% tax on banknote issues. Banamex received the right to issue banknotes up to three times the amount of its reserves, which could consist of federal bonds in addition to specie. Its competitors were limited to a ratio of two pesos in notes for every peso of vault specie.[41] The government also agreed to turn over half of the revenue of the Progreso, San Blas, and Mazatlán customhouses directly to the bank.[42]

In return, Banamex opened a four million peso credit line to the government, and soon offered more. By the middle of 1884 the government owed Banamex Mx$5,686,559.[43] By

[36] Labastida *Estudio histórico*, p. 76.

[37] AHBNM, January 24 1884, *Libro de Actas del Banco Nacional Mexicano*.

[38] Marichal, "Financial Market Reform," p. 101.

[39] See Ludlow, "La construcción de un banco."

[40] This was not appreciably different from the privileges the Banco Nacional Mexicano had obstensibly enjoyed. Ludlow, "La construcción de un banco," p. 332.

[41] Labastida, *Estudio histórico*, p. 99.

[42] AHBNM, 12 August 1884, *Actas de consejo*, vol. 1.

[43] AHBNM, 1 July 1884, *Actas de consejo*, vol. 1.

September, the bank had lent an additional two million pesos.[44] This debt was liquidated at a minuscule rate.[45] Banamex was also charged with engineering Mexico's return to European capital markets. Banamex agreed to underwrite a conversion of Mexico's outstanding debt into £6,000,000 of sterling-denominated bonds at lower interest rates.

Unfortunately, the "Noetzlin contract" ignited a political firestorm back in Mexico City when it was presented to Congress in October 1884. It arrived smack-dab in the middle of President González's quiet campaign to keep Porfirio Díaz from reassuming the presidency. Several Congressional deputies bitterly opposed the contract, objecting against the £1.3 million—roughly 20%—commission charged by Banamex. As Carlos Marichal has pointed out, these commissions were probably intended to cover the government's outstanding seven million peso debt to the bank. Nevertheless, before a final vote could be taken, hundreds of students took to the streets chanting, "Die, Manuel González! Die, Noetzlin!" Two people were killed and hundreds injured in the resulting riot.[46]

Neither González nor Noetzlin died, but the contract did. Mexico City was in the midst of bitter in-fighting over who should succeed Manuel González. Porfirio Díaz presumably had little incentive to help his protégé-cum-opponent resolve the country's credit problems. Díaz regained the presidency, and he informed Noetzlin that both the contract and commission were dead.[47]

The failure of the Noetzlin contract failed to shrink the government's demand for credit. Banamex charged the government an effective interest rate of 39.4% on a 300,000 peso ad-

[44] Banamex loaned the government an additional two million pesos, at 7%, in October, premised upon the receipt of the Noetzlin loan. AHBNM, 30 September 1184 and 7 October 1884, *Actas de consejo*, vol. 1.

[45] AHBNM, 12 August 1884, *Actas de consejo*, vol. 1.

[46] Marichal, "Foreign Loans," pp. 351-52.

[47] Communication from Dublán to Noetzlin, 21 January 1885, reproduced in Castillo, *Colección de leyes*, pp. 54-57.

vance made to make loan payments due in New York in January 1885.[48] In March the government illegally borrowed Mx$1,094,201 from Banamex through the expedient of not paying money orders drawn on New York.[49] In April the bank's board approved a further 300,000 peso "emergency" loan to the government.[50]

On June 22nd, 1885, Finance Secretary Manuel Dublán announced what the contemporary financial press called a "coup-d'état": the suspension of all interest payments on short term debt.[51] Deprived of credit, the government was forced to halt all subsidy payments and slashed the salaries of state employees 10 to 15 percent.[52] Banamex was left high and dry, and faced a very serious bank run. (See Table 4.) Its directors "agreed" to give the government until June 1886 to resume payments. In point of fact, the bank had little choice.[53]

(TABLE 4 AROUND HERE)

Within a year, however, Banamex opened new credits to the federal government.[54] In 1888, the bank aided the government in converting its outstanding foreign and domestic debts into new bonds at much lower interest rate. In 1893, it underwrote the government's first fresh borrowing on international capital markets in a half-century.

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48 Calculated from data in the AHBNM, 13 January 1885, *Actas de consejo*, vol. 2. The price of silver fell in 1884-85, causing the peso to depreciate strongly, falling from 89¢ (US) to 85¢. It would continue to fall until 1888, when it would pause at 75¢ before beginning to decline again in 1892.

49 AHBNM, 2 March 1885 and 4 March 1885, *Actas de consejo*, vol. 2.

50 AHBNM, 22 April 1885, *Actas de consejo*, vol. 2.

51 Marichal, "Foreign Loans," pp. 352-53.

52 Marichal, "Financial Market Reform," pp. 103-104.

53 AHBNM, 2 June 1885 and 19 June 1885, *Actas de consejo*, vol. 2.

54 AHBNM, 23 November 1886, vol. 2.

PROFITS

Why did the bank choose to aid the federal government? After all, Banamex had been seriously burned by the government's suspension of payments and the subsequent bank run. Why risk good money after bad?

Banamex had three reasons. First, Banamex was, in effect, empowered to collect taxes on the government's behalf. Banamex became the official financial agent of the federal government, which meant that all tax payments and disbursements passed through its hands. In addition, Banamex held all deposits made as guarantees of government contracts. The bank's directors collected a 3 percent commission on these funds.[55] In fact, Banamex was given the right to collect or administer some taxes directly. In 1885, the government mortgaged 10 percent of all customs revenue (staring on July 1st, 1886) to the bank.[56] In 1888, the administration of (and revenues from) the Veracruz customhouse and national lottery were given to Banamex.[57] In 1893, it was granted the right to the revenues from all federal excise taxes on alcohol in return for a loan of £267,500 to pay for railroad subsidies.[58] In 1893, in return for a loan of 2.5 million pesos, Banamex was granted administrative control over the federal mints. Banamex promised to continue kicking back to the government what it had previously earned from the mints (4.41% for silver pesos and 4.618% for gold), but believed

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55 AHBNM, 25 July 1888, vol. 3.

56 AHBNM, 29 September 1885, vol. 2.

57 AHBNM, 25 July 1888, vol. 3.

58 AHBNM, "Contract #28," *Libro de Contratos Originales con el Gobierno Federal*. It should be noted that this arrangement appears to have contravened a federal law which declared that, "The issue of [revenue] stamps shall be an exclusive responsibility of the federal government. No state, authority, nor corporation may issue them, nor collect taxes or fees by this means." Carmagnani, "El liberalismo," p. 488.

it could run the operation much more efficiently.[59] In other words, the government's chief creditor became, in effect, a tax farmer.

These arrangments benefitted the government as well as the bank. The share of alcohol taxes in all internal taxes doubled the year Banamex took over their collection.[60] Federal revenues from coinage increased more than sevenfold in the years following Banamex's takeover. In short, not only did the government gain from these arrangements by gaining access to credit; it also improved its fiscal position directly.[61]

(TABLE 5 AROUND HERE)

Second, the government enabled Banamex to extract rents indirectly from the rest of the Mexican economy. The Banco de Londres y México was the only bank besides Banamex permitted to branch across state lines. They could enjoy economies of scale and diversify their risks in a way that the smaller banks could not. The federal government protected Banamex from new startups, authorized by state governments, by federalizing all bank chartering in 1884.[62] Banamex's role as the government's financial agent gave it a secure source of liquidity (and 3 percent commissions) not enjoyed by its competitors. In addition, the government Banamex promised Banamex a monopoly over issuing banknotes.[63] The Banco de Londres y México used its political influence to prevent Banamex from fully exercising its monopoly, but Banamex still enjoyed a great deal of protection from competition, because

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[59] AHBNM, 21 March 1893, *Actas de consejo*, vol. 3, and "Contract #27," *Libro de Contratos Originales con el Gobierno Federal.*

[60] From Figure 4 in Carmagnani, "El liberalismo," p. 482.

[61] Interestingly, these tax farming-like arrangements paralleled those between the Spanish government and the Banco de España in Spain proper and the Banco Española de la Isla de Cuba in Spain's colony. See Fernández, *Encumbered Cuba*, pp. 34 and 101-02.

[62] Labastida, *Estudio histórico*, pp. 67-68. The same law also authorized the federal government to tax banknote issues. The government promised Banamex that it would impose a 5 percent levy on the issues of all its existing competitors, but a political outcry forced it to renege on this promise.

[63] AHBNM, 20 January 1885 and 27 Januaary 1885, *Actas de consejo*, vol. 1.

only its notes were acceptable for federal tax payments. The government lacked the capacity to extract these rents—a monopolistic position in the capital market only generates profits if you have capital to invest—but it could enable Banamex's owners to do so.

In 1888, under pressure from the state governors, the federal government granted concessions for fourteen new banks. These concessions worried Banamex, although only half of the new concessions allowed their holders to issue banknotes.[64] The financial press, however, was more sanguine. When the Banco de Sonora opened its doors in 1889, the *Economista Mexicano* observed that "the Banco de Sonora has not been conceded the innumerable franchises and exemptions that the privileged Banco Nacional de México enjoys."[65] The press turned out to be correct. None of the concessions which lacked the right to issue banknotes ever opened their doors.[66] Of the additional seven concessions, three failed and none of the others were allowed to branch outside their home state. Nor were they allowed to issue more capital without the explicit permission of the Finance Secretary (who always said no) and their note issues were very carefully monitored. As a practical matter their banknotes failed to circulate outside their home state.[67]

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[64] AHBNM, 26 October 1889, *Actas de consejo*, vol. 3.

[65] *Economista Mexicano*, 14 September 1889. Dublán also granted several charters for "bancos agrícolas e industriales." In 1889 he handed out seven concessions in San Luis Potosí, Jalisco, Guanajuato, Puebla, Veracruz, Zacatecas, and Yucatán. Manuel Saavedra, a political ally of Dublán's, received the San Luis Potosí concession on August 6th. The Veracruz concession went to an American, George Wilson, while the others went to prominent Mexican businessmen. See Labastida, *Estudio histórico*, pp. 106-10. The Puebla concession went to Tómas Iglesias, who succeeded in persuading the government to both allow his bank to branch nationally and to issue mortgage bonds in overseas markets. See "Contrato celebrado entre el Sr. Lic. Manuel Dublán...y el Sr. Tómas Iglesias," 29 August 1889, reproduced in Labastida, *Estudio histórico*, pp. 447-49. In 1890 Dublán handed out another concession for a bank in Coahuila. See the *Economista Mexicano*, 3 May 1890 and 7 June 1890.

[66] *Economista Mexicano*, 14 September 1889; Labastida *Estudio histórico*, pp. 106-10; and the "Contrato celebrado entre el Sr. Lic. Manuel Dublán...y el Sr. Tómas Iglesias," 29 August 1889, reproduced in Labastida, *Estudio histórico*, pp. 447-49.

[67] See Haber, Razo, and Maurer, *The Politics of Property Rights*, chapter 4.

Third, Banamex was able to use its position as the government's official financial agent to reap enormous profits from underwriting the government's debt conversions. In other words, Banamex was able to extract rents from the government's former creditors, in return for the hope (which turned out to be well-founded) that the written-down debts would be repaid.

The government used Banamex as an intermediary to negotiate the conversion of its outstanding debts. In 1886, the government persuaded its British creditors to write off its outstanding interest arrears. That same year, domestic claims with a face value of 57 million pesos were converted to 3% bonds worth approximately 25 million pesos. In 1888, Banamex arranged a European conversion loan. The proceeds from the new loan were used to pay off the government's existing debt to Banamex and buy up Mexico's outstanding foreign obligations at 40 percent of their face value. The country's creditors wrote off 37 percent of Mexico's foreign debts, for a net saving of £8.7 million.[68] Banamex received a commission worth 0.5 percent on the entire value of the operation.[69] In addition, it received 18 percent of the profits from underwriting the sales of the new bonds in Europe. This amounted to 29 percent of Banamex's total profits for 1888.[70] Noetzlin took an additional private commission worth one million pesos. In fact, the underwriters' profits were so high that the *London Times* criticized the transaction. "The only explanation," they wrote, "is that the Mexican government are greatly harassed by the persistent demands of the National Bank of Mexico to repay loans which are of long standing."[71]

[68] Marichal, "Financial Market Reform," pp. 105-107.

[69] Extraordinary session, 3/21/88, *Actas de consejo*, vol. 3, AHBNM

[70] Marichal, "Financial Market Reform," p. 107. The first tranche of £3.7 million was purchased by the underwriting consortium at 70 percent of par and sold at 85, while the second tranche was purchased at 85 and sold at 92.

[71] Cited in Marichal, "Financial Market Reform," pp. 108-109.

What the *Times* did not understand was that the transaction was good for all the parties involved. The government reduced its outstanding debt and began rebuilding its international reputation. Banamex divested itself of the government's outstanding debt and earned high profits. Mexico's foreign creditors got to exchange moribund debts for lower debts that might be—and, *ex post*, were—repaid. Later conversions in 1889 and 1890, and new debt issues in 1892 and 1893, followed the same pattern. In 1892 and '93, for example, the government found it difficult to place its bonds in Europe. Banamex underwrote the loans, buying the entire bond issue from the government, and waited a year to re-sell them on the European market. [72]

How high were Banamex's profits? The answer is: extremely high. (See Table 6 and Table 7.) The bank earned an average return on equity of 24 percent. By 1888, the bank's owners had earned back their entire eight-million peso investment. As might be expected, the bank paid out the majority of its profits in dividends, and reinvested very little.

(TABLE 6 AND 7 AROUND HERE)

During the 1880s, Mexico was an inflationary economy as the silver peso depreciated against gold. The figures in Table 7 have therefore been adjusted by the Gómez-Musacchio price index (which begins in 1886) in order to adjust for changes in the price level. Despite inflation, profits were still very high. Real returns averaged 23 percent in 1886-98.

CONCLUSION

[72] These loans were to finance railroad construction across the Tehuantepec isthmus and drainage works in Mexico City. Marichal, "Financial Market Reform," p. 110.

Mexico faced a severe dilemma in the 1880s. The government needed to finance an army, build a railroad net, and bring political stability to the country. This required a great deal of money. Unfortunately, the government's ability to extract taxes was limited. Without taxes, the government could not pay tax collectors; without tax collectors, the government could not collect taxes.

The only way to square the circle was to borrow. Unfortunately, in order to borrow, Mexico needed to solve the commitment problem. Since the government had come to power in a military coup in 1876 and faced strong opposition, no one believed it would be long-lived. In addition, Mexico had a long history of debt defaults. The regime tried to create a credible commitment by giving one credit institution a monopoly over lending to the government. Unfortunately, the government could not implement this solution effectively. As its demand for credit grew, the government borrowed from third parties and eventually defaulted on its debt. Its need for funds remained, but it remained unable to directly extract significant rents from the economy.

The solution was to contract with an institution that would be capable of extracting such rents. The government could not issue banknotes, because with no specie reserves and a debt in default it could not convince anyone to accept them. Banamex's wealthy owners, however, had specie reserves. The government could not run the mint efficiently. Banamex, however, could. The government lacked the capital to enter the banking business. It could, however, grant lucrative special privileges to someone who did. It short, the government could sell a stream of rents to wealthy private parties in return for credit. These rents compensated Banamex for the risk of doing business with an unstable government.

The arrangement was suboptimal in some abstract economic sense.[73] It was not, however, necessarily bad for Mexico. Given Mexico's political instability, it is not clear that alternative strategies would have been feasible. The government it could barely keep up the payments on its existing debt, let alone contract new debts at the usurious rates that would have been necessary. Foregoing new credit would have also meant foregoing the construction of a national rail net and a strong federal army, which would have resulted in more political instability and economic stagnation. Historical contingency made the second-best solution the only feasible solution. Given Mexico's history, the political generation and distribution of rents to a select group was better than the alternative of continued chaos.

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[73] For more on the long-term economic cost of these financial arrangements, see Maurer, "The Internal Consequences."

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Table 1: Mexico's outstanding foreign obligations, 1000s of pounds sterling

1837 bonds	434
1843 bonds	200
1846 bonds	21
1851 bonds	10,241
1851 certificates	180
1864 bonds	4,864
Baring certificates	75
English conversion debt	1,180
TOTAL	17,195

Source: Carlos Marichal, "Financial Market Reform and External Debt," in Bortz and Haber, The Mexican Economy, 1870-1930, Stanford 2002, p. 106-7.

Table 2: Gross short-term federal borrowing (1000s of current pesos)

1872-73	$	4,402
1873-74	$	3,328
1874-75	$	4,181
1875-76	$	3,819
1876-77	$	4,742
1877-78	$	9,686
1878-79	$	11,464
1879-80	$	13,951
1880-81	$	2,399
1881-82	$	16,423
1882-83	$	16,369
1883-84	$	30,563
1884-85	$	89,090
1885-86	$	115,057
1886-87	$	79,651
1887-88	$	129,932
1888-89	$	63,708
1889-90	$	49,444
1890-91	$	61,060
1891-92	$	34,380
1892-93	$	58,987
1893-94	$	40,823
1894-95	$	39,751

Derived from the *Cuadros de Información Hacendaria, 1825-1970*

Table 3: Mexican federal spending, 1000s of current pesos

Year	Total spending	Railroad subsidies	Military	Net surplus
1876-77	$ 14,592	$ -	$ 9,639	$ 1,334
1877-78	$ 17,925	$ 82	$ 8,220	$ 3,136
1878-79	$ 16,849	$ 573	$ 7,281	$ 479
1879-80	$ 20,804	$ 1,364	$ 7,266	$ 304
1880-81	$ 23,795	$ 1,001	$ 6,099	$ 2,295
1881-82	$ 31,128	$ 3,602	$ 5,870	$ (686)
1882-83	$ 49,287	$ 12,322	$ 12,752	$ (11,280)
1883-84	$ 58,861	$ 11,025	$ 11,597	$ (21,576)
1884-85	$ 54,928	$ 12,957	$ 10,724	$ (24,588)
1885-86	$ 42,122	$ 4,727	$ 10,088	$ (13,325)

Derived from the *Cuadros de Información Hacendaria, 1825-1970.*

Table 4: Banamex reserves, note circulation, and deposits in 1885

	Column A	Column B	Column C	
	Specie reserves	Banknotes in circulation	Deposits	A/(B+C)
Jan-85	$ 5,311	$ 5,798	$ 9,404	35%
Feb-85	$ 5,179	$ 6,172	$ 8,977	34%
Mar-85	$ 4,969	$ 5,997	$ 9,366	32%
Apr-85	$ 4,750	$ 5,744	$ 9,340	31%
May-85	$ 4,553	$ 6,011	$ 9,136	30%
Jun-85	$ 2,862	$ 4,713	$ 9,029	21%
Jul-85	$ 3,252	$ 4,524	$ 8,428	25%
Aug-85	$ 3,459	$ 4,463	$ 8,197	27%
Sep-85	$ 3,966	$ 4,767	$ 7,219	33%
Oct-85	$ 4,228	$ 5,235	$ 7,472	33%
Nov-85	$ 5,317	$ 5,611	$ 7,930	39%
Dec-85	$ 5,615	$ 6,275	$ 7,661	40%

Source: *Economista Mexicano*, various.

Table 5: Federal revenues from the mint, current pesos

1881-82	$	41,719
1882-83	$	3,583,961
1883-84	$	248,167
1884-85	$	222,023
1885-86	$	77,976
1886-87	$	237,786
1887-88	$	120,594
1888-89	$	103,411
1889-90	$	109,961
1890-91	$	123,962
1891-92	$	134,811
1892-93	$	417,326
1893-94	$	812,819
1894-95	$	819,602
1895-96	$	1,345,193
1896-97	$	1,417,938
1897-98	$	1,447,938
1898-99	$	1,410,858
	Annual averages:	
1881-87	$	735,272
1887-93	$	168,344
1893-99	$	1,209,058

Source: Carmagnani, Apéndice 3.

Table 6: Banamex profits, current pesos

	Profits	Dividends	Equity, end of period	Assets, end of period	Return on equity	Return on assets
1884*	1,241	800	8,441		16%	
1885	1,690	1,600	8,531	22,467	20%	8%
1886	1,699	2,200	8,630	29,347	20%	6%
1887	2,416	2,200	8,846	32,467	28%	7%
1888	3,022	2,800	9,068	36,355	34%	8%
1889	3,117	2,800	9,385	38,533	34%	8%
1890	3,454	2,800	10,039	41,550	37%	8%
1891	3,456	2,800	10,695	42,144	34%	8%
1892	3,232	2,800	11,127	46,684	30%	7%
1893	3,630	3,200	11,557	42,921	33%	8%
1894	4,138	3,400	12,295	50,480	36%	10%
1895	3,847	3,400	12,742	55,742	31%	8%
1896	4,068	3,600	13,210	65,883	32%	7%
1897**	3,804	3,600	14,414	71,688	29%	6%
1898	3,907	3,600	14,721	82,727	29%	5%

* The 1884 figure is only for the second half of the year.

** In 1897, the bank called in one-million pesos in capital from its shareholders. The profit figures have been adjusted accordingly.

Table 7: Banamex profits, constant pesos

	Profits	Dividends	Equity, end of period	Assets, end of period	Return on equity	Return on assets
1886	$ 1,699	$ 2,200	$ 8,630	$ 29,347	16%	3%
1887	$ 1,998	$ 2,117	$ 8,511	$ 31,237	18%	4%
1888	$ 1,979	$ 2,475	$ 8,015	$ 32,133	18%	4%
1889	$ 2,127	$ 2,330	$ 7,811	$ 32,071	19%	5%
1890	$ 3,576	$ 2,483	$ 8,904	$ 36,852	31%	8%
1891	$ 3,798	$ 2,635	$ 10,066	$ 39,666	33%	9%
1892	$ 1,648	$ 2,355	$ 9,359	$ 39,267	14%	4%
1893	$ 2,510	$ 2,574	$ 9,296	$ 34,523	22%	6%
1894	$ 3,135	$ 2,693	$ 9,738	$ 39,981	27%	7%
1895	$ 3,465	$ 2,781	$ 10,422	$ 45,594	28%	7%
1896	$ 3,298	$ 2,938	$ 10,782	$ 53,773	18%	7%
1897	$ 3,085	$ 2,934	$ 10,933	$ 58,426	25%	6%
1898	$ 4,424	$ 3,018	$ 12,339	$ 69,343	36%	8%

All figures in 1886 pesos, adjusted by the Gómez-Musachio AB price index.