

A revised version of this paper: In Barry Eichengreen and Peter Lindert, eds., *The International Debt Crisis in Historical Perspective* (Cambridge: MIT Press, 1989), pp. 140-188.

INTERPRETING THE HISTORY OF MEXICO'S EXTERNAL DEBT CRISES

I. MEXICAN DEBT IN HISTORICAL PERSPECTIVE

For analytical purposes, we can consider four epochs in international lending and rescheduling over the last 160 years. The first epoch begins in the 1820s and ends in the 1870s; the second overlaps in part with the first and runs from the 1860s to the onset of the first World War; the third from the interwar period to the post-World War II resolution of debt problems; and the fourth from the 1970s to the current debt negotiations. In all of these epochs, there have been important similarities with respect to the lending process, Mexico's problems in servicing its debts, actors' negotiation strategies, and the ultimate resolution of debt problems.

With respect to the lending and borrowing process, two common patterns emerge. On the supply side, the cycles of lending are related to the degree to which banks could float bonds among the public or were flush with deposits. Inadequate analysis by banks and bondholders of the long-term prospects for repayment by debtors appears to be the rule rather than the exception.

Mexico's desire to seek foreign funds is related to the government's almost perpetual inability to secure sufficient funds domestically as domestic spending continually outstripped revenues. Discovery of large oil reserves at various times only whetted the government's appetite for foreign loans as Mexico was seen to be a more attractive investment site.

Turning to problems in debt servicing, Mexico has continually faced difficulties in generating trade revenues. Its difficulties are aggravated by its mono export dependence and the ease with which industrialists can engage in the export of capital owing to Mexico's long border

with the United States. Any economic downturn or political instability generates immediate capital flight which governments over the years have found nearly impossible to control.

With respect to the central focus of this paper, debt rescheduling, both the negotiations and final outcomes show important similarities. Bondholders and banks have attempted to organize to pressure Mexico and have frequently allied with lenders to other countries.

For its part, Mexico has followed a strategy of repeatedly concluding rescheduling agreements which it has rarely implemented for long. During the negotiations, both Mexico and its lenders have often sought to link debt matters to trade, direct investment, and immigration.

Finally, on the creditor government side, the United States has played a key role in every negotiating episode, both by advancing funds directly and through pressure on lenders.

Let us turn to some of the parallels to the current problems which Mexico has encountered.

A. Epoch 1: 1820 to 1880s

The first epoch of lending to Latin America--and to Mexico in particular--began with its independence from Spain in 1821 after 11 years of revolutionary turmoil. In 1824, Mexico contracted its first bond loan of 3.2 million pounds (16 million dollars) through the London financial house of Goldschmidt and Company. Mexico received only \$6 million of this amount in cash, the rest being lost to discounting of the bonds, money withheld for bond servicing, and commissions. Another bond loan issue for the same amount was contracted in London through Barclay, Richardson, and Co. the following year.

By 1827, however, Mexico stopped coupon payments on the bonds and bondholders found themselves thrown into negotiations with successive Mexican governments over the resolution of the defaults. It was not until an era of relative peace and a strong government under President Porfirio Diaz in 1885 that Mexico's leaders worked out a comprehensive scheme

of financial readjustment to settle these early foreign loans.

Several parallels to the current negotiations in the ensuing periods of bargaining are striking.

Mexico took a first step toward settling its debts in the early 1820s by discussing a secret plan to **repurchase its bonds** at their depressed price (owing to the political unrest in the country) and sell them at the inflated price which would have come about as a consequence of the artificially "increased" demand. Such a repurchase idea has been considered with respect to the bank loans in the current era. Mexico--as well as other debtors--have often been accused of using part of the new funds they have received to purchase their discounted debt on the secondary market rather than to service debt at its face value.

Negotiations continued throughout the 1830s until Mexico agreed to **capitalize overdue interest on the initial loans through the issuance of new bonds**. After servicing the new bonds for only a year, Mexico again defaulted on its debt.

In a novel twist on **debt-equity swaps**, shortly after the Mexico-Texas war the Mexican government sought to adjust its debt while securing support for its effort to regain and maintain its Northern territories. It proposed that British bondholders be given land in Texas, Sonora, the Californias and elsewhere. This proposal garnered little support among London bondholders: they were not interested in obtaining questionable territory; and they were not eager to emigrate to Mexico.

In an example of **issue-linkage to trade**, in 1857 Mexico agreed to a treaty which would have given it a \$15 million loan in exchange for granting the US commercial trading concessions. But dissension with the US Government led disagreement over the treaty and in the end the Americans disavowed it. Similarly, in the 1980s, the US has actively pressed Mexico to join the GATT and open up its markets.

After Juarez returned to power after the overthrow of Maximilian (imposed on Mexico by the French), he took an aggressive stance with Mexico's creditors, repudiating Maximilian's loans and disavowing the international character of Mexico's Convention debt obligations. Going further, in 1868, Mexico began to **repurchase its foreign bonds at heavily discounted prices** (about 20% of their original value).

In 1873, the bondholders tried to pressure Mexico by **blocking a railway bond flotation on the London stock exchange**. While this effort failed, it apparently generated enough uncertainty among Mexican officials to induce Lerdo to open negotiations with the bondholders. But Diaz revolted against the government, arguing that Lerdo has "sacrificed Mexico's best interests."

Diaz's ascension to the Presidency in 1877 marked a new era in Mexican history known as the Porfiriato. After preliminary efforts to resolve the debt overhang failed, in 1884 Diaz instructed a newly formed commission to prepare a comprehensive plan of financial readjustment, including a bond adjustment proposal. In June 1886, an agreement was reached based on this proposal.

Overall, the bondholders did not fare badly considering the constant defaults, repudiations, conversions, and rescheduling agreements. The holders of the London debt bonds were able to recover all of their principal in 1888 with interest averaging 2.3% a year on the 1824 bond issues, and 1.1% on the 1825 bond issues.

B. Epoch 2: 1880s to the Default of 1913

Following the 1886 settlement, in 1888 Diaz floated a 10.5 million pound bond issue to German capitalists, beginning a new period of foreign borrowing. Over the next few years, Mexico secured additional loans connected to railroad construction and general revenue expenditures. Although Mexican credit worsened for some time, as the late 1970s, the

discovery of oil in 1901 set off a major period of borrowing at improved terms. By 1910, 4% bonds were marketed almost at par.

Such propitious circumstances were short-lived. In May, 1911, Diaz was overthrown by a revolution led by Francisco Madero. The immediate financial effect was a **massive outflow of capital from Mexico** forcing Madero to seek a \$10 million short term loan from American bankers in 1911 and a second loan for the same amount in 1912. In February 1913, however, Madero was overthrown by General Victoriano Huerta. Despite American refusal to recognize the Huerta government, bankers agreed to float a 16 million pound loan in June of that year. Although only a portion of this amount was actually issued, it was sufficient to cover the short-term loans held by American bankers, allowing them to escape from a possible Mexican default on their loan.

No resolution of the defaults that Mexico incurred in the subsequent periods took place during this second epoch.

C. Epoch 3: 1920s to 1940s

In 1919, an international committee of bankers on Mexico was constituted with an eye to reorganizing Mexican finances to encourage resumption of debt service. After Carranza was overthrown by General Obregon in 1920, more serious negotiations got underway.

After renewed efforts Mexico finally concluded an agreement with its bankers in September 1922 providing for rescheduling of about \$700,000 in principal and interest payments. Yet the agreement did not provide for an **additional inflow of new money**, a key objective of President Obregon. The accord quickly unravelled as de la Huerta, the Mexican Finance Minister who had negotiated the agreement, led an armed revolt against President Obregon. By June 1924, Mexico announced a suspension of the freshly negotiated agreement, in part owing to a sharp decline in revenues from the oil tax connected to growing foreign competition and the exhaustion of easily accessible wells.

By the end of 1927, paralleling the recent role of the IMF, the bankers sent a committee of experts to Mexico to examine its economic problems in greater detail before further adjustments would be made. The report submitted by J. E. Sterret and J. S. Davis in May 1928 called for a comprehensive attack on the debt problem that would deal not only with Mexico's foreign obligations but its domestic debt as well. After further negotiations, an agreement to issue a 45 year refunding issue was concluded which provided for a very favorable reduction in the amount owed for interest arrears (5 1/2 percent of the amount).

The ensuing depression did not contribute to financial solvency. After initially failing to ratify the agreement, the Mexican Congress passed a law in 1932 declaring the accord to be invalid. This default remained in force under President Cardenas from 1934 to 1940.

Discussion of the bond debt resumed only in 1942. The resulting agreement was highly favorable to Mexico as **the US government actively intervened** in the talks. The context of World War II was clearly fundamental in creating this auspicious climate for the Mexicans as the US agreed to Export-Import bank assistance to Mexico, a trade agreement, and various other credits and collaboration accords. The debt agreement called for major interest rate concessions, in some cases with agreement to pay 0.1% of the original value on interest arrears! Overall, taking into account provisions for debt resumption and repayment of a portion of the principal amount, it has been estimated that a debt of over \$500 million was eliminated for slightly less than \$50 million.¹

D. Epoch 4: 1970s-1980s and beyond

As you are undoubtedly familiar with Mexican problems in the 1980s, I will be very brief about the origins of the crisis. By 1981, falling oil prices led Mexico to borrow heavily, with its foreign debt growing from \$55 billion to \$80 billion in that one year alone. Moreover, average maturities on loans were reduced to the point where over 20% were shorter than one year. With massive capital outflow putting pressure on the peso, Mexican authorities devalued the currency by about 30% in February of 1982. Despite this action, Mexico was unable to staunch its loss of

reserves and was forced into the now famous August 1982 financial crisis.

II. MODELING DEBT RESCHEDULING

We have seen strong similarities across epochs in the way that Mexico and its lenders have negotiated over the costs of rescheduling. Other debtors in Latin America and elsewhere have engaged in negotiations with their creditors which partially resemble the Mexican case. To analytically examine these negotiations, I have developed a simple model to integrate the international and domestic political and economic factors which influence outcomes.

I attempt to predict how much debtors will be willing to adjust their economy and the degree to which lenders are likely to make concessions. To this end, I show how bargaining between debtors and lenders can be modeled as a game with payoffs representing their valuation for policy combinations of lending concessions and economic adjustment.

As a first step in deriving debtors' and lenders' payoffs, I postulate that actors in a debt rescheduling game are likely to have the following **basic** goals. Debtors' leaders will wish to: (1) avoid their country's bankruptcy; (2) avoid politically disruptive economic policies (austerity policies); and (3) maintain long-run access to lending and to markets to buy and sell goods and services. Lenders in a crisis want to: (1) minimize the commitment of additional funds; (2) avoid write-offs by pressing debtors to pursue economic adjustment so that they will maintain debt servicing; and (3) avoid retaliation and maintain good relations with debtors for possible future profitable lending opportunities. Both debtors and lenders must, of course, decide how to value each of the goals in making policy choices, an issue we will turn to shortly.

Although bargainers can theoretically consider a large number of issues in negotiations, in general their attention has focused on a few key aspects of policy. Debtors are concerned with the degree and ways in which they will be forced to promise and implement adjustment in their economies in exchange for lending concessions. They must also decide to what extent they will service their debts. Specifically, I define debtors' strategies as being a choice to pursue: (1) no

adjustment of their economy; (2) some adjustment; or (3) a high degree of adjustment. Lenders face a choice among three strategies of loan concessions that they can offer the debtors. For analytic purposes, we distinguish among "no", "some", and "many" concessions. These can involve reductions of the interest rate charged on rescheduled debt; the amount of debt they are willing to reschedule; the amount of new funds and trade credits advanced; and the grace period that they offer the debtors before payment must recommence.

I assume that it is possible to quantify lending concessions by the lenders to a debtor, the domestic adjustment undertaken by debtors, and the concern that the debtor and lenders have with maintaining good relations (goodwill) with each other. Let L, A, G, and H represent, respectively, lending concessions, domestic adjustment, and debtors' and lenders' concern with goodwill. The preference ordering of the debtor and lenders can be obtained by calculating the values of U(debtor) and U(lender). These are the utilities of the debtor and lenders, respectively, for different policy combinations of adjustment and loan concessions. Their utilities can be represented as follows:

CHART

$$(1) \quad U(\text{debtor}) = aL - bA + cG \\ = aL - bA + c \left[\frac{A}{L} - 1 \right]$$

$$(2) \quad U(\text{lenders}) = yA - xL + zH \\ = yA - xL + z \left[\frac{L}{A} - 1 \right]$$

where a, b, c are the weights assigned to the three goals by a debtor and x, y, z are those assigned by lenders and all weights are greater than zero.

Before examining how we should decide what weights to use in these equations, we first consider how the utility functions work. The way the equations are structured, a debtor's utility for a particular policy combination of adjustment and lending concessions is equal to the algebraic sum of the weighting of three goals: the benefits of loan concessions, L, the costs of adjustment, A, and the value of maintaining goodwill, G. Similarly, lenders' utility for different policy combinations will be equal to the sum of the weighted utilities for three goals: the benefits

of a debtor agreeing to adjust, A , the cost of providing loan concessions, L , and the value of maintaining goodwill, H .

B. The Weighting of Actors' Goals

I next turn to an examination of how actors are likely to weight their basic goals in different international and domestic situations. To develop a manageable integrated approach, we consider three variables drawn from the political science and economics literature: an actors' **overall power position**; **issue specific power** (which will vary with cognitive understandings of the issues involved in the negotiation); and the **strength of their domestic coalitions**.

As a first step in gauging the effects of different constraints on actors' goals, we identify the various individual situations based on domestic and international factors. For simplicity, the different possible situations can be characterized by dichotomizing the values of the three factors of overall capabilities, debt resources, and domestic coalitional strength. The following chart illustrates the possibilities:

CHART ON INDIVIDUAL SITUATIONS (IS)

How are actors likely to weight their goals in different individual situations? To deduce the weights, I consider both the independent effect of each of the three factors of coalitions, debt resources, and overall capabilities, and the possibility that they may have an interactive effect in influencing actors' preferences. For example, we can hypothesize that in general, the greater the coalitional stability of debtors' governments (focusing on incumbency expectations and the ability to control opposition), the lower the costs associated with adjustment policies. Higher debt-related capabilities should also lead to a decreased need for additional lending concessions on the debtors' part.

III. AN ANALYTICAL EXAMINATION OF MEXICAN DEBT NEGOTIATIONS

We turn now to an application of the model to two debt rescheduling periods in Mexican history: the 1820s to 1840s and the 1880s. These cases are particularly interesting. The first represents the failed initial efforts at negotiating a settlement of the default; the latter period represents a successful resolution of the longstanding conflict over resolving the debt problems that had hampered Mexico for over sixty years.

A. From the 1827 Default to the 1846 Conversion

In brief, during the first period of negotiations, we can classify Mexico as coalitionally unstable, debt-issue area weak, and overall strong. This places it in IS 4 for debtors in the chart of individual situations in section II. The bondholders were relatively united, but debt-issue weak, and overall weak, placing them in IS 7. The UK, the key creditor during this first period was unconcerned about the amounts that had been loaned to Mexico.

The Game: The 1820s

On a purely deductive level, if we examine Mexico's preferences, we would expect it to play a policy of no adjustment. Regardless of what the lenders do, it achieves the optimal payoff by not adjusting. If the bondholders could be sure that Mexico would (and could) carry out a high adjustment policy, then they would not be inclined to make any lending concessions. But if they expect Mexico to yield only some or no adjustments, then the bondholders will play a policy of high concessions to obtain the best outcome possible for their interests. In fact, this pair of strategies -- high concessions, no adjustment -- is the Nash equilibrium point of the matrix.

Summary: The Mexican government throughout the three rounds from the 1820s to the 1840s continued to assert that it was unable to service its debts. It concluded agreement after agreement to undertake high adjustment but never appeared to have had any intention to do so. By contrast the bondholders made important concessions on the debt and agreed to write

downs.

Because of their weak position, the bondholders acted in several ways to change their situation. Early in the period, they attempted to use norms and rules as power resources to improve their situation, arguing that nations must fulfill their private obligations. Such an appeal, as might be expected, had little coercive power and Mexico remained unresponsive.

The bondholders then attempted to form an alliance with the British government to increase its involvement on their behalf. Although the British acted to protect the interests of the bondholders, the government's actions were motivated more by strategic concerns. However, the British government did involve itself with the creation of the English convention debt. The convention brought about the direct diplomatic involvement of the government in protecting the property of British subjects against Mexico. In later periods, this new arrangement would prove to be hazardous for Mexico.

B. Mexico Comes to Terms: Negotiations in the 1880s

Negotiations over the original debt contracted by Mexico in the 1820s were finally resolved at the beginning of the Porfiriato. Although many of the policies followed during this time were based on the reforms of Diaz's two predecessors, Juarez and Lerdo, it was Diaz who was able to bring stability to the country and implement these policies to their fullest.

Preference Orderings: During the 1880s, we can classify Mexico as coalitionally stable, debt-issue weak, and overall weak (IS 7). We can also classify the bondholders, as united, debt-issue weak, and overall strong (IS 3).

CHART

The Game: The 1880s

Lender: IS 3

Lender: Coalition stable, Issue weak, Overall strong

Lender Values: Lending Unwillingness x: 1 Assets Concern y: 4

Goodwill z: 1

Debtor: IS 7

Debtor: Coalition stable, Issue weak, Overall weak

Debtor Values: Borrowing Need a: 5 Adjustment Unwillingness b: 2 Goodwill c: 5

During this period, the bondholders used their overall power to block Mexico's access to new foreign capital, forcing Mexico to make serious adjustments. President Diaz, the first leader to bring a long period of stability to the country, sought foreign investment in an effort to develop Mexico. He implemented important financial reforms and adjustments to foster economic stability within the country and improve Mexico's creditworthiness abroad. He also realized that the country would have to make high adjustments, which he implemented, before the bondholders would make any concessions to settle the debt. As expected from our modelling effort, although Mexico carried out strict economic and financial reforms, the bondholders made few concessions to Mexico.

C. Modeling Debt Rescheduling in the 1980s

Let us now briefly consider what outcomes we might expect in light of current conditions and see if using the same utility equations and weights corresponding to different individual situations provides insight into the negotiations.

I will consider three periods of negotiations from the August 1982 predicament Mexico and its lenders found themselves in to the present. The first runs from the first crisis until the first big rescheduling package until February 1983; the second to mid-1985 and the signing of the multiyear rescheduling; and the third running from that accord to the end of 1988.

During the first period from August 1982 to early 1983, the game Mexico and its lenders found themselves in appears to be the following in light of each actor's respective individual situation (lenders in IS8--coalition unstable, issue and overall weak; Mexico in IS7--coalition stable, issue and overall weak):

[Period 1 game here]

From the structure of this game, the likely outcome (Nash equilibrium) is a combination of bank unwillingness to advance further loans whereas Mexico is willing to undertake adjustments. In practice, this seems to have been the case. In light of US strategic concerns and the IMF fear of financial collapse, the outcome was one where these actors pushed the banks to make a large loan to Mexico by mid-1983.

In the second time period, with the banks now more unified and having additional confidence in being able to raise jumbo loans with participation from almost all participants, following the model, the resulting game (with each actor now in IS 7) should have been as

follows:

[Period 2 game here]

Here, the game is a clear case of "chicken" with the danger being an outcome of no concessions by either party as each tries to secure its Nash equilibrium (in this case, NC, HA for the lenders and HC, NA for Mexico). In this case, the game was highly regulated by the US government and the IMF with the outcome being closer to some adjustment by Mexico and some concessions by the banks, avoiding either the asymmetrical equilibria or more dangerously, the no adjustment, no concession outcome.

Lastly, we can consider the implications of the current Mexican instability after mid-1985 and the increased problems that the banks have had as some money center banks have taken loan loss reserves or written down their loans (as in the European case) and smaller banks increasingly balk at additional outlays of funds. The game with both actors in IS8 now becomes one of deadlock (with an equilibrium outcome of NC, NA).¹

[Period 3 game here]

This is a dangerous game from a US Government perspective. Each actor is motivated to play a strategy of no concessions leading to the deadlock outcome. Yet this challenges the US strategy of coaxing the banks and debtors to continue adjusting and opens the possibility of a threat to many banks as well as to Mexican economic stability. The consequences are evident: a fragile international financial system and unrest in Mexico leading to increased immigration pressure. The recent efforts by the US and the latest agreements on write downs and some new money reflect these American fears. It remains to be seen whether this effort will carry the day.

¹ Some might argue that the banks are now in IS2 because the banks are now stronger in the debt area since they have taken loan loss provisions. It is worth noting that the game outcome only becomes a more severe deadlock in this case (banks in IS2, Mexico in IS8).

IV. CONCLUSION

In sum, I have discussed the important parallels in debt rescheduling over the last 160 odd years. From a theoretical perspective, I have attempted to show how a simple model which incorporates both political and economic considerations can be used to deduce game payoffs for Mexico and lenders in debt negotiations. I do this by specifying a priori how actors are likely to emphasize their different goals in the negotiations depending on the political and economic constraints they face, I have tried to deduce probable outcomes of their bargaining. Although the model furnishes only relatively broad predictions, I hope that it will provide a useful step in our efforts to analytically understand the complex process of international debt rescheduling.

1. See Wynne, 1951, p. 97-99 and p. 106 for the full terms of the settlement of 1942.