Thomas Passananti received his Ph.D. in Mexican history from the University of Chicago where he studied with John Coatsworth and Friedrich Katz. He has been a visiting professor at University of California, San Diego and Colgate University. He is currently associate professor of Latin American history at San Diego State University. His recent publications include: "Conflicto y cooperación financiera en la *Belle Epoque*: Bancos alemanes en el porfiriato tardío," in *México y la economía atlántica, siglos XVIII-XX* (Mexico, 2006); "Nada de papeluchos: Managing Globalization in Early Porfirian Mexico", *Latin American Research Review*, vol. 42, no. 3 (October 2007); "Dynamizing the Economy in a *façon irrégulière*: A New Look at Financial Politics in Porfirian México", *Mexican Studies, Estudios Mexicanos*, vol. 24, no. 1 (Winter 2008).

**Abstract**

This essay explores the hidden history of the origin and gestation of Mexico's Monetary Reform of 1905. It argues that two symmetrical forces pushed the Mexican government toward the reform: foreign financiers (and their domestic allies), whose capital investments (and expatriated profits) suffered under a depreciating currency and the Mexican government, which wished to maintain its export model while seeking to avoid inflation and deteriorating terms of trade. Furthermore, the essay reconstructs the internal political climate, closely following the nuanced conflict between rival domestic power groups, and the ways in which external actors, especially U.S. bankers exacerbated those conflicts.

**Key words:** *silver, monetary reform, Limantour, Creel, Científicos, Porfiriato, gold standard.*

**Resumen**

Este ensayo explora la historia escondida del origen y gestación de la reforma monetaria de 1905. Encuentra la simetría explicativa entre ambos vectores que influyeron en la decisión del gobierno mexicano: las presiones del capital extranjero, sus aliados internos, y la necesidad del gobierno mexicano de mantener su plataforma de exportación y evitar el derrumbe de la moneda, la inflación y el deterioro de los términos de intercambio. Además reconstruye el clima político interno, con llamadas a la intervención de actores externos –especialmente los banqueros estadunidenses–, destacando los matices del conflicto doméstico entre grupos de poder.

**Palabras clave:** plata, reforma monetaria, Limantour, Creel, Científicos, porfiriato, patrón del oro.

**Fecha de recepción:** septiembre de 2007
**Fecha de aceptación:** noviembre de 2007

# THE POLITICS OF SILVER AND GOLD IN AN AGE OF GLOBALIZATION: THE ORIGINS OF MEXICO'S MONETARY REFORM OF 1905

Thomas P. Passananti

There is no sacrifice, however great it may seem to be, that the nation ought not make in order not to interrupt the flow of outside capital which in recent years has fertilized our soil, by the construction of railways, by the operation of mines of all kinds, by the expansion of agricultural production or, in time, by participation in the creation of new industries or the extension of industries already established.

Joaquin Casasús, 1905

Mexico has already suffered enough for silver and silver producers. It will now have to weigh its international against its domestic interests in the matter, and when it does so impartially it will be forced to the conclusion that the international interests are the more important of the two.

W.R. Lawson, 1903

As a way to address the economic crisis that erupted in the early 1980s Mexican policymakers sought to re-integrate their economy more tightly into the wider world. This contemporary strategy of globalization struck many researchers as remarkably similar to the pre-revolutionary era in Mexico history. In response historians have begun to re-examine the Porfirian era as a distant mirror, both because of the obvious analogies it offers and because of the lessons it might hold. One of

the Porfirian initiatives most studied has been Mexico's Monetary Reform of 1905.[1] The 1905 monetary reform was a key policy event for a variety reasons. First, by placing Mexico on a gold-exchange standard, the reform represented a dramatic departure from Mexico's almost four hundred year association of silver and money. Second the reform culminated a generation of economic policies that sought to attract and retain foreign investment, and as such was perhaps the most patent concession to the policy preferences of external actors. Third, as this essay will argue, the monetary reform was a contentious domestic policy initiative, perhaps the most controversial reform debated among Mexico's business groups. Finally, I will argue that the reform signaled the clear policy dominance of one fraction of the Mexican political elite, the so-called *Científicos.* All of these Porfirian trends find striking parallels in Mexico's contemporary economic opening.

This paper seeks to contribute to the growing scholarship on the 1905 Monetary reform scholarship by closely examining the external pressures the Mexican government (and private entrepreneurs) faced to reform the monetary system. The chief external pressures faced by the regime were from foreign bankers and investors. Banking syndicates were concerned that Mexico's falling exchange rate would jeopardize the government's ability to service its debt. Likewise, foreign direct investors were growing reluctant to invest in Mexican industry and infrastructure, given that falling exchange rates reduced expatriated profits (denominated in foreign currency). The paper also scrutinizes the contradictory internal pressures within Mexico both to accommodate and resist this policy change. Public officials, who struggled to pay a gold-denominated debt with domestic taxes collected in silver, and domestic entrepreneurs who sought foreign partners embraced the reform. Other key business groups did not. Namely, silver miners as well as export producers (who benefited from a weak silver peso) opposed moving off a silver-based currency.

Detailing and analyzing more precisely these complex pressures, which had long weighed on monetary policy, helps us understand the context (and the timing) of the reform. Such a political analysis of the reform also underlines the tensions and conflicts engendered by globalization and economic integration, not only among the popular classes but also among those seen as its principal beneficiaries. In short, the case of Mexico's monetary reform suggests that even in developing countries where class

[1] Over the past ten years, Mexico's Monetary Reform of 1905 has been the subject of renewed interest and many fine historical studies. Although there is no monographic study of the reform in its entirety, the number of essays that examine different aspects of the reform is impressive. Among them are: Borja, "Reforma", 1998; Mussachio, "Reforma", 2002; Passananti, "Acting"; Romero, "Reforma", 2005; Schell, "Money", 1996, and Schell, "Silver", 2001.

and interest politics are often assumed to be far less complex, external pressures to implement economic reform can threaten delicate domestic political arrangements, even among business classes. Thus I pay special attention to the politics of the reform, namely how public officials sought to manage and contain the considerable political conflict surrounding the call for monetary reform.

In 1905, reversing centuries of the circulation of silver as the coin of the realm, Mexico instituted a monetary reform that placed the country on a gold-exchange standard. The purpose of the new standard was to stabilize the value of the Mexican *peso* relative to the world's major currencies. Prior to the 1905 gold reform, the Mexican peso lacked a fixed value; technically, it held no fiduciary value. The peso's international worth was determined solely by its silver content, so the peso's value fluctuated with every rise and fall in the world price of silver bullion. Beginning in the 1870s, silver bullion suffered a secular decline so that by the early 1900s the value of an ounce of silver had diminished by more than fifty percent. During the same period, the peso paralleled silver's path, also losing over half of its international value. The 1905 Reform stabilized Mexico's exchange rate by decoupling the *peso*'s value from its silver content. Under the gold-exchange standard, a silver peso continued to circulate as coin, but its value was enhanced because the Mexican government limited its supply to the nation's gold reserves.

This seemingly technical adjustment was in fact an issue of lively political dispute, requiring that public officials intervene and manage a complex set of foreign and domestic demands. The adoption of the gold standard presented Mexico's five-term President, Porfirio Díaz, with a sharp political dilemma. On the one hand, foreign investors threatened to derail Mexico's project of intensive growth by withholding investment capital until Mexico adopted the gold standard. On the other, broad sectors of the Mexican bourgeoisie opposed the gold reform, and their hostility threatened the *Pax Porfiriana.* In part the Porfiriato's political stability turned on Díaz's ability to avert open disputes that pitted rival elite factions against each other, especially over matters of economic policy. And yet paradoxically, increasingly Díaz's ability to contain elite rivalries depended upon the foreign-financed, export-driven growth that was associated with one fraction of political elites, the *Científicos*, who championed the external-oriented growth model.

No previous Profirian public policy had so sharply divided Mexico's upper class.[2] I would suggest that it was the monetary reform, and not the

[2] The Mexican upper class was not an especially pacific lot, as Mexico's national history down to the *Porfiriato* attests. What deserves explanation is their apparent docility under Díaz.

subsequent issue of whom Díaz would select as 'his' candidate for the newly created office of the vice-presidency, that underlined the *Científicos* emergence as Mexico's ruling class, a group that nevertheless ruled at Díaz's pleasure. The stress on the conflict over the 1904 vice-presidency by the late historian François-Xavier Guerra, however provocative and well formulated, was misplaced. Guerra asked:

> ¿Hay que ver en este episodio [1904 selection of a vice-president] clave de la división de las elites porfiristas, como lo hace Bulnes con su talento de polemista, una consecuencia del exceso de perfidia del presidente, que deseaba dividir para reinar, minando con ello incluso los fundamentos de su regimen? Es posible, quizás, ver en ello más prosaicamente un atolladero no buscado, la consecuencia de un imposible dilema: escoger entre el entorno de tecnócratas, de la que dependían la imagen y el crédito internacional del régimen, o una clientela de fieles, de la que dependía el control del país.[3]

Guerra rightly discerned that Díaz confronted a political dilemma, he rightly identified the groups involved, but he mistook the issue. The issue was not Díaz's choice for vice-president, but rather whether to reform the monetary system. The stark alternatives were caught by the contemporary British economist, W. R. Lawson, who posed the problem: "Mexico has already suffered enough for silver and silver producers. It will now have to weigh its international against its domestic interests in the matter, and when it does so impartially it will be forced to the

---

The key variable, as Friedrich Katz has noted, was how under Díaz, the upper class as a social group was able to benefit from export-driven growth. He argued that "on the whole the changes and transformations that the Díaz regime wrought in Mexico's upper class may have increased the tensions and conflicts among them. Until the turn of the century, however, the Díaz regime succeeded in preventing any of these groups from attempting to further their interests by armed revolt. His regime granted them so many opportunities for accumulating wealth that they simply had too much to lose to wish for an armed uprising." Katz, "Mexico", 1986, p. 59.

[3] Guerra, *México,* 1988, p. 93. Friedrich Katz also stressed the nomination of Corral as the moment when Díaz's choice between the different groups within the ruling class was made explicit. To support his interpretation he argues: "Corral was elected vice president in 1904. It was a major victory for the *Científicos* that Díaz underlined when he removed their most powerful enemy, Bernardo Reyes, from his post as secretary of war." Katz, "México", 1986. p. 69. Katz confused the chronology of these two events. Reyes resigned from office not in 1904, but instead on December 22 1902, a full year and a half before Corral became vice-president. The point is not trivial, for it suggests that Reyes, the leader of the anti-científico faction within the Porfirian elite, had fallen from from grace long before the vice-presidential issue arose. In fact, one could argue that Corral's selection "underlined" the *Científicos'* victory, which had occurred with Díaz's agreement to adopt the monetary reform and remove Reyes from office. My hypothesis, which I will develop in a future paper, is that Díaz selected Corral, a man of weak ties to the *Científicos*, because Díaz recognized that while the *Científicos* were entrusted with running the affairs of state, their widespread unpopularity prevented a prominent member of their clique from holding the second office of Mexico.

conclusion that the international interests are the more important of the two."[4]

By eventually adopting the gold standard, Díaz answered the dilemma by siding with the *Científicos* and with Mexico's international interests.

Díaz's decision, and that of the *Científicos*, underlined the Porfiriato's dependence on external factors, namely on its ability to attract foreign capital. Put another way, the monetary reform underlined the extent to which external constraints limited Mexico's ability to fashion independent public policy. Indeed, during the monetary reform deliberations, a leading científico wrote,

> There is no sacrifice, however great it may seem to be, that the nation ought not make in order not to interrupt the flow of outside capital which in recent years has fertilized our soil, by the construction of railways, by the operation of mines of all kinds, by the expansion of agricultural production or, in time, by participation in the creation of new industries or the extension of industries already established.[5]

However, Mexican officials adopted the reform only after they had attempted to externalize some of the economic costs of the reform, tried to turn specific international currents to their favor, enlarged domestic control over the country's infrastructure, and effectively reduced the domestic political costs involved in adopting the gold standard.[6]

The essay is organized as follows. The body begins with a sketch of Mexico's search for foreign capital in 1902 and the reasons why foreign loans and direct investments were not forthcoming. The next section considers the causes of Mexico's economic crisis and its inability to solve them unaided. Thereafter, I describe in some detail how United States bankers pressured Mexico to adopt the gold standard and the methods Mexico's leaders adopted to manage that external pressure, confront growing domestic opposition, and convince President Díaz of the necessity of the gold-exchange standard. In the last substantive section, I show that, after a number of temporary solutions had failed, the Mexican finance minister addressed the domestic opposition by pursuing a collaborative international monetary initiative, establishing a domestic monetary commission, and inviting U.S. financial experts to Mexico to advise the gov-

[4] Lawson, "Mexican", 1903, p. 22. Lawson's analysis here was trenchant, if we only add the agricultural producers to Lawson's "domestic interests," we accurately characterize the monetary reform's intra-class conflict.

[5] Casasús, *Reforma*, 1905, p. 65.

[6] Limantour explained that the government wanted to "expose the country as little as possible to unnecessary expenses and grave upheavals of vested interests," p. 8.

ernment on its proposed reform. Given that the paper considers closely the politics of the reform, the conclusion briefly revisits the historiography that asserts a relationship between the monetary reform and Mexican Revolution of 1910.

## Mexico and the 1902 loan

In 1902 the Mexican Congress authorized the Finance Ministry to contract a $25 million loan, whose intended purpose was to extend the *científico* modernization project. The loan proposal earmarked funds for economic (port and rail improvements), political and cultural (a new legislative building), and health purposes (the improvement of sanitation conditions in Mexico City).[7] These goals reflected the particular sort of modernization the *Científicos* envisioned and promoted: one that allocated the bulk of government resources to development of the export economy, whose politics stressed style over substance, and that heavily biased social expenditures toward Mexico City. The architect of the *científico* project and the man who had designed and submitted the 1902 loan proposal to Congress was José Yves Limantour. Limantour, the leader of the *Científicos*, had directed economic policy for the past ten years as Finance Minister and generally took credit for Mexico's dramatic financial and economic recovery.[8] Among his successes, Limantour regarded highly the government's 1899 foreign debt consolidation loan of $110 million.[9] Limantour had negotiated the loan at an interest rate of five percent, the lowest in the republic's history, and had even reduced the onerous conditions attached to prior loans. Thus in 1902, flush from his success three

[7] See Cosío, *Historia*, 1995, vol. II, p. 965.

[8] Porfirio Díaz had appointed him Finance Minister in 1893. Alan Knight argues: "Limantour's successes depended to a large extent on global trends which–as the recession of 1907 displayed–were beyond his control." Knight, *Mexican*, 1986, p. 23. This is doubtlessly true. However, one should hasten to add that Mexico's ability to profit from the era's generally favorable global trends were less related to Limantour's stewardship of the Finance Ministry, but rather were based on the bold risk-taking of the Mexican government in the late 1870s and 1880s when it opened its economy to international currents. On this point see Passananti, "Nada", *2007*.

[9] Contemporary foreign bankers often noted Limantour's desire to promote his tenure as finance minister by wresting every last advantage from debt negotiations and then publicly celebrating them. See for example a letter Paul Gloner to Bleichroeder, where Gloner notes that Limantour had something personal at stake in the negotiations, "because not only practical considerations but also personal feelings play a role in the Minister's decision-making, especially the desire to make the conversion of the 6% Loan appear to crown his financial reforms, only after eliminating the clauses that are burdensome to the state. I believe that the Minister will not be dissuaded from his long cherished goal by practical considerations." May 14, 1898, Deutsche Bank Historische Archiv (DBHA) A44.

years earlier, Limantour felt confident that he could secure the relatively small $25 million loan quickly and at a rate still lower.

During 1902, external shocks undermined Limantour's search for new foreign financing. In 1898 and 1899 Limantour had watched American and European bankers seemingly fall over each other in a scramble to grant Mexico a $110 million loan.[10] Now, however, Europe and the United States turned a tin ear to his protestations that Mexico be granted a $25 million loan at four percent interest.

Mexico continued to run trade and budget surpluses, and the nation's 1899 bonds enjoyed quotations of par or better on the foreign exchanges. The difficulty sprang from the world price of silver and from the vagaries of international capital markets. In late 1901, the price of silver began to drop violently; this drop affected Mexico doubly because silver served both as Mexico's principal export and its currency. As currency, the Mexican silver *peso* did not possess a fiduciary value; its worth fluctuated with every movement in the silver market. The decline, together with a temporary scarcity in European capital markets, made international banking houses reluctant to grant Mexico a loan on the terms that the Mexican legislature had authorized. In his annual report to Congress, Limantour explained the situation: "El ejecutivo... esperó el momento propicio para realizar el empréstito en las mejores condiciones; mas la escasez de dinero en Nueva York, en Inglaterra y en Alemania, por una parte, y por la otra, el alto nivel del cambio en esos mercados, impidieron la colocación del empréstito de referencia, al precio prudente y a la altura del crédito de nuestro país."[11]

The Mexican government's domestic banker, the Banco Nacional de México, was informed by its European director, Eduardo Noetzlin, that in Paris, "le prix très élevé qu'on demande formera sans doute, la principale difficulté."[12] Given the temporary scarcity of funds throughout the major capital markets in 1902, Mexico's asking price for the 1902 loan was too high.

The terms of the proposed Mexican loan were less an obstacle in the United States because no dearth of funds existed on Wall Street. There, however, the "high rate of exchange," as Limantour referred to the depreciated *peso*, prejudiced American investment bankers against issuing Mexico the loan.

[10] For details of these elaborate negotiations see Passananti, "Conflicto", 2006.

[11] Secretaría, *Memoria*, 1907, p. XVI.

[12] Eduardo Noetzlin a Banque Nationale du Mexique, 31 Octobre 1902 "Correspondencia remitida por el Comité de París a la Dirección del Banco Nacional de Mexico en Mexico", vol. du 17 Avril 1902 au 15 Septiembre 1905, Archivo Histórico Banco Nacional de México (en adelante AHBNM).

These varying attitudes and approaches to Mexico's proposed loan reflected differences in the shares of direct investment in Mexico held by Americans and Europeans. In 1902, the year in which Mexico began contemplating the monetary reform, direct American investment in Mexico totaled more than $500 million, easily the largest share of foreign investment in Mexico.[13] Far behind the United States, and in second position, lagged Great Britain, with less than $250 million of direct investment.[14] Although exact percentages are not known, during this era American sources accounted for somewhere between 50 and 65 percent of total foreign investment in Mexico.[15] The preponderance of American capital invested in Mexican enterprises, together with the secular decline in the value of Mexican currency, meant that American capitalists suffered greater losses than their European counterparts, both in terms of capital invested and profits repatriated.[16] Limantour aptly captured how the *peso*'s fall ravaged American investments in Mexico:

> [T]he large investments of the money of citizens of the U.S. in railways, mines, coffee plantations, smelting works, and many other enterprises in Mexico, exceeding in amount $500,000,000 gold . . . make the stability of relationship between the moneys of the two countries of direct importance to the U.S. The earning of these enterprises, remitted to American investors, have suffered a serious fall in gold value with every fall in the value of Mexican money, and the principal of the investment has suffered in the same manner, when considered from the standpoint of converting it back into gold.[17]

America's greater share of direct investment and the close links between American investors in Mexico and New York investment houses, explain why Wall Street financiers led the call for Mexico to stabilize its currency system through the adoption of the gold standard.

## American finance capital, Enrique Creel, "El patrón de oro"

México, in the person of Enrique C. Creel, confronted the severity and the import of the silver crisis during a business trip to New York in late 1901. Creel called on Wall Street bankers in order to borrow money for

[13] D'Olwer, "Inversiones", 1998, p. 1160.
[14] *Ibid.*, p. 1158.
[15] For various estimates see D'Olwer, "Inversiones", 1998, pp. 1152-1153.
[16] For an intelligent, extensive discussion of the effects of silver's decline on American investments in Mexico, see Pletcher "Fall", 1958, pp. 33-55.
[17] Commission, *Stability*, 1903, p. 40.

his Banco Central de México.[18] His discussions underlined the importance of the silver crisis. During a banquet given in his honor by the city's *alta banca*, U.S. bankers noted that Mexico's depreciating currency wreaked havoc on foreign investments. They assured him that if Mexico did not adopt the gold standard, foreign interests would suspend future investments. These financiers then pressed a reluctant Creel to express his own opinion about Mexico's monetary problems. Emphasizing that he spoke as private individual, Creel declared himself in favor of gold. Creel's declaration was noteworthy. Americans and Mexicans alike regarded Creel as a key member of Mexico's ruling establishment, the *Científicos*, and believed his views either reflected or could help shape broader sentiment.

The next day Creel's support of the gold standard was leaked to the wire services. A political firestorm erupted in Mexico. The crisis first broke out among Mexican mine owners and agricultural exporters, who had long claimed that the silver standard was vital to their prosperity, and thus the prosperity of Mexico. Leading miners and exporters met and selected the mining industry's patriarch, José Landero y Cos, to express their fears and anger to President Díaz. In the meeting Landero y Cos warned Díaz that the gold standard would spell Mexico's imminent ruin. Sensitive to the economic interests represented by Landero y Cos, Díaz reassured him that no such reform was being contemplated. Although Limantour tacitly agreed with Creel, he deemed the moment impolitic to defend him, so he joined Díaz in condemning Creel's imprudent remark. Creel recalled the censure vividly: "El general Díaz y aun el señor licenciado don José Yves Limantour se alarmaron y por conducto de mi excelente amigo, el señor licenciado don Joaquín D. Casasús, desaprobaron mis ideas y me suplicaron que me callara."[19]

On his return to Mexico, Creel conferred with Díaz and Limantour, explained his actions and, curiously, received instructions from them to undertake a study, *una propaganda*, in favor of monetary reform, only stipulating that his study be presented after a long period of preparation.[20]

Given the political tensions Creel had ignited, and given that Díaz immediately had censured him, why did the President and his first minis-

[18] The following account is based largely on typewritten notes of Enrique C. Creel entitled "La Reforma Monetaria," a copy of which the late Eduardo Creel (the banker's grandson) generously provided me. See also "Mexican Financial Step Impending," *New York Times*, January 11, 1903. For a somewhat different description of Creel's dinner with the New York financial elite, see "Awakened Mexico," *New York Times*, November 10, 1901.

[19] Enrique Creel, "La reforma monetaria", private archives.

[20] *Ibid.*

ter only weeks later assign Creel to investigate and promote monetary reform? The initiative had come from Limantour who, facing several conflicting interests, designed the strategy and persuaded Díaz of its benefits.[21] In part, the Finance Minister took this tack to satisfy Díaz's desire to silence Creel.[22] Limantour also wanted to dissociate the reform from foreign interests, especially those of Wall Street.[23] Without question the gold standard loomed as the most divisive issue among the Porfirian bourgeoisie, and the results of Creel's study would help serve, as all *científico* inquiry did, to depoliticize public policy. Lastly this step would signal American bankers and industrialists that Mexico had taken the first step down the road of fiscal probity.

On October 20, 1902, Creel delivered his paper, "El patrón de oro", at the home of the *científico* Dr. Porfirio Parra.[24] The *Científicos* attending the lecture heard Creel give a well-crafted, shrewd endorsement of the gold standard, hedged by the proviso that Mexico still needed a period of economic evolution of ten to fifteen years before the country could afford to discard silver. He had sent an abridged version of the paper to former American Assistant Treasury Secretary Robert Meikeljohn, asking him to circulate it among the Wall Street community; it soon appeared as an article in *Banker's Magazine*. Creel suggested that, before Mexico could adopt the gold standard,

> it will be necessary that other developments should take place. Developments in agriculture, so that the price of corn and wheat may be lower; developments in railroads, so as to have lower rates to the mining camps; mechanical developments, so as to have modern machinery; developments in coal and oil, so as to have cheap power and other advantages; and besides, other improvements, so that the loss in wages, when paid in gold, may be compensated by or counterbalanced with lower rates of freight, less expense in mining on account of machinery, less expense in treatment and smelting of the ores and also lower

[21] Limantour recalled that "it was no easy matter to awaken public interest without running the risk of seriously unsettling people's minds and of working harm to important and sacred interests, without any countervailing advantage." Limantour, *Monetary*, 1904, p. 2.

[22] An American adviser to the Mexican Government, Charles Conant, remembered that "President Díaz was at first reluctant to take up so far-reaching a subject, feeling that the many constructive measures which he had carried out for the benefit of his country entitled him to a certain degree of repose in his declining years; but was finally persuaded by Minister Limantour and Mr. Enrique C. Creel to take the initial steps." Although Conant slighted the interest-group and ideological resistance to the reform, which largely accounted for Díaz's initial opposition, his statement correctly emphasizes Limantour's and Creel's leadership in the reform as well as Díaz's reluctance. Conant, *History*, 1927, p. 487n.

[23] Despite his efforts, the reform was criticized as a conspiracy of Mexican and American bankers.

[24] Creel, "Patrón", 1902.

wages on account of the low price of corn and wheat and the increase in the purchasing power of the gold currency as regards food, clothing and other commodities.[25]

He concluded that

> the evolution in favor of gold has started in Mexico. Every year it will advance more and more... I must say, however, that the country is not ready. It would be a very great mistake to make an experiment now, because I fear that failure would follow, and it would delay for many years the betterment as regards the currency of the country, which otherwise will come in a natural way, perhaps after twelve or fifteen years, more or less. If we have the good luck to increase our ratio of prosperity and to have the good sound Government which is helping Mexico in such an important and beneficial way it may come sooner.[26]

Throughout the version written for the American audience, Creel complained that Mexico's situation was not well understood by foreigners who were clamoring for Mexico to adopt the gold standard. For example, Creel believed the Mexican banking system enjoyed prosperity under the silver standard, but added that this "real condition is not well understood by business men who favor the gold standard, and there is also a prejudice against silver so that altogether the credit of the Mexican banks in gold countries is not as high as it should be, taking into consideration the clean and splendid record of the Mexican banks, and the sound moral character of the business community."[27] With this propaganda Creel (and Limantour) sought to still the American voices that urged currency reform. They promised that the gold standard stood in the offing, warned that its immediate adoption would wreck the Mexican economy, and complained that the strength of Mexican economy was underestimated.

As Creel later recalled, his "El patrón de oro" did not assuage impatient American investors.[28] Shortly after his speech American capitalists flooded Limantour with demands that gold be adopted forthwith. One New York banker, George Cook, had written to both Limantour and President Díaz, volunteering his own plan by which Mexico might go on the gold standard, and offering to underwrite a $25 million loan to accomplish the transition.[29] This effort by Cook, like an earlier one in which

[25] Creel, "Silver", 1902, p. 679.
[26] *Ibid.*, p. 681.
[27] *Ibid.*, p. 680.
[28] Enrique Creel, "La reforma monetaria", private archives.
[29] George Cook to Porfirio Díaz, September 27, 1902, Colección General Porfirio Díaz (CGPD), leg. 27, núm. 011695.

he personally spoke to Díaz about the gold standard, was to no avail. Numerous other unsolicited currency proposals besieged Díaz and Limantour.[30]

By early November 1902 Mexico's financial situation had worsened. Creel's propaganda effort had failed; American capital had stepped up demands that Mexico adopt gold; tight European capital markets persisted; silver prices plummeted, suffering their greatest monthly loss in history. Still the domestic political price of the gold standard seemed too dear. President Díaz remained reluctant to move against the combined opposition of mining and agricultural interests.[31] Limantour himself was unwilling to assume responsibility for initiating the battle, especially at a time when he was already in the midst of a political fight against a group of anti-Científicos (loosely associated with Secretary of War Bernardo Reyes), who were attempting to drive a wedge between the *Científicos* and Díaz.[32] Limantour feared that the so-called *reyistas* would exploit the silver issue for political ends. In early December, the *New York Times* carried a front page story about the monetary crisis. The paper reported that

> the silver question continues to be one of the great topics of public discussion. It is now certain that the silver miners and the farming classes will make common cause against the adoption of the gold standard. The Miners argue that silver mines in gold standard countries will have to shut down at the present price of silver, while Mexican mines cannot continue to be operated, also that silver mining and agricultural interests have more claim on the protection of the Government than railroads or merchants. Meantime all prides are being raised,

[30] The most curious proposal, perhaps, came from one Luis Bananiecki in a letter dated 28 August, 1902. Bananiecki, writing from Blumenau, *Sudbrazil,* urged President Díaz to introduce the monetary reform of a businessman, Silvio Gesell. Gesell's plan would "preserve the independence of Mexico and of its government" from "las permanentes intrigas del Union norte americano con su presidente Rooseveldt [*sic*]." Díaz did not respond to Bananiecki's offer. CGPD leg. 27, núm. 011520.

[31] Creel recalled that "La opinión pública de México, seguía favoreciendo el sistema de libre acuñación. La oposición de los mineros pesaba mucho en el ánimo del señor general Díaz," Enrique Creel, "La reforma monetaria", private archives.

[32] The *reyistas* had accused Limantour of attempting to promote himself as the next president of Mexico. For general accounts of this court intrigue see Bryan, "Mexican", 1969, pp. 97-109, and Luna, *Carrera,* 1975, pp. 68-71. Reyes' efforts to sabotage Limantour did not end with his resignation as Secretary of War in December of 1902. During Limantour's trip to Europe the following summer, Reyes sent Díaz an article entitled "The Next President of Mexico," from the New York monthly, *Success.* The article's subject, of course, was Limantour. Reyes had kindly provided a Spanish translation for Díaz's perusal. See B. Reyes al General Díaz, July 23, 1903, CGPD, leg. 28, núm. 009113. For a revealing series of exchanges between Díaz and Reyes about the científicos in general and Limantour specifically during the summer of 1903, see the Reyes Collection at CONDUMEX, carpeta 35, leg. 6818-6827.

and there is much anxiety felt among the middle classes, especially wage earners and salaried men.[33]

The rumors that the declining value of silver was causing both an economic crisis and an political opportunity for associated with General Reyes to exploit continued to fester. During early 1903, one of the confidential agents sent to New York by Limantour, Emeterio de la Garza was asked and denied that.

## TEMPORARY SOLUTIONS

The 1902 silver crisis not only created political tension, and damaged the short-term prospects of obtaining the public-works loan authorized the previous June, but also threw into doubt the viability of the *Científicos'* general economic program. With the continued fall in silver, federal revenues, collected in specie were increasingly inadequate to service Mexico's largely gold-denominated foreign debt. Absent a dramatic recovery, shrinking government reserves may soon have forced Mexico to delay debt service. Limantour understood further that, given silver's volatility, any government dumping of silver on the world market would cause its price to plummet further. Limantour moved to meet these short-term exigencies. He also tried a more tangible measure, given that Creel's trial balloon had burst, to placate American investors.

This effort sought to relieve the injury to the group of American investors most damaged by silver's fall, the owners of the railroads. Limantour permitted them to raise their freight rates.[34] The rail industry, largely foreign (and this mainly American) owned, suffered thrice from the effects of the falling peso. First, by dint of their need to purchase most of their capital goods abroad (and the railways perforce had large fixed costs), railroad companies made substantial purchases with an undervalued currency. Second, when profits were remitted, a portion of their value was lost.[35] Third, the principal of the investments themselves, due in part

[33] *New York Times*, December 13, 1902, p. 1.

[34] In 1902, it was estimated that more than three-fifths of American investment in Mexico, more than $330 million, was in railroads. See D'Olwer, "Inversiones", 1955, p. 1160.

[35] As Coatsworth has argued: "[I]t seems clear, therefore, that the depreciation in Mexico's silver currency which accelerated during the 1890s did not result in compensating adjustments in railroad tariffs sufficient to raise revenues earned per ton kilometer. In contrast to the rapid depreciation of the peso, railroad revenues per ton kilometer, in both current *and* deflated pesos, remained remarkably steady. With a major source of their inputs and most of their stockholders located abroad, chiefly in the United States and Great Britain, Mexican railroads companies had to meet rising foreign currency expenses out of constant peso earnings per unit of service. Most

to the low profitability caused by the high exchange rates, did not appreciate accordingly. Had railroad freight rates kept pace with the rising exchange rate and increased costs, investors might have tolerated silver's decline.[36] But such had not been the case.

Throughout the *Porfiriato*, the Mexican government had imposed ceilings on the rates that railroads could charge shippers. Given the export-driven model of economic growth, freight rate limits taxed railroad companies and subsidized export shippers. These rates, especially after 1898 (when the government created a special Tariff Commission weighted toward the interest of shippers), were increasingly inadequate to overcome rising costs.[37] In October 1902, Limantour directed the Tariff Commission to permit freight rates to be increased by fifteen percent when the peso-dollar exchange rate exceeded $2.20.[38] At this point, Limantour had conceded too little, too late; American investors demanded an economic environment that guaranteed stability and predictability, not one in which profits depended on the discretion of a sometimes sympathetic finance minister. At the turn of the century, the international institutional arrangement that seemed best suited to insure stability and predictability for capital investments was the gold standard.

Next, on October 29 1902, the Finance Minister addressed a confidential communiqué to the Banco Nacional de México. Limantour requested the *Banco* to begin selling daily on the London market small quantities of government silver (from 50 to 100 000 ounces), applying the revenue from these sales toward the foreign debt coupons due December 15, 1902. The purpose of this action was to convert silver revenue into gold without further lowering silver's quotation.[39] A month later, in early December, Limantour stipulated that these sales be transacted only when the price of silver had risen 1/16 pence over the quotation of the previous

---

companies suffered significant pressures on their profit margins, which neither the diminishing sympathy of the government nor their own transitory pooling arrangements sufficed to abate." Coatsworth, *Growth*, 1981, p. 93.

[36] This is the point Casasús argued during the subsequent deliberations of the monetary commission: "The land transportation business, would , if it had been able, have protected its interests, as all the producers have done, by increasing its tariff rates; but it has not been able to adopt a protective policy of that nature, because all the railroad corporations in the country are subject, by virtue of their concessions, to definite freight and passenger rates which they cannot put up at their pleasure." Casasús, *Reforma*, 1905, p. 214.

[37] Coatsworth argues that "[i]ncreased formal representation of shipping interests in the determination of railroad tariffs [after 1898] may help explain why railroad revenues per ton kilometer declined sharply in 1901-1902 and failed to return to previous levels thereafter," Coatsworth, *Growth*, 1981, p. 45.

[38] Viollet, *Problème*, 1907, p. 82.

[39] Limantour al Banco Nacional de México. AHBNM, Cartas de Hacienda al banco, enero 1897 a junio 1904, núm. 59, 29 de octubre de 1902.

day. Limantour was attempting to effect a rise in the price of silver, or at least to protect silver from further drops. Apparently this strategy could not produce the immediate consequences desired; nevertheless Mexico persisted in the policy for the next year.[40]

A second, related problem confronted Limantour. The declining price of silver meant that the tariff revenues received in silver would be worth less and less in gold. And since the debt was payable in gold, this state of affairs presaged a fiscal crisis. To compensate for the depreciation of silver, Limantour in November of 1902 devised a sliding tariff schedule that based tariff rates on a fixed gold amount regardless of silver's price. Such a schedule had been used in other Latin American countries during the 1890s to address fiscal problems of inflationary currency. Limantour conceded that the new tariff policy would prejudice imports: "The Government of Mexico, compelled by the necessity of preserving a sufficient revenue for meeting its gold obligations abroad, has placed the import tariff itself upon a sliding scale, which will increase the burden of the silver charges upon merchandise imported from gold countries."[41]

## The decision to call a Monetary Commission

Given the inability of the various temporary solutions to relieve the pressure on the Mexican treasury, and given the apparently permanent decline (and instability) in the price of silver bullion, in late 1902 Finance Minister Limantour moved to address the problems more radically. First he sent a confidential mission, led by Enrique Creel to New York and Washington, D.C., to discuss with U.S. officials, bankers, and representatives of ASARCO a plan to call for monetary reform in China as a way to address the severe perturbations upsetting the world silver market. The international initiative had a clear economic goal of helping to shore up the price of silver.[42] However, the plan also served political purposes–to show Mexico's mining sector that the government was working on behalf of silver interests and to portray the Mexican government as the initiator in an important international endeavor.[43] For that reason Limantour, who

[40] AHBNM, La correspondencia de direccion y consejeros con sucurales y con autoridades del gobierno, 1894-1915, núm. 18, Manuel Pereda al señor don José Ives Limantour, 1 y 2 de diciembre de 1902, and Gustavo Struck al Limantour, 3 de diciembre de 1902. See various letters in núm. 18 regarding this policy.

[41] Limantour, *Stability*, 1903, p. 40.

[42] See Limantour's instructions to Enrique Creel and Emeterio de la Garza, J. Y. Limantour al señor diputado don Enrique C. Creel, Mexico, 29 de diciembre de 1902, Archivo Histórico, Secretaría de Relaciones Exteriores (AHSRE), leg. 43, exp. 2.

[43] This initiative is closely analyzed in Passananti, "Acting".

otherwise operated in complete secrecy, publicized various documents regarding the international effort, all of which emphasized Mexico's lead in the movement for international monetary reform.[44] Moreover, in the summer of 1903, when Mexican commissioners traveled to Europe in an effort to persuade European governments to support common, collective action in China, Limantour sought to leverage the prestige of those meetings to reduce domestic political tension and soften public opinion toward the monetary reform.[45]

On February 4, 1903, having learned that the U.S. would cooperate with Mexico in an effort to call for monetary reform in China. Limantour established a domestic commission to undertake a study of Mexico's monetary problems and recommend solutions. Historians have generally taken at face value Limantour's given reason for convoking the monetary commission and thus have missed an opportunity to explore the nature of Porfirian politics. The late Mexican economic historian, Fernando Rosenzweig, believed that the commission's formation reflected the fact that the government "en realidad, aún no se tenía una idea clara sobre cómo proceder."[46] A less naive interpretation of the commission came from John Tutino, who charged that Limantour stacked the commission to assure "that the final recommendation would be a shift to the gold standard."[47] Both Rosenzweig and Tutino ignore the political calculus involved in Limantour's decision. A contemporary of Limantour, the French economist André-E. Sayous, believed that the finance minister, "ne de désire que masquer son semi-absolutisme vis-à-vis du président *Díaz*, toujours jaloux, et de ses rivaux, comme M. Joaquín *Casasús*. Il tient également à se préparer des excuses en cas d'insuccès."[48] The political purpose of the commission was at least partially grasped by Enrique Canudas, who believed that "Limantour quiso darle a la reforma toda la apariencia de una medida democrática, y para ello creó una Comisión Monetaria Nacional [...] En realidad, la decisión de la reforma había sido adoptada desde 1902-1903."[49] Canudas correctly dated the decision to adopt the gold-exchange standard in 1902, but was the commission cre-

[44] These remarkable documents can be found in *Diario Oficial*, t. LXIV, núm. 26, pp. 401-405, viernes 30 de enero 1903, as well as the científico-dominated *Economista Mexicano*, suplemento al núm. 18 del tomo XXXV.

[45] Limantour's letter to Díaz, August 28, 1903 from Paris, CGPD, leg. 012558-012560, is of special interest, but all Limantour's correspondence from Europe during the summer of 1903 reflected his concern with retaining Díaz's support for the reform as well as endeavoring to show his good will toward the silver industry. Limantour, *Reforma*, 1905, p. 2.

[46] Cosío, *Historia*, 1955, vol. II, p. 872.

[47] Tutino, *Insurrection*, 1986, pp. 333-334.

[48] Sayous, "Reforme", 1904, p. 136.

[49] Canudas, *México*, 1980, p. 428.

ated in order to give the reform una apariencia democrática? While apparent democracy was a respected and observed tradition in Mexican politics, it had been deployed in elections, not public policy. In the latter realm, "objective" social science reigned. The weakness of the *Científicos'* ruling legitimacy, or if you like, ideological hegemony, sprang from their inability to persuade Mexicans that their public policy was indeed objectively beneficial. For these reasons, the creation of a commission to investigate and recommend crucial public policy was important and demands fuller explanation.

Political considerations clearly prompted Limantour to create the monetary commission. Since the Reform era (1850s), no Mexican government had embarked on such a divisive public policy as the gold standard. President Díaz himself remained a reluctant convert to its adoption, and a lengthy review process would provide more time to convince him of its merits. Second, given the divisiveness of the reform, Limantour wanted to spread the responsibility among other important members of the Porfirian upper class. Enrique Creel recalled that "la responsibilidad para el señor Limantour era muy grande. Necesitaba el apoyo de respetables agrupaciones científicas para compartir responsibilidades y sobre todo para reunir elementos de convicción y de acierto [...] con ese objeto organizó la Comisión Monetaria."[50] In this sense, Tutino is right in saying that Limantour "selected the members carefully, guaranteeing a majority tied to the government, the railroads, the banks and others with large foreign obligations."[51] But contra Tutino, Limantour selected the members not in order to insure a favorable recommendation, but rather to create solidarity among the upper bourgeoisie. In a letter to Creel just days after Limantour announced the creation of the commission, the finance minister explained that, "estimo muy útil que las personas que por su inteligencia o posición social representan grandes intereses nacionales, palpen todas las dificultades del problema que, sin duda, pondrá de relieve la discusión, y asuman, a la vez, cierta responsabilidad moral en la manifestación pública y serena de sus opiniones personales."[52]

The commission also served to make the reform appear that the monetary reform emanated from Mexico and not from New York. Perhaps more importantly, Limantour desired that the new standard not appear to have been dictated by the government (especially the finance ministry), but to have arisen instead from the scientific investigations of a larger

[50] Enrique Creel, "La reforma monetaria", private archives.
[51] Tutino, *Insurrection*, 1986, p. 333.
[52] José Yves Limantour to Enrique C. Creel, February 10, 1903, Archivo José Y. Limantour (AJYL).

independent body. Here was the political method of the *Científicos*: to make politics appear, because of its alleged scientific basis, beyond the pale of public debate, of public choice.[53]

In addition, by including Landero y Cos as the mining industry's representative, Limantour brought the most outspoken and influential critic of the gold standard within the decision-making process. Neither a token gesture nor a sop, Landero y Cos' appointment was calculated to reduce intra-elite conflict and permit him to participate in policy modifications that would lessen the damage caused to mining. Still, Limantour gave the commission only a modicum of autonomy. In advance he had drawn up the questions that the commission would investigate and had chosen which members sat on each subcommittee. The commission's ultimate recommendations closely followed American advice, differing with it only on a point of moderate importance.

## U.S. FINANCIAL ADVISERS IN MEXICO

Not surprisingly, the Mexican government did not publicize its conferences with the American financial experts. During their week in Mexico in mid-March 1903, Charles Conant, Jerimiah Jenks (Professor of Political Economy at Cornell and Edwin Kemmerer's mentor) and Edward Brush (a director of ASARCO) were equally tight-lipped about the agenda pursued and advice given. The focus of the meetings was to discuss the means by which Mexico would adopt the gold standard; to design a coordinated plan for the upcoming international currency conferences; and to reach agreement with ASARCO in order to regulate the world supply of silver.[54]

Arguably the most critical item on the agenda was the first, namely to discuss the means by which Mexico would adopt the gold standard. This task was partly technical, partly political. The American advisers urged adoption of the new standard to stabilize the value of the Mexican peso in relation to the world's major currencies. They specifically recommended that Mexico fix the *peso*'s exchange rate at 50 cents U.S. gold, a rate that would facilitate commercial transactions between the two countries. Given

[53] Yet, as noted above, the preparation of public opinion was an important aspect of the científicos' leadership. Limantour acknowledged as much in his 'exposé de motifs,' that introduced the monetary reform bill to the Mexican Congress. He wrote, "the noteworthy work done both by the Mexican Commission on International Exchange and by the Monetary Commission which met at this capital, served to prepare public opinion." Limantour, *Reforma*, 1905, p. 2.

[54] These meetings are considered in great detail in my essay "Acting Globally, Thinking Locally."

that Mexico long enjoyed a positive balance of trade with the United States and that a majority of its trade was with America, the rate, denominated in light of the dollar, was a boon not a concession. In addition to its salutary effect upon commerce, a leading school of economic thought held that stable exchange rates best promoted the economic development of undeveloped countries. Stable exchange rates assured international capitalists that their investments would not suffer losses due to domestic inflation. This approach required that a nation's (here, Mexico's) circulating currency be limited, and that that circulation bear close relation to the nation's gold reserves. In this way the gold standard shielded the Mexican currency against fluctuations in the price of silver.

But the gold standard did more. Its traditional purpose was to prevent a country from expanding its money supply, which caused inflation, the creditor's historic enemy. A limit on the money supply made investments more secure. Credit now could be expanded only by increasing the gold reserves. And a nation's gold reserves could be enlarged through only three methods: increased production of gold, a favorable balance of trade or new infusions of foreign capital. Since gold production and trade surpluses could only be manipulated at the margins, the burden of increasing the money supply fell, in the short run, on those who could attract foreign loans. In this scenario, effective control of the money supply passed to foreign lenders.

Theoretically, such a tight money supply promised slower short-term economic growth, less volatility, and perhaps, fewer bankruptcies. Arthur Bloomfield made the more general point that in the period 1880-1914,

> a period generally characterized by strong secular expansionist forces, restrictive credit policies, to the degree that they were effective, served perhaps mainly to slow down or temporarily to halt the rate of expansion in the countries concerned, rather than to involve an absolute deflation of incomes and prices. To the extent that periods of sharp deflationary pressures did occur in individual countries, they appear to have taken place more frequently under the impact of world-wide depressions rather than under the influence of restrictive credit policies associated with the need for maintaining convertibility.[55]

Along with these benefits, this strategy carried a number of potential costs, all of which befell Mexico in the wake of the 1907 international recession. First, toward the end of the expansion of a business cycle foreign bankers possessed surplus capital that suffered falling interest rates at home. Attracted by higher foreign interest rates, stable exchange rates,

[55] Bloomfield, *Monetary*, 1959, p. 44.

and healthy international trade, these capitalists often overextended loans to developing countries. The gold standard, by stabilizing exchange rates, reduced once source of risk while leaving others untouched, thereby perhaps encouraged otherwise risky ventures. When the business cycle turned downward and international trade and capital markets shrank, the borrowing countries were left with hefty loans and few means of repayment. This occurred in Mexico in 1907, as treated more fully below. Second, a money supply fixed to gold reserves tied Mexico's hands at time came when the government might have adopted monetary policies to lessen the effects of the crisis.

Mexico's free coinage of silver had assured silver miners of a ready market for their product, and the depreciating currency had served protectionist purposes without the need for burdensome legislation. A stable *peso* demanded that the government intervene, close the mints, and actively regulate the monetary supply. Here economic science butted heads with formidable social constituencies, and the American advisers provided a sophisticated defense of the gold-exchange standard.

Proponents of the reform had to respond to the criticisms of two segments of the Mexican bourgeoisie, silver miners opposed to the closing of the mints and exporters hostile to a stabilized exchange rate.[56] Over the course of the previous generation both groups had devised elaborate arguments in defense of silver. Thus, the reform's opponents possessed a coherent ideology, with roots deep in the Porfirian past, that seemed to account for Mexico's unprecedented economic growth. The miners' argument could be dispensed with more easily than that of the agricultural exporters because it rested on what might be called a "proto-leading sector" analysis of silver's place in the Mexican economy. The miners argued that the silver industry had always been, and continued to be, the basis of Mexico's prosperity. Other economic sectors, they claimed, prospered only to the extent that silver prospered. José Landero y Cos, exemplified this argument:

> [L]o que constituye para México el beneficio de dichas minas, no son esas utilidades más o menos problemáticas, sino el trabajo que dan a buenos jornales en una porción numerosa de sus habitantes, el movimiento de efectos que producen, y el fuerte consumo que las empresas, y los empleados y operarios hacen de los frutos de la agricultura y de los productos de la industria de nuestro país. Visítense los minerales florecientes y se notará en ellos movimiento

[56] In a sense the division between miners and agriculturalists is overdrawn; the same person often owned both mines and haciendas.

y vida, y consumo abundante de los efectos todos, que no se encuentran en ciudades no mineras de doble población. Si esos centros mineros son heridos de una manera grave, algunos como Guanajuato y Zacatecas por su decadencia presente, serán heridos de muerte; sufrirán con ellos en mayor o menor escala todos los otros ramos de la riqueza pública, la agricultura, la industria, el comercio y los ferrocarriles, y muy especialmente la masa del pueblo trabajador.[57]

Landero y Cos also claimed that if Mexico abandoned the silver standard, it would weaken the remaining silver-currency nations' will to resist the gold standard, thereby further depressing the world demand for silver. Finally, to underscore the centrality of silver production to the economy, the miners stressed that silver still accounted for forty percent of export revenue.

Despite their passion, their appeal to history, and their political links, the silver owners' argument suffered too much from self-interest.[58] Gold advocates, while admitting that silver's share of exports was large, noted that it had been declining for decades. The basis of Mexico's future prosperity, they insisted, lay in other economic sectors. This analysis in fact dated from the mid-1880s, when the Mexican government first studied how the declining price of silver affected various sectors of the economy. The study concluded that though silver depreciation damaged mining profits, it spurred other enterprises.[59] Several years later, in the midst of another silver crisis, a similar argument was made by the British General Consul in Mexico, Lionel Carden. Carden speculated that the falling price of silver (and the *peso*) would eventually produce a more balanced Mexican economy in which agricultural properties would attract an increasing share of foreign investment, and in turn produce an increasing share of export revenue and national product.[60]

Here was the more compelling apologia for the silver standard, and it drew the attention of the American advisers. How could one deny that Mexico had enjoyed economic growth over the past twenty years and that the depreciating currency had played a major role by stimulating the

[57] José Landero y Cos, "Observaciones al dictamen de la Comisión de Crédito de la Sociedad Agrícola respecto á la adopción del patrón de oro", 4 de marzo de 1903, *Opiniones*, 1903, p. 28.

[58] In fact, doubts have been raised recently over the importance of the silver industry for the general health of the Mexican economy dating from at least the Bourbon period.

[59] See here Secretaría, *Crisis*, 1886, a collection of studies, commissioned by the Mexican government, which examined the effects of the first decade of falling silver prices on Mexico's economy. Some of the principal actors in Mexico's adoption of the gold standard, e.g., Limantour and Casasús, first became involved with the problem at this time.

[60] Carden, *Report*, 1893

export sector? The agricultural exporters broadened their appeal by pointing to Mexico's early industrial process, during which they argued that the depreciating peso had nurtured Mexico's infant industries. For example, Pedro M. Gorozpe, writing to the editor of *La Semana Mercantil*, cautioned that if the gold standard were adopted, "la industria resentiría perjuicios, porque es notorio que por la baja de la plata, ha ido en aumento el número de fábricas de tejidos de algodón que existen en la república."[61] In other words, the falling peso promoted industry and subsidized exports without the international friction of high tariffs or the fiscal burden of bounties.

Exporters claimed that protectionism had produced Mexico's export-driven economic growth; the American advisers countered that this growth was more apparent than real. They challenged the assertion that Mexican exports had grown significantly in the past decade. They admitted that a depreciating currency promotes "certain temporary benefits [...] in extending and developing the trade of the export country." Yet they raised doubts about "whether the continuous depreciation of the standard may not reach a point which will soon result in the surrender of a given quantity of domestic goods to foreign purchases in exchange for a continuously declining quantity of foreign goods."[62] In an essay submitted to the Mexican Monetary Commission, Conant, Jenks and Brush charged that Mexico's export-driven economic growth was an illusion created by calculating the value of exports with inflated currency. The basis of their assertion was an analysis of the growth of the export sector. Adopting what economists today term growth in real, or deflated terms, the Americans argued that the value of Mexico's exports grew, in the decade 1892-1902, at the modest annual rate of two percent.[63] This argument was influential; Limantour later used it in the explanatory statement accompanying the gold-exchange standard bill he sent to the Mexican legislature in November 1904. Limantour observed that "the gold value of our exports, which in 1891-1892 was $63 000 000, rose only to $77 000 000 in 1900-1901, the increase being barely from 20 to 22 per cent." And since it was during this ten-year period that "our exports have evinced the slowest progressive rate of growth," he concluded that "it is necessary to admit that the depreciation of the currency cannot have exercised a very decisive influence in the encouragement of export industries."[64]

[61] Pedro M. Gorozpe al señor don Everado Egewisch, 22 de diciembre de 1902, en *Opiniones*, 1903, p. 3.
[62] *Ibid.*, p. 431.
[63] Conant, Jenks y Brush, "Influence", 1903, p. 432.
[64] Limantour, *Monetary*, 1904, p. 4.

A final aspect of the meetings between the Mexican officials and their U.S. advisers deserves mention and comment. During the meetings, Mexican officials and Edward Brush of ASARCO discussed a secret pact to control the world silver market. This aborted accord has remained the most recondite aspect of the monetary reform. ASARCO and the Mexican government agreed that

> the value of silver is regulated by the surplus delivered to the London market, amounting to about 100 000 000 ounces per annum. Combined production of the American Smelting and Refining Company and such silver production in Mexico as can be controlled for sale by the Mexican Government will certainly equal 100 000 000 ounces, and the selling of the same should be so regulated as to maintain a comparatively steady value.[65]

Behind euphemisms like "combined production," "selling should be so regulated," and "maintain a comparatively steady value" loomed the darker image of a clandestine international silver trust, withholding product, fixing price, and enjoying monopoly profit. Yet the dark portrait is not apt. Both Mexico and ASARCO understood that an immodest scarcity of silver on the London market would create a temporarily high price for the metal, which would induce marginal producers to reenter the field. The long-run effect would be more silver, lower prices, increased instability, and lower profits. Mexico and Asarco's goals were more modest. They wanted a slight increase in the price of silver and long-term stability. Nevertheless, it seems that the two parties failed to reach a final agreement on this decision. In the following year (1904), when Limantour introduced the monetary reform bill to Congress, he felt it necessary to deny that any attempt to raise or artificially fix the price of silver had been made. He declared that,

[65] Enclosure of Edward Brush, March 15, 1903, Mexico, entitled "Method for procuring international co-operation and. [*sic*] Reasons therefore", within Jeremiah Jenks to Secretary of State John Hay, April 11, 1903, National Archives State Deparment Record Group (NASDRG) 37 (miscellaneous letters). See also the remarkably candid published report by the US Commission on International Exchange, in which it informed Secretary of State John Hay that "there are sold on the London market annually about 100 000 000 ounces [of silver], this market, of course, fixing the price for the world. Some four great organizations of smelters and refiners in the United States have at their disposition from 70 000 000 to 75 000 000 ounces a year, produced in the United States and Mexico. The amount sold by Mexico, exclusive of her product sold by the above-named smelters, amounts to from 25 000 000 to 30 000 000 ounces per year. These establishments are all working more less in harmony, and it is likely that within another year the selling of from 100 000 000 to 110 000 000 ounces per year will be practically handled by one establishment." U.S. Commission, *Stability*, 1903, p. 30.

at one time, it is true, there was some talk of curtailing the output of silver in order to increase the demand; but Mexico would have been the last country to countenance such an idea, for the reason, among others, that she is the largest producer of silver and that the winning of that metal from her soil is intimately bound up with the winning of other metals which constitute a source of great wealth to the nation. Certain negotiations conducted last year by the Commission on International Exchanged, which the government sent to Europe, must not be confused with the project just alluded to.[66]

Despite any evidence that pact was consummated, it is interesting and significant nevertheless that such an arrangement between a private international trust, ASARCO, and a sovereign government was seriously discussed and considered.

## THE MEXICAN REVOLUTION

Two interpretations of the Mexican Revolution by the U.S. historians John Hart and John Tutino, assert that the Mexican Monetary Reform of 1905 helped spark a political and economic crisis within the Mexican elite, and that this crisis led to the outbreak of civil war and revolution.[67] The emphasis these historians place on the monetary reform is arresting, because their interpretations are based on such little knowledge of the reform's origins, execution, or effects. Despite their provocative theses, present historical knowledge cannot bear the weight that Hart and Tutino have given the reform's relation to the Mexican Revolution. Future historical research on the reform, which exploits new sources and employs a more rigorous method, may yet establish links between the reform and subsequent political and economic conflict that existed on the eve of the Revolution. A crucial question is whether the sharp political division among the Porfirian bourgeoisie over the monetary reform mirrored schisms that appeared during the presidential crisis of 1910-1911. A second question treats peoples'

[66] Limantour, *Monetary*, 1904, p. 9.

[67] See the work of Tutino, *Insurrection*, 1986, in which he argues that the adoption of the gold standard caused economic hardship and political division among the elite. The ensuing conflict led, in Tutino's view, to the breakdown of the state that ushered in the Revolution, pp. 332-336. Hart, *Revolutionary*, 1987, also asserts that the monetary reform was an economic and political disaster that contributed much to the demise of the Díaz regime. Tutino's account is based upon Maria, "Científicos", 1979, pp. 157-187. María y Campos was the first to develop the thesis that the reform created political tension within the elite, and he cautions against inferring much about the reform's relation to the 1907 economic crisis. The author notes that both Tutino's and Hart's works exist in Spanish translation.

perceptions. Did Mexicans link the 1907 recession and subsequent hardships on the monetary reform? This question remains relevant regardless of whether, objectively, the reform aggravated economic conditions.[68]

Politically, the policy process that resulted in the monetary reform revealed a científico group more flexible and sensitive to its intra-class opposition than scholarship has suggested. The process of managing the reform also signaled a surprisingly precocious will (if not capacity) to externalize the costs of foreign-induced domestic reform. However by ultimately embracing the monetary reform, the *Científicos* underlined how completely their development model was conditioned by continued access to foreign loans and investment. This marks clearly the limits and contradictions of the program of economic nationalism that has been attributed to the group.[69]

## ARCHIVES CONSULTED

AHBNM Archivo Histórico Banco Nacional de México, Mexico, D. F.
AHSRE Archivo Histórico, Secretaría de Relaciones Exteriores, Mexico, D. F.
AJYL Archivo José Y. Limantour, CONDUMEX, Mexico, D. F.
CGPD Colección General Porfirio Díaz, Universidad Iberoamericana, D. F.
CGBR Colección General Bernardo Reyes, CONDUMEX, Mexico, D. F.
DBHA Deutsche Bank Historische Archiv, Frankfurt, Germany.
NASDRG National Archives State Department Record Group, Washington, D. C.

## NEWSPAPERS AND JOURNALS

*Diario Oficial*, Mexico City.
*Economista Mexicano*, Mexico City.
*New York Times*, New York.
*Banker's Magazine*, New York.

[68] An effort to assess the economic consequences, namely the economic hardships, associated with the monetary reform has been broached in Schell, "Money", 1996.

[69] Several historians have pointed to the economic nationalism of the *científicos* or the fact that they developed a certain national consciousness. Most prominent among them are Katz "Mexico", 1986, and Knight, *Mexican*, 1986.

## SECONDARY SOURCES


BORJA MARTÍNEZ, FRANCISCO, "La reforma monetaria de 1905" in JOSÉ ANTONIO BÁTIZ and JOSÉ ENRIQUE COVARRUBIAS (eds.), *La moneda en México, 1750-1920*, Mexico, Instituto Mora/COLMICH/COLMEX/IIH-UNAM, 1998.

BLOOMFIELD, ARTHUR I., *Monetary Policy under the International Gold Standard: 1880-1914*, New York, Federal Reserve Bank of New York, 1959.

BRYAN, ANTHONY T., "Mexican Politics In Transition, 1900-1913: The Role of General Bernardo Reyes", doctoral thesis, University of Nebraska, 1969.

CANUDAS, ENRIQUE "La circulación comercio y transporte en México entre los años 1880-1910" in CIRO CARDOSO (coord.) *et al.*, *México en el siglo XIX (1821-1910), historia económica y de la estructura social*, Mexico, Nueva Imagen, 1980.

CARDEN, LIONEL, *Report on the Depreciation of Silver in Mexico*, London, Her Majesty's Stationery Office, 1893 (Miscellaneous Series, 302).

CASASÚS, JOAQUÍN, *La reforma monetaria en México*, Mexico, Impr. de Hull, 1905.

COATSWORTH, JOHN H., *Growth against Development*, DeKalb, Illinois, Northern Illinois University Press, 1981.

COMMISSION ON INTERNATIONAL EXCHANGE, *Stability of International Exchange: Report on the Introduction of the Gold Exchange Standard into China and Other Silver Using Countries*, Washington, D.C., Government Printing Office, 1903.

CONANT, CHARLES, JEREMIAH JENKS and EDWARD BRUSH, "The Influence of Falling Exchange upon the Return Received for National Products", *Stability of International Exchange*, Washington, Gibson, 1903.

CONANT, CHARLES A., *History of Modern Banks of Issue*, New York, Putnam, 6a. ed., 1927.

COSÍO VILLEGAS, DANIEL, *Historia moderna de México*, vol. II, *Vida económica*, Mexico, Hermes, 1955.

CREEL, ENRIQUE C., "El patrón de oro", paper presented at the Sociedad Positivista, Mexico, October 20, 1902.

_____, "The Silver Basis in Mexico", *Banker's Magazine*, vol. LXV, no. 5, November, 1902.

D'OLWER, LUIS NICOLAU, "Las inversiones extranjeras" in Daniel Cosío Villegas, *Historia moderna de México*, vol. II, *Vida económica*, Mexico, Hermes, 1955.

GUERRA, FRANÇOIS-XAVIER, *México: del antiguo régimen a la revolución*, trad. Sergio Fernández Bravo, Mexico, FCE, 1988, 2 vols.

HART, JOHN MASON, *Revolutionary Mexico: The Coming and Process of the Mexican Revolution*, Berkeley, California, University of California, 1987.

KATZ, FRIEDRICH, "Mexico: Restored Republic and Porfiriato, 1867-1910", *Cambridge History of Latin America*, Ed. Leslie Bethell, Cambridge, 1986, vol. 5.

KNIGHT, ALAN, *The Mexican Revolution I*, London, Cambridge University Press, 1986.

LAWSON, W. R., "Is the Mexican Dollar Played Out?", *Banker's Magazine*, vol. LXV, no. 1, January 1903.

LIMANTOUR, JOSÉ YVES, *Monetary Reform in Mexico. Explanatory Statement and Bill Sent to Congress by the Minister of Finance Lic. don José Y. Limantour*, Mexico, s. e., 1904.

———————, *La reforma monetaria*, Mexico, Tip. de la Oficina Impresora de Estampillas

LUNA, JESÚS, *La carrera pública de don Ramón Corral*, trad. Antonieta S. de Hope, Mexico, SEP, 1975 (SepSetentas, 187).

MARIA Y CAMPOS, ALFONSO DE, "Los Científicos y la reforma monetaria de 1905", *Estudios Políticos*, Revista de Administración Pública, FCPyS-UNAM, vol. 5, no. 18-19, April-September, 1979-1980, Mexico, pp. 157-187.

MUSSACHIO, ALDO, "La reforma monetaria de 1905: un estudio de las condiciones internacionales que contribuyeron a la adopción del patrón oro en México", *Secuencia*, no. 52, January-April, 2002.

*Opiniones sobre la cuestión monetaria presentadas a la Junta Directa de la Sociedad Agrícola Mexicana, por algunos de sus miembros*, Mexico, Imprenta Particular de la Sociedad Agrícola Mexicana, 1903.

PASSANANTI, THOMAS, "Conflicto y cooperación financiera en la Belle Epoque: Banco Alamanes en el porfiriato tardío" in SANDRA KUNTZ FICKER and HORST PIETSCHMANN (eds.), *México y la economía atlántica siglos XVIII-XX*, México, COLMEX, 2006.

———————,"'Nada de papeluchos!': Managing Globalization in Early Porfirian México", *Latin American Research Review*, October, 2007.

———————,"Acting Globally, Thinking Locally: México's participation in the Comisision on International Exchange" (submitted and under review).

PLETCHER, DAVID, "The Fall of Silver in Mexico, 1870-1910, and Its Effects on American Investments", *Journal of Economic History*, no. 18, 1958.

ROMERO SOTELO, MARÍA EUGENIA, "La reforma monetaria de 1905; La cuarta y quinta subcomisión: argumentos y propuestas", *El Economista Mexicano*, no. 10, 2005.

SAYOUS, ANDRÉ-E., "La réforme monétaire au Mexique", *Revue d'Économie Politique*, année 18, 1904, Paris, pp. 133-144.

SCHELL, WILLIAM, "Money as Commodity: México's Conversión to the Gold Standard, 1905", *Mexican Studies/Estudios Mexicanos*, no. 12, 1996.

———————,"Silver Symbiosis: ReOrienting Mexican Economic History", *Hispanic American Historic Review*, no. 81, 2001.

SECRETARÍA DE FOMENTO, *La crisis monetaria: Estudios sobre la crisis mercantil y la depreciacion*, Mexico, Oficina Tipogáfica de la Secretaría de Fomento, 1886.

SECRETARÍA DE HACIENDA, *Memoria de Hacienda y Crédito Público correspondiente al año económico del 1 de julio de 1902 al 30 de junio de 1903 presentada por el secretario de Hacienda al Congreso de la Unión*, Mexico, Tipografía de la Oficina Impresora de Estampillas, 1907.

TUTINO, JOHN, *From Insurrection to Revolution in Mexico, Social Bases of Agrarian Violence, 1750-1940*, Princeton, New Jersey, Princeton University Press, 1986.

VIOLLET, EUGÈNE, *Le problème de l'argent et l'étalon d'or au Mexique*, Paris, V. Giard y E. Briere, 1907.