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*China and the World Financial
Markets 1870-1930: Modern Lessons
From Historical Globalization*

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China and the World Financial Markets 1870-1930:
Modern Lessons From Historical Globalization

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Preliminary, Comments Welcome

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China began to borrow in the world capital markets in the late 19th century, issuing bonds to pay for defense as well as for large-scale economic development. Particularly interesting is the role that the clash between domestic and international investors played in China's 1911 revolution. The protection of external investor rights was perceived at the time as an infringement on Chinese sovereignty. In this paper we interpret the conflict over foreign investor rights in terms of a disequilibrium in the development of financial markets. Europe's high level of investor diversification put her investors at a relative advantage in bidding for development projects in China, while European investor expectations about protection from expropriation and default, lowered Chinese cost of capital, but also led to erosion of national sovereignty and a dramatic, grassroots political backlash. Despite fundamental differences between China today and China 100 years ago it is still important to consider the dangers of an imbalance between domestic and international investor markets, and the mismatch between domestic and foreign expectations about investor protection. The lessons of the last century suggest that China today should consider opening Chinese investor access to foreign capital markets in order to equilibrate the level of diversification between foreign and domestic investors. In addition, protection of domestic corporate investor rights is at least as important as protecting foreign investor rights.

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I. Introduction

Early in the 20th Century, China was one of the hottest emerging markets for global investment. One estimate of total foreign capital invested in China in 1938 put it at \$2.5 billion, third behind India and Argentina as a target of developing market investment, and not dramatically less than the \$7 billion of foreign investment in the United States at the time.¹ China began borrowing from foreign investors in 1861 and continued to do so through 1938. Like many other nations in this period, China used foreign capital for military defense and for modernization of infrastructure, including the construction of railroads and the modernization of communications systems. What makes the external financing of China particularly interesting in this era is the role it played in colonial designs on Chinese sovereignty and the dangers of disequilibrium in the development of financial markets. Foreign investment over roughly eight decades financed remarkable growth in the Chinese economy, however the very protections that induced investors to commit capital to a risky, emerging market also nearly tore the nation apart. From the foreign perspective, investor protections seemed reasonable – the Chinese government bonds floated by leading investment banks in Europe were backed by revenues collected and overseen by European nationals. Likewise, Chinese railroad bonds were secured with mortgages on the property and revenues of the railway lines, and, while nominally owned by China, they were operated by foreign representatives of the firms that built them. From the Chinese perspective, however, these terms were viewed as an affront to Chinese sovereignty and an impediment to a domestic corporate sector. As a consequence, the terms of Chinese external loans led directly to a backlash against foreign ownership of Chinese capital and foreign encroachment on Chinese sovereignty.

The weakening of Chinese sovereignty in the late 19th Century through the agency of foreign investment represents a lost opportunity to integrate the world's most populous nation into what was then a robust and growing global economy. Instead, political fragmentation in China's warlord period, followed by an extended war against Japanese colonialism and an anti-capitalist revolution, shifted China away from widespread economic and financial relationships with the world community. Only in the last two decades has China returned to the world financial community and

¹ Lewis, Cleora, 1948, *The United States and Foreign Investment Problems*, The Brookings Institution, Washington. P. 295.

in the last decade China has begun to rebuilt her own domestic capital market.

In the current paper, we are interested in what led to the dramatic reliance upon foreign capital during this period, and also in the economic motives behind the onerous terms demanded by foreign investors. We believe there were strong financial drivers behind both of these factors. Although the quasi-colonialization of China by the Great Powers in the late 19th Century is largely seen as a political process, we argue that fundamental financial factors played an important role. These same financial factors may be important to consider as China moves aggressively towards integration into the world financial markets in the 21st Century. China currently faces problems loosely similar to those she faced a century ago. These include a continuing need to build infrastructure for development, the potential for foreign investment capital and foreign competition as a result of entry into the WTO, and the issue of how best to mobilize domestic savings.

To give the reader a brief preview of our results, we argue that some of the dire political consequences of China's external indebtedness a century ago are largely attributable to two financial factors that stem from the rapid development of European capital markets in the 19th century. The first factor is a dramatic mismatch between the international investor opportunity set and the Chinese investment opportunity set. 100 years ago, Europe had the world's most liquid and well-developed capital markets. Capital markets were a powerful engine for European industrial development and a liquid source for the financing of technological innovation. From the perspective of the supply side, European capital markets mobilized not only the savings of large, wealthy investors, but also tapped the investment capacity of savers with modest wealth.

Capital markets in the late 19th Century may have existed on a small scale in the financial centers of Shanghai and Hong Kong, however there was simply no comparison to the international capital markets of London, Paris and Amsterdam. This disparity provided a fundamental comparative advantage to European enterprise – it could readily tap investment to develop large-scale capital-intensive projects like railroads. One particularly crucial feature of Europe's capital markets – in contrast to markets that were limited to domestic securities, was the capacity for even small investors to hold diversified portfolios. In terms of financial theory, this imbalance in diversification meant that foreigners may have been effectively the marginal investors in Chinese enterprise and public debt. That is, in head-to-head competition between foreign and Chinese capitalists for commercial projects – simply by virtue of a cost of capital driven by relative

diversification – the foreigners could pay more.

The second factor in the trajectory of Chinese foreign indebtedness is the relative newness of legal protection and governance structures for enterprise in China. By the late 19th Century, many European nations had developed laws and norms for the definition and governance of business enterprise, as well as legal protection of the rights of security holders – both holders of corporate obligations and holders of sovereign debt. In Asia, Japan moved quickly to adopt financial markets and structures patterned after European models, but major steps in this direction were not taken in China until the early 20th Century. Even then, stakeholders of various kinds – from local gentry to provincial government officials wielded considerable power and influence over commercial enterprise. Virtually all the rail and mining firms operation in China before the 20th Century were incorporated in Europe, not China. These foreign concessionaires extracted guarantees from the Chinese Imperial Government such as direct control over collection of revenues, the right of property seizure in case of default, the right to source their own materials, and exclusivity against domestic or foreign competition. In some cases, concessions included near-complete autonomy from Chinese law and taxation, and freedom from local competition – even the right to issue a separate currency. While such deals may have lowered the risk to foreign investors, their effect was to elevate the protection enjoyed by foreign firms above Chinese firms.

The protections for foreign investors in Chinese government bonds were even more extraordinary. Beginning in the mid-19th Century the Chinese Maritime Customs revenues were collected and controlled by the British. Payments on foreign debt could thus be taken directly from customs revenues before going to the treasury – effectively giving foreign bond holders senior claim to China’s primary source of revenue. While this undoubtedly lowered the Chinese Government’s cost of capital by reducing the probability of default, it also limited the fiscal options of the Chinese state, and put her purse-strings in the hands of a foreign power.

Foreign control of Chinese Maritime Customs, and the commercial concessions extended to foreigners may have served at first to control foreign investor risks, but they had obvious political repercussions. Indeed, they were regarded then, as now, as dangerous, intermediate steps towards

the foreign colonialization of China.² Foreign control of China's transportation system and trade revenues put the Imperial government at the mercy of political attempts to press territorial advantage. The great powers: Britain, France, Germany, Russia and Japan all had imperialistic designs on Chinese territory. While investor benefits may have been the original motivation for commercial and governmental concessions, following the Sino-Japanese War, the great powers vied with each other to finance Chinese rail development – regardless of whether there was demand by investors for the loans. China was chronically in debt in the early 20th Century as a result of indemnities settled on her by these same powers – a condition that gave foreign nations more leverage in negotiations to expand their spheres of territorial influence. The pressure of foreign powers on the Chinese government together with the institutional imbalances between Chinese financial markets and the those of the developed world was an explosive combination. They finally led to the foreign ownership of productive capital, to foreign capitalists playing in China by their own rules, and to the pretext for weakening of the state control over her own territory.

The remainder of this paper is organized as follows. In section II and III, we more fully describe theoretical background for the two salient financial factors – capital market development and investor protections. Section IV examines the history of Chinese sovereign debt, and addresses the proposition that the foreign control of maritime customs in fact reduced the risk to foreign bondholders. Section V examines the history of Chinese railroad bonds, and investigates the role that local stakeholders and the development of a domestic capital market played in the Revolution of 1911. Section VI concludes, with recommendations for current Chinese capital market development.

II. Factor 1: Mismatched Investor Opportunity Set

II.1. International Diversification

Rudolph Taüber's 1911 survey of the world's stock markets provides a useful overview of the world of international investing before the First World War. He describes bourses in more than

² See, for example, Winston, A. P., 1916, "Chinese Finance Under the Republic," *Quarterly Journal of Economics*, 30(4) August, 738-779.

thirty countries around the world available to the German investor.³ Henry Lowenfeld, an English author, in his 1909 book *Investment an Exact Science* lists forty countries with stock markets open to British investors.⁴ In fact, for British investors of this era, many of these markets were available by trading on the London Stock Exchange itself – either by purchasing stocks and shares in foreign firms listed in London, or by purchasing the securities of British firms with concessions to operate overseas. Lowenfeld’s analysis is particularly interesting, because it proposes an international diversification strategy based on “The Geographical Distribution of Capital.” With numerous graphs showing the uncorrelated movement of securities from various countries, he argues that superior investment performance is obtained by spreading capital in equal proportion across a number of geographical sectors and carefully re-balancing back to these proportions on a regular basis.

It is significant to see how entirely all the rest of the Geographically Distributed stocks differ in their price movements from the British stock. It is this individuality of movement on the part of each security, included in a well-distributed Investment List, which ensures the first great essential of successful investment, namely, Capital Stability.⁵

This geographical diversification strategy was apparently a popular one with British and other European investors around the turn of the century. Europe was the world’s major exporter of capital to the world until the end of the World War I, when the lending role of the United States and Japan grew in prominence. Michael Edelstein ranked Great Britain, France and Germany as the leading creditor nations in terms of capital outflows for most five year periods from 1881 to 1913

³ These include Germany, Austria, Switzerland, the Netherlands, Norway, Sweden, Denmark, Russia, Serbia, Greece, Rumania, Turkey, Italy, Spain, Portugal, Belgium, France, Great Britain, Ireland, New York, Haiti, Dominican Republic, Ecuador, Brasil, Peru, Argentina, Uruguay, Chile, Columbia, Venezuela, Japan, South Africa, Natal, Egypt and Australia.

⁴ Great Britain, India, Canada, Australia, Tasmania, New Zealand, Straits Settlements (Singapore), Belgium, Denmark, Germany, Holland, Norway, Russia, Sweden, Switzerland, Austria, Bulgaria, France, Greece, Italy, Hungary, Portugal, Roumania, Spain, Serbia, Turkey, Japan (Tokio and Yokohama), China (Shanghai and Hong Kong), Cape Colony, Natal, Transvaal, Egypt, New York, Mexico, Argentine, Brazil, Chile, Peru and Uruguay.

⁵ Lowenfeld, Henry, 1909, *Investment an Exact Science*, The Financial Review of Reviews, London. p. 49.

with Russia, Norway Australia, South Africa and the United States also occasionally being next capital exporters in this period.⁶ Cleora Lewis' comprehensive study of international capital flows suggests that by 1938, the U.S., U.K., Holland, Belgium, Sweden, Italy and Japan were the only capital exporting countries.⁷ Of course, this does not mean that investors in all non-exporting nations were necessarily undiversified. In the context of an equilibrium model like the CAPM, in which all investors hold the same portfolio of risky assets, investors from small countries will hold mostly foreign assets, and by the same token, the enterprises of small countries will have mostly foreign investors.

II.2 Limited Domestic Opportunity Set

But what of a world out of equilibrium – a segmented market in which one set of investors is able to diversify their portfolios through international investments and another set is constrained to hold assets in only one country? Consider the following stylized example. There are two separate capital markets, market 1 and market 2 in which investors holding shares in market 1 cannot hold shares in market 2 and vice versa. Take market 1 to be China and market 2 to be the European capital markets of the turn of the century. Now consider a new project, n , which pays a random cash flow and needs financing. The project owner must decide which market will give the best terms. In effect he will choose the market with the lowest cost of capital for the project which is the expected rate of return $E[R_{n1}]$ or $E[R_{n2}]$. Let us assume that the equilibrium asset pricing model CAPM holds in each separate market, that the coefficient of risk aversion for the representative investor in each market is equal, that each project is atomistic in its respective market, and that the riskless rate of return, R_f is the same in each market. Using standard notation for betas, correlations, variances and covariances, and letting θ be the coefficient of risk aversion, the conditions determining the relative costs of capital in each market are then straightforward.

⁶ Edelstein, Michael, 1982, *Overseas Investment in the Age of High Imperialism*, Methuen and Co. New York, p. 271.

⁷ Lewis, Op. Cit.

$$\begin{aligned}
E[R_{n1} - R_f] &= E[R_{n2} - R_f] \\
\beta_{n1}[R_{m1} - R_f] &= \beta_{n2}[R_{m2} - R_f] \\
\frac{\sigma_{n1}}{\sigma_1^2}[R_{m1} - R_f] &= \frac{\sigma_{n2}}{\sigma_2^2}[R_{m2} - R_f] \tag{2} \\
\frac{\sigma_{n1}}{\sigma_1^2}\theta\sigma_1^2 &= \frac{\sigma_{n2}}{\sigma_2^2}\theta\sigma_2^2 \\
\sigma_{n1} &= \sigma_{n2}
\end{aligned}$$

For the owner to be indifferent between sources of financing, the covariances of the cash flows of project n with respect to the segmented market portfolios must be equal. However, suppose there is an inequality? Equation 1 suggests that the required rate of return on the project in market 1 will be larger than in market 2 when the covariance of the project with respect to the market index 1 is greater. For China, it is natural to assume that domestic development projects have a higher covariance with a domestic, market-weighted portfolio of Chinese companies than with a market-weighted portfolio of the rest of the world's companies, excluding China. This suggests that the cost of capital in the domestic market – if fully segmented – will be higher.

This interpretation should be tempered, however, with the understanding that the requirements for a pricing model like the CAPM to hold – particularly liquidity requirements – are probably unrealistic for China in the last century. In addition, it is not clear whether a railway project in China would have a higher covariance with other economic activity in China, or with a world index which is heavily weighted to railway companies. This is an empirical matter for further research. Finally, Shanghai at the turn of the century had banks and equity markets. Did these allow Chinese investors to diversify their portfolios internationally – effectively making our assumption of segmentation incorrect? Again, this is a matter for further research.

Equation 1 characterizes conditions in terms of covariances, but this effect can be decomposed into correlations and standard deviations, which allows us to consider the relative importance of diversification. Under what conditions will we find the cost of capital be smaller for market 2 than for market 1? Assuming correlations to be positive:

$$\sigma_{n1} > \sigma_{n2}$$

$$\rho_{n1} \sigma_n \sigma_1 > \rho_{n2} \sigma_n \sigma_2$$

$$\frac{\rho_{n1}}{\rho_{n2}} > \frac{\sigma_2}{\sigma_1}$$

(3)

Equation 2 suggests that even in the case where the $\rho_{n1} = \rho_{n2}$, if the standard deviation of the world wealth portfolio (excluding China) were lower than the standard deviation of the Chinese market index, then the owner would find external financing more attractive. As Stulz (1999) points out, and as contemporary commentators on international investing noted, the risk of a global investor's portfolio was reduced through geographical diversification. In a world where one group of investors is diversified and another group is not, the diversified investors are simply willing to pay more for the same asset. This obtains when the added asset is more highly correlated to the domestic investor's portfolio, and also when the volatility of the domestic portfolio is higher. If this were true in China 100 years ago, we would expect to find a reluctance by Chinese investors to invest capital in domestic projects on the same terms provided to foreign investors. Of course, this analysis may simply pre-suppose too much about the relative development of Chinese capital markets.

The western encounter with China during the 19th century was as much a clash of financial systems as it was a clash of technology and culture. There was no Chinese parallel to the rapid European development of government and corporate bond and share markets over the 19th Century. This stands in marked contrast to Japanese efforts in the late 19th century to develop internal capital markets. Like China, Japan first floated foreign bonds in the 1870's. However unlike China, virtually all Japanese financing until the mid-1890's made active use of an internal government debt market, and much economic development was financed by a business environment consciously adopted during the Meiji period from successful European models.⁸ In contrast, the Chinese financial system in the mid to late 19th century was dominated by pawnshops and money shops for small-scale lending, exchange banks for distant transfer of funds, and, after 1860, customs banks in major ports to receive and disburse customs payments for foreign trade.⁹ The lack of a capital market meant that most lending and equity investment was private. The government did not borrow by issuing public debt, and by some accounts, regarded the payment of interest for borrowing

⁸Suzuki, Toshi, 1994, Japanese Government Loan Issues on the London Capital Market 1870-1913, Athlone Press, London.

⁹ See Stanley, John C. Late Ch'ing Finance: Hu Kuang-Yung as an Innovator, Cambridge, Massachusetts, 1970. Pages 19-29.

anathema. Interest-free lending to the government was seen as a obligation. In his history of Late Qing finance, Stanley quotes a telling statement from a government official in the 1870's regarding the domestic issue of bonds: “As the loan is one from people to officials, it is inexpedient that it should bear interest.”¹⁰ Such governmental resistance to compensation for the time-value of money cuts two ways. The government deposited tax revenues with exchange banks and demanded no interest – presumably the yield on these deposits, if realized were regarded as the benefits of patronage. Understandably, the official attitude towards government loans made it hard to borrow from her own citizens. Thus, the effects of diversification may have been secondary to the simple lack of a liquid capital market.

There is some historical evidence that the required rates of return on foreign-financed capital projects during this era were less than the rates of return to externally financed infrastructure projects. Pommeranz cites evidence that the “prime rate” charged to the government and leading merchants by Tianjin banks and pawnshops in the late 18th century was 10% to 12%. Broader surveys of Chinese interest rates in the early 20th century document annualized median interest rates on agricultural loans 30%, and for business ventures, required loan rates of 7% to 8% plus a share in equity profits.¹¹ Lee notes that capital opportunities outside of the traditional investment in real estate and pawn shops also yielded higher returns – Chinese capitalists were actively investing in export-oriented industry such as textile and food processing. Lending to the government and buying railroad bonds and shares were comparatively unattractive places for capital.¹² Unfortunately, there is no systematic survey of rates of return on investments in China at this time, because there was no large scale public capital market. What is clear is that it was hard to attract domestic investment. The Chinese were not major investors in government loans or domestic development projects in the late 19th and early 20th Centuries – a simple economic explanation for this is that there were superior risk-adjusted alternative uses of capital.

The dramatic export of capital from Europe, and the active practice of international

¹⁰ Ibid. p. 65.

¹¹ Huenemann, p. 128-129.

¹² Lee, op.cit. P. 133.

portfolio diversification must surely have had a significant effect on the markets into which Europe's capital flowed. Stulz (1999) argues that the modern trend towards globalization has reduced the global cost of capital through the diversification effect. Motivated by similar interests, Beakaert and Harvey (1995, 1998) carefully examine the shifts in cost of capital and market risks in emerging markets as they integrate into the world capital market. The general conclusions reached by these and other researchers studying world capital market liberalizations is that the cost of capital drops as outside investors are given access to local investment projects. There are obviously positive features of this drop in cost of capital – capital projects previously unattractive due to low rates of return are can now be financed. Lower interest rates can be an extraordinary boom to the economy. Hou (1965) and Huenemann (1984) both document the dramatic expansion of the Chinese economy resulting from foreign investment n the late 19th century. However, the other side of the coin is that, in the competition for control of domestic assets, the undiversified local investor is at a relative disadvantage.

This competition between domestic and international investors is the theme of Rajan and Zingales (2001). They point out that, despite the obvious efficiencies of international financing, domestic investors may strongly resist competition. The motive for such resistance is, presumably, the additional benefits of influence attached to rights of control enjoyed by local management. When these rights are challenged without compensation, and the powers of local interests are not governed by strict rule of law, the consequences are potentially explosive.

III. Factor 2: Mismatched Investor Protection

In an influential series of cross-sectional studies of the world's capital markets, LaPorta et al. (1997,1999,2000) show that protection of investor rights is just as important as getting access to their capital – in fact without the rights, capital is remarkably scarce. They demonstrate that the legal environment is one of the most important determinants of the success of corporate capitalism in a country. Empirical evidence by these authors and others who have built upon their work shows that legal origin determines the protection of shareholder rights which in turn helps determine the size and functioning of the capital market which in turn determines the efficiency of the allocation

of capital to enterprise.¹³ What determines the origin of the country's legal system? Colonialism is a major cause. Colonialism, for all of its known faults, can be thought of an export mechanism for the legal framework from one country to the other. LaPorta et al. show that even when the government itself is no longer a colonial one, the legal framework may continue to provide differential benefits to private enterprise within the country. Pushing this evidence a bit further, one can interpret a colonial world as one form of political-economic equilibrium in which investor-friendly legal systems across the world allow for increased efficiency in capital allocation and the emergence of private enterprise. Of course, there is another side to this coin when the issue of national sovereignty supercedes economic motives.

China's commercial sector underwent extraordinary change in the late Qing era. While still a traditional agrarian economy, the opening of trade with the world, partially through British gunboat diplomacy in the 19th Century, generated considerable opportunity for domestic manufacturing. It has been pointed out that embryonic capitalism existed in China from the Late Ming onwards, particularly in the mining and manufacturing industries, however there is little question that the encounter with the West, particularly in the major trading ports was a major stimulus to domestic enterprise.¹⁴ The success of European business practices and financial institutions in trading ports like Shanghai and Hong Kong elicited a movement in China to develop her own financial technology.

Although foreign banks had been operating in China since 1845, the development of competitive modern Chinese financial institutions dates to the end of the 19th Century, with the founding of the National Bank of China in 1891 – capitalized with both foreign and domestic

¹³ Jeffrey Wurgler, 2000, "Financial Markets and the Allocation of Capital," *Journal of Financial Economics*, 58(1) 187-214, October.

¹⁴ See, for example, Xu, Dixin and Wu Chengming, 2000, *Chinese Capitalism, 1522-1840*, St. Martins Press, New York.

funds.¹⁵ The Sin Chun Bank of China (China's first savings bank) was founded in 1906.¹⁶ The first joint stock company in China began in the 1870's, and the Shanghai stock exchange dates to the 1880's, however there is little historical information about the economic importance of this early Chinese capital market.¹⁷ Shortly after the turn of the century, The Chinese government took steps to develop a legal structure to promote the development of a Chinese corporate sector that could compete with foreign corporate investment.¹⁸

In 1904, the Chinese Ministry of Commerce promulgated a number of reforms of the commercial code to facilitate the development of domestic corporations and to limit the ability of foreign shareholders and bondholders to gain control. It further established a bankruptcy code in 1905. According to one estimate, these efforts attracted 130 million taels (or roughly \$100 million U.S. dollars) in Chinese capital to 265 new domestic corporations between 1903 and 1908.¹⁹ Ten of these new firms were railway companies representing about half of the capitalization of all Chinese corporations registered under the company act of 1904. Besides companies organized under official code, There were a number of other structures devised to finance railroad development and to compete directly with foreign concessionaires. Figure 1 in the paper, taken from Lee (1977) lists 19 rail companies formed from 1903 to 1909, many of which received official provincial subsidies in the form of revenues from surtaxes on rice, opium, opium pipes, tea salt, lottery tickets, lumber, stamps, rent, official's salaries, and land. As the chart suggests, the promised rates of return on these investments was not high – ranging from 4% to 7% – although it is not clear whether this included the potential for capital gains, since the type of security – equity or debt – is not identified.

¹⁵ Lam, Otto, 2001, "Banks and Banknotes of Hong Kong:1846-1911" The Journal of Hong Kong Numismatics Society, Hong Kong.

¹⁶ See Pan, Junxiang and Ma, Chuande, 1998, *Currencies in Old Shanghai*, Shanghai People's Fine Arts Publishing House, Shanghai. P.35

¹⁷Kirby, William C., 1995, "China Unincorporated: Company Law and Business Enterprise in Twentieth Century China," *Journal of Asian Studies* 54(1) February, 43-63.

¹⁸ Ibid.

¹⁹Lee, En-Han, 1977, *China's Quest for Railway Autonomy: 1904-1911*, Singapore University Press, Singapore, 1977. P. 268.

What is clear is that the targets for capital were not met. Even with official subsidies for many of the firms, the actual amount raised rarely reach half of the goal. Was this due to lack of personal capital? Unlikely. Macroeconomic estimates of domestic wealth from China in the 1930's, as well as accounts of major personal fortunes of her citizens, both suggest that China had considerable capacity to finance defense and infrastructure domestically. One problem was surely the lack of experience with the process of share issuance and bond underwriting that European markets had already mastered.²⁰

Another problem was corporate governance. Despite legal reforms and active efforts to charter domestic enterprises, evidence suggests that most of the new businesses after the 1904 reforms did not have the governance structures and managerial expertise and independence from governmental control to allow them to compete effectively against foreign concerns. Lee's study of the Chinese chartered railroad companies in this era attributes their failure to (1) undercapitalization due to higher alternative uses of capital, (2) lack of engineering and technical skill, (3) lack of managerial expertise, (4) corruption and embezzlement.²¹ Of course, the first problem of undercapitalization is a symptom and not a cause. Chinese reluctance to invest may have been due to competition with internationally diversified investors or to rational investor expectations about governance problems or both. We will detail a particularly important company in our later discussion about railway finance.

In sum, the foreign control of Chinese government revenues and the "extra-territorial" rights extended to foreign railroad concessionaires bear a close resemblance to a process of legal "imperialism" designed to protect the rights investors. While presumably these benefits would accrue to all investors in Chinese railroads and all holders of Chinese bonds, the fact that most rail and bond investors were foreign meant that the benefits of investor protection accrued disproportionately to foreigners. Chinese reforms in commercial code in 1904 and 1905 provided a domestic structure for corporate investment, but its novelty, and serious problems of governance prevented it from immediately succeeding as a means to protect minority shareholder rights.

²⁰ For macroeconomic estimates of savings capacity, see Riskin, Carl (1975). For a discussion of personal fortunes see Huenemann (1982) p. 126.

²¹ Lee, Ibid. p. 132-141.

IV. Government Bonds

In Table I we enumerate the Chinese external loans listed in Kuhlmann (1983), and Stanley (1970) and code each according to the security pledged for the loan.²² The external loans over the late 19th and early 20th centuries essentially securitized an amazing array of specific government revenues, including China's maritime customs, salt taxes, internal provincial transfer taxes [likin], mining taxes, alcohol and tobacco taxes, opium revenues, property transfer taxes and revenues for railways. Of course, verification and collection of these revenues was an important feature of the loan contract. The Maritime Customs duties, one of the largest sources of government revenue, were collected directly by foreign government officials at Chinese ports.²³ Despite being a creation of British colonialism in the mid-19th century, the Maritime Customs Revenues until the beginning of the 20th century became the single largest source of revenue for financing China's defense and reparations.

IV. 1 Borrowing for Defense

China's provinces, with the blessings of the Imperial Government first borrowed from foreign merchants during the Taiping rebellion in 1861, and then again in 1862 to control bandits in Fukien and Taiwan. Reliance upon foreign merchants continued in 1867 and 1868 with loans to finance the war against Islamic rebels in Western China. Each of these provincial loans was secured on provincial shares of Maritime Customs. Another loan, floated to defend against the Japanese designs on Taiwan in 1874, was secured on the Maritime Customs. Maritime Customs again backed the 7% 1.5 million sterling bonds sold in London to finance China's defense against France in the 1880's. All of the debt incurred in the 1894-5 war with Japan and the resulting

²²Stanley, John C. Late Ch'ing Finance: Hu Kuang-Yung as an Innovator, Cambridge, Massachusetts, 1970.

²³ C.f. Stanley, page 82. The foreign oversight of Chinese maritime customs revenues began as a method for the British and French to collect their war indemnity of 8 million silver taels from China. 40% of custom revenues were paid directly to Britain and France in equal share from collections in all open ports, until the completion of the obligation in 1866. From that point on, the 40% share was paid directly to the Imperial Government in Peking, who found it convenient to maintain the same structure and oversight of the customs duties.

indemnity was secured by Customs revenues, as were the Boxer Indemnities – the debt settled on China by the consortium of powers after the Boxer Rebellion. The Boxer Indemnity of £ 67.5 million was divided among 14 powers with roughly 75% going to Russia, Germany, France and Great Britain. It effectively absorbed the previously remaining unpledged portion of China's customs revenues and placed her import taxes entirely under foreign control.

With her customs revenues largely pledged after 1900, China had to promise alternative sources of revenue as collateral on major loans. Some of the last obligations of the Chinese Imperial Government such as the 1910 Kiagnan loan issued in France and Belgium were secured by salt taxes. The Qing dynasty fell in 1911 and recognition of the Chinese Republic by the great powers was conditional upon honoring the debts of the previous government. Thus, the first major loan of the new Republic in 1912 (the 5% Crisp Gold Loan), floated in London, negotiated and approved by the new political leaders Sun Yat-sen and Yuan Shi-kai, was backed explicitly by salt revenues.

Loans secured by salt taxes followed in 1911, 1917, 1918, 1922 and 1937 under a variety of Chinese governments. Internal transit taxes, called likin, existed after the Tai-Ping Rebellion. These were pledged as security on Chinese external loans in 1898, 1909, 1911 and in 1912. Why are all of these revenues and taxes important? Because they represented security to foreign investors. China faced constant external and internal military challenges through the period of our study and by the end of the 19th Century, the weakness of the Imperial Government was well known. Thus, without such backing, Imperial promises to repay were not worth much, even if repayment were deemed to be “expedient.”

IV.2 Bond Yields and Historical Events

Perhaps the most remarkable feature of Chinese bonds over the period of study is the stability of their yields until 1918. Figure 2 shows the time-series of yields on Chinese, Indian, Japanese and Russian bonds over the period. This was a time of political tumult for China; a period that included two external wars, the Boxer Rebellion, indemnity payments, a revolution that toppled the Qing Dynasty and participation in a World War. Despite these events, the yields on Chinese bonds never move outside of a narrow trading band between 5 ½ and 6% from 1899 to 1913, and from 6% to 7% from 1913 to 1918. The time-series data in this chart is from Global Financial Database. It uses a series of yields on Chinese Government bonds quoted on the London market and

documented in the Investors Monthly Manual published monthly by The Economist. The bonds used are the 8% Taiwan War Loan of 1874, The 6% Sterling Loan issued in London by Baring Brothers in 1885, and the 5% Reorganization Loan of 1912/13 issued in London, Paris, Frankfurt and St. Petersburg. The first two bonds were backed by Maritime Customs Receipts. The third bond was a direct obligation of the Chinese Government and an a Salt tax and surplus Maritime Customs.

This stability of the yields is particularly striking in light of evidence that European and American securities reacted strongly to wartime events. European bond markets reflected the wartime fortunes of combatants during WWI, and European equity markets reflected the relative advantages of combatants during WWII²⁴ Studies of the United States during its Civil War indicate that the financial markets reacted to, and in some cases anticipated , outcomes of major battles.²⁵ The rationale for market reactions to news from major political events is based on the presumption that the likelihood of payment on the security fluctuates with the political and military events affecting the issuing authority. Conversely if the foreign shareholder protection was ironclad, we would expect to see no price reaction to political events.

In China, the first political event we examine for a bond price reaction is the 1894-95 war with Japan and treaty negotiations on indemnity payments. Speculation about the treaty and proposed indemnity payments might have been seen in prices in early 1895, and the terms of the treaty, with its 200,000,000 Tael indemnity would have become public after April 17, 1895.²⁶ Surprisingly, if anything, the 8% treasury bond prices decreased during the war years, despite the

²⁴ For yield fluctuations in Europe during World Wars, see Fergusen, Niall, 2000, The Cash Nexus, Basic Books, New York. For equity fluctuations during World War II see Jorion and Goetzmann, 1999, "Global Stock Markets of the 20th Century," Journal of Finance 54(3) 953-980.

²⁵ See Roll, Richard, 1972. "Interest Rates and Price Expectations during the Civil War," Journal of Economic History :476-498 and Kristen L. Willard, Timothy W. Guinnane, Harvey S. Rosen, "Turning Points in the Civil War: Views from the Greenback Market," NBER Working Paper No. W5381, October 1996

²⁶ For details of the treaty negotiations see Beasley, W.G., Japanese Imperialism 1894-1945, Clarendon Press, 1987, p. 64.

fact that the loans to defease the indemnity, issue in 1895 at 6%, were also largely secured on the Maritime Customs Revenues.

The second date we look for yields to reflect an increasing risk of Chinese default is the funding of the Boxer Indemnities in 1901, which was not issued as bonds, but which captured most if not all of the remaining Customs Revenues until the end of the first World War, at which time some of the indemnity was postponed or cancelled by various nations. The Boxer Indemnities had a junior claim on the Maritime Revenues, with priority following previous charges.²⁷ However, despite their lower priority, they must have represented a severe economic stress to the government, and they were owed directly to nation-states with armies as opposed to bond-holders who would have to seek legal protection in the event of default. Thus, the issue of strict claims priority in the event of financial distress must be questioned. Despite their importance, there were no price reactions in the London market.

The third and perhaps most important event with the potential to affect the probability of default on Chinese sovereign debt was the Chinese Revolution of October, 1911. It is only reasonable to assume that an investor holding a promise by the Chinese Imperial Government would be concerned by the news that the government had been violently overthrown and replaced with a military strongman with an unclear popular mandate to rule. Again, no movement in the bond prices in London hint at elevated uncertainty about whether the new government would honor its external obligations – despite an obvious, immediate need to consolidate internal popular support.

Recognition of the new government by world powers was conditional upon honoring international debts, and the first step towards this was the 1913 Reorganization Loan, a £ 25 million loan negated by China's new ruler Yuan Shi-kai with Great Britain, Germany, France, Russia, Belgium and Japan. The U.S. did not participate, on the objection that the loan interfered in Chinese sovereignty. The terms effectively prevented China from using the loan proceeds to defend herself against Russian and Japanese designs on Manchuria.²⁸ Indeed, political power was directly tied to financial power in the Reorganization Loan negotiations and American influence in the

²⁷Kulhmann, p.34.

²⁸Scholes, Walter V. and Marie V. Scholes, the Foreign Policies of the Taft Administration, Missouri Press, 1970, p. 237 and ff.

course of the complex negotiations over the Reorganization Loan was hampered by the lack of a liquid market in the U.S. for foreign government securities. Not until the end of WWI did the U.S. assume prominence as a world capital market, in effect, stepping into the vacuum created by financial wartime crises in Great Britain.²⁹ By the time the Reorganization Loan was finally negotiated and proceeds issued in 1913, the Chinese government was in dire financial straits and needed the cash to meet imperial and provincial loans coming due, back pay for the army and administrative expenses of the new government. Certainly some of the loan proceeds went to pay the Army in Beijing loyal to Yuan Shih-kai, but contemporary observers suspected much of it ended up in the pockets of high officials.³⁰

The Reorganization Loan marks the beginning of the finances of the new Republic, and a period of higher rates and higher volatility for Chinese bonds. Loan rates averaged over 6% in the period up to 1919, which by historical accounts marks the beginning of “High Warlordism” by which time the Republic had fractured into a number of battling regional powers with shifting alliances and uncertain finances. It is really the first evidence in the time-series of yields on Chinese bond suggesting that political events in China had any bearing at all on the likelihood of bondholder repayment. Until that time, apparently the bondholders in London and elsewhere in Europe felt confidence that regardless of China’s internal turmoil, the mechanisms were in place to insure against governmental expropriation.

On October 19, 1921, the Chinese government declared bankruptcy, and with few exceptions, China began to default on her foreign loans in the 1920's. Only bonds backed directly by the Maritime Customs Revenues, including the 1898 Anglo-German Loan and the 1913 Reorganization loan continued to pay. It is interesting to note that Table I indicates clear trends in the sourcing of Chinese debt. After World War I, Japan became a more important lender to China, apparently taking up the slack in the ability of European and Russian capital markets.

²⁹Atkin, John Michael, British Overseas Investment, Arno Press, 1977, p.23 and ff.

³⁰ Kulhmann, p. 87.

By 1939, virtually all Chinese external loans had defaulted.³¹ The erosion of China's ability to pay her debts is generally attributed to the breakdown of the mechanism for directing revenues to claimants – provincial seizure of revenues during her civil war were apparently common as regional warlords needed to finance military operations. Finally, the world-wide depression, the devaluation of silver and natural disasters finished off China's ability to borrow externally.

IV.3 Summary of Government Debt

In sum, Chinese government obligations over roughly sixty years around the turn of the 19th can be divided into a period of financial stability followed by a period of volatility. Paradoxically the period of stability in her loan payments was a very volatile period politically. China met obligations despite the sizable Japanese Indemnities and Boxer Indemnities for more than a decade. This was not entirely due to choice – the stability in Chinese bond prices in the first decade of the 20th century is almost certainly attributable to the foreign control of Chinese government revenues. It may be argued that foreign control of revenues was good for foreign bondholders – at least in the short term – but perhaps bad for the new Chinese Republic, which suffered from a lack of military funding, despite the first Reorganization loan. It is particularly interesting that the very of transparency and accountability of the Maritime Customs Revenues that guaranteed bondholder security also restricted the ability of the central state to access cash when needed. Her cost of capital was low, but it may not have been such a bargain.

The comparison to the loan fluctuations in other Asian countries is instructive. Figure 2 indicates that China was unusual in the period before 1912 in the *stability* of her bond yields. For example, Russian debt yields fluctuated dramatically, with lows in 1890's and highs following their defeat in the Russo-Japanese War. Japanese debt yields began higher than China's but dropped dramatically after her settlement with China in the 1890's. They rose again before the Russo-Japanese War and then dropped with its successful conclusion. Even India – a full fledged colony of Britain – had more volatile bond yields than China in this period. The conclusion we draw from these comparative dynamics is that the distinctive characteristics of the Chinese loans – in particular their enhanced security features – played a role in insulating investors from risk.

³¹ Kuhlmann, p. 5.

V. Railway Loans

Much has been written about global railway finance around the turn of the century. By most accounts the competition among the great powers to secure railway concessions during this period through a combination of political diplomacy and the financial might of their capital markets is, in some ways, the high point of the age of Imperialism. At least it was characterized as such by contemporary commentators such as Lenin, who used the division of China into spheres of influence by foreign capitalists as the example of Capitalist Imperialism *par excellence*.³²

Although being under the nominal control of the Chinese Railway Commission, virtually of China's railways constructed after 1895 were financed by foreign debt issues underwritten by European-led investment banking syndicates which obtained right of way, property concessions and promises of repayment from the Chinese Imperial government. Under the control of the bankers who financed the loans, Chinese railways were constructed, owned and operated by managers designated by the financial consortium. Certainly the most contentious feature of these loans was their provision for extra-territorial rights, which is essence "means the substitution of the court procedure of a creditor country for the business practices of the debtor country."³³

The Chinese Eastern Railway was a prime example of extra-territoriality. The Russo-Chinese bank issued a 5 million Tael loan in Russia in 1896 to finance the construction of a railway across Manchuria linking the Trans-Siberian Railway to Vladivostok. The railway and its right of way were entirely administered and policed by Russian officials, who controlled the receipts and disbursements. The line was, in effect, a little bit of Russian territory within China's borders, and issued its own currency.³⁴ Japan followed the same model with the loan for the 1917 South Manchurian Railway, which was secured upon the railway's properties. The railway became Japan's first territorial stake in China. A Belgian loan issue of 1897 financed the construction of the Lung-Tsing-U-Hai Railway and was secured by the railway itself and the property and rights of way owned by the company.

³²Lenin, Vladimir Illyich, 1916, *Imperialism, The Highest Stage of Capitalism*.

³³ Adams, Henry C. 1920, "International Supervision Over Foreign Investments," *The American Economic Review*, 10(1) 58-67.

³⁴Dreyer, Edward L., 1995, China at War 1901-1949, p. 29.

Foreign financed, owned, operated and policed railways represented an obvious threat to Chinese sovereignty, an issue widely debated by contemporary observers. For example, economist A.P. Winston, writing in the *Quarterly Review of Economics* in 1916, is sharply critical of the foreign companies “monopolizing” the financing, construction and control of Chinese railways.³⁵ In contrast to Britain, France, Russia, Belgium and Japan, the United States – for the most part -- pursued an “Open-Door” policy with respect to China, based on the principle of equal access by all nations to Chinese markets and resources, and the preservation of Chinese national sovereignty as opposed to its fragmentation and colonization by world powers.³⁶ As a consequence, America generally opposed contracts that suggested preferential access to rail concessions. One exception to this policy, and perhaps the most important and spectacular example of Chinese railways concessions, is the Hukuang Loan.

The Hukuang loan is important in Chinese history for many reasons. The story of the loan illustrates the struggle between provincial and national powers in the late Qing period. It also illustrates how Chinese capitalists sought to fund development internally. Finally it reveals the political consequences of foreign concessions – the Hukuang loan has been interpreted by some historians as the spark that led to the 1911 revolution and the end of 3,000 years of dynastic rule.

Hukuang is a region in south-central China which includes the provinces of Hunan, Hubei, and part of Szechuan. In 1905, a consortium of Hukuang gentry, officials and businessmen, with the blessing and participation of the provincial governor Chang Chih-Tung, obtained a concession to develop a domestically financed rail line through Hukuang. It came after the successful provincial lobbying for compensated cancellation of the development rights of J. P. Morgan’s American China Development Company which actually fronted for a Belgian rail development firm seeking to construct a line from Canton to Hankow. The line was a key route through Hukuang linking a commercial port to the cross-roads of Chinese rail lines in the interior, and the cancellation of the foreign concession opened the door for domestic development.

³⁵ Winston, A.P., 1916, “Chinese Finance Under the Republic,” *Quarterly Journal of Economics* 30(4) August, p. 738-779.

³⁶ Scholes, alter V. and Marie V. Scholes, 1970, The Foreign Policies of the Taft Administration contains a detailed description of the U.S. China policy.

After the cancellation of the American concession, the Hukuang gentry took an active role in gaining concessions. For example, the Canton-Hankow line was divided between two domestic concessionaires, one in Kwangtung (Guangdong) and the other in Hunan. The experience of the Kwangtung company illustrates some of the problems of corporate governance experienced in the emerging Chinese legal framework. The firm was among the most successful of Chinese companies at capital subscription. All 44 million Taels was raised, much of it from wealthy overseas Chinese investors. Overseas Chinese participation in the venture is particularly interesting given the issues of diversification discussed earlier. An initial price of 1 Tael per share attracted widespread popular domestic interest. An account in the *North China Herald* is particularly graphic in its description of investor enthusiasm for buying railway shares.

Not only are the monied classes rushing to buy shares, but the poorest of the poor and even those who are supposed of no cash to spare and hardly enough to keep body and soul together are buying up one or more shares.³⁷

Many of the shares were sold to the public through provincial charitable institutions, who failed to register them in the name of the subscribers and instead retained the voting rights for themselves. With the help of these same organizations, and over the violent protests of shareholders, the president of the Canton Chamber of Commerce took control of the company and precipitated further proxy contests and ultimate intervention by provincial authorities. An audit of the company books in 1909 revealed massive embezzlement. The management had falsified the books by inflating expenses, and had been purchasing equipment at high prices through suspicious transactions.³⁸

The movement after the turn of the century towards domestic financing is often interpreted as a grassroots nationalistic response to the threat of external financing and control of Chinese infrastructure by foreign concerns, however this characterization may be too simplistic. The role of the gentry in development ventures in the early 20th Century is particularly important, given the

³⁷ Quoted in Lee, En-han, 1977, "China's Quest for Railway Autonomy: 1904- 1911: A study of the Chinese Railway Rights Recovery Movement," Singapore University Press. P. 104.

³⁸ Account taken from Lee, 1977, p. 140.

Rajan and Zingales hypothesis regarding local competition. The gentry in China at this time was a class of educated social elite who served a political role as local intermediaries between the imperial government and the populace, and who exerted considerable local control and influence over commercial affairs. Early in the history of Chinese railway development, Er-Tu Zen Sun observes:

Chinese railways often suffered from forces in the environment that tended to obstruct their normal operations. These obstructions came from different quarters. It was sometimes the local gentry in the early years of railway history: over 3,000 taels were paid in 1906 to a number of local influential personages along the route of the P'ing hsiang-Hsiangt'an line, for example, as salary for "protecting the road," in permission to lay the track through their districts.³⁹

In his study of the Changsha Rice Riot of 1910, Rosenbaum finds that the gentry played a key role in using xenophobic sentiment about foreign railroad development to turn the populace against the Manchu government. Indeed, Chang Chih-t'ung had turned down a proposal by a local merchant guild to fund a proposed rail line in Hunan in favor of a gentry-dominated, quasi-governmental firm. According to Rosenbaum it suffered a similar fate to the Kwangdong company.

The operations in 1907-1908 were an unmitigated disaster. Virtually no power was assigned to shareholders, a number of whom apparently were merchants. In late 1907 large numbers of private shares were withdrawn. Those excluded from a voice in management continued to protest, although it is not clear whether their main target was the incompetent gentry management or the government's refusal to reorganize the company into a purely private venture.⁴⁰

In sum, the experience of the domestic rail companies that obtained the concessions in place of the American China Development Company was unfortunate. The formation of domestic companies for rail development had the potential as a catalyst for personal investing in domestic ventures. The active participation of overseas Chinese in these ventures suggests that the domestic

³⁹Sun, E-Tu Zen, 1955, "The Pattern of Railway Development in China," *The Far Eastern Quarterly* 14(2) February, 179-199.

⁴⁰ Rosenbaum, Arthur L., 1975, "Gentry Power and the Changsha Rice Riot of 1910," *Journal of Asian Studies* 34(3) May, p. 689-715.

firms might even have had the potential for attracting international capital of a sort. All the more unfortunate that, despite the laudable goals of self-financed railway development, and the willingness of Chinese great and small to invest their savings in such ventures, the fundamental structure of corporate governance was not yet in place in China. Sadly, it appears that combination of poor corporate governance, and an entrenched gentry that operated under a system of prestige and influence made it difficult to compete with foreign companies incorporated abroad under governance systems well understood by well-diversified investors.

Ultimately, despite nationalistic sentiments and powerful local interest groups, Chang brokered sole British financing for the railway – a move that threatened to tip the delicate balance of foreign influence in the Yangtze region.⁴¹ To combat British advantage, Germany, France and finally the U.S. demanded participation in the loan, the construction, and the control. The final result was a £6,000,000 sterling loan shared by the four powers, with the rights to develop separate sections of track carefully negotiated among the participants. In a move that doubtless infuriated the gentry, Chang then closed the deal by persuading the Qing government to nationalize all domestic railway development on the grounds that delays caused by the undercapitalization of domestic developers were impeding progress. The expropriation of domestic shareholder rights was thus complete.

The magnificently printed 5%, 50 year Hukuang Railways Sinking Fund Gold Loan was signed in 1911 with the Imperial chop of the Minister of Posts and Communications. The bond also bears the details of the security for the loan. Besides the net revenues of the railroad, the loan pledged as security (1) the Hubei general likin of \$2 million Taels/year, (2) the Hubei additional salt tax for river defense of 400,000 Taels/year, (3) a new, additional salt tax established in 1908 (during the period of loan negotiation) of 300 Taels/ year, (4) the Hubei collection of Hukuang inter-provincial taxes on imported rice of 250 Taels/year, (5) Hunan general likin revenues of 2 million Taels/year and (6) the Hunan salt commissioner's treasury allotment of regular salt likin of 250,000 Taels/year. Presumably, this collateral was vital to pay bondholders during the railroad construction period. While the people of Hukuang were getting a modern railroad, they were paying for it with salt taxes, new salt taxes, rice taxes and taxes on inter-provincial transfers which presumably would

⁴¹Scholes and Scholes p. 127.

increase with the extension of the rail system. In addition, the development rights were effectively expropriated from local business interests and handed to foreigners by the provincial governor acting in concert with the Imperial government.

Kuhlmann found a particularly interesting account of the consequences of the Hukuang loan. Quoting Chang Kia Ngau, *China's Struggle for Railroad Development*:

When the new policy of nationalization was made known the people raised a storm of opposition. Popular indignation was once more aroused to an extraordinary extent. It was especially intense in Szechuan, where strikes took place in the markets and schools. The provincial legislature was thrown into turmoil by the arrest of its speaker and deputy speaker. The people of the provincial capital Chengdu marched en masse to the official residence of the viceroy, and sentries fired into the crowd, killing scores of people. This enraged the people still more, and they refused to pay any more taxes and levies. By the middle of July many thousands of persons surrounded and attacked the city of Chengdu, being supported by the neighboring townships and villages. The coincidence of the outbreak of the revolution in Wuchang, opposite Hankow on the Yangtse River [In Hubei Province] – greatly heartened the people of Szechuan. To suppress the movement, the Imperial Government sent its well-equipped soldiers under the command of General Tun-Fang to Szechuan, but the general was assassinated on his way, and the Viceroy of Szechuan met with the same fate. On September 10, 1911, the people of Szechuan declared themselves independent of the old regime and in sympathy with the revolutionary cause. On October 16, Prince Regent Chun proclaimed on behalf of the boy emperor his abdication from the throne.⁴²

While this account conflates a number of riots and unrest in the period just before the revolution, a careful study of one of the most important riots over Chinese railroad rights during this period – the Changsha rice riots of 1910 – clearly implicates the local gentry as fomenters of resistance against the Qing government.⁴³ With the Qing government siding with foreign investors in financing Chinese development, The rights recovery movement turned against the Manchu rulers as well as foreign commercial interests.

The Hukuang Railway loan was the last external debt of the Chinese Imperial Government,

⁴² Quoted in Kuhlmann, Willhelm, *China's Foreign Debt*, self-published, 1983, p.73.

⁴³ Rosebaum, Arthur, 1975, "Gentry Power and the Changsha Rice Riot of 1910," *Journal of Asian Studies*, 34(3) May, 689-715.

and it defaulted in the 1920's. China as a nation continued to borrow for railway development until late into the 1930's – rail loans appear in 1934, 1935, 1936 and 1937. The only significant gaps in railroad bond issuance in the database are 1926 and 1927 (coinciding with Chiang Kai-shek's northern military campaign to unify China), and the first four years of the Great Depression of the 1930's. With these exceptions, Chinese railway financing and development by foreign investors continued in the face of civil war and eventually foreign occupation.

VI. Conclusion

Sometimes, finance plays a central role in the political development of nation-states, but as an agent for the state's formation and as an agent for the state's destruction. The story of China's first major encounter with the world's financial markets is inseparable from global politics. The world's financial markets of a century ago were anything but *laissez-faire* – at least as far as China was concerned. Loan negotiations which began as investor protections ultimately became the means for colonial designs on China. Railways played a key role in the extension of foreign control and even foreign legal environments into China.

None of this could have occurred, however, without the fundamental drivers of finance. In this paper, we identify two key financial motivations which in some sense are stateless. First, we argue that the high level of development, and the demand for international diversification by sophisticated investors in the global money centers of Britain and Continental Europe gave a relative advantage to foreigners. Chinese sovereign debt found a ready market in London, and experienced relative stability in yields due to investor protections negotiated with the Chinese government. Investors also financed potentially highly profitable infrastructure projects in China – particularly railroads. We argue that the existence of a liquid capital market, and the power of international diversification put foreign investors in a relatively better position to bid for Chinese projects. The active markets in Europe and Japan were able to mobilize the capital of small investors. Modern portfolio theory suggests that the diversification enjoyed by these investors through global investing allowed them to accept lower rates of return than China's domestic investors.

The second major factor we focus on is investor protection. While the extraterritorial terms provided to foreign investors were anathema to the Chinese people, the historical evidence suggests that they may have been a necessary condition to allow development and operation without the

interference of local interest groups. The gentry-led movement to regain railway development rights from foreigners in the early 1900's had been viewed as a nationalistic movement to regain Chinese rights. The experience of the shareholders in these companies suggests that the potential for a genuine capital market in China was hobbled by the inability to protect the minority rights of domestic investors.

The role of finance in Chinese politics of a century ago is of more than historical interest.

With the re-emergence of global investing in emerging markets, China is poised to attract considerable financial capital. China is in a much stronger position today politically and militarily and thus the issues of extra-territoriality and sovereignty are less threatening than 100 years ago. It is worth noting, however, that in part due to financial history, China is understandably still sensitive to violations of her territorial sovereignty.

In this paper, we focus on two key factors in the first encounter between China and the global financial system. The first is the issue of capital market development and diversification – in particular the effects of an imbalance between the level of diversification domestically and the level of diversification internationally. As commercial opportunities arise in China today, will her own investors be able to compete against foreign investors to finance projects? One way to insure this possibility is to offer domestic investors the possibility of investing outside of China, either directly, by liberalizing currency exchange, or internally by listing international shares on Chinese exchanges and by launching international mutual funds that are accessible to Chinese savers. Although this means that some Chinese capital will be exported, it also means that the domestic investor opportunity set will be equal to that of foreign savers, and as a consequence, Chinese investors will demand the same rates of return as foreigners, and the marginal investors in Chinese ventures will not necessarily be foreign.

The second factor is China's experience with corporate governance. The enthusiasm for investing immediately following the promulgation of corporate laws in 1904 was tempered by the failures of corporate governance. These failures were nothing special to China. Governance is a particularly challenging problem for many countries in the world right now. One interpretation of the unequal rights and concessions associated with foreign finance is that they were a means to control the risks associated with emerging market investing. But the experience of China 100 years ago suggests that investors needed protection against expropriation just as much as foreigners

needed it. Chinese capital markets today are developing rapidly as Chinese financial regulators are modernizing the legal framework for investment. One approach that might prevent the unequal treatment of foreign and domestic interests is to concentrate efforts to protect minority shareholder rights for domestic shares, and to test the institutional structures for such things as contests for corporate control, public accounting and disclosure and insider trading laws in the context of the domestic share market. Once securities regulators have experimented with these issues, it might then be the time to eliminate the difference between domestic and international shares.

There are also important lessons for the international investment community interested in supporting China's capital market development. Although much of the early political abuses of the international financial system have been corrected with the development of international lending institutions like the World Bank, there is still the potential, in these dynamic times, for asymmetric competition between domestic and international financing. While it may be tempting to suggest that the most efficient, low cost means of financing Chinese economic development is through foreign rather than domestic markets, the international community should realize the serious problems that arise from domestic stakeholders who are excluded from participation in the profits of such financing. Currently, the dual-listing structure of the Chinese equity market is an effective means to mobilize and in some sense to nurture domestic commitment to Chinese capital markets. The international community should do what it can to support future efforts to protect this re-emergence of Chinese investing. This may mean accepting a gradual process of experimentation with market regulation and share dissemination, as well as a gradual reduction in the differences between foreign and domestic shares.

It has become fashionable for both the left and the right to criticize current global financial system – either because it distorts risk-taking incentives by governments expecting a bail-out, or because it finances projects that environmental and political groups find objectionable. These critics should consider the alternative. One hundred years ago, China's first encounter with globalization created political conditions that led ultimately to a rejection of the international financial system. As the world now approaches the degree of global market integration it enjoyed at the end of the last century, the disparity in international capital market development creates potential problems similar to those faced in the past. International financial architects should be wary of suggestions that a new equilibrium can be quickly and easily achieved without consideration of the human and

political consequences.

Besides the immediate, practical implications of interpretations Chinese financial history, we draw one additional implication from our current study. Chinese capital markets ultimately disappeared because of internal rather than external forces. A simplistic view of this is that, in China, the Leninist interpretation of capitalistic imperialism eventually won out. Although current empirical research shows that legal protection of external shareholder rights—particularly in the face of strong stakeholder influences—may ultimately be best for economic development, there are large gaps in the empirical record. China and Russia both withdrew from the world capital markets as a result of Marxist revolutions. Thus, a longer historical view reveals these gap to be endogenous. The repudiation and elimination of both internal and external financial claims may have been due at least as much to the success of legal imperialism as to its failure. That is, the expansion and articulation of property rights of external owners that is so important to the success of corporate enterprise also sometimes alienates local stakeholders from the productive sector.

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Table 1: List of Chinese External Debt Issues

External Debt of Chinese government as compiled from Kulmann (1977) and Stanley (1970). Each is coded by date of issue, type of debt and face value of issue, converted into U.S. Dollars at exchange rates prevailing at the time. Loan yields are as specified on the bond at issue, not market yields based upon issue price, thus they are typically a lower bound on the actual bond yield. Currency indicates the currency or form of payment promised on the loan. The purpose of loans is briefly identified, and the type of security or collateral is listed. Place of issue indicates the location the debt was issued. Multiple locations indicate multiple bond issues.

Date	Type	US dollar amount (millions) if known	Yield	Currency	Purpose	Security or collateral if known	Place of Issue
1861	loan	200,000		tael	war	Shanghai custom voucher	
1862	loan	336,587	11	tael	war		
1862	loan	169,370		tael			
1864	loan	100,000	6.5	tael	armory		
1865	loan				none	none	
1866	loan			Tael	none		
1866	loan	1,333,000		tael		maritime customs and provincial revenues	
1867	loan	800,000		tael	war		
1868	loan	1,413,000	7.25	tael	war		
1874	loan	3,260,000	8	sterling	war		Hong Kong
1877	bond	3,333,000	8	tael	war	maritime customs	Hong Kong London
1878	loan	2,333,300	10	tael	war		
1878	bond	1,667,000	5.5	tael	none		Berlin
1879	bond		7	tael	none		Hong Kong
1881	loan	2,667,700	8	tael	war		
1883	loan	667,700		tael	war		
1883	loan	667,700		tael	war		
1884	loan	667,000	8	tael	war		
1884	loan	667,000	8	tael	war		
1884	loan			sterling	armory		
1885	loan	2,667,700		tael	war		
1885	bond	6,543,000	7	sterling	war	maritime customs	Hong Kong London
1885	loan	6,522,000	6	sterling	rail	maritime customs	London
1885	bond	3,409,000	6	sterling	none	maritime customs	Hong Kong London
1886	loan	2,000,000		tael	war		

1886	bond	76,000	7	tael	none		Shanghai
1887	loan		5.5	DM	none	Chihli customs	Frankfort Berlin
1888	loan		7	tael	yellow river		
1893	loan			tael	none		
1894	bond	726,000	7	tael	war	maritime customs	Shanghai Hong Kong Amsterdam Hamburg
1895	bond	4,347,000	6	sterling	indemnity	maritime customs	London
1895	bond	13,043,470	6	sterling	indemnity	maritime customs	London
1895	bond	4,347,000	6	sterling	indemnity	maritime customs	Frankfort Berlin Hamburg
1895	bond	4,347,000	6	sterling	indemnity	maritime customs	London
1895	bond	68,782,000	4	gold	none	maritime customs	Paris St. Petersburg Geneva Brussels Amsterdam Frankfort
1896	bond	69,565,000	5	gold	indemnity	maritime customs	London Berlin
1896	bond	3,333,000	6	tael	rail	Chinese Eastern Railway	Shanghai London
1897	bond	19,565,217	4	sterling	rail	Lung-Tsing U Hai Railway and land	Brussels
1898	bond	8,000,000	5	franc	rail	Cheng-Tai Railway	Paris
1898	bond	69,565,000	4.5	gold	indemnity	maritime customs, salt Lik in revenues, customs bonds	London Berlin
1899	bond	10,000,000	5	sterling	rail	Chinese Northern Railway	London
1899	bond	22,500,000	5	franc	rail	Peking-Hankow rail revenues	Paris Geneva Brussels Amsterdam
1900	bond	3,000,000	5	dollar	rail		New York
1900	bond	1,121,739	5	sterling	cable	government guarantee	London
1901	loan		5	sterling	cable		
1901	bond	300,000,000	4	sterling	indemnity	maritime custom	Shanghai
1903	bond	8,000,000	5	franc	rail	railway and direct obligation of government	Paris
1904	loan	14,772,700	5	sterling	rail	existing and future railway	London
1904	certificates	20,454,500		sterling	rail		
1904	bond			sterling	rail		
1904	bond			dollar	war		
1905	bond			yen	war		
1905	loan	4,444,000	5	sterling	indemnity	maritime customs and provincial revenues	London Berlin
1905		4,888,800		sterling	rail	opium revenues/internal revenue bonds	London
1905	loan	8,200,000	5	franc	rail	railway	

1905	loan		5	sterling	rail	existing railway and its revenue	London
1906	bond			dollar	war		
1906	loan		4	sterling	rail		
1907	loan	400,000		yen	rail		
1907	bond	6,521,700	5	sterling	rail	railway	London
1907		4,782,600	4.5	sterling	rail	Canton-Hankow railway and its revenues	
1908	bond	6,521,000	5	sterling	rail	direct obligation of government, railway	
1908		1,075,000	5	yen	rail	Kirin-Changchun-railway	Tokyo
1908	bond	23,585,000	5	sterling	rail	railway	London Berlin
1909	cert.			chinese gold dollar	war		
1909	loan	22,727,270	5(4.5)	sterling	rail		
1909	loan		5(7)	sterling	repay debts	provincial likin revenues, direct obligation of government	
1909	loan	160,000	5	yen	rail	Hsin-Feng Railway	Tokyo
1910	loan		7	tael	local	guarantee of the central government	
1910	loan		7	tael	local	Kiangnan salt revenues	
1910	loan	12,766,000	5	sterling	rail	railway and provincial revenue	London Berlin
1910	loan	2,888,510	5	sterling	rail		
1911	loan	5,000,000	5	yen	none	Peking-Hankow railway revenue	
1911	loan	5,000,000	5	yen	rail	railway and revenue of Kiangsu Province	
1911	loan		7	tael	local	3rd charge on the ichang salt revenues	Shanghai London Paris Berlin New York
1911	loan		7	tael	local	1st charge on likin revenues of Kwang-Tung	
1911	loan	2,885,000	5	sterling	armory	salt taxes, direct obligation of government	
1911	loan	39,216,000	5	sterling	rail	revenue on general revenue form Hunan and Hupeh prov.	
1912	loan	1,500,000	8	yen	rail	revenues and stock of Kiangsi railway	Tokyo

1912	loan	1,000,000	8	yen			
1912	loan	10,714,000		sterling	repay debts		
1912	loan	1,607,100	6	sterling	rail		
1912	loan		7	M	local	silk likin revenues	
1912	bond		8	M	local	central government guarantee	
1912	bond		8	tael	Treasury	taxes of agricultural products and supplementary customs revenues	
1912	bond		6	tael	Treasury		Shanghai
1912	loan	35,087,700	5	sterling	repay debts	surplus of salt gabelle and other government sources	London
1912	loan		5	M	armory	government guarantee	
1913	loan	15,686,000	5	sterling	rail	Lung-Tsing-U-Hai Railway	Paris Brussels
1913	loan	1,765,000	5	sterling	none	tax on transfer of property and title deeds	Brussels
1913	loan	17,655,000	5(6)	sterling	rail		
1913	loan	19,608,000	5.5	sterling	rail		
1913	loan	3,019,600	6	sterling	rail		
1913	loan	98,039,200	5	sterling	repay debts		London Paris St. Petersburg Brussels Tokyo
1913	loan	4,706,000	6	sterling	repay debts		London
1913	loan	7,843,100	6	sterling	none		London
1914	loan	1,960,784	6	sterling	none		
1914	loan	28,864,000	5	franc	government expenses/rail way	industrial enterprises it was issued for, municipal taxes	Paris
1914	loan	41,667,000	5	sterling	rail	secured upon a second mortgage on the Chiaokia-Tayuan-fu railway	London
1914	loan	1,562,000	6	sterling	repay debts	surplus profits of the Peking-Mukden railway	Shanghai London
1914	loan	19,230	5	franc	rail		
1914	bond		8	m	Treasury		
1914	bond	3,745,455	5	sterling	rail		
1915	loan	2,488,000	6	yen	none	mining concessions in Hunan and Anhwei	
1915	bond	2,488,000		yen	rail	1st charge on railway	
1915	bond			yen	war		

1915	loan		7(8,10)	franc	repay debts		
1916	bond	1,150,000	8	dollar	rail		
1916	bond	5,500,000	8	dollar	Treasury		
1916	loan		8	tael			
1916	loan	5,871,400	8	sterling	repay debts		
1916	loan	301,600		yen	local		Tokyo
1916	loan	1,010,000		yen	industry		Tokyo
1916	loan	301,600		yen	industry		Tokyo
1917	loan	505,000		yen	industry		Tokyo
1917	bond	1,010,000	6.5	yen	local		Tokyo
1917	certificates(?)	2,564,000	7.5	yen	repay debts	bank shares and treasury bonds	Tokyo
1917	loan	667,000		yen	local/industry	factory and local government guarantee	Tokyo
1917	loan	769,000		yen	local	provincial salt taxes	
1917	loan	1,179,000		yen	rail		
1917	loan		7		repay debts	Bank of Bhina notes	Tokyo
1917	bond	2,122,640	7	franc	Treasury		
1917	bond	52,173		taels			
1917	loan	272,700	6	sterling	none	peking octroi	
1917	loan	1,090,900	6	sterling	none	peking octroi	
1917	loan		7	yen	repay debts	surplus salt revenues	
1917	loan	769,230		yen	local		
1917	loan	10,256,000	7.5	yen	none	Treasury bonds	
1917		3,333,000	6(5)	yen	rail	properties of railway and government guarantee	
1917	loan	41,025		yen	local/industry		
1917	loan	128,200		yen	local		
1917	loan	25,600		yen	local/industry		
1917	loan	25,600		yen	industry		
1918	loan	66,200	9	sterling	education		
1918	loan		10	taels	none		
1918	loan	1,052,000	8	yen	purchase		
1918	bond	755,500	8	sterling	telecommunication	none	
1918	loan	2,667,600	8	sterling	army equipment	direct obligation of the government	London
1918	loan	444,400	8	sterling	telecommunication	government treasury	

1918	loan	526,000		yen	ation military	Kailan mining Adm.	Tokyo
1918	loan	5,261,000	7	yen	repay debts	surplus salt revenues	Tokyo
1918	loan	1,052,000	7	yen	local	rights to cooperate in local iron-mining	Tokyo
1918	loan	526,000		yen	government	surplus salt revenues	Tokyo
1918	loan	526,000		yen	local	sundry taxes of Fukien	Tokyo
1918	loan	526,000		yen	industry		Tokyo
1918	loan	7,368,000	7	yen	government		Tokyo
1918	loan	1,052,000	7	yen	rail	revenues of the railway	Tokyo
1918	loan	52,600		yen	rail		Tokyo
1918	loan	1,578,900		yen	telecommunic ation		Tokyo
1918	loan	10,521,000	7.5-9	yen	telecommunic ation	all telegraph properties not previous pledged	Tokyo
1918	loan	526,000		yen	local		Tokyo
1918	loan	10,521,000	5	yen	rail		Tokyo
1918	loan	1,578,900		yen	rail	collieries in Fengtien owned by prov. Gov.	
1918	loan	1,578,900		yen	industry		
1918	loan	5,261,000		yen	repay debts		
1918	loan	2,382,200	8	sterling	telecommunic ation	exclusive rights to communicate with systems outside china	
1918	loan	5,261,000	7.5	yen	rail		
1918	loan	15,789,000	7.5	yen	local	Kirin and Heilongkiang gold mines and government forests	
1918	loan	10,521,000	8	yen	rail	treasury bonds	
1918	loan	10,521,000	8	yen	rail		
1918	loan	5,261,000	7	yen			
1918	loan	5,261,000	7	yen			
1918	bond		8	chinese dollar	industry		
1918	loan	1,206,000	10	yen			
1918	loan	1,538,000	7	yen	rail	Peking-Suiyuan railway	
1918	loan	5,128,300	8	yen	telecommunic ation	present and future gov. tel. Adm. Rev.	
1919	loan	901,000	6	sterling		title deeds taxes	

1919	loan	258,500		yen	none		
1919	loan	891,900	8	sterling	none		
1919	loan	572,000	10	taels	none		
1919	loan	752,000	9	franc	none		
1919	loan	76,000	9	franc	none		
1919	loan	8,122,000	8	sterling	transportation		London
1919	bond	796,300	5	franc	Treasury		
1919	loan	448,000	10.8	taels	none		
1919	loan	27,700	9	franc	none		
1919	bond	3,703,000	7	franc	Treasury		
1919	bond	25,000,000	6	dollar	Treasury	wine and tobacco revenues	New York
1919	loan	5,727,000	7.5	sterling	rail	earnings from Taokow-Tchingwha railway	
1919	bond	5,500,000	5.5	dollar	Treasury	wine and tobacco revenues	New York Chicago
1920	loan		12	chinese dollar	repay debts		
1920	bond	2,593,000	5	franc	none		
1920	bond	1,075,500	9	franc	none		
1920	loan	36,590	9	sterling	education		
1920	loan	104,070	8	franc	local		
1920	loan	410,000	10.2	yen	none		
	loan	15,384		yen	none		
1920	loan	70,000		dollar	education		
1920	loan	60,000	6	dollar	education		
1920	loan		8	belgian franc	haikow harborLTUH railway line		Brussels
1920	loan	545,400	5	sterling	rail		
1920	loan	3,076,000	9	yen	telecommunic ation	telegraph installations, equipment, properties and revenues	Tokyo
1920	loan		8	fl	rail		Amsterdam
1920	loan	1,328,000	9	yen	none		
1921	loan		12	taels	Treasury		
1921	bond	701,000	8	yen	Treasury		
1921	loan	1,718,800		yen	none		
1921	loan		10	sterling	none		
1921	loan	45,100	10	franc	education		
1921	loan		8	belgian franc	rail		Brussels
1921	loan	25,000	14	yen	education		Tokyo

1921	loan	28,850	10	yen	education		Tokyo
1921	loan	938,983	8	dollar	none		
1921	loan	240,000		yen	rail		
1921	loan	1,442,000		yen	rail		
1922	bond	14,234,000	8	yen	repay debts	salt-surplus revenues	
1922	loan	541,000	15	yen	forestry&mining		
1922	loan	3,720,000	8	sterling	rail	projected railway from Paotow London to Ningshia and from Peking to Paotow	
1922	bond	6,831,000	6	yen	Treasury	customs and salt revenues after all prior claims	
1923	loan	7,121,000	8	belgium francs	rail	LTUH railway line	Brussels
1923	loan	6,870,000	8	fl	rail	LTUH railway line	Amsterdam
1923	bond	19,417,000	6	yen	Treasury	railway and government guarantee	
1923	loan		8	taels	rail	railway	
1925	bond	43,893,900	5	dollar	indemnity	maritime customers revenues and native Chinese custom revenues	Shanghai London Paris New York
1925	loan	4,340,000	8	franc	rail	LTUH railway line	Paris New York
1925	loan	21,600	8	sterling	rail	China's shared profits in Shanghai-Nanking railway	
1925	loan	33,010,000	8	sterling	reorganize bonds	taxes on transfer of property and title deeds and Peking octroi	
1928	bond	5,000,000	6	Gold	indemnity	maritime customs revenues	Brussels
1928	bond		8	fl	rail		
1929	bond	757,300	8	sterling	rail	rolling stock purchased	
1930	bond	20,000,000	2	dollar	repay debts		
1933	loan	17,105,386	5	dollar	purchase		
1933	bond	100,000,000	5.5	dollar	treasury		
1933	bond	4,400,000	9.6	dollar	indemnity	maritime customs	
1934	loan	4,000,000	6	taels	rail		
1934	bond	7,352,000	6	sterling	rail	secured on a portion of the original box er indemnity	London
1934	loan	5,333,000	5.5	taels	rail		

1935	loan	1,172,000	6	sterling	bridge		
1935	bond	5,294,000		yen	rail		Tokyo
1936	loan	750,000		sterling	industry		
1936	loan	5,500,000	6	sterling	rail	direct obligation of the government and also secured on railway/bridge revenues	Shanghai
1937	loan				rail		
1937	bond	4,900,000	4	dollar	reorganize bonds	direct charge on entire salt revenues	
1937	loan	15,000,000	5	sterling	rail	surplus salt revenues not yet pledged	
1937	loan	18,500,000	5	sterling	rail	rail	
1937	loan	4,000,000	6	sterling	rail		
1937	loan		6	cgu	rail		
1937	loan	1,920,000	6	sterling	rail		
1938	loan		7	francs	rail	Kwangtung mining taxes	
1982	loan	40,816,000	8.7	yen	none		Tokyo

Table VI: Capital and Organization of the Provincial Railway Companies, 1903-1911

Name	Date of Establishment	Organizer(s)	Total Projected Capital (Initially Projected Capital)	Capital Actually Received	Projected Route	Official Subsidies (provincial surtaxes)	Guaranteed Interest (per annum)
Szechwan Railway Company (Ch'uan-Han)	July 1903 (reorganized April 1907)	Hsi-liang, Governor-general of Szechwan	50,000,000 taels (15,000,000 taels)	Ch\$16,000,000 (commercial investment only)	Ch'engtung-Chungking-Hankow	rice, opium, opium-smoking lamp, officials' salary, tea, salt	4%
Swatow-Ch'aochow Railway	Dec. 1903	Chang Yunnan, overseas trader	Ch\$2,500,000	Ch\$3,600,000	Swatow-Ch'aochow		6%
Peking-Kalgan Railway	May 1905	Ch'en Chao-Ch'ang, expectant <i>taot'ai</i> of Chihli	7,500,000 taels	1,600,000 taels	Peking-Kalgan	government fund (net profit from the Peking-Mukden Railway)	
Yunnan-Szechwan Railway	May 1905	Ting Chen-to, Governor-general of Yunnan	20,000,000 taels (6,000,000 taels)	1,000,000 taels (1910)	Kunming-Luchow (Szechwan)	salt, grain, public funds, lottery tickets, copper coins	4% (changed to 6%)
Anhui Railway Co.	July 1905	Li Ching-fang, former associate-director of Shanghai-Nanking Railway	20,000,000 taels (4,000,000 taels)	Ch\$892,000 (1909)	Wuhu-Kuangteh	rice, salt, lottery tickets, interest of public funds, lumber, stamps, housing rent	5%
Chekiang Railway Co.	August 1905	T'ang Shou-ch'ien, former Salt Commissioner of Lianghuai	Ch\$40,000,000 (Ch\$6,000,000)	Ch\$10,600,000	Hangchow-Soochow-Shanghai		7%
Fukien Railway Co.	Sept. 1905	Chen P'ao-chun, ex-sub-reader of Cabinet Chancellery	Ch\$6,000,000	Ch\$1,733,915 (including investment Ch\$500,000)	Ch'angchow-Ch'uanchow-Foochow	grain, salt, Fukienese officials' salary, commercial transaction	6%
Kiangsi Railway Co.	Nov. 1905	Li You-feng, ex-provincial treasurer of Nanking	20,000,000 taels (5,000,000 taels)	Ch\$9,600,000 (including commercial investment Ch\$2,100,000)	Nanch'ang-Kiukiang	salt, officials' salary, steamship navigation, opium smoking, relief fund	7%
Hupei Company of Canton-Hankow Railway	March 1906	Liang Ting-feng, Hupei Judicial Commissioner	Ch\$10,000,000	Ch\$400,000 (commercial investment only)	Wuch'ang-Hunan	lottery tickets, rice	
Hsinning Railway Co.	April 1906	Ch'en Yi-hsi, overseas trader	Ch\$2,500,000	Ch\$3,333,670	Hsinning-Sanchiahai		5%
Kiangsu Railway Co.	May 1906	Wang Ch'ing-mu, Junior Councillor of Commerce Ministry	Ch\$10,000,000	Ch\$4,600,000	Shanghai-Kiahsing-Soochow		7%
Tat'ung-P'uchow (Shansi) Railway Co.	June 1906	Ho Fun-K'un, ex-provincial commissioner of Kansu	20,000,000 taels (2,000,000 taels)	227,000 taels (including grain surtax 200,000 taels)	T'aiyuan-P'ing-yao (eventually Tat'ung-P'uchow)	grain interest of public funds, land tax, opium, corvee services	4%
Kwangtung Company of the Canton-Hankow Railway	July 1906	Cheng Kuan-yung, expectant <i>taot'ai</i>	Ch\$44,000,000	Ch\$44,000,000	Canton-Yichang (Hunan)		
Hunan Company of the Canton-Hankow Railway	Aug. 1906	Yüan Shu-hsun, Metropolitan governor of Peking		Ch\$1,400,000 (commercial investment only)	Ch'angsha-Chuchow	rice, salt, poll tax, housing rent, officials' salary, land tax	
Kwangsi Railway Co.	Sept. 1906	Yu Shih-mei, vice-minister of Education	Ch\$30,000,000 (Ch\$15,000,000)	Ch\$100,000 (1909)	Kweilin-Hunan, Kweilin-Kwangtung, Linchow-Nanning-Yunnan	'Contributed' funds for purchasing official posts and titles.	6%
Hupei Company of the Szechwan-Hankow Railway	Sept. 1906	Chang Chih-tung governor-general of Hukwang	Ch\$20,000,000	Ch\$656,900 (including commercial investment Ch\$59,000)	Hanyang-Ichang	rice, lottery tickets	6%
Heilungchiang Railways	April 1907	Ch'eng Te-ch'uan, Tartar general of Heilungchiang			Harbin-Tsitsihar, Tsitsihar-Tsingshan	1,000,000 taels (land reclamation fund)	
Honan (Loyang-T'ungkuan) Railway Co.	Sept. 1907	Liu Ko, Junior Councillor of Rites Ministry	Ch\$15,000,000	Ch\$900,000 (commercial investment only)	Loyang-T'ungkuan	salt, land	
Sian-T'ungkuan (Shensi) Railway Co.	May 1909 (formally registered)	Yen Nai-chü, expectant <i>taot'ai</i>	6,000,000 taels	640,000 taels (registered capital only)	Sian-T'ungkuan	opium, salt, grain, community debt, public funds	5%

Sources: Yu-ch'uan-pu, ed. *Kuei-cheng chi-yao ch'u-pien* (First Collection of Documents concerning Railway Affairs), contracts and charters; *Kuei-cheng chi-yao ts'e-pien* (Second Collection of Documents Concerning Railway Affairs), contracts and charters; *Yu-ch'uan-pu tso-i lui-pien* (Collected memorials of the Yu-ch'uan-pu), railway affairs; *Yu-ch'uan-pu tso-i hsi-pien* (Supplementary Collection of Memorials of the Yu-ch'uan-pu), railway affairs; Hsieh Pin, *Chung-kuo t'ieh-tao shih* (History of Chinese Railways) 238-42; Tseng K'un-hua, *Chung-kuo t'ieh-tao shih* (History of

2. Yields: Russia, China, Japan, India

Source: Global Financial Database

