A MICROECONOMIC ANALYSIS OF THE BARING CRISIS, 1880-1890[1]

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Abstract

This paper aims to provide new light on one of the most famous episodes in financial history. The 1880s mania for Argentinean bonds in European financial markets culminated with the 1890 crisis. Taking a microeconomic approach, this paper addresses issues that were not emphasized in traditional explications of the crisis. We analyze Argentina's borrowing costs in the 1880s using new data from debt contracts. We argue that, despite a worsening macroeconomic situation in Argentina, its government enjoyed decreasing borrowing costs. This paper suggests that competition between financial intermediaries was a main cause behind the crisis.

INTRODUCTION

This paper aims to provide new light on one of the most famous events in financial history. During the 1880s, Latin American countries experienced a foreign investment boom. A major part of these flows took the form of sovereign debt, and the bonds were traded in the main European financial centers. Intermediaries played a major role in the whole financial mechanism, participating in each step prior to bond issuance. Different kinds of financial institutions, mainly merchant banks, supplied a variety of services for both the demand and supply sides. On the one hand, financial institutions established long-term relationships with foreign governments in order to fully exploit markets conditions, diminish risks, share the benefits from well-received issues and find solutions when problems arose. On the other hand, as individual investors had to deal with an information costly environment, financial institutions where seen as monitors of foreign governments and good political

economy practices. Financial intermediaries where thus actively involved in a highly profitable market.

Despite the traditional "one bank-one country" behavior, competition between financial intermediaries could emerge. A remarkable case of such occurred in the 1880s, when Argentina switched its one bank relationship to a competitive market. Since the country's independence, Baring had been Argentina's bank and was the most active financial institution in defending investors' interests in default situations by finding arrangements with Argentina's successive governments[2]. When the country finally stabilized and pursued a promising economic growth path in the beginnings of the 1880s, competition came first from French and then from German banks, sweeping Baring's dominant position in Argentinean affairs. However, this fact did not change the market's perception that Baring was Argentina's monitoring institution. Baring continued to participate in almost every bond issue, although sharing the business in banks syndicates or in less profitable activities of the bond issues' mechanism. This paper implies that this situation led to the 1890 crisis.

Macroeconomic theories have been dominant in providing explanations of this crisis. This paper takes a different approach, tackling unanswered questions by providing a microeconomic approach to the event. We use standard microeconomic theory to show that Argentina's borrowing costs decreased during the 1880s despite a worsening macroeconomic situation. Empirical evidence comes from debt contracts, which have never been used for this kind of analysis. However, this new data base is called to be a rich source of new lessons for our present.

[2] See Ferns, *Britain and Argentina in the nineteenth century* .

This paper is divided into five sections. First, we present a literature review of the principal theories that explain the 1890 crisis. We then describe the general debt issue mechanism for foreign governments at the end of the XIX century. Third, we will review all external loans contracted by the Argentinean governments from 1880-1889. In the fourth section we present a simple model of benefit-risk sharing between banks and governments. Empirical evidence then shows that banks were unusually risk-takers despite unfavorable economic fundamentals in Argentina. Next, we present several arguments in order to demonstrate that competition between financial intermediaries was a key factor behind the crisis, including a comparison with the situations of Brazil and Chile. Finally, we conclude. The Baring crisis serves as a typical case of free-riding and moral hazard and proves that pernicious results can also transpire in an environment of private, competitive financial institutions.

THE BARING CRISIS: EXISTING THEORIES

Historians and economists have long discussed the causes and consequences of this event since the repercussions in London and Paris were felt in distant countries like India or Australia in a probable case of "contagion"[3] despite the short duration of the crisis. Although discussion has focused on the econometric measurement of the channels through which the crisis affected third countries, little attention has been devoted to the economic explanation of investors' behavior in the aftermath of the event. Moreover, traditional theories of the crisis fail to explain precisely the rational of the sudden standstill in capital exports from the main financial centers to the rest of the world.

[3] Triner, "International Capital and the Brazilian Enilhamento, 1889-1892 : An Early Example of Contagion among Emerging Markets?" ; Mauro, Sussman and Yafeh. "Emerging Market Spreads : Then Versus Now".

The 1890 crisis, known as the "Baring crisis" due to its repercussions on the biggest merchant bank in London, has been a main subject of macroeconomic analysis throughout the century[4]. Classical explanations include those concerning the demand side, which we divide into two groups: balance-of-payments and monetarist. Additionally, an explanation from the supply side can be found in Kindleberger's work, which takes into account the investors' role in the crisis.

Williams[5] (1920) was the first supporter of a balance-of-payments view, presenting for the first time estimations on Argentina's accounting data. His reasoning supposes that increasing commercial deficits (as was the case in Argentina in the 1880s) made foreign capital flows necessary to minimize exchange rate depreciation. As soon as these flows froze due to external conditions or a lack of confidence, currency depreciation translated in external crises. Excessive money emissions taking place in the late 1880s were an answer rather than a cause of precedent depreciations (foreign debt was denominated in foreign currency). Monetary factors were thus irrelevant in explaining the crisis.

Following the same path, Prebisch[6] (1991) analyses the cyclical aspects of external factors (capital flows and exports) and its repercussions on the Argentinean economy. Using the same data as does Williams, Prebisch shows that expansive phases in the world economy coincided with crisis gestation phases in Argentina (as was the case in 1890): credit

[4] On a detailed description of the Baring crisis see Marichal, *A century of debt crises*, Clapham*, The Bank of England: A history,* or Della Paolera, *Straining with the Anchor*.
[5] Williams, *Argentina International Trade under Inconvertible Paper Money, 1880-1900*.
[6] Prebisch, *Obras, 1919-1948*.

expansion, consumption increase, excessive confidence and a general feeling of prosperity that translated into financial and property speculation. This was also fed by a rise in the demand for loans by the government (causing at the same time excessive liberal policies by official banks), creating a fictitious economic euphoria lacking any link with the real economy. Prebisch observed that capital flows stopped at a time when the Bank of England raised its interest rates, originated from cyclical changes in the hegemonic center of the world economy. This fact precipitated Argentina in the deepest phase of the crisis.

Ford[7] (1962) adopts a similar view, although his main concern was the behavior of the gold standard and its ability to support currency convertibility in the cases of both Britain (as a core country) and Argentina (as a periphery country) cases. His hypothesis was that the gold standard regime was not able to support currency convertibility if, in a context of modifications in price structures, external transactions were not balanced. For Argentina as well as for Britain, convertibility depended on political, economic and social conditions.

At the same time, Ford suggests that external factors were behind the imbalances in Argentina's external sector for that period (1880-1914), excluding monetary reasons. He argues that exchange rates depended on the balance-of-payments, although he recognizes the effects of macroeconomic policies, particularly the link between exchange rates and monetary emissions. Imbalances in the external sector were responsible for the convertibility failure, due to the different phases in capital flows: indebtedness was followed by an increase in imports and currency depreciation. As for Prebisch, as these flows stopped, debt service had to still be paid in gold. This phase deteriorated because

[7] Ford, *The Gold Standard, 1880-1914: Britain and Argentina.*

during this period, investment returns did not sufficiently compensate for the increase in imports and debt payments. In 1890, Argentina was particularly affected by this fact, which was reinforced by the macroeconomic politics of the 1880s that encouraged credit expansion although investment returns in the export sector were not yet adequate to cover external payments.

An alternative view is presented in the work of Cortes Conde[8] (1989). Following a monetarist view, he applies a model which can be considered of "rational expectations". Cortes Conde writes that Argentina's XIXth century crises (particularly those of 1876, 1885 and 1890) had their root in monetary factors: as a response to credit increases and money supply, public purchased gold "anticipating" currency devaluation, causing reserve outflows and money depreciation.

Della Paolera[9] (1995, 2002) agrees with this view, arguing that the Baring crisis was caused by inconsistent monetary and fiscal policies, seeking, on the one side, to return to currency convertibility but running persistent fiscal deficits on the other. Until 1885, government accounts remained in deficit and were financed by issues of paper notes. But between 1886 and 1887, public funded debt played this role, breaking the strong correlation between deficits and inflation rates. Besides, primary deficit (deficit net of interest and amortization payments for public debt) diminished considerably, having a positive impact on people's perception of the government meeting its obligation without resorting to inflationary

[8] Cortes Conde, *Dinero, Deuda y Crisis: Evolucion Fiscal y Monetaria en la Argentina, 1862-1890.*

[9] Della Paolera "Monetary and Banking Experiments in Argentina: 1861-1930" and Della Paolera and Taylor, *Sraining with the Anchor*.

finance. Fiscal matters became fragile from 1888, changing the public's perception of inflation, thereby causing people to fly from paper currency into specie inciting currency depreciation. This process was reinforced by further money creation to finance deficits and the impossibility to obtain access to capital markets.

On the supply side, Kindleberger (1996)[10] questions investors' rationality. Following Minsky´s financial crisis model, events leading up to a crisis start with a "displacement", which is defined as an exogenous, outside shock to the macroeconomic system (e.g. the end of a war or the widespread adoption of an invention). For the Baring crisis, much discussion has centered on low rates in British investments, and a sudden favorable economic perspective in Argentina (having thus push and pull forces acting together). This "displacement" opened new profit opportunities, attracting both business and individuals. For Kindleberger, if new opportunities dominate, a "boom" is created, with the possibility of being nourished by an expansionary monetary environment brought about through: not only bank credit, but also the formation of new banks, new credit instruments, and other means outside of banks.

Once the urge to speculate is present and transmuted into effective demand for goods and financial assets, increased demand places pressure against the ability to produce goods or the supply of existing financial assets. Higher prices open new profit opportunities, attracting more firms and investors. This "euphoria" phase implies speculation added to investment for production and sales resulting in "overtrading". Profits from speculative purchases and sales increasingly attract firms and investors, leading to the evolution of

[10] Kindleberger, *Manias, panics, and crashes: a history of financial crises*.

rational behavior to “mania” or “bubble”, the former emphasizing irrationality and the latter forecasting the bursting.

Speculative booms carry with them increases in interest rates, velocity of circulation and prices. As soon as a few insiders decide to take their profits and sell out, hesitation begins and prices begin to level off. Kindleberger calls this phase, “financial distress”. Regarding the 1890 crisis, Kindleberger names German sellers of Argentinean bonds in 1888, writing that they contributed to distress rather than to the crisis, since they loaded British investors with a higher proportion of the £200 million in bonds issued by Argentina[11]. This contrary opposite movement from German investors towards Argentinean securities attracts Kindleberger’s attention, who when referring to British “euphoria”, says that it was *“one of a few cases where enthusiasm of one class of investor for a security failed to communicate itself for long to another”*[12].

Kindleberger continues by naming any single signal as the factor that precipitates the crisis: for instance, the failure of a bank or the fall in the price of the primary object of speculation. A rush takes place and prices decline, increasing bankruptcies. Liquidation may lead to panic, feeding into itself until prices fall so low that people are tempted to move back, closing trading or by the intervention of a lender of last resort.

While these theories explain important financial and economic factors that lead to the crisis, a number of important questions remain. Most important address the forecast of the crisis.

[11] Kindleberger, *Manias, Panics, and Crashes* p.102.
[12] Kindleberger, *Keynesianism vs monetarism, and other essays in financial history*.

How could Argentina arrive to such a financial situation and still continue to receive capital? For instance, a similar contemplation was made by Wirth (1893) some years after the crisis:

"..during the years 1882 –1889, Argentina and its provinces, towns, mortgage-banks, and other concerns became indebted to European investors for over one thousand million dollars. There is no well governed country in Europe which could get so large a credit in proportion to the number of its people…In 1886, European investors already began to suspect that the Argentine credit was being overworked.."[13]

Informational concerns may indeed have played a central role. Did investors know about Argentina's financial situation? For certain authors, European investors had always been aware of the financial situation. Eichengreen (1999), comparing the Mexican 1994 crisis with Baring's, wrote that

"*In neither 1890 nor 1994 was a crisis totally unanticipated…As early as 1886 there were fears for the stability of the Argentine finances. Already that year it was suggested that Barings was lending to the government mainly to support the value of Argentine securities"*[14]

or, looking in detail at the behavior of one contemporary economic agent, Joslin explained that

" Anderson (director of The London & River Plate Bank) expected a crisis long before it broke…By January 1888, he could only explain the continued flow of funds into Argentina in terms of the extremely low rates of interest in London…"[15]

[13] Wirth, "The Crisis of 1890"..
[14] Eichengreen, "The Baring Crisis in a Mexican mirror".
[15] Joslin, *A Century of Banking in Latin America*, p. 121

but he does not tell us why it was precisely Argentina, whose situation may have not been better than elsewhere, the chosen country that attracted those funds. Financial distress became evident over time. For instance, Della Paolera argues that

"the fiscal regime clearly changed early in 1889 when the Argentine government decided to pay off in paper pesos part of the funded debt service denominated in hard dollars"[16]. Nonetheless, yield rates on Argentinean public bonds remained stable during the whole year. Moreover, bonds on behalf of Argentina's federal and provincial governments continued to be issued in European financial markets. Mere speculation does not tell us the whole story. For instance, Kindleberger does not explain why British enthusiasm failed to communicate to German investors, who became hostile to Argentinean bonds some years before the crisis. Or, quoting Flandreau (2003):

"…as far as we know, nobody has never wondered why it was only Baring who took a deadly beating in the Argentinean default: basic prudence should have implied that the bank would not take a long position in one state whose fragility it knew only too well, precisely from its close relation with it".[17]

In fact, Flandreau gives us part of the answer when he quotes Baring's relationship with Argentina. In his paper, he implies that information on Argentina's financial situation was readily available to Baring, and that this information was retained from the markets. This same clue is followed by Kindleberger:

[16] Della Paolera and Taylor, *Straining with the anchor*, p. 19
[17] Flandreau, "Crises and Punishment: Moral Hazard and the Pre-1914 International Financial Architecture".

"Baring Brother's reputation was so high that from its successes in Anglo-American trade finance in the first half of the century that the market in London was reassured by its continued involvement in Argentinean securities.."[18]

TOWARD A MICROECONOMIC APPROACH: THE DEBT ISSUE MECHANISM

In this section we will begin to construct the puzzle. Taking into account the macroeconomic theories listed above, we will now turn to a microeconomic approach. We will begin by describing a more specific channel that we consider vital in explaining the crisis. This channel is the debt issue mechanism. The sources consulted for this section are both primary and secondary; we used some classic works mainly concerned with London and Paris bond issues, although we include some German works; we also consulted the archives from some banks both in England and Paris. Our main concern was related to knowing the debt costs for the government and agreed conditions concerning the bond issues. Most information was found in the debt contracts, which we describe below.

To begin with the secondary literature, we have on the one hand the classic works of Finnie[19] (1934), Jenks[20] (1927), Cairncross[21] (1953), or more recently, Suzuki(1994)[22]. Nonetheless, these works ignore an important amount of literature describing debt issues in other countries, such like France or Germany, which developed parallel bond issue

[18] Kindleberger, *Manias, Panics*, p. 231.
[19] Finnie, *Capital Underwriting. An account of the principles and practice of underwriting capital issues, together with a critical analysis of all the main underwriting and subunderwriting agreements*.
[20] Jenks, *The Migration of British Capital to 1875*.
[21] Cairncross, *Home and Foreign Investment, 1870-1913, studies in capital accumulation*.
[22] Suzuki, *Japanese Government Loan Issues on the London Capital Market*.

mechanisms not practiced in London[23]. At the turn of the XIXth century, financial markets were very much integrated in many aspects, particularly in sovereign debt bond issues. We would not have the complete picture if we were only to analyze one market, for competition and solidarity interacted between and within these markets. As mentioned above, we aim to retain the main characteristics for Paris and London in the 1880s, focusing on two questions: first, which were the differences between both financial places that we consider important for our analysis; second, what was the role of the debt contracts, whose content decided the share of both risks and benefits of the bond issues between financial intermediaries and governments.

Bond issues in the financial markets of late XIX century can be regarded as a four-stage mechanism, comprising the whole process of the capital flows from the individual investor to the final borrower (for our purposes, foreign governments). Stages varied according to the country and intermediaries involved. In general terms, these stages are: 1) the search for funds; 2) choice of issue system; 3) issue planning; and 4) bond market placing. For each case, the complete specific mechanism was decided in the first two stages, and the terms were formalized in a document called the *debt contract*, signed between the financial intermediary (or intermediaries) and the government. We will now explain each stage in more detail.

[23] It has been a general practice that these authors use almost the same primary sources. A first and basic reference is an article in The Banker's Magazine of July 1876, which describes the evolution of bonds' issues mechanism between the years 1860-1870 (although other press articles are sometimes cited, particularly in Suzuki's work). A second reference are the writings of O'Hagan, an active stock broker in foreign loans and an important supporter of banks' syndicalisation in order to diminish the risks from bonds' issues. A third and very recurrent reference is the work of Drummond-Wolf, H. Rambling Collections, vol. II. Finally, Jenks primarily uses the "Reports from the Select Committee on Loans to foreign states". While there exists a relative historical consensus in the description of the debt issue mechanism, economic formal analysis still remains at the very beginning. In this work we try to formalize some basic ideas to consider for future research.

1) The search for funds. Governments generally began the process through the search for new funds from abroad. In some countries, parliaments voted laws allowing the government to look for funds for particular projects. In most cases, governments named an agent to negotiate in Europe a loan with financial intermediaries (mainly merchant banks or *banques d'affaires*) in Europe. However, banks could also take the initiative and propose their services to the government: some financial institutions having to do with foreign business operated though agents of their own or commercial houses established in the country itself, having the possibility to use a more direct contact with distant governments[24]. Box 1 presents a broad picture of financial market structures both in Paris and in London, and some hints of competition's role in the issue mechanism.

2) *Choice of issue system*. At the moment when a government decided to take a loan, the next stages were established as soon as the government agreed with a bank upon the terms of the issue. The first decision to be taken was the issue system, for which several possibilities existed. The simplest way was the system which the French called " *vente à commission*". Banks acted merely as financial intermediaries, receiving subscriptions for the purchase of bonds, and more generally doing every necessary administrative step for the floating of the loan. For each service, banks received a commission as a percentage of each bond handled[25].

However, during the 1880s business was not always that simple. A very different system which clearly opposed the *vente à commission* was the system which involved the

[24] In a rather surprising manner, this second case has been overlooked in the secondary literature, although it was a general rule for some Latin American countries in the 1880s, and particularly for Argentina, at a time when bank competition to get issues was at peak.

[25] These commissions could involve several kinds: placement, guichet, brokerage, etc.

formation of bank syndicates[26]. These syndicates bought the whole amount of bonds and placed them themselves later on (Lotz[27], pp.5). This system was especially used in France and Germany.

In Paris, syndicates were classified into two groups. The first was named "*de prise ferme*"(firm offer). This kind of syndicate could subscribe a certain amount of bonds, or buy directly from the government, taking itself a part or the complete risk of the issue. The second kind of syndicate was called "*de garantie*"(guarantee syndicate) which is represented by a manager and who, in return for a commission,

"the manager commits to find underwriters, otherwise he would take firm the remaining of the issue."[28]

This guarantee system was analogous to the "underwriting system" in London (having "underwriting syndicates" as well). In order to assure the success of the bond issue and diminish the risk of the business, the issuers dealt with persons or institutions to engage in taking a certain amount of the bonds in the case the public would not have taken the whole issue.

By the 1880s, the formation of syndicates in London was a practice developed several decades before (Finnie, 1934). Suzuki wrote that « *the primary role of a syndicate was to ensure a firm placement of the loan on the market* »[29]. Risk-sharing between the members

[26] Tchernoff defines a financial syndicate as a "means to concentrate capitals, particularly floating capitals, to canalize them to an economic, industrial or financial object". Tchernoff, *Les syndicats financiers: syndicats d'émission et de placement, syndicats de blocage, syndicats de résistance, syndicats de bourse, investment trust et holding : suivi de formules d'application*.

[27] Lotz, *Die Technik des deutschen Emissionsgeschäfts: Anleihen, Konversionen und Gründungen*. .
[28] Tchernoff, *Les syndicats financiers*, p. 34.
[29] Suzuki, op.cit. pp.26.

of syndicates should make the business more attractive: the risk from high-amount loans decreased, as well as the risk of issue (due to the borrower). On the other hand, syndicates were also a mean to guarantee the governments the placement of a part or the whole issue[30].

3) *Issue Planning*. This stage depended completely on the issue system chosen. In the case of syndicates, several points had to be specified from the very beginning: the quantity of bonds to be guaranteed or underwritten, the nominal rate and issue price, and every loan feature so that banks could decide to adhere to the syndicate or not. Banks had also to agree on other aspects: the starting date of the syndicate, its duration, expenses and expected benefits (see below). Benefits depended on different commissions mentioned above, and in the case of the guarantee syndicates, also on the manager's remuneration. This kind of syndicate also demanded a commission for each bond guaranteed, as well as a placement commission for the unsold bonds to be distributed between the members of the syndicate and a *guichet* commission. Managers of these syndicates reserved also a part of net benefits for the payment of their commission. On the other hand, "*Prise-ferme*" syndicates obtained as an important benefit the difference between the price of issue and the price at which the government sold the bonds (the expenses could be taken in charge by either the government or the syndicate, depending on the contract signed).

Syndicate participants could be responsible for both the total results of the syndicate operations and the part assigned to them. Tchernoff[31] writes that this depended on the syndicate system chosen. In theory, two different systems existed. The first was called "*Lyonnais*"(from Lyon, where this system was common). On the non-placed remainder of a

[30] Syndicate participants and underwriters did not need to be the same, although syndicates may be formed to underwrite a loan.
[31] Tchernoff, *Les syndicates financiers*, p.61.

bond issue, each participant was to receive a proportional part according to its number of placed bonds (in other words, each bank was only responsible for the difference between its syndical part and the number of bonds that it was able to place). The second system was called "*de la repartition a la parisienne*". If all or a part of a bond issue taken firm was not placed, they were to be distributed proportionally between the participants. In practice, however, a considerable number of hybrid systems existed. A syndicate manager could, for instance, modify to his preference placement commissions, cession to other intermediaries or bond placement prices[32].

In the underwriting system, issuers contacted investors or institutions ready to commit to subscribe the issue in the case the public did not take the entire or part of the issue. Underwriters were usually business partners of the issuers, or had relationships with one of their brokers (those charged to place the bonds; brokers could also play the role of an underwriter): merchants, manufacturers, or other financial institutions. Merchant bankers active in bond issue matters generally engaged a part of their assets in underwriting operations in both own issued bonds and other bonds considered attractive to them.

4) *Bonds placement*. In Paris, there existed three ways to place a bond issue: i) public subscription, ii) through introduction into the stock market; and iii) through the banks. The first consisted of an announcement that public subscriptions to an issue were to take place in certain banks or financial institutions which were designed in the prospectus or other publicity modalities. This practice was also used in London and other important European financial markets.

[32] Ibid. pp. 75.

Introduction to the stock market implied that issuers needed to take an important decision, namely, the introduction price. Tchernoff explains that the limits of variation were quite narrow. For instance, if similar bonds were quoted already in the market, the new issue could not exceed that price. Furthermore, bonds issues depended strongly on temporary movements. Issuers made use of "fictitious" operations to inflate bond prices. This practice was commonly used in London, where introduction in the Stock market was the most common manner to place bonds. Members of syndicates, underwriters and brokers purchased bonds even before publication of the prospectus. Jenks wrote that "*Ability to make the market rather than financial prestige was the crucial qualification for a successful dealer in government loans"* (pp. 278). This practice was called "*market rigging*"[33], and was perceived as an artificial stimulant of bond issues. Curiously, one of the most remarkable exceptions of financial intermediaries not following this practice was precisely Baring[34].

Finally, issuers could make use of bank branches against a commission (for placement or "*guichet*"). If these banks were themselves issuers, it was in their own interest to directly recommend the bonds to clients in their establishments. A main characteristic of this system is that no other publicity took place with the exception of the direct recommendations[35].

[33] In the US called "Wash sales". Cairncross, op. cit. p.93.
[34] ibid.
[35] This fact would explain why today researchers are not able to find prospectus on certain loans of the period. For instance, the non-existence of the documents seem to be an impediment to the widening to the Mosley's contracts database.

The whole process described above is shown in Figure 1. The schema shows the four stages involved until the bonds arrive in investors' hands. In the simplest model, the financial intermediary is the only existing agent between the government and final investor. But in other cases it can constitute syndicates or engage underwriters. At the same time, syndicates can make use of other agents to take charge of the bond issue, constituting new syndicates or making other agreements.

The process is also summarized in the document called "debt contract", which we already mentioned. It is signed by the interested parts (governments and issue banks) from the very beginning, and it determines all the conditions of the bond issues. For the data we were looking for, this four to five page document contains every loan detail: indebtedness costs, risk-sharing, participants' names and participants' numbers.

Market Structure and Competition at the end of the XIXth century

Structure of European Financial Markets. In London, the market for bond issues was dominated by a few merchant banks established several decades before the 1880s. Jenks observed that, from 1866, the most prominent banking houses in London were of foreign origin, like Frühling&Goschen or J.S. Morgan; others had branches in London, like the American house Morton & Rose; finally, a group of them also operated in some of the main cities on the Continent, this being the case for houses like Rothschild and Stern, or some that were less reputed like Bischoffsheim or Erlangers.

In Paris, foreign government bond issues were mainly a business of the *banques d'affaires*, although certain important *banques de depots* could also participate in some stages of the

bond issue. For the period 1860-1890, French banking experienced an important expansionary phase. Bouvier writes that Crédit Lyonnais, a major *banque de depot* increased ten times its nominal capital between 1863 to 1881 (from 20 to 200 millions francs)[36]. Expansion implied foreign business. Following *"la loi du profit*"[37], French banks tried to develop their activities toward "*operations extraordinaires*"[38] which remained mainly within the hands of some big *banques d'affaires* or credit institutions, represented for instance by Société Générale, Crédit Lyonnnais or Paribas.

Competition. The distinction between "big banks", with an important, well - established reputation and other banks is an aspect emphasized in the secondary literature as crucial for the reception of bond issues by investors. In such concentrated markets, particularly in London, those "big banks" did not need to look for new business to continue in the market; Jenks writes that interest payments and redemption of loans already contracted offered them enough benefits to participate in new perilous issues. They also regarded with indifference the efforts made by banks with a less prestigious reputation or syndicates (which we will later see) formed to promote new loans and new borrowers (Cairncross, p.92). Moreover, competition was even undesirable and badly perceived, because *"the effect of competition was very often to augment the risks marketing the loan in the face of the efforts of the unsuccessful banker to cry it down* » (Jenks, p. 273). Thus, following these authors, competition did not improve the credit of the country or interest rates.

[36] Bouvier, *Histoire Economique et Histoire Sociale. Recherches sur le capitalisme contemporain*.
[37] Cauboue, Pierre. *Conduite des Banques*.
[38] This term was used by Henri Germain, president of the Administration Board of Crédit Lyonnais. According to Germain, operations involving foreign governments and French investments in foreign loans were the principal activities of this column. An "operation extraordinaire" was the one which was "*...susceptible de rapporter des intérêts élevés ; qui soit lié à des opérations d'envergure, portant sur des gros chiffres ; qui se produise sans régularité, au hasard des affaires ; qui ne soit pas automatique, facile à réaliser, mais le résultat de combats parfois délicats contre des groupes financiers rivaux, qui offre, avec des chances de gain, des risques certains; qui doive être, par conséquent, l'objet d'études préalables sérieuses… »* , cited in Bouvier, op. cit.

The banks' expected benefits

"The profits of a financier, it is seen, depend on the number, rapidity, and variety of his operations. (…)But except to the captains of the craft – the Barings, the Hopes, the Rothschilds – business does not drop from the clouds, or come unsolicited. On the contrary, it has to be sought, devised, discovered, or bought. New fields have to be opened out. Countries unexplored must be visited, and governments influenced."

"… in the case of countries in which money is scarce, and which are forced to bring their loans to a foreign market. These are obliged to pay high for their money, and generally to run the usual risks."[39]

We will try to briefly formalize the benefit's function of the banks, as an incentive to participate in Argentina's bond market prior to the crisis. We mentioned in the text that benefit sources could vary depending on the issue system. In the easiest case, where the banks act merely as financial intermediaries, we have

$$E(\pi) = f(\sum F)$$

Where $E(\pi)$ is the expected benefit of the bank. It depends on the present value of the fees to be paid by the government for all services during the life of the bond on the market. This means that benefits depend only on the commissions that the bank charges for subscriptions, payments of coupons and redemption of the bonds (net of all expenses that banks may face).

[39] Wolff, *Rambling recollections.*

If we consider, on the other part, that banks assume a part of the risk of issue, expected benefits will be a positive function of the expected price of issue, p_e given p_p , the purchase price:

$$E(p_e / p_p)$$

For instance, in the case of a *"prise ferme"* syndicate, we have that:

$$E(\pi) = f(E(p_e / p_p) - p_p, F)$$

Expected issue price was indeed an important variable that banks took into account to negotiate the debt contracts with the governments. It served at the same time to define p_p when a firm offer was made. On the other hand, $E(p_e)$ depended on a number of variables measuring the risk of the issue: macroeconomic situation of the country (mainly monetary and fiscal variables, debt sustainability) the market mood (price of bonds with similar characteristics already in the market, time passed since the last issue) and bond characteristics (existence of guarantees).

ARGENTINEAN CONTRACTS BEFORE THE BARING CRISIS

Our "data base" consists of almost every Argentinean, Brazilian and Chilean debt contracts for the period 1880-1890. Many of them can be found in the archives of the banks. For Argentina, an important amount of contracts for the period 1880 - 1913 are available in the Baring and Paribas archives. Other sources include Agote (different volumes) and Peña (1906), which contain information on contract and public finances of Argentina. With regards to Brazil, the Rothschild archives contain all the contracts of the period, although a good amount of information in those contracts can be found in other sources like the

Brazilian Yearbook (different volumes) and in the Ministry of Finances reports [40]. Concerning Chile, the Rothschild archives contain some contracts, and we could find additional information in the Credit Lyonnais archives.

In this section we will concentrate on Argentina's contracts. The history of Argentina's external debt was, as for most Latin American countries, very eventful throughout XIX century. For the purposes of our study, we will analyze the decade prior to the crisis, dividing it in three sub-periods (as done, for instance, by Peters (1934)). In the first sub-period, from 1880 to 1884, Argentina signed four contracts with European bankers. One important characteristic during these years was the dominance of French banks in the Argentinean national business, replacing Britain's dominating position and limiting it to bond placing activities. French banks affronted successfully British competition by constituting "*prise-ferme*" syndicates (later imitated by German banks), whereas British banks acted alone and realized merely financial intermediation activities (with no risk-taking)[41].

The second sub-period concentrates on the year 1885, a brief crisis period in Argentina (leaving a temporary gold standard regime). During this year, a contract was signed between Argentina's government and European banks involved in Argentinean business, canceling two previous loans which had completely failed and converting the debt into a major long term loan and conceding a new short-term advance to alleviate a critical fiscal situation.

[40] These reports are available online. I thank Andre Villela for this and other useful information. The web address is: http://www.crl.edu/info/brazil.
[41] For a detailed description on French banks entering Argentinean business see Regalsky (1984).

The third sub-period (1886-1889) begins with the issues of the long term loan (made in two parts, in January1886 and 1887). It experiences an important "boom" in Argentinean national (five loans including three conversions), provincial and municipal bonds, and the entry of a new concurrent: German banks.

First Sub-Period: 1881-1884, the breakdown of English monopoly

French Contracts: 1881 and 1882 loans

The first loan (called the "Railway Loan"), amounted to £2.45 million nominal value and a 6% coupon. As a remarkable new fact for Argentina, the national government received several offers from English and French banks even before promulgation of the law by the Argentinean parliament allowing the external loan. Although contemporary literature still discusses the precise number of serious competitors trying to obtain the issue[42], press articles and previous studies allow us to be sure about one thing: government's preference was given to "firm offers" (getting rid of risks involved in the bonds' issue). However, the only firm offer was made by the French syndicate represented by Paribas[43], who took the whole loan at a price of 82. Later, with the bonds issued at a price of 91, the benefits for the banks resulted to be exceptionally high.

A second loan was negotiated between August and October 1882. The same French syndicate undertook the loan (called "*Treasury Loan*"), amounting to £817,000 and offering a 6% coupon. Once again, this loan was negotiated on a "firm offer" basis, at 90.5.

[42] According to Regalsky, there existed four candidates ready to negotiate the loan issue: two English banks and two French syndicates (represented by Paribas and Société Générale, respectively). On the other hand, Jones writes that two other banks were also interested in the affaire: the Spanish bank Vega, Ibañez & Co. and Erlanger & Co. from London.
[43] Members of that sindícate were: Paribas, Cahen d'Anvers and Comptoir d'Escompte.

This was at a time when Argentinean bonds were quoted at the market at 97-99. By the time of the issue, the price of the new bonds was situated at 92,5. Unfavorable conditions in European markets (Regalsky) and the frequency of new bond issues (Jones) seem to be the principal factors lying behind these deceiving results.

The first loan (called "*National Bank Loan*") that offered a 5% coupon (instead of 6%) was contracted with the same French syndicate, for an amount of £1,7 million. However, negotiations were considerably more complicated than in previous cases. Banks refused to take the whole loan on a firm basis at the first stage, and opted to make an advance to the government in the amount of £960,000 (56% of the nominal capital of the loan) at a rate of 6% plus a ¼% trimester commission. At the same time, they kept the option to buy firm in a one year period the totality of the loan or the nominal capital equivalent to the sum to be paid by the Argentinean government.

Baring was in charge of the bond issue in London. In fact, some days after signing the loan contract with the Argentinean government, the French syndicate had signed a contract with that banking house. It stipulated that Baring receive a 1% commission on the nominal amount of the loan, and the syndicate was in charge of all expenses for the issue. At the same time, commissions paid by the Argentinean government were to be shared between Baring and the Syndicate: 1% on coupon payments and ½% on redemption[44].

For the first sub-period, this was the last « lucky » loan flotation. There existed afterwards two new issues, which failed and precipitated the need for a new agreement. The first,

[44] The same commissions were paid to Murrieta and Morton & Rose for previous loans.

called the "Public Works" loan, was signed with a new Anglo – French syndicate, amounting £5.9 million with a 5% coupon. This syndicate opted to make a firm offer for one third of the nominal amount, £2 millions, at a price of 84, although charges were to be taken by the Argentinean government (2.5%), and funds shipped within a year, leaving a net price of 78.3. The remaining two thirds of the loan were given at the same terms, but when the issue took place on the September3rd 1884, rumors concerning convertibility suspension in Argentina were rife, and the syndicate were left with most bonds in their hands[45].

The second loan (called "*Salubridad y Riachuelo*") was negotiated almost simultaneously with the French syndicate represented by Paribas, for a nominal amount of £2,4 million. In a similar manner, the syndicate took one third of the loan, at a price of 80, payable in 90 days bills of exchange, which reduced the price to 78.6. The rest of the bonds were to be sold on commission (2.5% for each bond sold), having the issue price not lower than 82.5. Surpluses were to be equally shared between the government and the bankers. Meanwhile, market conditions made the placement of the bonds impossible.

Second Sub-period: 1885

At this stage, the Argentinean government found itself needing fresh funds to meet their short-term obligations. Particularly after the 1884 failures, a government agent, Dr. Carlos Pellegrini, was sent to Europe to unblock the situation. The problem to be faced by Dr. Pellegrini was well summarized in a report to Argentina's government:

[45] H.E. Peters, op. cit., pp. 39

"Once he arrived, he found himself in an embarrassing situation; the French syndicate who took firm $4,000,000 of the 12,000,000 Riachuelo loan, could not place the bonds on the market. Morgan, who took $10,000,000 firm of the Public Works loan ($30,000,000) could not place but £300,000. Between these syndicates rivalry impeded any action. In these circumstances, the agent began negotiations to unify both syndicates and incorporate the Baring banking house"[46]

A first agreement (contract) between the government and an "unified syndicate" of all banks participating in the 1884 loans was signed on the 6th and 7th of July, 1885[47]. The "*Salubridad y Riachuelo*" loan, taken by the Paribas syndicate, was completely cancelled (£2.4 million), and the "*Public works*" loan, taken by the Syndicate represented by Société Générale was partly cancelled (£4 million nominal worth bonds out of £6 million). On the other hand, the government agreed to repurchase part of the loans taken firm by the banks. The arrangement "consolidated" both loans in one big issue amounting £8.4 million, which became the most important loan ever accorded to a Latin-American country.

This time, no firm offer was made, and the bonds were to be placed in the market by the "*vente à commission*" system, where the government paid 2.5% on the nominal amount of the bonds sold. Charges of the issue, brokerage, stamp, publicity and legal fees were all paid by the government as well.

[46] Own translation from Spanish. Report of the Argentinean parliament, published in La Prensa, 21 October 1885.
[47] The banks participating in the agreement were: Paribas, Comptoir d'Escompte, Cahen d'Anvers, Société Générale, Crédit Industriel, Baring and the North American house of Morgan.

This contract presented two special features. First, the famous guarantee that Argentina's government was obliged to cede to the bankers: the customs revenues[48]. The National Bank of Argentina, responsible for the collection of the government's revenues, was charged for opening a special account to deposit the necessary funds to meet debt service. Second, Argentina's government committed not to *"authorize or sanction, as long as this government is in charge, the issue of any loan, without a formal previous agreement from the other contracting party"*.[49] The contract referred particularly to a loan already voted by the parliament to raise the capital of the Bank of the Province of Buenos Ayres, the most important bank of the country.

However, matters did not happen as foreseen. The Argentinean parliament, to whose approval the agreement was conditioned, refused it on the 11th of August, giving as a main reason the inclusion of the guarantee clause, which was considered as "*depressive to the dignity of the country*"[50]. We can only speculate about the real reasons of this refusal, and time gaining may be a plausible one. Within the next months, a new law was voted to take an external loan of £4 million. The "Bank of the Province of Buenos Ayres" loan was taken in charge by the provincial government, and finally, on the 21st of October, 1885, the parliament voted a new agreement with the banks. Except a few insignificant modifications, the new contract was practically the same.

Third sub-period: 1886-1889

[48] Government revenues from the customs duties constituted in 1884 about 62%. Banks seem to have been aware of this fact. See Ferns, H.S. Britain and Argentina in the nineteenth century. Oxford : Clanrendon Press, 1960 for a detailed discussion on the effects of the agreement. Also : Flores, Juan. The Pellegrini Agreement : A Historical Case of Moral Hazard ? Unpublished Manuscript, 2002.
[49] Own translation from French. Contract of July 1885, Paribas archives.
[50] La Prensa, op.cit.

Despite the prohibitive clause not allowing the Argentinean government to take new loans, in 1886 it continued to seek external loans. In October a contract was signed with Murrieta, for the extension of the "*North Station Railway*". The loan was divided in two series, having signed the contract only for the first series. The loan amount was £3.9 million, to be issued in three times between 1887 and 1889[51].

Murrieta had not participated in the 1885 agreement. In fact, no bank participating in that syndicate was allowed to contract new loans. However, the favorable results of the 1886 issue (the first part of the £8,4 millions loan) eased the market for new bonds. For instance, Baring could finally place a bond issue for the province of Buenos Ayres. But the turning point were the new competitors stalking the Argentinean market: the German banks.

On 25th of January, 1887, a syndicate formed by Disconto Gesellshcaft, Norddeutsche Bank, Oppenheim and Banque d'Anvers signed a contract to advance the Argentinean National Bank the equivalent of £1,5 millions. As a guarantee, the syndicate would receive bonds equivalent to £2 million in internal debt (that were to be converted to external debt by a law that hat to be passed by the Argentinean parliament).

Another syndicate represented by Deutsche Bank[52] signed a contract with Argentina's government on the 14th of July, 1887. The amount of the loan was 20 million gold pesos,

[51] Bonds' issues and prices were as follows: June 1887, £1,3 at 91,5; April 1888, £1,5 millions at 94, and 1,1 in May 1889, at 97. Data from Lewandowski, M. et Martinez, A.B. L'Argentine au XXe siècle, Paris : A. Colin, 1906.

[52] The other participants were: Mendehlsohn, Bank für Hander, Bethmann, Deutsche Vereinsbank, Disconto Gesellshcaft, Norddeutsche Bank, Bleichshcröder, Oppenheim, Cahen d'Anvers, Heine, Société Génerale pour favoriser le développement du commerce et de l'Industrie en France, Société Générale du Crédit Industriel et Commerciale.

equivalent to £4 million and a 4 ½ % annual coupon. The object of the loan was to convert the 5% loans contracted at the beginning of the decade. The loan was taken firm by the syndicate, at a price of 85, less 2.5% issue expenses, taken in charge by the government.

Lacking an English partner in the syndicate, a second contract was signed between the syndicate and Baring. This allowed the bank to issue part of the bonds (equivalent to £1,5 millions) in London. This way, Baring remained the bond issuer in London. On November 6th , 1888, issue took place with a favorable outcome (issue price was 87).

At the end of the decade, two more contracts were signed. The first with a syndicate of German, French, and English banks. The second with the banking house of Stern. According to the first contract, the objective of the loan was the conversion of 6% bonds issued in the 1870s and the beginning of the 1880s. The syndicate, composed of eight banks, took firm the total amount of the loan, £5.9 millions, with a 4 ½% coupon and 1% annual redemption. The price agreed upon was 88, less 2.5 charges, the net price was 85.5. The issue price later turned to be (on the 18th February 1889) 90. Finally, the second contract was taken by "*vente à commission*". The loan to be converted was the much problematic "*Hard Dollar Loan*"[53], to a 3 ½% coupon and 1% redemption.

[53] This was an originally internal loan issued in 1876 with a nominal amount of 6 million gold pesos, bearing 9% annual interests and 4% redemption. Although at the time of the issue the price remained low (75), by 1881 the quotation was 122. The government refused to redeem the bonds by purchase in the market and "*insisted upon its right to call at par, which was disputed by British holders*". For a detailed discussion on Argentina's conflicts with foreign bondholders see Peters (1934).

Table 1 resumes contract conditions for Argentina's foreign loans in the 1880s. From a total of eleven contracts[54], eight were taken firm (totally or partially) either at the moment of the signature of the contract (6) or as an option (2). For the two contracts for which the loans were taken firm as *a posteriori* option, a short-term advance was included in the contract (both National Bank loans). The lowest net purchase price was the 1884 Public Works loan, and the highest was the Treasury 1882. Short-term advances implied interest rates of 7% (interest rate + commission), except the National Bank 1886 loan, which rate was 8% . Sale commissions for the loans not taken firm amounted to 2.5% on nominal capital, not taking into account the Hard Dollars conversion Loan, whose commission amounted only 1.25%.

Commissions concerning redemption payments remained constant throughout the period (0,5%), contrary to interest payments, whose commissions diminished in the second half of the period, going from 1 to 0.5%. Some contracts established minimum prices, allowing the banks to choose the date of the bonds' issue to meet this engagement. Finally, we can observe that excluding the first contracts, expenses were taken in charge by the government. In some cases, charges were fixed in the contract, but the general rule was that these were established after the issue took place and deduced from the funds sent to the government.

In order to conclude this section, we can say that conditions concerning Argentina's external loans for 1880-1889 were quite volatiles. It seems that they were very favorable at

[54] There exists an additional contract, signed with Murrieta for a nominal amount of £0,6 millions, with a 5% coupon issued in June 1887. We have not found enough information to include this loan in our analysis.

the beginning of the decade, considerably deteriorating between 1884 and 1886, and improving the last years. Are these movements coherent with economic fundamentals? What are the factors behind contract negotiations?

A MICROECONOMIC APPROACH

A main contribution of this paper is to extract pertinent information from debt contracts in order to have a quantitative analysis for the bargaining power of Argentina when negotiating its borrowing costs with European banks. The logic behind our analysis is quite intuitive. We aim to demonstrate that there existed a trade-off between the share underwritten by the banks and the price they offered for the bonds p_p (i.e. the more risk the banks undertook by placing themselves the bonds the lower the price they offered for the bonds). Although a useful and insightful analysis could be done through the means of an Edgeworth box (Flores 2004), we develop an analogous analysis, which we call "the marginal rate of transformation" approach. This analysis has the advantage of omitting several assumptions necessary in a classical Edgeworth box analysis, allowing us to better quantify the gains or losses for the two agents, borrowing governments and banks.

In this simple model, we assume the existence of two goods, risk and bonds' purchase price, and two agents, government and banks. Both agents have to agree in basically two terms: the share underwritten by the banks (if there is any underwriting) and the price the banks will pay the government for the bonds (purchase price)[55]. We have represented this "negotiating map" in Figure 2. We will assume that the first agent is represented by the

[55] As already mentioned, there exists an important number of clauses in each debt contract: different fees, payment clauses, etc.

Argentinean government, who has his graphic origin in the southwest corner. The second agent will be represented by the banks, and their graphic origin is depicted in the northeast corner. Goods 1 and 2 are risk taking (firm or underwriting) and loan purchase price. Thus, from the government's point of view, on the abscise axis 1 we have the part of the loans taken firm by the banks. The more the proportion of the loan is taken firm, the better off will be the government[56]. Axis scale goes from 0 to 1. For instance, if the whole amount of a loan is taken firm by the banks, we will situate the point on the right extreme of the X axis. Risk is completely taken by the banks. On the other hand, on the origin (left extreme) the risk is taken by the government: this may be the case, for instance, for the system of "*vente à commission*".

Good 2, represented on the ordinate axis, corresponds to the net proportion of the loan received by the government. In order to account for market movements, the pertinent variable to be represented as good 2 (purchase price, p_p)is the net price (p_i) as the percentage of the UK consols price[57](p_{uk}), the benchmark or risk-less asset. We will finally define the ratio

$$\frac{p_p}{q_{risk}} = \overline{X_i} \text{ where } \quad p_p = \frac{p_i}{p_{uk}}$$

Xi is the marginal rate of substitution between the price paid by the banks and the share the banks agree to underwrite. It measures the amount the government is receiving from each unit of risk, or, from the banks point of view, how much they are paying for each of the bonds underwritten. The lower the value, the better for the banks, because it increases the

[56] Risk can be regarded as a malt. Good 1 would be the inverse of this malt.
[57] We modify this price in order to make in comparable to Latin American bonds' prices. We have adjusted the price assuming it presents the same coupon as the other bonds. For instance, if we were to compare it with a 5% Argentinean bond, we transform the UK price, supposing that it also offers a 5% coupon.

potential margin of profit of each placed bond. In other words, conflicting interests arrive because banks would like to pay less for the bonds and would like to undertake less risk.

Graphically, the relative prices ratio is represented by the slope of each ray from the origin. The magnitude of the slope is the Xi ratio described above. This would imply that point A on the graphic benefits the government more than point B because of increasing income from the same amount of underwritten bonds. In fact, if we want to know how much the government will receive for each issue, we would have to multiply the price paid for each bond with the quantity underwritten, this means:

$$R = p_i * q + E(p_e)(1 - q)$$

where q represents the share underwritten by the banks.

In order to resume, the implications of the model are the following. First, the conflicting position of government and banks. Banks are willing to pay less for the issue (which allows them to have a potential bigger profit when placing the bonds on the market). This means that the value of the relative prices should be minimized, as showed by the downward arrow in figure 2. In the opposite direction, governments would prefer to have a higher ratio. Second, we assume that banks and governments are risk averse. On the one hand, the more banks underwrite, the bigger the potential loss (including liquidity losses by not placing the issue, risk from price volatility of similar bonds already on the market, etc.). Banks prefer not to underwrite in an extreme case, or to minimize the share underwritten at any given price ratio. In the figure this would imply that A is favorable to the government than for instance C. But we cannot establish a direct comparison between B and C, because

B has a lower X ratio but a longer underwritten share. If we assume risk aversion, B will be preferred by the government.

Not to underwrite means that profits can only come from placing fees with no potential loss (but no potential additional profit either). This is a plausible assumption, since, as we already mentioned, the most reputed banks did not practice underwriting unless bonds were practically risk free (as in the British or French case) or when banks competed with each other in order to get the issue. On the other hand, governments may face liquidity shocks or volatility risks in the *"vente a commission"* system. This means that they strictly prefer a specified amount at a fixed date than an uncertain income at an uncertain date. Third, this model allows to have competition in both, prices and quantities, the last being represented by the opposite arrows on each ray. Banks are willing to underwrite less, whereas governments would like to have the whole issue underwritten (at the highest price).

Before coming to the empirical evidence, we should note the extreme cases. When the ratio X's value is 0 (the slope of the ray would be completely horizontal) no issue is possible (there is no potential gain neither for the government nor for the banks). But the interesting case is when the relative price value is infinite (where we have no underwriting). The meaning of this is twofold. On the one hand, we could have the *vente a commission* system, where government face the risk of not placing the bonds (and thus have no income from the issue). On the other, we could have the "minimum price guaranteed", where banks agree to guarantee a minimum price for the issue (with no fixed placement date- and thus, no fixed income, which can be a problem if the government faces liquidity troubles). However, as

we mentioned above, governments are risk averse and they prefer to avoid any issue risk including liquidity. Government would thus give absolute priority to underwriting.

Having drawn our theoretical model, we can turn back to empirical evidence. Following the information presented in the last section, we can construct our negotiating diagram for Argentina and its banks. It is shown in Figure 3[58] and Table 2. Almost every loan is represented in the figure. Strictly speaking, both National Bank loans should not appear. Syndicates that took those loans did it under option clauses, meaning that they avoided risk sharing[59]. Nonetheless, we have included them to have the complete picture. We have also drawn the relative prices ray for each loan. The doted rays represent the loans for the second half of the decade, which are crucial for our analysis.

Looking with more detail, we may begin the lecture of the graphic by taking the point corresponding to the 1885 Agreement point. We can say that the "Public Works" loan and "Riachuelo 1884" were more favorable to the government, because both loans contain more of the two goods: risk taken by the banks (one third for both cases) and a higher price for the loan (0.46 and 0.47 respectively compared to 0.45).

A useful exercise is the comparison of the 1885 agreement with previous loans. For instance, the contracts signed in 1882 (Treasury loan), 1883 and 1884. Clearly, banks improved their negotiation position against the government: both terms, risk and price were more favorable. Concerning the first loan (Railways 1881), we cannot establish a direct

[58] We left aside two loans, because they lacked of a minimum price.
[59] Another kind of risk were taken by the banks, which included the short-term advances granted to Argentina's government.

comparison: the price for the first loan is lower (0. 41 compared to 0.45 –see Table 2), but risk sharing is better for the first loan (1 to 0). The graphic also shows two additional features: first, risk taking by the banks was at its highest at the beginning and at the end of the period. And second and most strikingly, the best contract terms for the government were obtained at the end of the period (for both Refinance loans of 1887 and 1889), the years prior to the crisis.

What lies behind the results of our graphic? There may be two answers. On the one side, we have economic fundamentals. The Argentinean economic position was supposed to be closely followed by capital markets. Therefore, we expect that having solid fundamentals, governments will be able to access better terms on their loans. The stronger they are, the better these terms. As mentioned above, bankers also expected diminished risks and higher profits due to bond issues of "well-behaved" countries, having incentives to improve their offers concerning government's loans.

A second possibility is market failure. Regardless of fundamentals, banks may become more eager to get the loans as competition becomes decisive. This fact obliges banks to make better offers concerning prices, but also to take greater risks. We will come back to this point in the next section. In order to identify the effects of both fundamentals and competition, we will take a closer look at their behavior during the decade.

We will begin with the Argentinean economic fundamentals. Table 3 shows some of the main variables than influence risk perception on a given country. We have borrowed them from other works studying the financial history of that period, trying to derive "the model

of the world which was on the mind of contemporary investors"[60]. We have included fiscal and monetary variables as risk factors. For the former, we included two ratios: service of the Debt/Government revenues and Deficit/Revenue, controlling on risk through the debt burden channel: a higher deficit meant for instance a possible need for further borrowing, and its persistence could degenerate in serious fiscal worries; similarly, the higher the interest payments as a proportion of revenues, the higher the probability of default. For the second, we have included exchange rate depreciation: as most loan were paid in hard currencies, depreciation mattered in the sense of having revenues in paper, thus making more difficult to secure debt payments[61].

Fundamentals did not experience an overwhelming change in time, having perhaps monetary variables deteriorating over time and debt service remaining important during the whole decade. Deficits existed, and these were also financed by monetary emissions, which may be a cause behind the exchange rate depreciation. But this "higher risk" is not present in the market. To show this point, we show in Figure 4 an interesting feature of the years prior to the 1890 crisis. The yield correspond to 1884 bonds, denominated in sterling pounds. Usually, we should have a strong correlation between the values of both variables, through the channel we already described. This is not the case since mid 1886, when an attempt to rejoin gold standard was definitively abandoned. A clear and strong depreciation took effectively place after 1887, but yields remained quite stables. This variable began to raise only after political unrest in Buenos Aires and rumors about interest payment suspension in July 1890.

[60] Flandreau (2003).
[61] All data are from Flores (2004).

We may argue that the Argentinean fundamentals deteriorated throughout the period, but this fact is incongruent with results of the debt contracts' terms. This is the reason we should take into account other factors behind bankers' behavior.

COMPETITION AND THE BARING CRISIS

We have several reasons to believe that competition was a key factor behind the Baring crisis. First, previous works on Argentina's loans in the 1880s emphasize the competitive behavior of European bankers to get the "business". Second, comparing Argentina's situation with other Latin American countries where competition was limited (Chile) or inexistent (Brazil) may give us a clue of importance in competition facing the negotiation of debt contracts. Third, the terms of a contract signed between Baring and the Argentinean government (finally not issued) was the worst of the decade from Argentina's perspective. It wa negotiated at a time where Argentina (and Baring!) lacked of the interest from other banks to participate in the issue. Finally, and as a consequence of the 1890 crisis, Argentina's history of its reentrance to international capital markets was marked by the monopoly of Baring as the only bank in issuing the bonds. We will proceed to review each argument in detail.

The analysis presented in the last section considered a dynamical situation, giving place to "noise" in the sense of changing market conditions and agents' behavior (e.g. due to increasing risk aversion). Even if this may have been the case (unlikely, due to the worsening of the macroeconomic situation), Argentina's historiography support the fact

that competition between bankers played in favor of Argentina in the form of decreasing borrowing costs.

Jones (1984) offers in fact a detailed analysis on competition for the first Argentinean loan in the 1880s (the "French loan"). The law approved by the Argentinean congress on a £2,4 million loan initiated a race between the offers by European banks to get the loan. Those banks included Barings, Stern, Vega Ibañez & Co, a French syndicate (BNPB, Comptoir de'Escompte and Cahen d'Anvers), Heine, Heimendahl, Murrieta, a second French syndicate and Erlanger.

The first offer received by the government was done by Stern, with a net price of 75.5 in December 1880, "vente a commission". Successive offers of other banks (all of them "vente a commission") forced Stern to make a second offer, this time a "firm" offer, and a net price of 78 on march 1881, only to improve it some days later with a net price of 78.5, but retiring it as a "protest on the way the Argentinean government was facing the negotiations". Baring's agent in Buenos Aires, Nicholas Bower, was willing to make a "firm offer" with a 85 price, but he did not obtain the authorization from London. Finally, the Argentinean government accepted the offer of the French syndicate represented by Paribas, which contemplated a firm offer with a net price of 82. This process is represented in figure 5, showing the more favorable terms for Argentina. Following our analysis of the last section, we can draw the successive offers which follow the expected direction, favoring Argentina's government.

A second argument implies a comparison of Argentina's situation with other countries. Thus, in order to have this comparative benchmark, we will situate the Argentinean situation in a broader context, studying two additional Latin American countries. We will begin with Brazil. This country signed four contracts with one of the most prestigious merchant banks in London: Rothschild. Relationship between that country's government and Rothschild differed slightly from Argentina with any other bank. For instance, Rothschild was literally Brazil's only bank, in the sense that the government had its own account in Rothschild's balance sheet. It was called "Brazil agency":

" *This account shows the amount standing to the credit of the Brazilian government, and the amounts debited for dividends and for sinking funds charges. The account is balanced at the end of each month and a copy is sent to the government. It contains also a record of the installments received on account of each loan…"*[62]

Contracts were also negotiated in a different way. Both Bank and government analyzed the government's financial situation as well as market conditions, and defined not only the issue price of the loans, but also the real amount to be obtained in each loan. For instance, for the first loan of the 1880s (22 January 1883), the real amount of the bonds' issue was fixed in the contract at £4 millions. Issue price was agreed to be 89 (with an annual coupon of 4,5%). That meant that the total nominal amount to be issued was £4,49 millions. Adding commissions to be paid by the government, the final nominal amount was £4.6 millions of bonds. At first instance, the corresponding net price was 86.75. Taking

[62] The Rothschild archives. Transactions of a Committee to enquire into the organization of the Accounts. 18 November 1908.

additional cost into account, the Ministry of Fazenda calculated a final net price of 81.52, or a cost of 7.48%.

General conditions on the rest of Brazilian contracts are shown in Table 4. Unlike Argentina, Brazil was obliged to face all the risk of the issue. On the other hand, Brazil benefited from better contract terms than Argentina. p_p was generally higher, and commissions were lower. However, differences or the spreads for p_p between both countries and commissions tended to diminish, and, by the end of the period, differences were at their minimum.

This dynamic comparison contrasts with Cairncross' (1953) argument about competition in European capital markets. Based on Peter's work (1934), Cairncross argued that Argentina, lacking a fix agent in London, negotiated its loans in worse terms than countries who had one. He mentions the case of Brazil to show his point, arguing that this country could get terms almost as good terms as Holland . We do not agree with this conclusion. First, as we have seen, Argentina had the advantage of sharing the risks of its bonds' issues with the banks. Second, Cairncross looks only at the period 1880-1885, which sharply contrasts with the second half of the decade. And third, there were two fundamental differences in the financial position of both countries. Whereas Argentina had defaulted several times on its external debt service, Brazil was the only Latin-American country that kept an irreproachable repayment history. The other difference was monetary policy in both countries, having an expansionary one in Argentina and a conservative one in Brazil, with a brief period in the gold standard regime by the end of the decade.

A second interesting case was Chile, a country with which Argentina had a strong rivalry. Chile was indeed the country with the best terms concerning the countries we compare. Differences between both countries were more than marginal. Chile signed four contracts with European and American banking houses, in 1885, 1886, 1887 and 1889. For the first contract, signed with City Bank, we could not get enough information to include it in the analysis. Both 1886 and 1887 contracts were signed with Rothschild's, and in 1889 it was a syndicate represented by Deutsche Bank who floated the loan.

Looking at the Chilean economic fundamentals, this country had a stable but flexible exchange rate regime, and, more important, it was the less indebted country of the three. Table 5 shows its contracts terms and economic fundamentals. An striking feature is that, for 1886 and 1887, Rothschild took firm the whole amount of the loans, and for a relatively high price. In fact, Brazil and Chile can be directly comparable, as they negotiated with the same bank. For instance, for the 1887 Chilean loan, Rothschild took the whole amount at the price of 96 paid on "account of the said government". As for Brazil, the funds in the Chilean account were at the disposal of the government two months after the signature of the agreement, and were paid interests "one percent below the current Bank of England Rate". Except stamping, all expenses were in charge of the Bankers, an important difference from Brazil contracts. Besides, commissions for coupon payments were lower than for Brazil.

The most advantageous contract was in 1889, signed with a German syndicate. It remained in similar terms than the contracts with Rothschild's, with yet another feature favorable to Chile. The banks paid the first coupon of the loan. As far as we know, no other Latin

American country could get such a clause in its contracts, and this reflected the higher status of the Chilean credit in international financial markets. However, as it was for Brazil, differences between Argentina and Chile tended to diminish as we approached the end of the 1880s decade, and Argentinean latest loans' terms were only slightly below those for Chile. As we have seen, one possibility to explain this would be that the Argentinean economic fundamentals improved, whereas Chilean remained stable or worsened. But as we have seen, Argentinean fundamentals did not improve, and the Chilean did not change.

To conclude our comparison, we drew the same diagram as we did for Argentina for the loans floated on behalf of both, Brazil and Chile (Figure 6). As mention above, even if Argentina may have begun the decade with worse terms, it rapidly caught these differences by the end of the period. Clearly, Economic fundamentals cannot explain this "convergence".

The Baring contract of 1890 is another proof in the fact that macroeconomics and the fiscal position of the government were delegated to a second plan. Although, as we have seen, the trajectory of Argentina's contract terms improved in the second half of the 1880, the crucial year of 1890 offers a completely different story. From the correspondence of Baring with other Bankers (Archive references) we know that Baring tried to form a syndicate for a loan issue of £10 millions in order to improve the fiscal situation of Argentina's national government and to support the depreciating peso. Baring did succeed to convince Morton and Murrieta in a rather minimal way, but in risk terms it remained alone. Figure 7 represents the terms of the contract comparing with the previous loans. Clearly, with a

desperate macroeconomic situation and without competition, the terms of this contract considerably worsened.

Finally, looking beyond the period, the crisis marked a difficult period for both Argentina and Baring. On the one side, Baring needed a bailout orchestrated by the Bank of England, and was separated in two branches, although the bank was soon on its own feet and reentered the business of foreign borrowing. Argentina needed two successive funding loans, and did not have access to the international capital markets during almost 10 years. In fact, the loans contracted between 1900 and1913 were all negotiated and issued by Baring, simulating its quasi-monopolist situation of the pre-1880 period.

CONCLUSIONS

We have presented a different story not taken into account by the traditional theories explaining the Baring crisis adding a new and decisive element. As suggested in this paper, financial intermediation and information issues may have played a key role in pushing Argentina in the financial situation of 1890 by overborrowing at decreasing costs. The 1880s is an interesting decade because monopoly in Argentina's debt issues was replaced by a competitive market structure. Although Baring was aware at any moment of the government's fiscal position, it had little or no incentive to properly monitor and releasing information to the market because, say, the bank risked its market position and preferred rather to follow the masses (nourishing the mania for Argentinean bonds). Although other information sources already rose suspicions about deteriorating financial situation in Argentina, the market was reassured by Baring's involvements in Argentina's bond issues, as claimed by Kindleberger. Matters became too evident between march and July of 1890, where partial default and political riots in Buenos Aires definitely made the market hostile

to any new loans to Argentina, at the time were Baring planned new issues to ease the situation in that country. Neither the market was willing to channel new funds to the country, nor the short-term rent seeking banks. This paper thus supports the importance of financial long-term relationships.

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TABLES AND FIGURES

Loans	Nominal Amount (millions £)	Net purchase price	Normalized 3% Consols price at contract date	Proportion of the loan taken firm	Short-term advance (d)	Advance's Commission	Advance's interest rate	Commission on sold bonds	Redemption's commission	Coupon's payment commission	Minimum price	Expenses (%)
Chemins de Fer 1881 6%	2,45	82	199,3	1	0	0	0	0	0,5	1	No	CB
Tresorerie 6%	0,81	90,5	199,3	1	0	0	0	0	0,5	1	No	CB
Banque Nationale 5%	1,7	79,35	170	0,56 (a)	0,56	0,25 (b)	6	0	0,5	1	No	CG
Santé et Riachuelo 5%	5,9	78,6	166,1	0,33	0	0	0	2,5	0,5	1	Yes	CG
Travaux Publics 5%	2,4	78,3	170,6	0,33	0	0	0	0	0,5	1	Yes	CG
Accord 1885 5%	8,4	0	166,6	0	0,48	0,5 (c)	6	2,5	0,5	1	Yes, 75	0,75
BN 1886 5%	2	85	167,8	0,75 (a)	0,75	0,5 (b)	6	0	0,5	0,5	No	5
Chemins de Fer 1886 5%	3,9	0	167,8	0	0	0	0	2,5 *	0,5	0,5*	No	CG
Conversion Harddollars 3,5%	2,75	0		0	0	0	0	1,25	0,5	0,5	No	0,5 + CG
Refinance 4,5% 1887	5,26	82,5	152,5	1	0	0	0	0	0,5	0,5	Yes, 85	2,5
Refinance 4,5% 1889	5,29	85,5	151,5	1	0	0	0	0	0,5	0,5	Yes, 88	2,5

Sources : See Text. Notes : (a) : Firm part taken by the banks, or short-term advance ; (b) :each trimester ; (c) : each semester ; (d) : proportion of total amount ; CB : issue's expenses taken in charge by the banks. CG : issue's expenses taken in charge by the government, amount not specified in the contract.

Table 1

Loans	Share Underwritten	Purchase Price	Ratio X
Railway 1881	1	0,41	0.41
Treasury	1	0,45	0.45
National Bank	0.56	0,47	0.84
Health and Riachuelo	0.33	0,47	1.42
Public Works	0.33	0,46	1.39
1885 agreement	0	0,45	No underwriting
National Bank 1886	0.75	0,48	0.68
Railways 1886	0	0,51	No underwriting
Refinance 4,5 1887	1	0,54	0.54
Refinance 4,5 1889	1	0,56	0.56

Table 2: Data from Argentina's debt contracts.

Loans	p_p	Deficit/Revenue	Debt Service/Revenue	Gold Standard	Exchange Rate Depreciation (% from previous year)	ΔM1-ΔPIB
Railways 1881 6%	0,411	0,65	0,36	0	-10,2	NA
Treasury 6%	0,454	0,42	0,33	0	-10,4	-0,02
National Bank 5%	0,466	1,14	0,35	0	-7,4	0,17
Riachuelo 5%	0,471	0,45	0,34	1	0	0,11
Public Works 5%	0,460	0,45	0,34	1	0	0,11
1885 5% Agreement	0,450	0,47	0,29	0	2	0,06
National Bank 1886 5%	0,476	0,51	0,31	0	35,4	0,09
Railways 1886 5%	0,506	0,51	0,31	0	35,4	0,09
Refinance 1887 4,5%	0,540	0,29	0,33	0	0,48	-0,03
Refinance 4,5% 1889	0,564	0,47	0,36	0	9,4	0,2

Table 3: Argentina's fundamentals

Loans	Nominal Amount (millions £)	Issue Price	Net Price	Normalized UK 3% Consols price at contract time	p_p	Banker's Commission and stamps	Brokerage commission	Number of installments for bond purchase	Time for bonds' payments (months)	Discount on anticipated bond payments	Commissions on interest payments	Commission for redemption by drawing/ purchase in the market		Service /Revenu	Exchange rate depreciation
1883 4,5%	4,6	89	86,75	156,5	0,55	2	0,25	5	10	4,5	1	0,5	0,125	0,4	0,3
1886 5%	6,4	95	92,75	178	0,52	2	0,25	5	6	5	1	0,5	0,125	0,5	-10,7
1888 4,5%	6,3	97	95,25	171,8	0,49	1,5	0,25	6	6	4,5	1	0,5	0,125	0,3	-11,35
1889 4%	19,8	90	88,25	149,6	0,59	1,5	0,25	5	6	4,5	1	0,5	0,125	0,3	-7,2

Table 4: Brazil's contract terms and macroeconmic situation

Loans	Nominal Amount (millions £)	Issue Price	Net Price	Normalized UK 3% Consols price at contract time	p_p	Banker's Commission and stamps	Brokerage commission	Number of installments for bond purchase	Time for bonds' payments (months)	Discount on anticipated bond payments	Commissions on interest payments	Commission for redemption by drawing/ purchase in the market		Service/ Revenu	Exchange rate depreciation
1886 4,5%	6	98	96	158,4	0,61	G	0	6	9	4	0,5	0,5	0,125	0,2	6,25
1887 4,5%	1,2	97,1	96	165,1	0,58	G	0	6	9	4	0,5	0,5	0,125	0,2	-2,29
1889 4,5%	1,5	102	97	171,4	0,56	0,5	0	NC	NC	NC	0,5	0,5	0,125	0,2	-1,09

Table 5: Chile's contract terms and macroeconomic situation

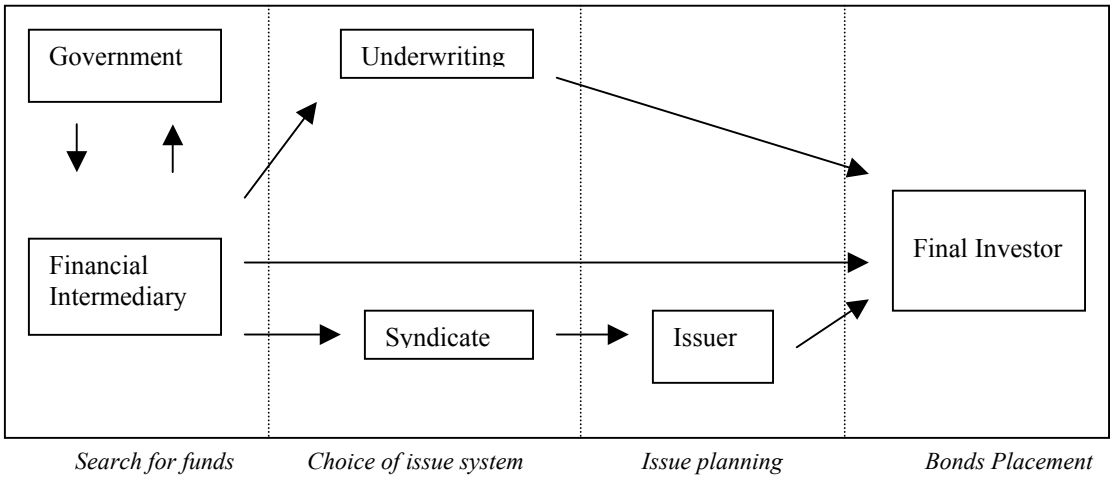

Figure 1: Debt issue mechanism.

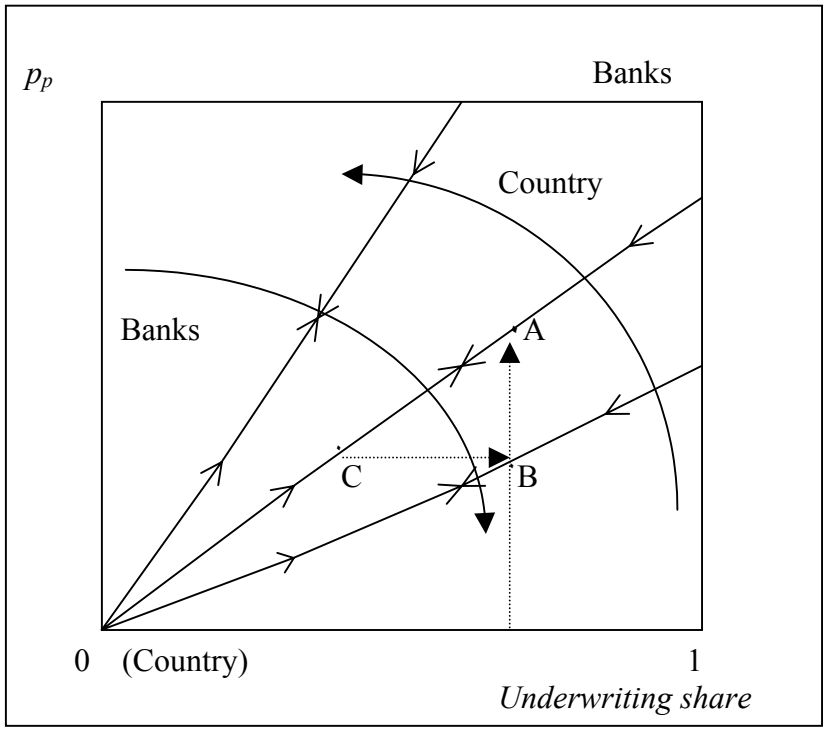

Figure 2: Negotiating map.

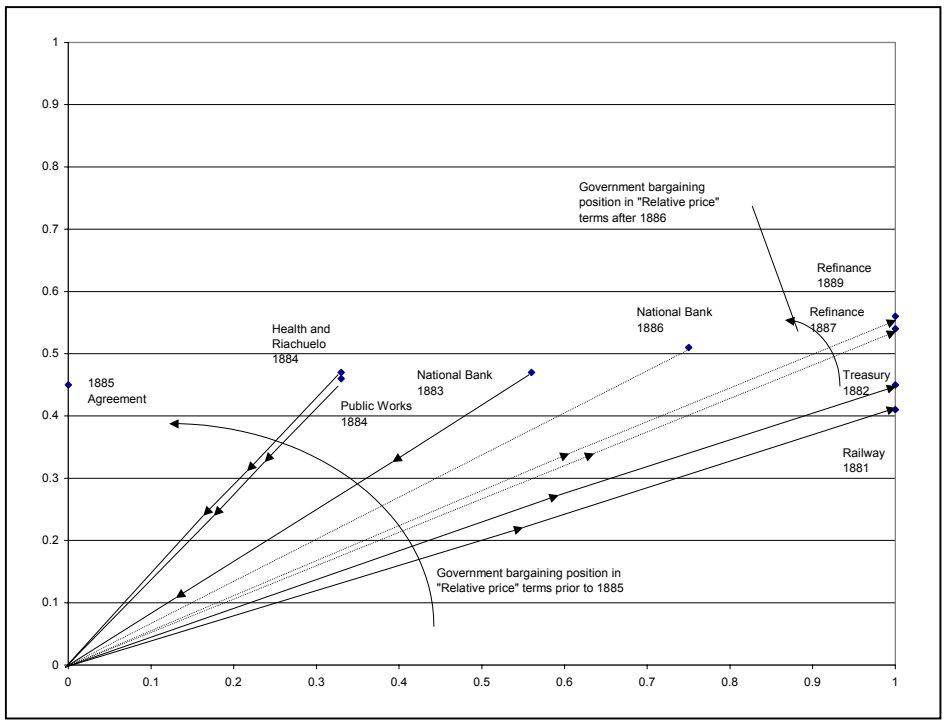

Figure 3: Argentina's loans. 1880-1889

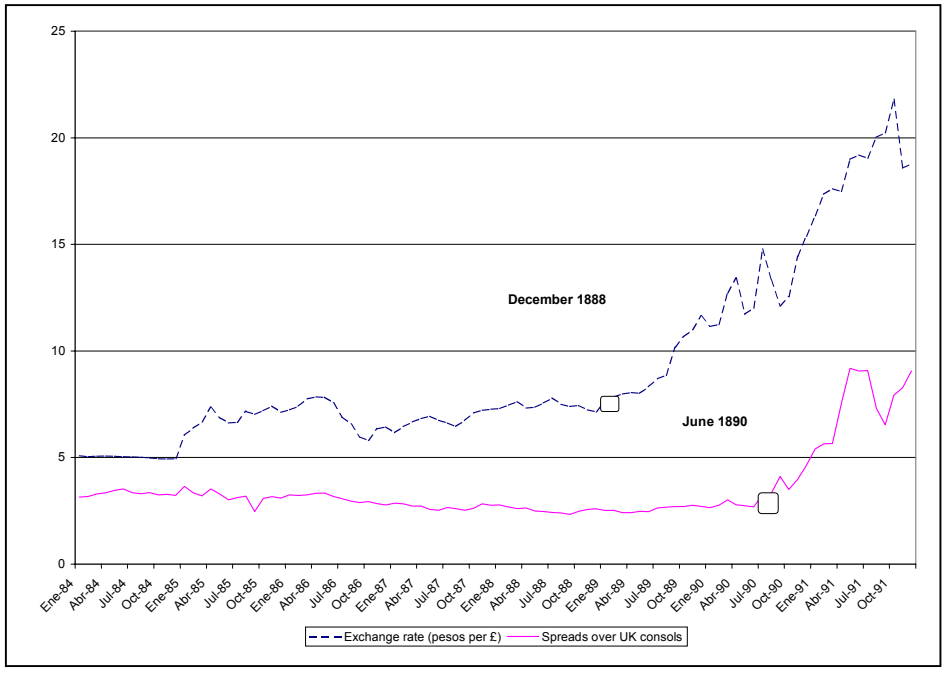

Figure 4: Argentina's yield spread and exchange rate.

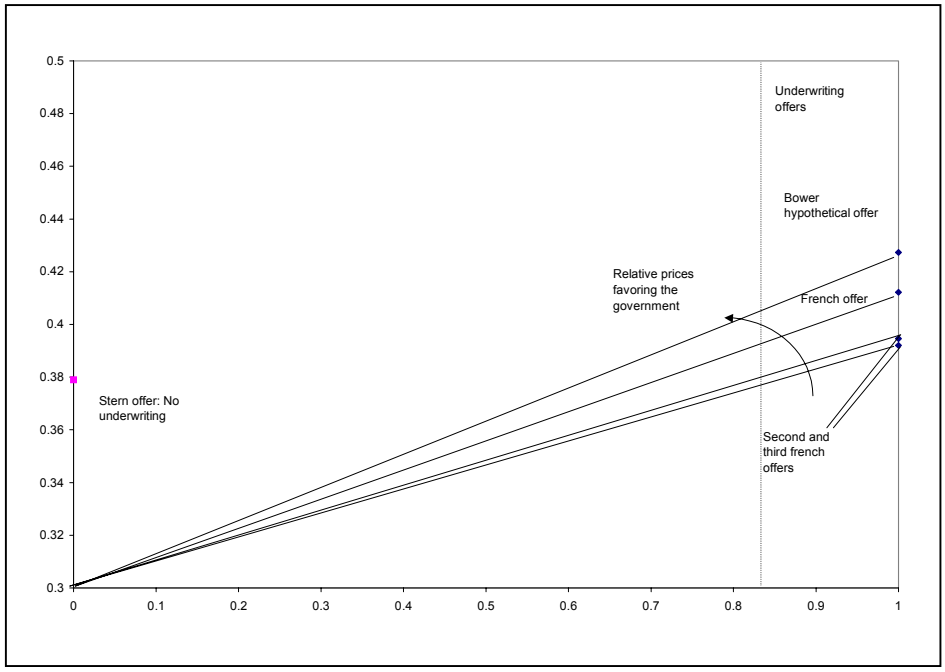

Figure 5: Railway loan of 1881.

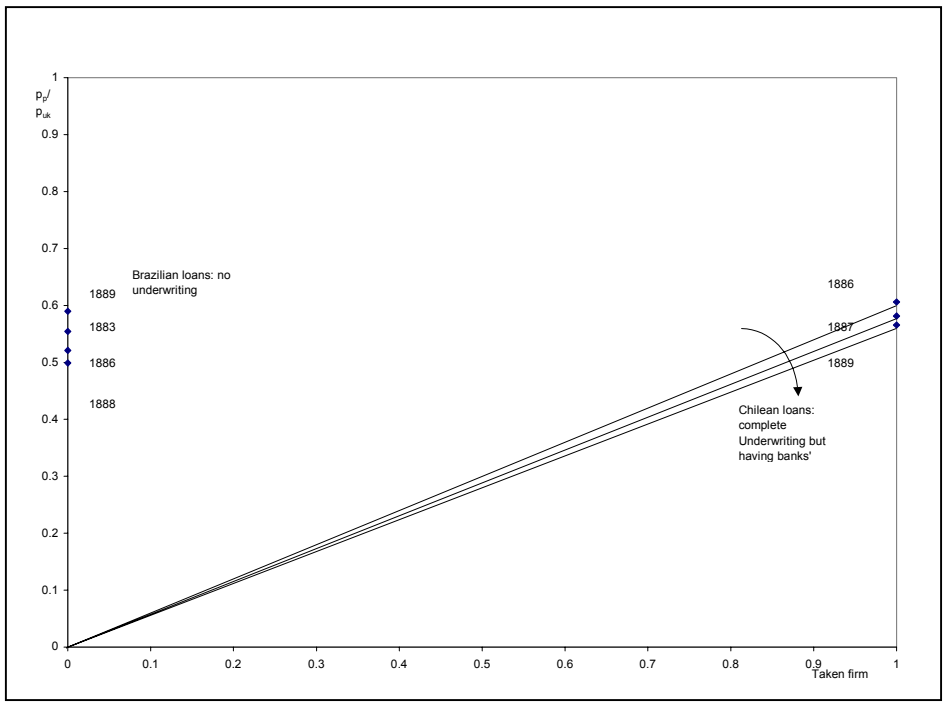

Figure 6: Brazilian and Chilean loans

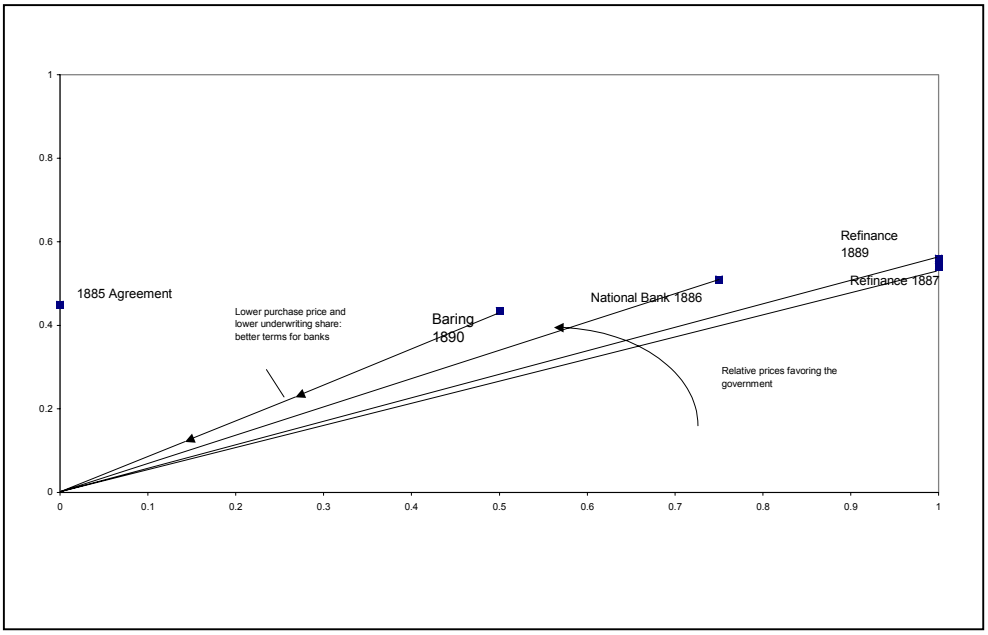

Figure 7: Baring 1890 loan