The True Measure of Country Risk: A Primer on the Interrelations between Solvency and the Polity Structure of Emerging Markets: Argentina 1886-1892

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Abstract

In this paper we construct the true measure of country risk for Argentina over the important 1886-1892 period, the end of which witnessed the first widespread emerging-market capital and debt crisis. This measure -computed as a weighted average of sovereign and sub-sovereign default risk premia- acknowledges the importance of the political structure of an emerging market economy in determining its degree of participation and strategies in international debt markets. The rationale for this index is that the polity structure of a country matters for the conduct and outcome of the public debt phenomenon. The lessons learned are compelling to understand the recent build up of debt that drove the surprising collapse of the Argentine currency board and the financial system in early 2002. Moreover, it informs policy makers and investors about the "correct" way of assessing country risk in federal countries where sub-sovereigns entities are fiscally interdependent and potential time inconsistencies and sovereign moral hazards are present. Incidentally, the true measure decouples from the typical sovereign risk spread by 200 to 350 basis points when liquidity crunches and political upheaval set up a tough scenario in Argentina since July 1890. This measure has huge implications for a reappraisal of the economic growth and development of Argentina.

JEL CODES:

Introduction

This paper looks into the heterogeneous effects that the process of financial integration with the world capital market had on the different government bodies in Argentina. It covers the period from 1886 until the run up to the Baring Crisis in 1891.

Among the first to analytically recognize that the nature of emerging capital markets is far more complex than the arbitrage parity conditions in the conventional goods and services markets were Harberger (1980) and Eaton (1985). In this essay we add an extra-dimension to their analysis and ask how credit constraints and potential defaults are to be analyzed by considering the behavior of different political entities within the same sovereign nation.

The asymmetric havoc wrought by the Baring collapse was then reflected by a credit crunch for the provinces and the municipal entities, leading them to a default on their obligations by the end of 1891. By contrast, the Bank of England acted as a timely lender of last resort for the national government. Unlike other developed countries at the time, whose financial markets at the different levels were well integrated into the world capital markets, meaning their borrowings were regarded as perfect substitutes, the Argentine experience suggests an opposite fate.

This contribution aims to demonstrate that the public sector borrowings at all three levels – national, provincial and municipal- were not perceived as holding the same risk class, i.e. they were seen as imperfect substitutes. Moreover, our approach suggests that an analysis of the public debt dynamics should take into account the political structure of the country in question. It is always the case that, in spite of their different political jurisdiction, provincial and municipal debt was always recognized ex-post facto as federal liability. Hence, we will reconsider the true measure of country risk: political structure matters for the management and assessment of public debt. The paper intends to (1) set out a first simple framework to address the reality of the different political entities; (2) construct the time series data of the yield to maturity of the relevant bonds and financial instruments with the purpose of (3) computing the "true measure of country risk", as defined by the weighted average of sovereign and sub-sovereign default risk premia.

The lessons drawn by this paper are very telling to the recent build up of debt that drove the surprising collapse of the Argentine currency board and the financial system in early 2002. It also points out that to analyze the dynamics of monetary and fiscal policies by looking only at central government institutions is at best a partial equilibrium exercise (della Paolera and Taylor, 2003). The inter-temporal effects of the country's polity structure on economic outcomes should be taken into account to correctly assess the risk premium of an emerging market country and the real debt burden borne by their residents. Also this exercise opens the question of what it means to exercise the role of lender of last resort in the international financial architecture (della Paolera, 2001).

Section 1. The rationale to re-calculate the country risk premium

In much of the recent literature on political economy, as for instance in Persson and Tabellini (2003), the main issue is that economic policymaking generates conflicts in different dimensions and therefore, political economy outcomes are a function of the political institutions structure. These authors highlight the different games played by the political actors within a political system to influence political economy outcomes but very little is said about how the engineering of the decision-making process in a republic can affect economic outcomes and more importantly, the perception of state solvency. [1]

Surprisingly enough, when it comes to analyzing the conduct of fiscal policy, the question of how different political parties coalesce or not is more often studied when the so-called common-pool problem in fiscal policy is addressed than the issue of the political structure, delegation of authority and sovereign and sub-sovereign jurisdictions. The importance of taking into account the political structure for the conduct of public policy is recognized by Persson and Tabellini (2003) as they put: "…We are confident that focusing on central rather than general governments does not bias our inferences. Nevertheless, we always include an indicator variable for federal political structures in our cross-country analysis…These are likely to control all levels of government more easily in unitary than in federal states…"[2]

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[1] One crucial exception to this is Elster (1995) on the impact of Constitutions on Economic Performance and Drazen (2000, 134-137)

[2] Persson and Tabellini (2003, 38)

In this vein, we want to investigate the linkages between the political structure and the pricing and management of the public debt in a federal republic such as Argentina for the period 1886-1892. This period is fertile in terms of access to the international capital markets and is one of both good data and institutional qualitative information availability. In economic history, there are three or four candidates of newly settled federal countries that could be outstanding laboratories for analyzing the dynamics and moral hazard of public government debt under a federal constitutional design: the United States of America, Mexico, Brazil, and Argentina.[3]

The importance of analyzing whether sub-sovereign becomes in fact a sovereign debt liability was clearly recognized in the case of Argentina some time ago by Marichal (1989): "The long term consequences of Financial Dependency: While the debt arrangement of 1893 provided substantial relief for the Argentine National Treasury, the drain of capital from Buenos Aires to Europe continued despite the large payments remitted from Argentina, the foreign debt of the national government did not decline. In fact, between 1891 and 1900 it rose from 204 million to 389 million gold pesos. This huge increase did not come from fresh loans as such, but rather from a series of conversions of previous debts. Specifically, the Argentine National Government assumed responsibility for all existing debts of the provincial governments and the municipalities..."[4]

Also Shepherd's(1933) document on the default and adjustment of Argentine foreign debts states: "More than 15 years elapsed from the first defaults in Argentina, July 1, 1890, to the last settlement in December, 1906…Holders of provincial and municipal bonds…lost all accrued interest and suffered reduction of principal in most instances. It is needless to speculate upon what the outcome of debt negotiations with individual Provinces would have been if the National Governments had not assumed responsibility for the provincial foreign debts…"[5]

As we can appreciate here, the theoretical aspects of country risk, moral hazard, and incomplete information have to take into account the political structures of nations. At some point, in times of financial turmoil the common-pool fiscal problem emerges: so the question is: what is the true

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[3] For Brazil, there is a discussion about the federal level by De Paiva Abreu(1999) "Brazil: 1824-1957: Bom ou Mau Pagador". However the author makes no account on the consolidated debt.
[4] Marichal(1989,162-163)
[5] Shepherd (1933, 59)

counterfactual (or actual) country risk measure of the state under consideration? What is the true measure of the expected solvency of a sovereign state with a complex and fuzzy federal structure?

To our knowledge, to analyze the process of capital arbitrage and convergence, previous estimations of interest rates in emerging countries or newly settled economies restricted their data analysis to liquid central government bonds. We claim that these estimates might only show an incomplete picture of that process. Furthermore, we may even have to re-examine the process of interest-rate convergence of countries such as the US, Mexico, Brazil and Argentina once the ex-ante and ex-post economic effects of the sub-sovereign bodies (i.e. provinces and municipalities) are taken into account. Roberto Cortes Conde (1989) clearly addresses the problem of the fiscal linkages between the federal government of Argentina and the provinces but his aim is not to analyze the dynamics of debt in a consolidated fashion.[6] Della Paolera (1988) and della Paolera and Taylor (2001) analyze the dynamics of fiscal and monetary policy coordination though they emphasize the role of the central fiscal authorities and, finally, Fishlow (1989), looks into the public debt burden for an open economy but again, like the previous authors, mostly looks at the convergence of interest rates of Argentina to the world economy by considering the standard real yield spread of a sovereign bond over the world risk-free interest rate. To be fair, the macro-view is also present in more general studies such as in Ferguson (2001) who recognizes the problem in his seminal work: "Although, the American federal government never defaulted on its debt, the same cannot be said of the American States themselves. In the recession of 1837-43, there were defaults on around half of the outstanding state debts; 10 per cent of the total amount owed by the states were repudiated altogether…"[7]

Also E. Cary Brown (1990) states while analyzing the US 1843 crisis: "Unsuccessful efforts were made to persuade the federal government to assume or support these debts, and many foreign lenders clearly failed to distinguish the two levels of government."[8] Also the same author mentions an important economic history episode which reveals the ex-ante and ex-post importance of the consequences of the political-entity fiscal structure on the calculation of the real

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[6] See However Cortes Conde (1987). Nuevos Aspectos en la Crisis de 1890. Series Documentos de Trabajo Instituto Torcuato Di Tella. Documento#145.
[7] Ferguson (2000,142)
[8] E. Cary Brown (1990, 232)

ex-ante cost and real burden of the public debt: "European lenders were ready purchasers of many states' debts, but were understandably put off by the defaults and, after, repudiations. Secretary of the Treasury Bibb in his Annual Report for 1844 stated: "If aliens, not understanding the texture of the National Government, do not distinguish accurately between engagements entered into by the several States,…have distrusted the credit of the National Government,…such distrust is to be regretted"[9]

The Argentine experience is both quantitatively and theoretically compelling. As della Paolera (1988) states: "Revised estimates confirmed the importance of the European capital transfers to the Argentine economy: in between 1884-90 the country absorbed 11 per cent of the new portfolio issues of the London market; North America (including Canada) with a population twenty times that of Argentina absorbed 30 per cent of the new issues.[10] In this first draft, we attempt to construct the true measure of country risk for Argentina for the important 1886-1892 period and then to analyze the differences that are obtained from the standard view of Argentina's behavior and state of affairs in international capital markets. This exercise should be seen as a first modest attempt to open the question about differing political economy goals of different sub-sovereigns within the same country.

Section 2. Analytical Framework

2.1. Public Debt and the True Measure of Country Risk

For the reasons sketched above, Argentina's true country risk premia should not be viewed as strictly equal to the premium paid by the national government during the booming years of the first era of financial globalization (1880-1891), when international liquidity was plentiful. Since different sub-national entities (provincial and municipals) should have been perceived as holding (substantially) different risk classes compared to the national sovereign, the calculation of country risk premium could be misleading if one assumed it is equal to such national sovereign risk. We

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[9] E. Cary Brown (1990, 252). The US definitely had a consolidating view of the debt after the Civil War. Our a prior hunch here is that unitarian political regimes are less prone to public debt recursive crises, but this is a topic for further research
[10] della Paolera (1988,28)

argue that if Argentine bonds are perceived as better risks than their provincial and municipal counterparts, the market is implicitly recognizing that the different political bodies run an independent fiscal policy. However, the recurrent story of emerging capital markets is that when international capital markets dry up, the sovereign body, the Nation, "envelops" and bails out the sub-sovereign bodies. Hence, the assessment of country risk should take into account this institutional feature.

Let us call RA, RP, and RM, the national, provincial, and municipal yield spread over a risk-free rate, respectively. We argue that the true cost of transferring financial resources to Argentina (RT), measured by the yield spread over a comparable risk-free bond -e.g. the British Consol yield for instance, would be more adequately defined by the weighted sum of RA, RP, and RM. The implicit weight is given by the share of each entity's borrowings in the total supply of loans at some time T (θ_A, θ_P and θ_M):

$$RT = \theta_A RA + \theta_P RP + \theta_M RM$$

where $\theta_i = \dfrac{L_i}{L_{TOT}}$ with i=A, P and M.

We calculate the θ_is using public borrowing figures drawn from Shepherd (1933), over the period 1886-1891. The debt incurred by the different political entities had a manifold purpose: 1) expansion of the railway network or other public works, 2) capitalization of provincial banks, 3) consolidation of other outstanding debt, and 4) the financing of mortgage loans which ultimately encouraged land speculation. The θ_i are reported in Table 1:

**Table 1: Public borrowings, in thousands of gold pesos and % of total loans**

	National	θ_A	Provincial	θ_P	Municipal	θ_M	Total
1886	16128	0.39	25459	0.61	0	0.00	41587
1887	33744	0.72	10912	0.23	1892	0.04	46548
1888	31750	0.35	48810	0.53	11200	0.12	91760
1889	13067	0.42	1620	0.05	16146	0.52	30833
1890	11420	1.00	0	0.00	0	0.00	11420
1891	2506	1.00	0	0.00	0	0.00	2506
average		**0.65**		**0.24**		**0.11**	

Marichal (1989) computes an average θ_i for the period 1880-1890 and obtains θ_A =0.5, θ_P =0.42 and θ_M =0.08. As these estimates reflect more accurately the average debt stock share of each political entity in the total indebtedness over the whole decade (i.e. the 1880s)[11], we will use them in section 3 to compute the true measure of country risk, RT, notwithstanding our sample being constrained to 1886-1892, as it was argued above.

2.2. Supply of External Funds and Risk Premia

The uneven degree of financial integration of the different Argentine governmental bodies into the international capital market becomes apparent, not only through the assessment of country risk, but also through their counterpart: the external supply of loanable funds available for those entities. That is, when international liquidity crunched the response of interest rates or yield differentials (measured by subtracting the risky yield from a risk-free benchmark yield) to a variation in the external supply of loanable funds should have been felt as having an asymmetric impact on the different governmental entities. A rationale of such asymmetric response may be found in the public perception that the Bank of England would only bail out the national government in case of financial distress. This is equivalent to saying that the degree of credit rationing or the conditions under which new borrowings would have been undertaken by the national and sub-national entities had to be perceived as plainly different.

Figure 1 illustrates the supply of external funds each borrower faced under the assumption of rationed credit markets, i.e. the impossibility of unlimitedly borrowed resources at a constant interest rate. L_A, L_P and L_M, stand for the external supply of loans faced by the Argentine Republic, the provincial and municipal entities, respectively. Here, it can be seen that a tightening of the credit constraint hits first at those low-quality, high-risk borrowers, i.e. provinces and municipalities. In other words, the elasticities of their respective risk premia to the foreign credit supply that each borrower faced should have been different.
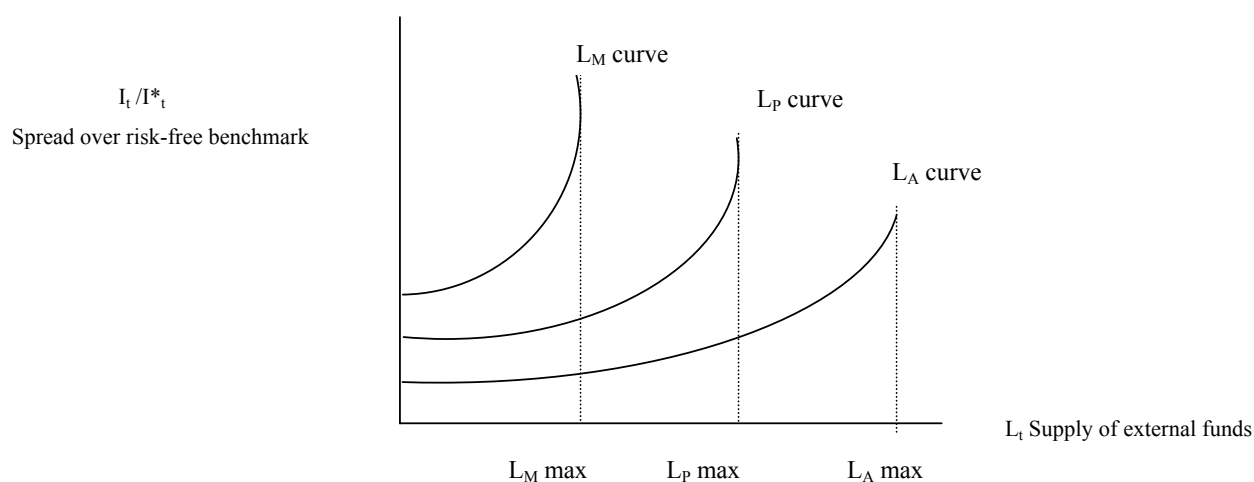
The above graph replicates previous work by Harberger (1980) and Eaton (1985) on the recognition of different perception of risk but extended to the case of various sub-sovereign entities. Harberger was pioneer in explaining why the small country, open economy assumption that those countries face an infinitely elastic supply of funds was at best, a very weak assumption to understand how financial and debt markets work in developing countries. Another important theoretical impulse was done by the pioneering works of Calvo (1988) and Calvo and Guidotti (1990) on the importance of expectations for interest price formation and the "volatility" of maturity. Here, as a first approximation, we deal with the true process of debt pricing in a federal republic with foggy linkages among its different sub-sovereign entities.

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[11] Table 1 demonstrates that provincial and municipal entities were credit rationed in 1889 and 1890.

2.3. Sovereign and sub-sovereign risk premia in a simple general equilibrium framework. The "cascade" effect.

For a foreign-currency denominated bond (either in British pounds or gold), the premium over a risk-free asset (typical benchmarks at the time were the British Consols, denominated in British pounds) borne by an emerging market issuer, can be defined as follows. First, let $R^{*A}_{t,k}$ $R^{*P}_{t,k}$ and $R^{*M}_{t,k}$ denote the annualized gross yields (i.e., one plus the interest rate) at time t on *foreign-currency* debt issued on the London market by the *resident emerging sovereign A (or sub-sovereigns P and M respectively)*, with k-period maturity; and let $R^{*f}_{t,k}$ denote the gross yield on foreign-currency debt of the same maturity issued by the benchmark *foreign debtor*, typically a risk-free instrument issued by the British Treasury at the same market. Letting $i^{A}_{t,k} = \ln(R^{*A}_{t,k})$ and similarly with the other yields, we can write the following interest-rate equilibrium conditions:

(1) $$i^{A^*}_{t,k} = i^{f^*}_{t,k} + \mu_t.$$

(2) $$i^{P^*}_{t,k} = i^{f^*}_{t,k} + \delta_t$$

(3) $$i^{M^*}_{t,k} = i^{f^*}_{t,k} + \varepsilon_t$$

where $\mu_t = \mu\left(i^{f^*}_{t,k}; i^{A^*}_{t,k}; L_A\right)$; δ_t and ε_t are the national, provincial, and municipal "pure default" or simply entity risk premia, respectively. In line with our assumptions, it should be clear that: $\delta_t = \mu_t + \phi_p$ and $\varepsilon_t = \mu_t + \phi_p + \phi_M$, being ϕ_p, ϕ_M the specific province and municipal premia over (and typically above) the national government default premium. Therefore, it is straightforward that $\phi_{Pt} = \phi_P\left(i^{A^*}_{t,k}; i^{P^*}_{t,k}; L_P\right)$; $\phi_{Mt} = \phi_M\left(i^{P^*}_{t,k}; i^{M^*}_{t,k}; L_M\right)$. The equilibrium of interest rates of different sovereign and sub-sovereign bodies as shown in (1), (2) and (3) can be rewritten as follows:

(1)' $$i^{A^*}_{t,k} = i^{f^*}_{t,k} + \mu_t.$$

(2)' $$i^{P^*}_{t,k} = i^{f^*}_{t,k} + \mu_t + \phi_{Pt}$$

(3)' $$i^{M^*}_{t,k} = i^{f^*}_{t,k} + \mu_t + \phi_{Pt} + \phi_{Mt}$$

The relevant spreads are obtained as:

(4) $$RA = i^{A^*}_{t,k} - i^{f^*}_{t,k_t} = \mu_t.$$

(5) $$RP = i^{P^*}_{t,k} - i^{f^*}_{t,k} = \mu_t + \phi_{Pt}$$

$$(6) \qquad RM = i^{M^*}{}_{t,k} - i^{f^*}{}_{t,k} = \mu_t + \phi_{Pt} + \phi_{Mt}$$

Equations (4) to (6) reveal a "cascade" effect in the determination of each risk premium. Furthermore, recalling that:

(7) $L_{TOT} = L_A + L_P + L_M$, where all borrowings are expressed at present values, it turns out that the total country risk premium is:

(8) $RT = \theta_A \mu_t + \theta_P RP + \theta_M RM$, as laid out above (section 2.1.)

As a special case we might have that when $\theta_P = 0$ and $\theta_M = 0$ (as 1890-1891 proves) $RT = \mu_t$. Certainly, this is not the case when international liquidity abounds and market sentiment improves, as in the earlier period. The exception would be the case of a federal country where sub-sovereign entities are fiscally independent, perceived as solvent as the federal state and there are no moral hazard problems. In this case, assuming that $\theta_P > 0, \theta_M > 0$, both ϕ_p, ϕ_M would be zero and again $RT = \mu_t$

Based on this framework we now aim to: (1) Compute the true measure of country risk, RT_t and 2) compare it to μ_t . Section three presents the dataset and an estimate of RT.

Section 3. Preliminary evidence on the true measure of country risk

3.1. Dataset

We work with bimonthly data from The Economist Newspaper, covering the period January 1886-January 1892. More specifically, we collect "current market (bid) price" observations corresponding to foreign and colonial stocks, namely the Argentine Republic, provincial entities and municipalities. Besides the sovereign bond prices which are easy to identify and are traded on a liquid market, we should ideally include all (23) provincial and municipal loans as reported by e.g. Shepherd (1933, Table 6). Unfortunately, this is not possible because 1) The Economist does

not report bond market prices for all those loans[12], 2) some reported bonds are quoted on an irregular basis (i.e. illiquidity) or 3) secondary market data is not available for a specific loan at all times. Thus, we try to find loans with the closest issue date, coupon payments and (maturity) when possible.

Table 2 below summarizes the national, provincial, and municipal bonds we have selected, as well as their main features.

Table 2: Loan features-Sovereign and sub-sovereign issuers[13]					
Agent	Entity	Denomination and issue date(s)	Original amount placed sterling)	Issue price	Coupon payments
Baring Bros	Argentine Republic	5% loan 1884	1.714.200	84 $^{1/2}$	semi-annual
Baring Bros	Province of Buenos Aires	6% loan 1882-1886	4.098.300	92 and 98	quarterly[14]
Morton, Rose & Co.	Province of Cordoba	6% loan 1887-1888	1.190.400	91 and 92	semi-annual
Murrieta & Co.	Province of Entre Rios	6% loan 1886	800.000	91 $^{1/2}$	semi-annual
Morton, Rose & Co.	Province of Santa Fe	6% loan 1883-1884	1.434.426	90 and 86$^{1/2}$	semi-annual
Heinemman & Co.	City of Rosario	6% loan 1888	992.000	103	semi-annual

Source: to be completed

3.2. The true measure of country risk: some preliminary estimates.

In a first step, we proceed to compute μ_t, RP, RM so as to be able to compute the true measure of country risk, RT. To this end, we first calculate a current yield for each loan at a given date as the ratio coupon to bid price. This current yield is a rough proxy of the bond yield to

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[12] We were unable to find the unquoted loan prices in other sources such as www.globalfin.com or The Corporation of Bond Holders, at least on a regular and high- frequency basis.
[13] All loans contained an accumulative sinking fund provision of 1% over the principal.
[14] Admittedly there will be an unaccounted "coupon size and frequency" effect on the yield differential of Buenos Aires.

maturity. Coupon bond prices (clean) should indeed reflect the relationship between the coupon rate and the yield to maturity: when the former is higher than the yield to maturity the price should be above par (i.e. higher than 100) and vice versa. As we are unable to retrieve the yield to maturity for each bond, we assume they are equal to the bond current yield.

Most of these bonds had maturities of about 30 years. We recall that we are calculating a pure default premium, as all loans are floated and traded in the same jurisdiction (London) and are denominated in the same currency, i.e. sterling. Then, μ_t, RP, RM are obtained by subtracting each current yield from the current yield of a risk-free bond, namely British Consols perpetuities of 3% or 3 $^{1/2}$%, depending on the year. In the case of RP, we calculate a weighted average of the four provincial current yields corresponding to those loans reported in Table 2 above. The loan weights are estimated using data from Shepherd (1993) and are shown in Table 3:

Table 3: θ per province

	Buenos Aires	Cordoba	Entre Rios	Santa Fe	**Total**
Sterling	9 154 686	3 785 600	5 276 400	6 619 526	**24 836 212**
share	0,369	0,152	0,212	0,267	

Note: Based on those provinces for which data are available in The Economist.
Adds up all loans contracted by a province in 1880-1890
Source: Shepherd (1933)

Figures 2, 3, and 4 plot μ_t, RP, RM and RT, respectively, over the relevant period and over two sub-sample periods, namely "tranquil times" (1886-1889) and "turmoil times" (1890-1892).[15]

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[15] RT starts from October 1888 due to the constraint imposed by our municipal loan, Rosario 1888 6% and the lack of alternative data prior to this year.

Figure 2: Sovereign and sub-sovereign spreads over Bristish Consol yields 1886-1891: national, provincial and municipal issuers
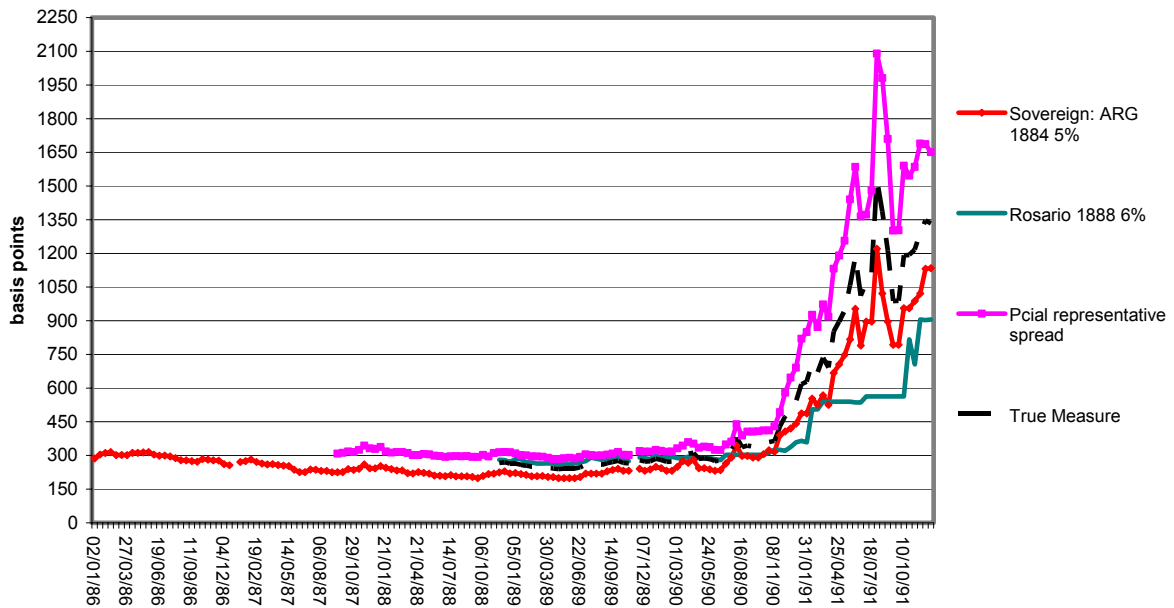

Figure 3: Sovereign and sub-sovereign spreads over Bristish Consol yields II 1886-1889: national, provincial and municipal issuers; "tranquil times"
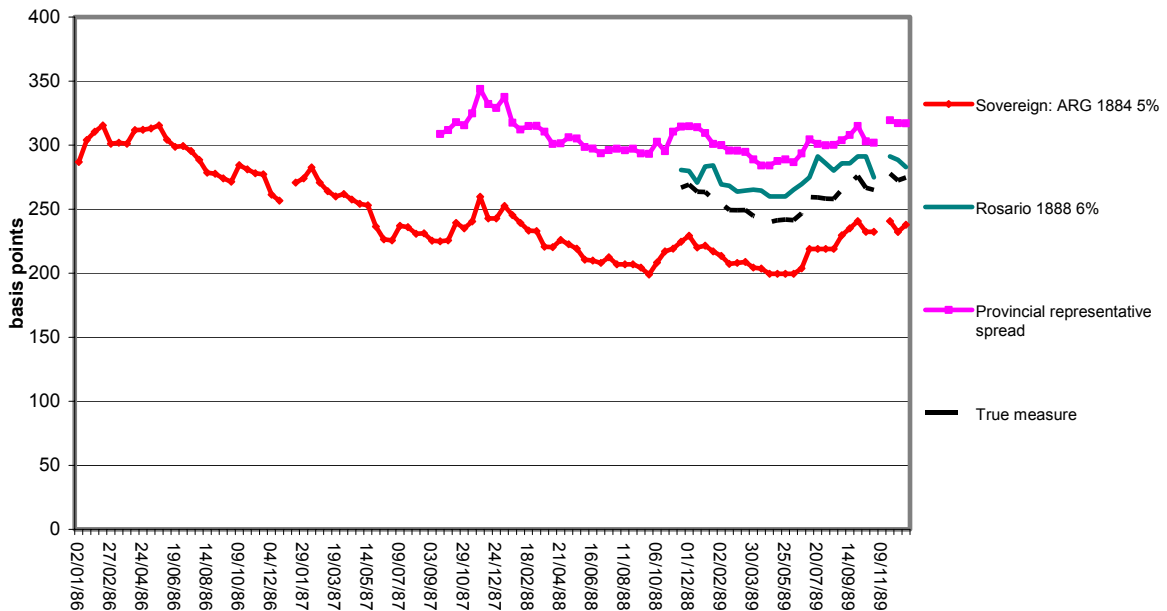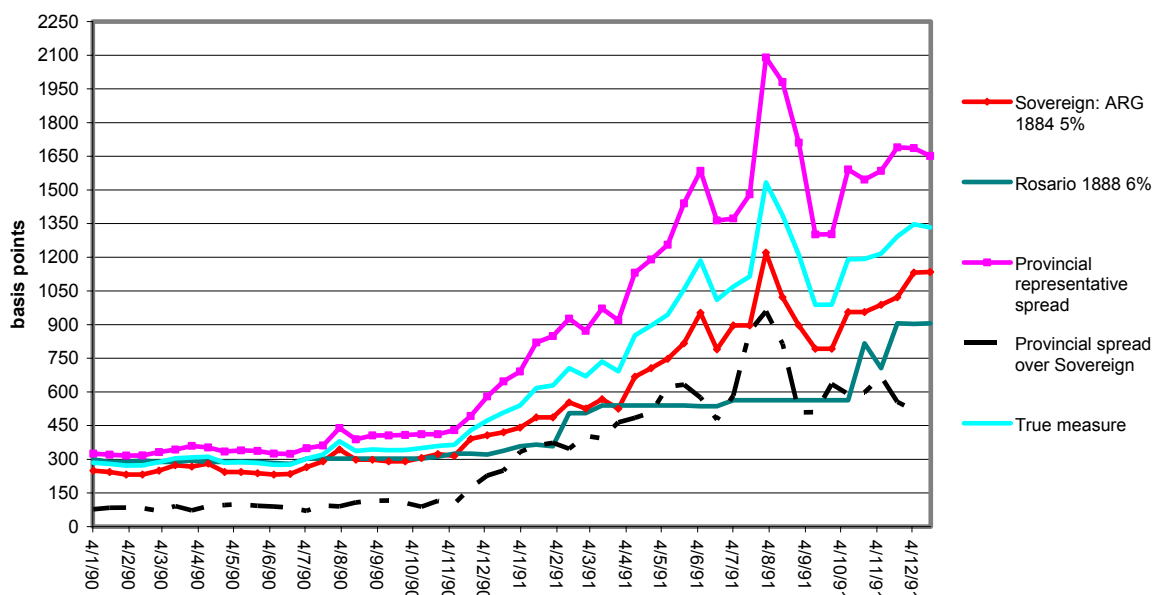
Figure 4: Sovereign and sub-sovereign spreads over Bristish Consol yields III 1890-1891: national, provincial and municipal issuers; "financial turmoil"


Figures 2, 3 and 4 illustrate several important facts:

1) Until November 1890 provincial and municipal (represented by Rosario) bonds were traded at an average spread of 100 to 120 bps above the sovereign. In particular, we see that the true measure of country risk stood close to the sovereign bond spread in tranquil times (Figures 2 and 3). Put differently, when liquidity was plentiful investors were attaching a slightly higher probability of default to sub-sovereign entities in comparison with the sovereign.

2) All yields start to rise from July-August 1890, when the first defaults are declared (Shepherd, 1933) amid political upheaval and deep concerns about the financial health of the different entities (Figure 4).

3) However, the decoupling between the sovereign and sub-sovereign entities spreads over the British Consol yield only becomes apparent in November 1890 (bold dotted line in Figure 4), when Baring Bros troubles are known. For instance, the provincial spread over the sovereign yield widens to 900 bps by June 1891 and never comes down below 600 bps afterwards.

4) Since November 1890 we observe how the yield differential between the true measure of country risk (RT) and the representative sovereign bond (Argentina 1884 5%) start to increase. Figure 5 presents further evidence that makes this point clearer: RT trades at 200 to 300 bps over

the typical sovereign risk premium (bold solid line). This excess spread would be wider should one exclude the loan incurred by Rosario, our representative municipal bond, which may be regarded as a special bond which traded even at tighter than provincial spread levels.

Figure 5: Excess Spread between "True Measure of Country Risk" and typical Sovereign Spread (ARG 84 5%): 1890-1891 "financial turmoil"
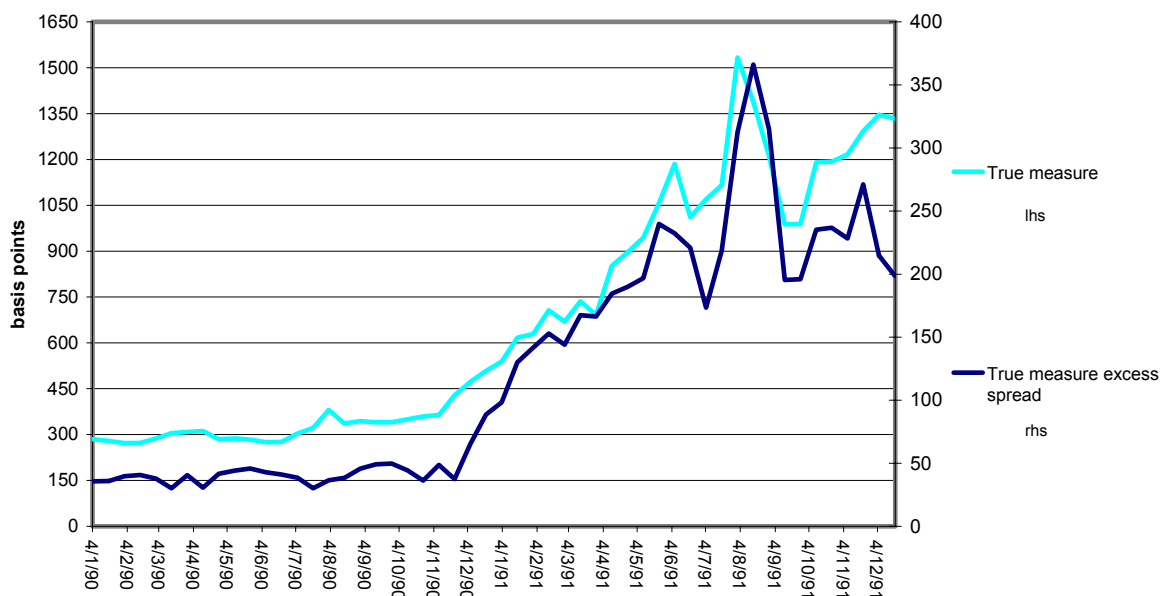
Section 4. Historical and Political Economy Side: Politics and Debt.

The downward bias of the true country risk during tranquil times was of about 100 to 200 basis points, a magnitude that represents one third of the absolute value of the spread. It is important to note that the band of divergence is maintained until the late 1890s but afterwards the divergence becomes clear even before the defaults of 1892. Hence, one might say that not only Argentina started a period of financial autarky, but also the opportunity cost of her staging a comeback to the international capital markets was higher. This higher cost was not due to the performance of her own federal bonds but to the attribution of solvency involved now in turbulent time bonds which originally have had a different seniority.

It is apparent from the above shown historical performance, that institutions' subtleties matter

more and appear in full in harsher rather than in tranquil times. It is a surprising but well-known asymmetric result from credit markets that the spread (and its volatility) between good and "lemon" assets flattens when markets are hugely liquid and goes nuts when conditions worsen. While the borrower might have the usual time-inconsistent and moral hazard macroeconomic feature in credit markets, here the creditor has a time-inconsistent institutional appraisal and enforceability of the different fixed-income instruments. The end-game outcome of whether Argentina has to bail out sub-sovereign bonds rest on the bargaining power of the international creditors and the cost-benefit perception of the borrowing nation.

What was the strategy followed by Argentina to manage the 1890-91 Baring crises to return eventually to the international capital markets?

First, we must say that the first political entity which recognized the service payments difficulties was the Argentine Republic in July 1890[16] stating that it might default on all foreign debt obligations. This announcement produced a cascade effect on the foreign obligations of the provinces and municipalities, which by the end of 1891, defaulted both on their interest and amortization payments. The incumbent President Juarez Celman resigned in August 1890 and was replaced by his Vice-President Carlos Pellegrini, a well-seasoned cosmopolitan politician and financier.

The strategy of the Argentine central government was implemented in two steps: (1) Pellegrini stated first that Argentine bonds would and should never be in default and quickly produced the famous Funding Loan agreement of 1891 with the Bank of England to avert the full-default on the Argentine bonds; (2) he insisted to the Corporation of Foreign Bondholders that the situation of the provincial and municipal debt was a separate problem and placed in a different jurisdiction. Hence, the Bank of England acted as a lender of last resort in 1891 to the Central Argentine government, bailing out both the "Argentine Republic" and the Baring brothers.

In the Romero agreement of 1893, the relief on service and amortization payments still referred to the Argentine Republic Debt and the Provincial and Municipal debts were in a limbo after, having

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[16] della Paolera and Taylor (2001, 72-73)

quoted in "good times" only 50 basis points above the best argentine fixed income security! However, in 1898, Argentina in a virtual state of autarky recognized the provincial and municipal external obligations which were definitely consolidated in the year 1905. This is, in spite of the clear different conditions and collateral implied by different type of bonds, the ex-post facto here as in the previous case of the Baring loan undertaken by the Province of Buenos Aires in 1824, the federal government "nationalized" the whole debt obligations which means that in an emerging country in which most of the debt incurred in order to finance expenditure is floated in hard currency in international markets, institutional moral hazard is king.

Therefore, the true measure of the opportunity cost of funds for Argentina and the real cost of the debt burden for the whole citizenry should take into account this feature. Again, to have concluded that in January 1890 because Argentina's federal bond yield was converging to the world yield and hence we were witnessing a more mature capital market is at best a partial equilibrium statement. And this is a lesson that was not learned by economists for the contemporaneous economies. Ex-ante sovereign property right constraints might not be constraints at all after certain events arise. So both the cost of capital in the buoyant period and the cost of being in autarky for some many years after the crash should internalize the true measure of country risk..

Section 5. Concluding Remarks

In this paper we ask about the importance of the political structure of an emerging market economy in determining its degree of participation and strategies in the international debt markets. We think we have added another angle to the discussion by recognizing that debt strategies depend not only on political polarization, election probabilities, or standard forward looking time inconsistencies; the economic effects of the political structure of emerging nations are an important consideration in analyzing their economic development.

And this political structure effect should be priced accordingly.

Therefore in this first exercise we have calculated the true measure of country risk in light of the Argentine experience 1886-1892. It was shown that the true measure decouples from the typical sovereign risk spread by 200 to 350 basis points when liquidity crunches and political upheaval set up a tough scenario after July 1890. More importantly, the credit crunch had an effect on the strategic behavior of both borrowers and lenders in an ex-post facto.

The lessons drawn here are very telling to the recent build up of debt that drove the surprising collapse of the Argentine currency board and the financial system in early 2002 and the public debt disarray. Moreover, it informs policy makers and investors about the "correct" way of assessing country risk in federal countries where sub-sovereigns entities are fiscally dependent on the central government finances and moral hazard is present.

For further research, the paper invites political economy researchers to analyze the actual costs and consequences of ex-ante pitfalls in evaluating country risk when the polity of a country differs. Our first prognosis here is that when a federal republic can not develop well-integrated capital markets, it probably means that the polity structure is clearly sub-optimal and fails to effect economic development and progress for its citizens.

Finally, in another study in course, we are to perform an econometric model in order to test 1) the different elasticities of μ_t, RP and RM (or each of the implicit bond yields) to a shock in the international liquidity constraint (e.g. a change in L* faced by each entity or I*$_f$) and (2) the endogenous responses of an entity spread to a change of other domestic entities spreads, this is how fast and sensitive is the cascade effect.

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