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Polanyi Redux: Financial Market Power, Conditionality Lending and War Prevention during the Pax Britannica (1815-1914)

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Abstract

This paper provides new foundations to Polanyi's famed argument that monopoly power in the global capital market served as an instrument of peace during the *Pax Britannica* (1815-1914). Our perspective is novel: We focus on the role of intermediaries and certification. We show that when information and enforcement are imperfect, there is scope for the endogenous emergence of "prestigious" intermediaries who enjoy a monopoly position and control government policy actions. As a result, they can implement peace-conditionality: condition the distribution of credit upon the adoption of peaceful policies. The reason they have an incentive to do so, we argue, is because prestigious intermediaries are concerned with maintaining an unblemished track record, while wars increase risk of default. This analysis provides a significant extension to, and departure from, recent research that has used the economics of reputation to emphasize the importance of countries' own behavior for the accumulation of reputational capital.

POLANYI REDUX: FINANCIAL MARKET POWER, CONDITIONALITY LENDING AND WAR PREVENTION DURING THE PAX BRITANNICA (1815-1914)*

In the Pantheon of International Political Economy, Karl Polanyi's *Great Transformation* published in 1944 occupies a central position. His famed conjecture that financiers were responsible for the "Hundred Years' Peace" between the Congress of Vienna (1815) and the Austrian Archduke Franz-Ferdinand's assassination in Sarajevo (1914) provides an early recognition of the relevance of interrelations between economics and politics. Specifically, Polanyi claimed that this outcome was the highly intentional result of conscious actions by a subgroup of "finance," which he called "haute finance" and within which the House of Rothschild reigned supreme, "embodying the principle of abstract internationalism" (whatever is meant by that beautiful phrase). According to Polanyi, the Haute finance secured peace through a mechanism that anticipates on what is known today as "political conditionality." Specifically, Polanyi suggested that the mechanism for war prevention was the haute finance's desire *and* ability to use market power to influence policies towards peace. As a result, he argued:

* The authors are grateful to the CAMT, where Rothschild Frères archives are kept, for facilitating access to contracts. We thank Jeff Frieden for challenging us to write this paper, Jerry Cohen for discussion of certain arguments and detailed criticism of an early draft. Feedback and comments from Ken Shepsle and Jim Alt and from participants at the Harvard–MIT Positive Political Economy Seminar (12 November 2009) are gratefully acknowledged. We also thank Stefano Ugolini for advice and support. Discussion with Thomas Biersteker was helpful in preparing the last draft. The paper also received extensive criticism from the editors of *International Organization* and from three anonymous referees, whose suggestions proved extremely helpful. Errors and misinterpretation are ours. This paper benefited generous funding from Yves Mirabaud, whose support is gratefully acknowledged. The views expressed here are solely those of the authors.

> The nineteenth century produced a phenomenon unheard of in the annals of Western civilization, namely a hundred years' peace—1815–1914. Apart from the Crimean War—a more or less colonial event—England, France, Prussia, Austria and Italy were engaged in war among each other for altogether only eighteen months. […] This triumph of a pragmatic pacifism was certainly not the result of an absence of grave causes for conflict […] The entirely new factor, we submit, was the emergence of an acute peace interest. Traditionally, such an interest was regarded as outside the scope of the state system. […] For an explanation of this amazing feat, we must seek for some undisclosed powerful social instrumentality at work in the new setting, which could play the role of dynasties and episcopacies under the old and make the peace interest effective. This anonymous factor was *Haute finance*.[1]

What makes Polanyi's theory so attractive is that he succeeded in blending explicitly politics (peace) with economics (lending). However he did not give much evidence. His bottom line was postulated rather than demonstrated: neither empirical nor theoretical foundations were provided. He recognized that "no all-around inquiry of the nature of international banking in the nineteenth century has yet been undertaken" before directing readers to the work of historians Egon Caesar Corti, Leland Jenks and Herbert Feis, from which he said he had gleaned insights – although the first book is an hagiographic account of the House of Rothschild, and the last two still a distant call from Polanyi's theme.[2] He never explained how *haute finance* could be enlisted in the interest of peace. The closest he came to providing an argument is when he appears as a functionalist, briefly alluding to the notion that provision of peace, an international public good, would have given legitimacy to the power of *haute finance*.[3]

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[1] Karl Polanyi, *The Great Transformation* (Toronto: Rinehart, 1944), 5, 7, 9.
[2] Compare Leland H. Jenks, *The Migration of British Capital to 1875* (London: Thomas Nelson, 1927); Egon Caesar Corti, *The Rise of the House of Rothschild* (Vienna, 1928); and Herbert Feis, *Europe, the World's Banker, 1870-1914* (New Haven: Yale University Press, 1930) with Polanyi, 9–10.
[3] "*Haute finance* was not designed as an instrument of peace; this function fell to it by accident... [haute finance] was able to serve a new interest, which had no specific organ of its own; for the service of which no other institution happened to be available, and which was nevertheless of vital importance to the community: namely, peace." Polanyi,11–12.

From the vantage point of rational choice, Polanyi's conjecture raises numerous fascinating issues. First, we may ask whether Polanyi's description of the relation between the financial market place and the Hundred Years' Peace is adequate. Do we know that the market place discriminated against wars during the 19th century? Second, could this actually lead governments to be discouraged from military undertakings? Third, we may question the theoretical underpinnings of Polanyi's conjecture. There is the issue of the "intentionality" of financial intermediaries: why should financiers want peace? A fourth question is the market structure that Polanyi postulates: He certainly did not argue that an amorphous financial interest acted in an uncoordinated way so as to discourage war. Rather, he emphasized that a highly centralized grouping, "haute finance", which he identifies with a Rothschild-controlled bankers' ramp, was in charge of implementing political conditionality. But is such a description adequate? This raises a fifth question: Was "haute finance" actually behaving in a cartel-like manner, and why? This paper sets out to answer the previous questions: we provide new data and new theoretical foundations to Polanyi's conjecture, and in so doing, we also provide some important qualifications and insights on the relation between financial market power and international politics. As a result, our article provides what can be called a new industrial organization perspective on international organization.

Earlier and more recent research provides relevant insight on the questions above. It is a popular notion that financiers have "dictatorial" powers. Think for instance of Thomas Friedman's claim that there are two superpowers: "the United

States and Moody's Investors Services".[4] This view has deep roots: when Polanyi wrote his book, he could rely on a long tradition that had emphasized the existence of a "capital market conspiracy." The late nineteenth century saw the rise of literature that personified (and vilified) the capital market. An overarching theme was that global finance acted as a cartel, and reference to the centrality of the Rothschilds in the "plot" abound.[5] Denouncing the existence of "Money Trusts" became a popular theme and was discussed in highly successful books written in various languages.[6] Such accounts eventually found their way into the works of Marxist students of imperialism, such as Rudolf Hilferding and Vladimir Lenin who argued that, given the power of Haute finance, then the occurrence of World War I was proof that it had wanted it (as it did not work to prevent it: sin of omission).[7] The notion and language of bankers' influence then found its way into post WWI

[4] Thomas Friedman, PBS interview, 1996.

[5] According to Jenks, Walther Lotz was among the first to describe the bond market as "monopolescent" in his work *Die Technik des Deutschen Emissiongeschäfts* (Leipzig: Duncker & Humblot, 1890. John Hobson's theory of imperialism contains one of the most famous and explicit statements to this effect, suggesting that the House of Rothschild had the power to stand in the way of wars and was therefore guilty of the sin of omission for all the conflicts that nonetheless occurred. In Hobson's words: "Does anyone seriously suppose that a great war could be undertaken by any European State, or a great State loan subscribed, if the house of Rothschild and its connections set their face against it?". Hobson's suspicion of a bankers' conspiracy also reflected his professed anti-Semitism. John Hobson, *Imperialism: A Study* (New York: James Pott & Co., 1902.

[6] In 1908, "Lysis" achieved worldwide celebrity by publishing a blockbuster pamphlet (*Down with Financial Oligarchy*) in which he charged that international banks were a cartelized oligarchy that held borrowing governments hostage: "Each bank has its clientele of foreign states, it has its influence zones. This is known as the 'game preserves'. These preserves are jealously defended, its rights do not suffer any reduction, and trespassers are asked to walk away. One cannot do business with a foreign government without asking the authorization of the landlord." Lysis, *Contre l'oligarchie financière* (Paris: La Revue, 1908), 105. On Lysis, see Marjorie Beale, *The Modernist Enterprise* (Stanford: Stanford University Press, 1999) and Suzanne Berger, *Notre première mondialisation* (Paris: Seuil, 2003). Lysis's work impressed Justice Louis Brandeis, who used similar language to depict the operation of the "money trust" in the United States. Louis D. Brandeis, *Other People's Money: And How the Bankers Use It* (New York: F.A. Stokes, 1913), Chapter I, "Our Financial Oligarchy."

[7] Rudolf Hilferding, *Das Finanzkapital* (Vienna: Wiener Volksbuchhandlung, 1910); V.I. Lenin, *Imperialism, Highest Stage of Capitalism* (London: Lawrence, 1916) - particularly Chapter. III: "Finance Capitalism and the Financial Oligarchy"); Feis; and Polanyi, 9–10,. relied extensively on Lysis when discussing the monopoly power of underwriting banks ("absolute"), their behavior (a "bankers' trust" securing "exorbitant benefits"), and organization (a worldwide "oligarchy").

historians' accounts and then back into Polanyi—although the Rothschilds were now praised as friends of peace. With the revival of global markets and market management of reputation, this tradition is making a come back in the current era, making the study of Polanyi even more interesting. Modern IPE scholars working on investment banks, sovereign funds, or rating agencies, etc. recognize that such players, because they "control" the reputation of borrowers, wield considerable power, motivating study of their ideologies, beliefs and policies.[8]

On the other hand, personification of financial markets by Polanyi and others is an operation that is not methodologically straightforward. To be valid, personification must rest on the proof that a certain group of agents is willing and able to act in a cartel or at least group-like manner so that is can be represented by a collective (rational) self. However, following Mancur Olson, modern scholars have been skeptical of the ability of collusion to survive. Kenneth Schultz and Barry Weingast extend this skepticism to capital markets and cast doubt on the likelihood

[8] On rating agencies, see Timothy J. Sinclair, "Passing Judgment: Credit Rating Processes as Regulatory Mechanisms of Governance in the Emerging World Order," *Review of International Political Economy* 1, no. 1 (1994): 132-159, and Sinclair, *The New Masters of Capital* (Ithaca: Cornell University Press, 2005). On the International Monetary Fund, see Jeffrey Chwieroth, "Testing and Measuring the Role of Ideas: The Case of Neoliberalism in the International Monetary Fund," *International Studies Quarterly* 51, no. 1 (2007): 5-30, and Chwieroth, "Neoliberal Economists and Capital Account Liberalization in Emerging Markets," *International Organization* 61, no. 2 (2007): 443-463. On institutional investors, see Adam Harmes, "Institutional Investors and the Reproduction of Neoliberalism," *Review of International Political Economy* 5, no. 1 (1998), and Harmes, "Institutional Investors and Polanyi's Double Movement: A Model of Contemporary Currency Crises," *Review of International Political Economy* 8, no. 3 (2001) For perspectives on the renewed role of markets in the international system, see Eric Helleiner, *States and the Reemergence of Global Finance: From Bretton Woods to the 1990s* (Ithaca: Cornell University Press, 1994) and Susan Strange, *The Retreat of the State: The Diffusion of Power in the World Economy* (Cambridge: Cambridge University Press,1996). Layna Mosley, *Global Capital Markets and National Governments* (Cambridge: Cambridge University Press, 2003) provides a useful perspective on the evolution of markets-states relations that has relevance for the ideas developed here as discussed below.

of successful credit embargoes in the wake of rampant free riding.[9] Theoretical economists point out that lending to sovereigns is plagued by a "common agency" problem: several lenders deal with one borrower, which creates an externality in both contracting and collective action.[10]

These important ideas have found their way in recent attempts to discuss some aspects of conditionality lending. Two recent books, published respectively by Jonathan Kirshner and Michael Tomz, provide different perspectives that share the notion that lenders in the capital market are best described as atomized, uncoordinated entities—potatoes in a potato bag.[11] Kirshner's contends that financial globalization might inhibit some conflict. This is because bankers fear disruption of the macroeconomic environment they favor. That the financial community is leery of war means that wars are penalized (through higher interest rates). The extent to which war is actually prevented by this mechanism depends on the size of the interest rate hike, and also of the country's own resources and probably also of the

[9] Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge: Harvard University Press, 1965); Kenneth A. Schultz and B.R. Weingast, "The Democratic Advantage: Institutional Foundations of Financial Power in International Competition," *International Organization* 57, no. 1 (2003): 3-42.

[10] Early references include Jonathan Eaton, Mark Gersovitz, and Joseph E. Stiglitz, "The Pure Theory of Country Risk," *European Economic Review* 30, no. 3 (1986): 481-513, and Jeremy Bulow and Kenneth Rogoff, "A Constant Recontracting Model of Sovereign Debt," *Journal of Political Economy* 97, no. 1 (1989): 155-178, both of which are skeptical of creditors' coordination. Compare with Mark L.J.Wright, "Reputations and Sovereign Debt," (Mimeo, Stanford University, 2002), and Wright, "Creditor Coordination and Sovereign Risk," (Working Paper, Stanford University, 2004).

[11] This argument is passim in Michael Tomz, *Reputation and International Cooperation: Sovereign Debt across Three Centuries* (Princeton: Princeton University Press, 2007) and emphasized in the book's pitch which refers to "atomized bond markets" (http://www.stanford.edu/~tomz/pubs/Tomz-RIC.html). Jonathan Kirshner, *Appeasing Bankers: Financial Caution on the Road to War* (Princeton: Princeton University Press, 2007), 10, states: "International financial markets reflect the cumulative sentiments of uncoordinated market actors." For earlier work emphasizing creditors' coordination problems, see Vinod Aggarwal, "Interpreting the History of Mexico's External Debt Crises," 140-188, in Barry Eichengreen and Peter Lindert (eds.), *The International Debt in Historical Perspective* (Cambridge: MIT Press,1989), and Aggarwal, *Debt Games: Strategic Interaction in International Debt Rescheduling* (Cambridge: Cambridge University Press, 1996).

expected pay-off from waging this war.[12] Kirshner's account purports to explain why "bankers in general" are "appeasing" in a way that is not unrelated to Polanyi (as he does recognize). But it does so in a manner that rules out the instrumental role of certain actors—as incarnated in Polanyi's claim of the peacekeeping action of some bankers in particular. Kirshner's study of anonymous punishment by the market can be seen as a post-Olsonian version of the Polanyi intuition, one where Rothschilds and the "haute finance" would be missing.

A similar approach is at the heart of Tomz' study of reputation and market access over the long run. He argues that lack of information about countries' types does align atomistic lenders' behavior and incentives and that the capital market behaves competitively. The result is that while the setting is vulnerable to free riding, it nonetheless permits a certain form of discipline to emerge: Countries with no credit history face bad terms because they scare lenders away. They must work hard and be patient and faithful so as to (slowly) accumulate reputational capital. Tomz provides compelling 19th century evidence that new sovereign borrowers coming in foreign markets were penalized by high interest rates. Seasoned ones (with a good history and track record) were rewarded by lower rates. In this account there is no room for intermediaries. Interestingly, Tomz' very careful study does not mention Polanyi (neither in the text, nor in the reference list, nor in the index) – a suggestion that modern rational choice theory would be able to do away with

[12] Mark Harrison and Nikolaus Wolf's "The Frequency of Wars" (The Warwick Economics Research Paper Series no. 879, 2008) studies the relation between countries' wealth and war.

Polanyi's suggestion that market structure (the "monopoly" of haute finance) mattered.

In contrast to these works, this article provides a reconstruction of Polanyi's idea, highlighting the role of intermediaries in the markets. Polanyi's conjecture amalgamates two complementary arguments: a monopoly power argument and a political conditionality /peacekeeping argument. We give foundations to both by introducing insights from finance and industrial organization theory, which harken to Michael Spence's seminal paper on the economics of signaling.[13] Our argument is that the supply of certification services is non-competitive. Owing to credibility issues, certification tends to exhibit features of a natural monopoly: Because it earns revenues from issuing a label (a "seal of approval"), a certifier can benefit from misrepresenting the true condition of the government it assesses—unless such misrepresentation leads to a loss of future revenue due to reputation loss. For veracity to prevail in equilibrium, the costs of cheating (as captured by permanently diminished market share) therefore must exceed the benefits (the one-shot sale of misleading advice). And for this to occur (i.e., for possible future losses to be large enough that they serve to discipline certifiers), *certifiers must own a large market share to begin with*.

In summary, for certification to be credible there must be a critical level of monopoly power and this, we shall argue, explains why Polanyi could portray the global capital market as non-competitive: As we find, the Rothschilds (Polanyi's

[13] Michael A. Spence, "Job Market Signaling," *Quarterly Journal of Economics* 87, no. 3 (1973): 355-374.

main character and core of the *haute finance* "conspiracy") had a very large market share and were thus concerned with retaining prestige. We give both explicit rational foundation and supporting data for this interpretation.

Next we explain why brand concerns lead prestigious bankers to distribute their seal of approval with prudence and as a result, obstruct war. Because the ability to certify rests on reputation, a prestigious certifier tailors support to countries in a way that maximizes its own prestige. Because wars increase risks and ultimately make default more likely, prestigious intermediaries seek to discourage conflict. As a result, we argue (in contrast to Polanyi's view of high finance as providing a public good) that global financing for wars was not entirely suspended, but instead limited to conflicts that did not threaten certifiers' brands. This concern is what led prestigious bankers to set their face against those wars that were potentially destructive of their future ability to certify: this is why they sought to discourage countries from military entanglements – not because they were some precursors of the United Nations or because this would look good on their vitae, but because war would have meant foregoing future revenues. This new interpretation of the pro-peace virtues of banking elites thus provides a meaningful qualification to Polanyi.

The old trinity—means, motive, opportunity—provides a detection method for culpability. Polanyi accused high finance of having killed wars. We in this paper must therefore do this: provide evidence that prestigious bankers had the means, the motive and the opportunity to stop wars. We shall provide abundant analytical arguments and empirical evidence to support this claim. This would be enough for

most judges and juries, but some may prefer the culprit to be caught red-handed, or better still, a confession. Using both archival and secondary sources we have identified cases where the relation between war and finance was explicitly discussed and, digging deeper, even found evidence of military conditionality in original. All this we hope provides new and powerful evidence in support of the prestige-protection/war-prevention nexus which we argue was at the heart of the *Pax Britannica*.

We think that this new perspective on Polanyi has important empirical, theoretical, and topical relevance. From the point of view of empirics, it is useful to provide reliable data to document Polanyi's claims. It is also useful to provide a rigorous discussion of the underpinnings of his theory and also to engage with alternative interpretations. No attempt has ever been made to provide relevant figures on this important topic, and this paper is the first to do so.

The paper makes also several theoretical contributions. First, it provides a generalization with which to understand the politics of conditionality during 19th century's *Pax Britannica*. This is useful for political scientists genuinely interested in the study of past regimes and as it makes historical comparisons more relevant; there is a serious methodological risk in pooling all past regimes for managing foreign debt in the same basket. Second, we make what we hope is an innovative theoretical advance by showing how insights from Industrial Organization theory can be used in International Organization theory. Our explicit construction of an argument explaining why political power can accrue spontaneously to private

entities in situations with serious information asymmetries and enforcement problems is potentially important: it suggests that the familiar Olsonian skepticism regarding the ability of cartels to survive may not be relevant in situations when information is scant and enforcement difficult, situations arguably very relevant to International Organization theory. Third, our study provides both a critique and broadening of Tomz' analysis of the role of government policy in securing reputation through repeat play. We show conditions under which it is profitable for the government not to wait until it has a reputation of its own but instead, use a private agent as an intermediary to secure this reputation by proxy. This possibility is not considered in Tomz' account. Yet we show that it has much empirical relevance. The result is that the intermediary acquires a form of "ownership" of government policies and can use it to secure certain policies (thus the connect with war and peace, but obviously the issue has relevance for government policies writ large). Thinking of conditionality lending as resulting from the ownership (by monopolistic lenders) of "property rights" over government reputation is potentially important. It opens the door to a theoretical explanation of the reasons why certain policy beliefs, held by private actors, are important and deserve study.

Last, the topicality of the paper comes from the fact that, some of the features of our discussion are still valid today. In an open international system, different lenders may get involved into adjustment programs and the issue of competition or cooperation among them is then paramount. Current examples include the alleged undercutting of World Bank conditionality by Chinese lenders in Africa or the

debate regarding the European Financial Stability Fund whose creation raised issues of institutional competition (between the European Union, the International Monetary Fund, and the European Central Bank). While today's world is no longer run by haute finance, we still get the insight that alternative conditionality regimes are outside options for one another suggesting that a theory of imperfect competition in conditionality lending has broad theoretical relevance.[14] Polanyi's insights, which this paper seeks to organize in an articulated theory, may provide founding elements to such a theory.

The balance of the paper is organized as follows. Section I provides new data to examine the empirical basis for Polanyi's conjecture that global capital markets were conducive to peace. Section II spells out our theory that prestige in certification gives the means to penalize certain polices and reward others. We delineate our argument from Tomz'. Section III provides new evidence supporting this theory. We report data suggesting that certifiers' prestige was able to drive bond prices. We organize a horse race between Tomz' theory (that countries seek to certify themselves through repeat play) and our alternative theory (that countries are certified by private bodies who thus "own" countries' reputations). Section IV provides tests of the effect of bankers on war. We report archival evidence of explicit antiwar conditionality. We use characteristics of the wars that nonetheless received funding as a further test of our theory. We show that prestigious banks penalized

[14] As shown by Hungary's recent haggling over IMF conditionality, countries face a choice between exit, voice, and loyalty. See Albert O. Hirschman, *Exit, Voice and Loyalty. Responses to Decline in Firms, Organizations and States* (Cambridge. Harvard University Press, 1970.

more destabilizing wars. We conclude by summarizing our argument and drawing implications.

I. Was Polanyi Right? Stylized Facts about War and Market Access

That the *Pax Britannica* was characterized by relatively few wars is a tautology. In this section we provide new data that is relevant to the question of whether capital markets discriminated against wars. We rely on a new, extensive data set of London security issues during the Hundred Years' Peace (1815–1913) that we hand-collected and matched against data on war as reported by other scholars.[15] Although (as we shall see later) price data, once properly sorted, contains relevant insight, we begin with reviewing quantity data. The reason is that, since the argument in Polanyi is about credit rationing (rogue countries would have been "embargoed"), quantities is the relevant criterion.[16]

[15] For a description of this data set, see Marc Flandreau, Juan Flores, Norbert Gaillard,, and Sebastián Nieto-Parra, "The End of Gatekeeping: Underwriters and the Quality of Sovereign Debt Markers, 1815-2007," 53-92, in Lucrezia Reichlin and Kenneth West (eds.), *NBER International Seminar on Macroeconomics 2009* (Cambridge: NBER, 2010). The data set was based on a variety of sources—including Hyde Clarke, "On the Debt of Sovereign and Quasi-Sovereign States, Owing by Foreign Countries," *Journal of the Statistical Society of London* 41, no. 2 (1878); 299-347, Charles Fenn, *Fenn on the Funds* (London: Effingham Wilson, 1883), and Jenks—and then checked against announcements in the press (principally the London *Times*) as well as prospectuses, contracts, and archival material.

[16] On this matter, compare Kirshner with Paolo Mauro, Nathan Sussman, and Yishay Yafeh, *Emerging Markets and Financial Globalization: Sovereign Bond Spreads in 1870-1913 and Today* (Oxford: Oxford University Press, 2006). While Kirschner finds that bond yields increased in response to wars, Mauro et al. estimate the effect of wars and political crises on bond prices in the secondary market during the period 1870–1913 reject the hypothesis that war and political crises related interest rate increases were significant. Both findings are consistent with the theory we articulate here, which test for anti-war bias by looking at primary markets and quantities. We also remark that, as historians have long remarked, financiers have been repeatedly involved in war finance and on several occasions have benefited tremendously from the resulting volatility. Evidence of high interest rates is not per se evidence of an anti-war bias of the financial community; see Bertrand Gille, *Histoire de la Maison Rothschild,* Vol. I: Des origines à 1848 (Geneva: Droz, 1965); S.R. Cope, *Walter Boyd. A Merchant Banker in the Age of Napoleon* (London: Sutton, 1983); Stanley Chapman, *The Rise of Merchant Banking* (London: Allen & Unwin,1984); and Philip Ziegler, *The Sixth Great Power. Barings, 1762-1929* (London: Collins, 1988). On the positive relation between war and finance, see Richard Ehrenberg, *Das Zeitalter der Fugger: Geldkapital und Creditverkehr in 16 Jh.* (Jena: Fischer,1896); Peter G.M. Dickson, *The*

Our main source for conflicts is Kristian Gleditsch, who provides an update of the Correlates of War database; we rely on Dan Reiter and Allan Stam for information on warring nations.[17] The war data we employ coincides with what the Correlates of War database defines as "Inter-States Wars" (without loss of generality we added the U.S. Civil War, considering the Confederacy as a sovereign entity). We are interested in foreign countries that managed to secure funding during wartime in the London capital market.[18] That is, to assess Polanyi's claim that *haute finance* was biased against war, we produce a statistical summary of foreign countries' market access in London, and then cluster it with evidence on their being at war. The statistics have been organized to correspond to the four boom-to-bust phases in foreign debt lending in London: 1818–1829, 1845–1876, 1877–1895, and 1896–1913.[19]

Table 1 reports the results. We begin by documenting the extent of war. We can see that the Hundred Years' Peace is a phenomenon of Western European, developed countries. Apart from the period 1845–1876, which was characterized by "unification wars" (wars between Germany's and Italy's predecessor states and Austria, as well as the Franco-Prussian War, the political prelude to German unification), war was limited to the confines of Europe (the Crimean War) or to the rest of the world (Latin America, Asia, and North America). When we combine this

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Financial Revolution in England. A Study in the Development of Public Credit, 1688-1756 (London: Macmillan, 1967); and Charles Tilly, *Coercion, Capital, and European States, AD 990-1992* (Cambridge: Blackwell, 1992).

[17] Kristian Skrede Gleditsch, "A Revised List of Wars between and within Independent States, 1816-2002," *International Interactions* 30, no. 4 (2004): 231-262; Dan Reiter and Allen C. Stam, *Democracies at War* (Princeton: Princeton University Press, 2002).

[18] We exclude countries that secured wartime funding in other international markets (e.g., Amsterdam or Paris). We also exclude funding in London of British wars (e.g., the Boer Wars), since London was a domestic market for the British government.

[19] Only a few loans were made during the period 1829–1845, which would render any inferences spurious. As a result this period is ignored throughout the analysis, although the data is available from the authors.

information with market access data, we obtain results that are partly consistent with Polanyi. For the entire period (1818 to 1913), we have 18 instances of capital market access by foreign countries that occurred during wars, which is less than 5% in a total of 380 loans. For the period 1845–1913, which encompassed ten different wars, we find only 15 market access events in wartime; this is only 4.2% of the total number of loans. Controlling for the fact that some wars received multi-access, we compute (but do not report in the table) that lending did occur during 19.6% of all wars that occurred during those years.[20] In other words, war lending was not a big business in London (which is consistent with Polanyi's notion of a market place peacekeeping channel), but securing war finance was not altogether impossible, and references to automatic embargoes require further scrutiny.

[20] The total number of wars for the period 1845-1913 was 51. Since lending occurred in 10 wars, we have 10/51 or 19,6%.

Table 1. War and Capital during the Hundred Years' Peace

Period	1818–1829	1845–1876	1877–1895	1896–1913
War Statistics				
Share of years with war in at least one country (%)	66.7	96.9	73.7	88.9
Number of wars				
Between powers	0	5	0	0
Powers vs. nonpowers	3	10	13	4
Other wars	3	11	4	9
Total number of wars	6	21	17	13
Foreign Issues Statistics				
Foreign issues: Total number [a]	22	148	107	103
Per year	1.8	4.6	5.6	5.7
Issues by Foreign Countries at War				
Number of issues by foreign countries at war [b]	3	6	4	5
Between foreign powers	0	2	0	0
Involving foreign powers	0	0	1	4
Colonial wars [c]	0	0	3	0
Other wars	3	4	0	1
Number of issues from countries not at war	19	142	103	97
Share of war loans	14%	4%	4%	5%

Source: Author calculations from a variety of sources.
[a] Outright foreign issues on the London market (no conversions). Foreign powers include Austria, France, Germany/Prussia, Italy, and Russia; Japan is not treated as a power. See text for description of sources for loans.
[b] From Gleditsch (2004), who revises the Correlates of War database. We focus on so-called interstate wars (Table A, pp. 248–49). Loans from "war countries" are those issued during wartime. We exclude issues that are issued before or after wars as well as indemnity loans (i.e., French 1871–1872 loans).
[c] Colonial wars are those involving foreign powers or countries in a colonial conquest.

To go deeper in the analysis we now cluster results by type of war. Polanyi reflected that not all wars were equivalent and dismissed the Crimean war as a "more or less colonial event". Without taking a stand on specific wars, we agree that different wars had different significance depending on the standing of the belligerents. Consistently, in the bottom panel of Table 1, London wartime loans are

organized in four categories. We distinguish: a) "wars between powers" which we identify as wars between members of the "Concert of Europe": Austria, Britain, France, Prussia/Germany, Russian Empire, to which we add the Kingdom of Sardinia/Italy[21];b) "wars involving powers" (where at least one power was involved but where powers did not fight one another); c) "colonial wars" (all that the name implies), and d) "others" (a residual category that includes the few wars between countries outside the nations mentioned above, such as conflict between Latin American nations). In line with Polanyi's insight we contend that our category "wars between powers" has much significance in terms of systemic stability and thus global peacekeeping.

Market access events are now clustered according to war types.[22] The table reveals that, with only two exceptions (the 1855 Crimean War loan to Turkey and a 1870 Franco-Prussian War loan to France), wars between powers *never* led to international loans in London. Characteristically, international finance abstained from funding the German and Italian unification wars in Europe during the mid-century. Anecdotal evidence suggests this was made on purpose. A frustrated Italian leader Camillo Cavour's reported on his difficulty in raising external capital before waging a campaign against Austria in 1859 and interpreted it as an embargo against

[21] Incidentally, applying this criterion makes the Crimean war in which Britain and France along side the Ottoman Empire fought Russia, not a "colonial event" (as Polanyi's suggested) but a "war between powers".
[22] We consider the market access event according to war type, not borrower type. In this logic, Ottoman borrowing during the Crimean War is a loan for a war between powers, because Britain and France were actively supporting the Turks against Russia. Adopting the alternative, more restrictive criterion would only reinforce our conclusions since it would result in our registering even less market access events for war between powers.

war: "Bankers of all countries, he lamented, have organized a kind of *conspiracy in favor of peace*."[23]

As Table 1 shows, the bulk of war loans concentrated on other types of conflicts. There were only two "wars involving powers" during which the London capital market was used: the Russo-Turkish war of 1877–1878 (for one loan) and the Russo-Japanese war of 1904 (for a total of five loans). There were also two colonial wars during which the "colonized" country received funding from London (China against France in 1885 and China against Japan in 1894–1895) for a total of three loans. Finally, there were four other wars that involved five loans from London: the Argentina–Brazil–Uruguay skirmish of 1852, the Triple Alliance war against Paraguay of 1865–1870, the U.S. Civil war, and the second Balkan war. This is consistent with the assumption that there was an embargo on loans that could lead to severe political destabilization.

Our findings thus both vindicate Polanyi's hypothesis and qualify it. That certain *types* of wars were penalized is not consistent with Polanyi's interpretation of financiers as providing a public good. Had they been a kind of peacekeeping body they ought to have been able to prevent all wars. Finally, it is not apparent from the above evidence why and how this happened. While we have the body and a hypothesis regarding the suspect's origins (the capital market), we still lack information on the means, motive and evidence.

[23] Emphasis added. Bertrand Gille, *Histoire de la Maison Rothschild,* Vol. II: 1848-1870 (Geneva: Droz, 1967), 358.

II. The Argument: Prestige as Gatekeeping

a) Economics of Prestige

Our explanation of the mechanism through which markets could discriminate against wars rests is an argument about the role of intermediaries in certification. Under certain conditions of imperfect information and enforcement, truthful certification can only occur if markets are non-competitive. Leading intermediaries ("prestigious banks") emerge to deal with information and enforcement: they have market power. Next, because these intermediaries are concerned with retaining a good track record, they oppose dangerous policies, within which wars (more precisely hazardous and large scale wars) feature prominently: and thus prestigious banks tend to behave as peacekeepers.

These results can be derived from research in industrial organization and financial economics which has explored conditions under which markets are able to solve problems involving incentives to report truthfully. For simplicity, consider a world in which there are two types of investors (informed and uninformed) and two types of governments (good and bad). As in the respective works of Kirshner and Tomz, ordinary investors suffer from information asymmetries. Assume, for example, that these investors—unlike informed intermediaries (underwriting banks)—cannot distinguish the relative merits of borrowing governments. Intermediaries have incentives to cheat investors because they earn fees, but investors understand that. Sovereign debt may nonetheless emerge in this context, as

bankers are sorted into a "pyramid": a few prestigious bankers have monopoly power and specialize in high-grade securities, while the many ordinary underwriters are competitive and deal mostly with low-grade securities (these have a narrower market, plagues with rampant quality problems). Association with prestigious bankers does send a quality signal.[24]

These insights have been extended into finance. William Megginson and Kathleen Weiss argue that prestigious underwriters play an important role in resolving asymmetries of information during securities issue.[25] Thomas Chemmanur and Paolo Fulghieri develop a relevant model in which the financial underwriter's reputation for veracity helps it secure a large market share. This mitigates the moral hazard problem in the production of information, since prestigious intermediaries who might otherwise be tempted to overprice securities (in order to generate short-term gains) refrain from doing so for fear of damaging future revenues.[26] Likewise, R.B. Carter and S.Manaster study the role of reputation in IPOs.[27] R.B. Carter, F.H. Dark, and A.K. Singh show that, over the long run, issues managed by prestigious houses outperform those managed by ordinary ones;[28] Randolph Beatty and Jay Ritter show that, conversely, an originator will lose market share if its issues

[24] The modern theory of signaling was pioneered by Spence (1973). He showed how efforts could be used to signal a potential employee's worth.
[25] William Megginson and Kathleen Weiss, "Venture Capitalists Certification in Initial Public Offerings," *Journal of Finance* 46, no. 3 (1991): 879-903.
[26] Thomas J. Chemmanur and Paolo Fulghieri, "Investment Bank Reputation, Information Production ,and Financial Intermediation," *Journal of Finance* 49, (1994): 57-79.
[27] R.B. Carter and S. Manaster, "Initial Public Offerings and Underwriter's Reputation," *Journal of Finance* 45, no. 4 (1990): 1045-1067.
[28] R.B. Carter, F.H. Dark, and A.K. Singh, "Underwriter Reputation, Initial Returns, and the Long-Run Performance of IPO," *Journal of Finance* 53, no. 1 (1998): 285-311.

underperform.[29] Thus market share emerges as the endogenous solution to problems involving precommitment or credibility

Recent work has extended these insights to long run historical perspectives. Marc Flandreau and Juan Flores found that, in the first foreign debt boom of the 19th century (when the London market for foreign debt was started) the House of Rothschild did surpass all other underwriters in terms of market share, capital stock, and performance.[30] This is consistent with the view that prestige was used for the successful origination and distribution of high-quality government securities. The associated monopoly power was the endogenous market response to information asymmetries: Rothschilds' large market provided them with the right incentives and ensured misrepresentation to be suboptimal. Rents accruing to brand name led underwriters to sustained efforts in defending their prestige. In short, prestige can be viewed as a strategic investment (sunk cost) that created a barrier to entry against other banks. This has the relevant implication that prestigious brands own a kind of monopoly power over borrowers. This monopoly power, however, did not rest on cartelization and was thus not subject to free riding, contrary to the conventional concern of Olson and others.

b) Politics of Prestige

We offer here a test our contention that prestige and monopoly power each reinforce the other. A prestigious originator ought to issue successful securities in

[29] Randolph P. Beatty and Jay R. Ritter, "Investment Banking, Reputation, and the Pricing of IPO," *Journal of Financial Economics* 15 (1986): 213-232.
[30] Marc Flandreau and Juan Flores, "Bonds and Brands: Intermediaries and Reputation in Sovereign debt Markets: 1820-1830," *Journal of Economic History* 69 (2009): 3646-3684.

order to retain credibility and indeed, the evidence shows that the Rothschilds did outperform competitors on this score throughout the entire Hundred Years' Peace.[31] We therefore predict that the market for foreign government debt should have remained highly concentrated with incumbent prestigious banks such as Rothschilds retaining their edge. Table 2 documents market leadership and persistence in concentration for the period 1818–1913.[32] The long-run evolution of market power is measured by two alternative indicators: Herfindhal–Hirschmann indices and the market share of the leading three firms. The table shows that the degree of concentration—as captured by either indicator—was remarkable throughout. Herfindhal–Hirschmann (H-H) indices range from "high" to "very high" concentration, and market shares for the top three loan originators are always above 50%. Rothschilds remained the leader throughout the entire nineteenth century. The only other house that is usually among the three leaders is Barings, whose prestige and special position as "the other leading house" is affirmed in the work of historians.[33]

[31] See Flandreau, Flores, Gaillard, and Nieto-Parra (2010); Flandreau and Flores (2011).
[32] As before, we omit the period 1825–1845: there were almost no issues, and most of the few that took place were conversions.
[33] See R.W. Hidy, *The House of Baring in American Trade and Finance: English Merchant Bankers at Work, 1763-1861* (Cambridge: Cambridge University Press, 1949), in addition to Chapman and Ziegler

Table 2. Characteristics of the London Foreign Debt Primary Market

Period	Number of underwriters	H-H index	Market share of top three (%)	Names of top three
1818–1825	12	2432	73.4	Rothschilds B.A. Goldschmidt Thomas Wilson
1845–1876	45	1382	55.3	Rothschilds Barings Imperial Ottoman Bank
1877–1895	34	2176	65.5	Rothschilds Barings Hambros
1895–1913	33	1196	51.7	Rothschilds Hong Kong Bank Barings

Source: Flandreau, Flores, Gaillard and Nieto-Parra, "The End of Gatekeeping."

The previous finding is a reinterpretation of one of the two facets of Polanyi's conjecture: there was something special about certain bankers (Rothschilds). However, our characterization differs from the Marxist interpretation of Polanyi's *haute finance* as some kind of "gang". Rothschilds was special not because it was the "boss" of a cartel but because it differentiated itself from all the other issuers through quality signals: The key word in "high finance" is not "finance" but "high". The bankers' name was a prestige good—something to which Polanyi (who is considered as a precursor of economic anthropology) might have been sensitive. Our interpretation of monopoly power as stemming not from cartelization but rather from prestige is novel in the literature on sovereign debt.[34]

[34] Although the value of prestige in banking has long been acknowledged in business history literature, the role of prestige in international debt is barely mentioned in modern discussions of countries' reputational capital; See for example Gille, *Histoire de la Maison Rothschild*, vol. I (1965); Richard Roberts, *Schroeders: Merchants and Bankers* (London: Macmillan1992); and Toshio Suzuki, *Japanese Government Loan Issues on the London Capital Market 1870-1913* (London: Athlone Press, 1994). In political science literature, Mosley is one exception as she follows business historians in emphasizing the role of prestige. She does relate it explicitly to conditionality lending, however.

The innovation that this different perspective provides is that, unlike what happens in standard models where bondholders try to coerce defaulters but have their money tied with her once a loan has been granted (thus creating a conflict of interest and time inconsistency) delegation of enforcement to a prestigious underwriter does not present this flaw. Once a loan has been issued, the investors rather than the prestigious bankers bear the brunt of the cost of default. Since bankers have already disposed of the loan, they mostly worry about their ability to certify future loans which itself rests on wise ex ante choices and determined ex post trouble-shooting. In other words, prestigious bankers can credibly pre-commit to punish defaulters in the future.[35]

For this reason the prestigious bank has a valuable role to play in fixing countries' credibility problems. When a borrower's reputation can rise and fall, certification by prestigious houses (whose market share and thus prestige was stable – see Table 2) provides a reliable anchor. One obvious situation when a country lacks credibility is when it is new in the market. At a broader level, the need for a reputable underwriter can arise each time a country undergoes some "information crisis." A fiscal crisis is one possibility. The prospect or outbreak of a war (with their dire fiscal, political and diplomatic complications) is another instance. As economists have shown abundantly wars have been historically a major source of deficit.[36] They have made public finances more vulnerable. This means that the certification power

[35] See Marc Flandreau and Juan Flores, "Bondholders vs. bond-sellers? Investment banks and conditionality lending in the London market for foreign government debt, 1815-1913," EHES Working Papers no. 2, forthcoming in the *European Review of Economic History*, for an empirical study.
[36] For example, a revolution might be followed by a declaration by new rulers that former debts were "odious."

of prestigious intermediaries becomes extremely valuable during diplomatic crises and military conflicts, especially when the country is on the losing side.

That wars increase information asymmetries and thus increase the value of prestige is one thing. But what prevents prestige from sponsoring a war? We argue that the invisible hand at work here is the underwriters' concern about retaining their good name.[37] In this background, wars were hazards. For intermediaries, they increased reputational risks when a direct corollary of our model is that prestigious banks will want to prevent conflicts because they want to maintain their own unblemished track record.[38] A quote may provide a useful illustration. In the late 1830s Rothschilds were involved in lending to Belgium and used this to coerce it to make peace with Holland. Their private correspondence shed light on their motives for doing this: "our good will does not go as far as giving them a stick for them to kick us with, that is to say giving money to *make a war and destroy the credit which we support with all our forces and resources.*"[39] Thus war was seen by prestigious banks as a direct threat *to their charter* and there were therefore rational reasons to resist them.[40]

c) Prestige vs. Countries' Reputation

[37] Evidence in Flandreau and Flores, "Bondholders vs. Bond-sellers?," shows that Rothschilds had very few defaults (the lowest one of all significant underwriters). Even when there was a credit event for a security they had sponsored, they saw to it that investors would receive the promised returns and beyond.
[38] Robert Barro, "Government Spending, Interest Rates, Prices, and Budget Deficits in the United Kingdom, 1701-1918," *Journal of Monetary Economics* 20, no. 2 (1987): 221-248.
[39] Gille, *Histoire de la Maison Rothschild*, vol. I (1965), 298.
[40] Historical evidence suggests that the collapse of established powers and monarchies brought about by the French wars at the beginning of the nineteenth century was a serious blow to the shine of reputable Amsterdam houses and the Amsterdam market for foreign debt, once the leading center of government finance. J.C. Riley, *International Government Finance and the Amsterdam Capital Market, 1740-1815* (Cambridge: Cambridge University Press, 1980). Likewise, Britain's involvement with World War I opened the way for New York to dominate in the field of foreign government securities. Cleona Lewis, "America's Stake in International Investments," (Washington, D.C.: Brookings Institution, 1938).

To conclude this theoretical tour, we now engage in a discussion of our theory with respect to Tomz. He articulates a Polanyi-free perspective on the history of sovereign debt under which the desire to borrow cheaply provides incentives for borrowers' cooperation with lenders.[41] The central intuition is that countries make efforts of countries to repay their debts so as to accumulate reputational capital: investors cannot directly observe government characteristics, but they do observe whether governments discontinue interest service as well as data about the circumstances they face. Investors thus try to infer countries' types from behavior.[42] At the beginning, the debt of "new" borrowers is discounted (they have no track record). As borrowers become "seasoned" conditional on their paying, they gradually secure better terms (investors update prior beliefs). The process through which upgrades or downgrades occur also takes into account current circumstances and is thus known as "contextual inference" (e.g., servicing one's debt in an unfavorable environment has more value for investors than the same decision undertaken in a favorable environment). Similarly, investors may be more forgiving when default occurs during dire times.[43]

In contrast, the world we consider is one in which investors use the signals from certain prestigious brands to make inferences about countries' types. Investors cannot tell which countries' debt would be a good investment, but they know that

[41] Tomz , *Reputation and International Cooperation.*
[42] The Bayes formula is used to derive the probability that the country is a good type conditional upon that country paying its debt.
[43] Tomz reports data for the early 1820s that suggest reputation pays. He finds evidence that new borrowers receive less favorable treatment than do seasoned borrowers.

credible delegated monitors have that knowledge and the capacity to enforce; hence investors react not to news about a country's behavior but rather to the presence (or absence) of a prestigious underwriter. In practice, we predict that their market power is an increasing function of the extent of information asymmetries. The less agents know about the borrowing country, the more prestigious bankers add value. At the extreme, if investors know close to nothing then a prestigious bank's market power is maximal. This is likely to be the case when countries are new to the market, or when they suffer from some credibility problems *as is the case during military conflicts*. In other words, our theory differs from Tomz' by recognizing that, in situations of severe asymmetries of information, countries have other strategies than efforts and forebearance. They can use the certification services of market gatekeepers. But this means that the gatekeepers can influence policies – and diplomacy too.

In summary, we have found that Polanyi's basic insight on the existence of a dominant player in the market place to be empirically justified. We have also constructed a new argument that could explain that under *Pax Britannica*, prestigious banks had a weapon (their prestige, which added value and permitted borrowing at attractive costs), a motive (their own track record) and an opportunity (the conflicts themselves or their forecast or eventuality) to weigh in on national policy and orient countries in a peaceful direction. This new argument, which rests on the existence of intermediaries with a logic of their own shows that the two related aspects of the

Polanyi story (market power and ability to prevent wars) have but one source: the prestige of intermediaries, which intermediaries sought to protect.

III. The Value of Bankers' Certification

a) Evidence from a case study

In this section, we report evidence that prestigious banks could inflict penalties on countries that adopted policies they disliked. For this, we demonstrate that prestige added *substantial* value. This contention is widespread in literary descriptions of international banking during the 19th century.[44] But reliance on verbal statements may prove misleading. A heuristic test of this hypothesis is found in cases where the underwriter's identity changes but the country's character does not. Consider the case of, say, an upgrade (moving from an ordinary to a prestigious underwriter): then the outcome should be an improvement in the price of bonds. The variation in bond prices is a "clean" measure of the value added by prestige.

The experience of Brazil in 1825 provides evidence. Its very first international public offering (IPO) in the London market had been managed by a consortium of houses led by Wilson (an "ordinary" merchant bank[45]) before Rothschilds took over. The Wilson issue took place in 18 August 1824 at a price of £75 (per £100 nominal value bond) and turned out to be a failure.[46] On January 12, 1825, however, it was

[44] For abundant anecdotal evidence scattered in a large section of his book, see Gille, *Histoire de la Maison Rothschild*, vol. I (1965), 35–202.
[45] See Chapman; F.G. Dawson, *The First Latin American Debt Crisis. The City of the London and the 1822-25 Loan Bubble* (Princeton: Princeton University Press, 1990); and Flandreau and Flores (2009).
[46] Much of the stock remaining unsold Dawson (1990), Flandreau and Flores, "Bonds and Brands." Rothschild Archive 000/401A/7/7 provides evidence.

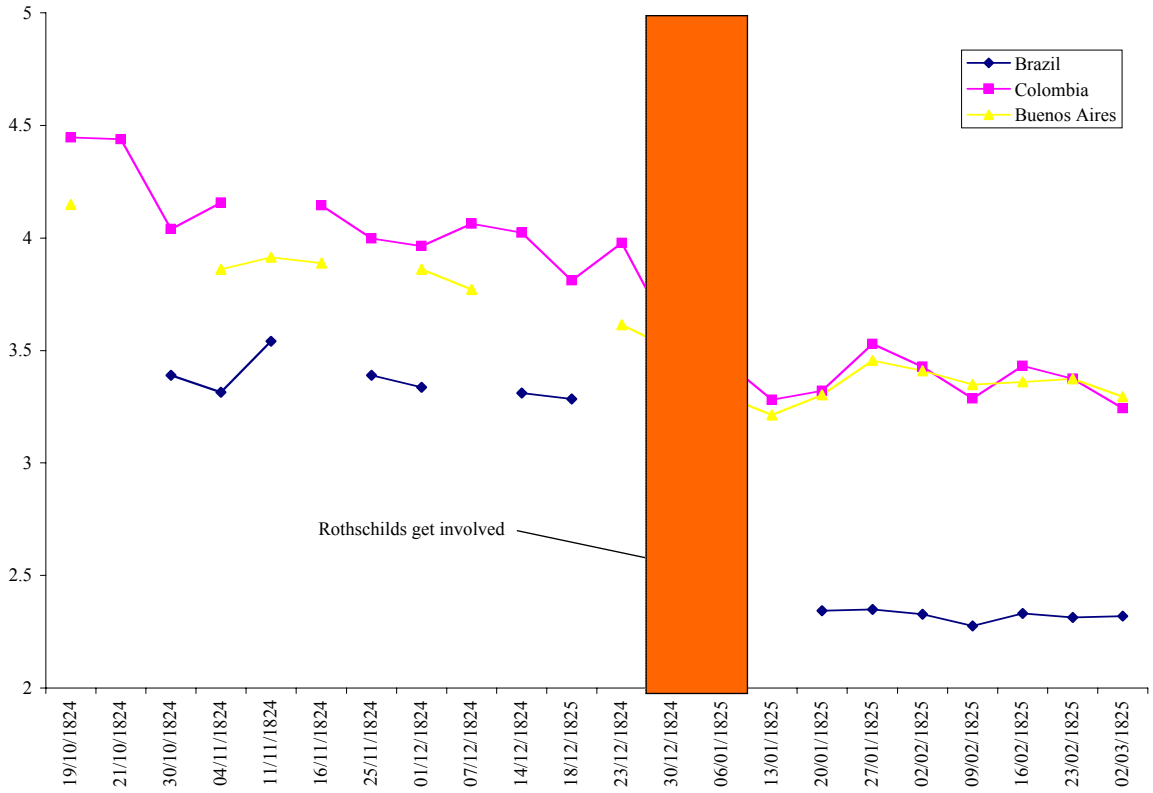
suddenly revealed by *The Times* that Rothschilds would take the balance of the loan at £85 per bond. There had been no "news" on the situation of Brazil, its political stability, etc. so that the only innovation was Rothschilds getting involved. *The Times* explained that this event had caused bond prices to start rising in the last few weeks on the "belief that the contract for the remainder would fall to the eminent capitalist who is now understood to have taken it… [Rothschild]'s remarkable success in raising the credit of some of the European Governments by his contracts for loans in England is the best guarantee to a similar result on the other side of the Atlantic, and there seems little cause to doubt that the Government securities of Brazil will, under his auspices, bear as high quotations in the money market as any of the continental States."[47]

Figure 1 organizes evidence on Brazilian securities by showing weekly data for their yield spreads (i.e. returns required by investors to hold the bonds minus returns on risk free British bonds). As controls, we show like data for securities of other Latin American securities (Colombia and Buenos Aires i.e. Argentina). The figure also indicates the period during which rumours were reported to be lifting the price of Brazilian securities.[48] The signal sent by the news of association with Rothschilds was worth a 50–100 basis points reduction in Brazilian yield spreads.[49]

[47] The *Times,* 12 January 1825. See also Dawson, 93; Rothschild Archive, Memorandum with Brazilian Government, 1825. The *Times* must have been tipped for when we checked this information against archive we found that, on the very day the article was printed, Brazil and Rothschilds indeed agreed upon a memorandum of understanding that provided for the bank's takeover of the unsold part of the Brazilian bond at a price of £85
[48] The data come from the "Foreign Funds" section of the *Times*.
[49] Both prices and qualitative evidence show the improvement was sustained. As pointed out by one referee, in Figure 1, all spreads stop declining at the same time, not just the Brazilian one and it was suggested that Rothschilds might have had any effect in this through some form of "contagion". In this case our measure would

In other words, when information is scant (as in the case of a newcomer to the market), prestigious houses can offer something extremely valuable to governments. It is not that countries cannot issue without them (although we remarked that the Wilson issue had failed) but they would issue less and at more expensive costs. This shows that prestigious banks have something to give to (or withhold from) policymakers.

Figure 1. Weekly Yield Spreads on Latin American Securities for Three States



Source: Authors, from *The Times* and the Rothschild Archive.

b) Countries' Reputation versus Certifiers' Prestige: Cross Section

underestimate Rothschilds true effect. The implication would be that the Rothschild effect is even bigger than we suggest.

We give a ballpark estimate of the value of prestige. It is also theoretical in that we construct an explicit comparison between the effect of prestige and those of patience and forbearance (or what countries "can do by themselves" by behaving well and patiently accumulating reputational capital), which is the essence of Tomz' hypothesis. Table 3 organizes evidence on the marginal contribution of underwriters' prestige to borrowing costs during the period 1845-77.[50] We compare the performance of new and seasoned borrowers and then control for prestige to see whether it has additional explanatory power.[51] We have measured the cost of borrowing by computing yield premia at issue.[52] Underwriters (i.e., lead managers of the issues) were identified by using contracts found in archives, the press, and prospectuses.[53] We distinguish "new" versus "seasoned" issues. "New" issues refer to countries borrowing for the first time in the London Stock Exchange during that period;[54] other issues are "seasoned". Because in Tomz' theory borrowing costs depends on both seasoning and quality of the seasoning process (what is really good if you are seasoned with a good track record), we distinguish, à la Tomz, between "Clean" issues, which are those without a record of default or renegotiation, and

[50] During this period, the debt market was mature enough that the performance of underwriters must have been common knowledge even to poorly informed market participants; and there were many new borrowers, thus enabling us to make statistically reliable inferences.
[51] We focus on genuine London issues (not on issues in other markets that were eventually cross-listed in London) and thus get as close as possible to covering the universe of "primary issues in London". For this reason we also excluded loans whose only purpose was the conversion of previous loans.
[52] In the few cases when the precise month of issue is not known, we used year-end consol yields instead.
[53] It is important to differentiate underwriters from the simple distributors whose names were typically printed in smaller type at the bottom of prospectuses.
[54] As a result, subsequent issues by the *same* "new" borrower are treated as New. Results are not affected if instead we *exclude* subsequent issues by the same borrowers. The next subsection clarifies this by focusing on time-series properties of the data.

"tainted" issues (all others).[55] (New issues can be Tainted if the issuing country inherits a default record from a previous entity to which it is related.[56])

We first look at the "pure effect" of seasoning and government honesty (column "All banks"). Results are fully consistent with the Tomz' track-record hypothesis.[57] We find that within each category, new borrowers were discounted. New clean issues exhibited spreads that were about 200 basis points higher than their Seasoned counterpart, and the gap between New tainted issues and seasoned tainted ones is larger still (about 260 basis points). There is also a 160 basis points reward from having been seasoned without experiencing a default.

Let's now consider the marginal effect of prestige. To this end we consider the Rothschilds column which replicates the same exercise but for Rothschilds countries only.[58] As seen, the involvement of Rothschilds creates value in several critical groups. For new clean bonds, Rothschilds yield premia are about 300 basis points lower than average for the category. This is an enormous effect and it means that Rothschilds had an ability to bring to the market new borrowers at very attractive terms. Seasoned tainted issues when they were taken in by Rothschilds also enjoy a

[55] We make no effort to control for how serious the breach of faith was.

[56] For example, countries who initially formed the "Great Colombia" (Venezuela, Ecuador, and Colombia) or Guatemala (later Guatemala, Costa Rica, and Honduras) first accessed the market during the period under study as successor states of previous defaulters. We placed Hungary in the New Tainted group because it was a successor state of Austria, which had imposed a capital levy in 1867 (and despite Hungary's attempt to indemnify bondholders for its predecessor's harm). See Gyorgy Köver, "The London Stock Exchange the Credit of Austria-Hungary, 1867-1871," *Acta Historica Acdemiae Scientiarium Hungaricae* 34, nos. 2/3 (1988): 159-170; and Marc Flandreau, "The Bank, the States and the Market: An Austro-Hungarian Tale for Euroland," in F. Capie and G. Wood (eds.), *Monetary Unions: Theory, History and Public Choice* (London: Routledge, 2003).

[57] Note that Tomz' test differs from ours. He distinguishes "new" from "seasoned" borrowers by looking at the date for the first loan in the Amsterdam market after 1695 and then reports average market yields in 1824 and 1825. Tomz, Table 3.3, These are secondary market prices. In contrast, we compare primary market yields and yield premia.

[58] As reported in the table, during 1845–1877 Rothschilds was involved in about 15% of issues, which accounted for 43% of the amounts loaned.

reduction of 100 basis points, meaning that the bankers added value even when the country was known to the market.[59] We conclude that, consistently with our intermediary-based certification hypothesis, prestige made a considerable difference. This implies that countries had other ways—beyond patience and effort—of addressing the problem of asymmetric information. In contrast, the Rothschild effect is not substantial for Seasoned Clean issues. This result is not surprising, but it is important: the marginal gain from association with prestige is smallest for countries that already have a good track record: these are the ones facing the smallest information asymmetries. The inference we make is that the greater the asymmetry of information, the more valuable the prestige.[60]

Table 3. Seasoning versus Signalling, 1845–1877

		All banks	Of which: Rothschilds
Number of loans		132	20
Total amount (£ million)		965,232	420,486
Total amount (%)		100	43
New	Clean	4.78	1.72
	Tainted	5.65	N.A.
Seasoned	Clean	2.44	2.39
	Tainted	3.92	3.06

Notes: See text for sources. Prices of U.K. consols are from the *Times*. Yields calculated via the standard coupon/price formula. Because France's loan of 1871 was unusually large, we have also computed results without it. Results give 2.43 and 2.36, thus not significantly affecting results.

c*) Countries' Reputation versus Certifiers' Prestige: Time Series*

We have suggested that the effect of prestige is reduced when we are dealing with clean seasoned countries. However, we must delve further into the data

[59] Rothschilds', unsurprisingly, endorsed no new tainted issues at all.
[60] We remark that this inference is consistent with Mosley's finding that well-behaved countries are subjected to less intrusive conditionality and monitoring. We argue that this reflects the smaller marginal benefits from association with prestigious underwriters', because "good countries" can "self-certify" more easily.

because such countries underwritten by Rothschilds were not the same as those underwritten by the rest, so it is not possible to make strict pairwise comparisons.[61] Therefore, a useful complement to Table 3 is Table 4, which organizes a test of differences in bond spreads *following a switch in underwriters*.[62] This method (unlike the previous cross section) has the merit of controlling for country characteristics.[63] We predict, according to our theory, that when a country switches from Rothschilds to an ordinary underwriter, spreads ought to rise (for this is a downgrade). Conversely, if it switches from a lesser firm to Rothschilds, then spreads ought to decline (upgrade).

[61] Cases where prestigious houses compete against ordinary ones for the best deals are by definition implausible. For instance, a large part of the Seasoned Clean issues is provided by the Scandinavian countries of Denmark, Norway, and Sweden. These involved smaller amounts for which liquidity requirements were less. For interesting evidence with Scandinavian States seeking Rothschilds, see Klovland (2005). Rothschilds tended to specialize in bigger, more illiquid bonds—for example, France's first indemnity loan of 1871. This issue amounted to about 10% of France' s GDP, dwarfing the Scandinavian issues. Rothschilds teamed up with Barings and put the loan on the market with a yield spread of about 3%. This was greater than the average Scandinavian yield spread; however, one would obviously want to compare this Rothschild-Baring spread with the spread faced by France had the issue been underwritten by ordinary houses, not with the spread paid by Scandinavian bonds underwritten by bankers other than Rothschilds. But it is not clear how such an estimate could be built.

[62] For an economist' discussion and empirical study of the reasons why firms switch underwriters, see Laurie Krigman, Wayne H. Shaw, and Kent L. Womack, "Why Do Firms Switch Underwriters?," *Journal of Financial Economics* 60 (2001): 245-284.

[63] Although it may be that some environmental variables (e.g., appetite for risk) have changed.

Table 4. From and to Rothschilds: Underwriters' Upgrades and Downgrades for Seasoned Countries, 1850–1873

	Country	Year of switch	Previous loan	Change in spread (bp.)
CLEAN COUNTRIES				
Upgrades from:				
1. Ordinary				
Goldsmid	Brazil	1852	1843	−105
Hambro	Sardinia	1855	1851	−212
Dent, Palmer & Co.	Turkey	1855	1854	−359
Hambro	Italy	1863	1862	+27
Morgan [a]	France	1871	1870	−98
Average				*−150*
2. Elite				
Baring, Hope	Russia	1862	1860	+38
Baring, Hope	Russia	1870	1869	−13
Average				*+12.5*
Downgrades to:				
1. Ordinary				
Dent, Palmer & Co.	Turkey 6%	1858	1855	+324
Gen. Credit & Fin. Co.	Italy 5%	1865	1863	−70
Average				*+127*
2. Elite				
Baring, Hope	Russia 5%	1864	1862	+48
TAINTED COUNTRIES				
Upgrades from (ordinary)				
Morgan	Spain 5%	1870	1869	−389
Downgrades to (ordinary)				
Spanish Financial Commission [b]	Spain 3%	1870	1870	+384

Source: Authors' computations, see text for details.
[a] Rothschilds issued the next loan (upgrade) jointly with Barings.
[b] The Spanish Financial Commission was a representative body of the Spanish Ministry of Finance. The issue referred to was distributed directly on the market.

However, since not all switches are equivalent, Table 4 is distinguishes between to or from an ordinary underwriters from those to or from an elite underwriter. The reason is that changeover from Rothschilds to another "elite" house is less significant than a changeover to an "ordinary" one. Previous work and Table 2 suggest that Barings was second only to Rothschilds in prestige.[64] Since we do not have sufficiently detailed information on the ranking of other houses, we

[64] As measured by market opinion and the stock of capital; see Chapman, and Flandreau and Flores, "Bonds and Brands."

therefore adopt the most conservative procedure and limit the category of non-Rothschilds "elite" to Barings alone. Finally, to control for the fact that not all countries are equivalent, the table distinguishes clean countries from tainted ones. Table 4 strongly supports our hypothesis. When there is a switch between Rothschilds and an ordinary underwriter big gains or losses were observed. For clean countries, the variations are 150 or 127 basis points, respectively, for an upgrade or a downgrade. The effect of prestige is naturally greater for countries with Tainted issues, as illustrated by the case of Spain (about 400 basis points each way).[65] Naturally, the Rothschild effect is not really perceptible when we look at changeovers with the other elite bank implying that, provided that they were not taken in a crisis, Clean countries could, at the margin, leave the best underwriter in favor of the other reputable one. This is where and how a country's self-certification—namely, establishing itself as a good (Clean) borrower—could compete against a banker's seal of approval: the entry threat posed by Barings to Rothschilds coerced the latter in to providing good countries with good terms.

We conclude from the above that bankers prestige was a patch on information asymmetries. And no one would dispute that wars are situations that exhibit considerable information asymmetries. Our findings thus help explain what happened during wars: When wars occurred, the uncompetitive nature of the

[65] The benefit for Spain in moving from Morgans to Rothschilds was pretty much offset by its loss in switching from Rothschilds to the Spanish Financial Commission, which auctioned securities on the market. This is another way of saying that an ordinary bank (such as London's Morgan) added little value. It is interesting to note that the Rothschilds loan to Spain in 1870 was serviced throughout its entirety and was excluded from all subsequent restructuring of Spanish debts. This indicates that Rothschilds could structure the senior securities of tainted governments.

market for government debt became even more marked, because countries desperately needed the bankers seal of approval. Bankers' prestige exceeded countries' reputational capital. The conclusion is that Rothschilds had great leverage during diplomatic crises. Having found the weapon, a motive and an opportunity, we are close to indict *haute finance* with the charge that that they willingly interfered with wars. But stay tuned: for those readers who would want more direct and indirect evidence, the next section has additional insight.

IV. Unpacking Polanyi: The Microeconomics of Peace and War

a) The War that Was Not: Belgium 1830-1839

The material in the first section showing that the *Pax Britannica* exhibited a bias against market access during wars and the evidence in other sections in favor of a mechanism operating through the prestige of bankers is now complemented with more direct evidence. However, the problem with trying to catch haute finance red-handed is that there was no body: like the dog that did not bark (Sherlock Holmes: "That was the curious incident.") we are grappling with the curious incident of the wars that were not. In order to find evidence of haute finance' appeasing action, we thus explored historians' accounts. Bertrand Gille's path-breaking study of Rohschilds devotes long passages to Rothschilds's peacekeeping operations consistent with the view that the Hundred Years' Peace involved a "bankers' ramp"

against war.[66] Within the abundant anecdotal evidence he gives, one episode stands out: the international crisis between the independence of Belgium of 1830 to the peace treaty with Holland in 1839. We document it and complemented the evidence in Gille with evidence from debt contracts in the Rothschild archive and press clippings.

The Belgian Revolution of 1830, which led to the proclaiming of the new state's independence from Holland on October 4, 1830, challenged the borders established by the Congress of Vienna in 1815. An international parlay group, the London Conference, was created in November 1830 and led to the recognition of Belgium's independence by "foreign powers" (Austria, Britain, France, Prussia and Russia) in January 1831. Belgium secured a constitution on February 7 1831, and a King, Leopold I, on July 21, 1831. In August 1831, however, King William of Holland rejected Belgium's claim of independence and marched onto Brussels. French intervention compelled the Dutch to evacuate their forces from Belgium late in 1831 leading to an international treaty (November 15, 1831) to be ratified by the five powers. Lingering Belgian claims for further territorial expansion, and the resistance of the Dutch King led to delayed ratification by Austria, Prussia and Russia: they would not recognize Belgium's independence until the Dutch did. The stalemate extended until May 1833, when the existence of Belgium was recognized by the Dutch King and his allies. But it was not until April 1839 that the final Dutch-Belgian separation treaty was signed.

[66] Ziegler calls the House of Barings the "Sixth Great Power."

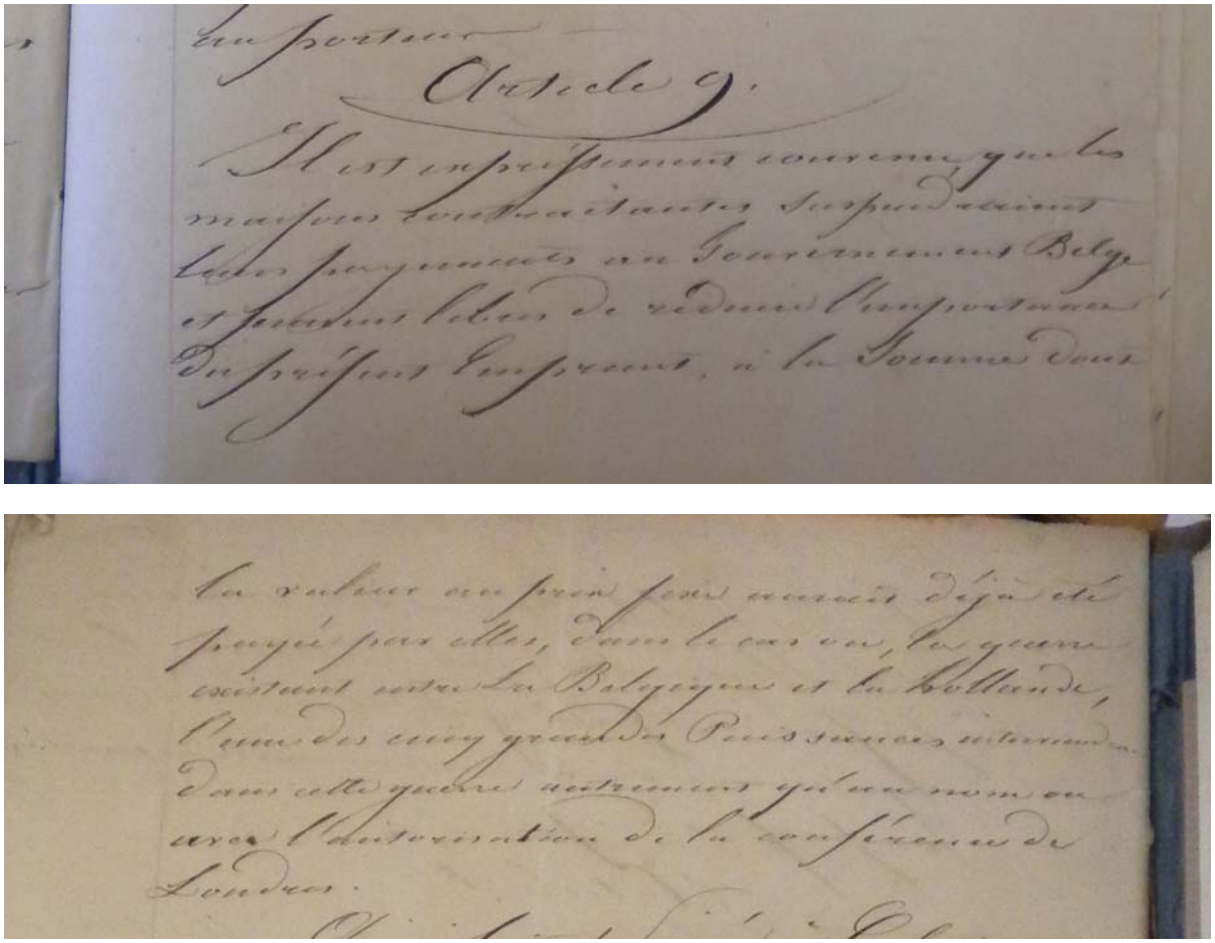
Before the Dutch intervention, the provisional Belgian government started negotiations with the House of Rothschilds to issue a loan. The Belgian government wanted to fund the transition period until a sound taxation system would be put in place. But Rothschilds were reluctant to lend before a peace treaty with Holland was signed. According to Gille, Rothschilds (rightly) feared the situation would lead to an outbreak of war between Belgium and Holland. They also feared an expansion of the conflict to the rest of Europe and in particular a war between powers.[67] The Belgian uprising signalled a resurgence of French influence and renewed political tensions between France and the other powers. Russia, Austria and Prussia, were also involved in their own conflicts with subject or neighbouring countries, and hated the notion of Belgian independence. When the Dutch army invaded Belgium in August 1831, France's intervention was not under the London Conference's mandate. Contemporary observers did not rule out the intervention of Prussia to support Holland.[68] A European war was in sight.

Rothschild's response was to include explicit war conditionality in the international loans made during that period. The most commented condition was article 9 of the first international loan issued by Belgium, signed on December 19, 1831. The press and subsequent scholars have referred to it as intended to prevent war. We went to check the contract in the Archive of the House of Rothschilds and discovered that the conditionality was stated in a fascinating way (Figure 2). Since

[67] Gille, *Histoire de la Maison Rothschild*, vol. I (1965), 221.
[68] *The Times*, 6 August 1831; Gille, *Histoire de la Maison Rothschild*, vol. I (1965),212.

Belgium and Netherlands were already at war, and since Rothschilds did not have direct leverage on Holland (not a client of Rothschilds), the contract could not require Belgium and Holland to make peace. So instead, it gave lenders the right to reduce actual lending if, "Belgium and Holland being at war, one of the five Great Powers would intervene in this war in an other way than in the name and with the authorization of the London Conference."[69]

Figure 2. Military Conditionality: Article 9 in the Rothschild-Belgium contract of 19 December 1831



Source: Rothschild Archive, Roubaix, 132 AQ 38-39
Text reads: "Article 9. Il est expressément convenu que les maisons contractantes suspendraient leurs paiements au gouvernement belge et seraient libres de réduire l'importance du présent emprunt à la somme dont la valeur au prix fixé aurait déjà été payé par elles, dans le cas où la guerre existant entre la Belgique et la Hollande, l'une des cinq grandes puissances interviendraient dans cette guerre autrement qu'au nom ou avec l'autorisation de la conférence de Londres".

[69] Contract of December 19, 1831, Rothschild Archives, Roubaix, 132 AQ 38.

Article 9 automatically deterred efforts by Belgium to involve France into the conflict, and aligned its incentives with Peace. Moreover, the reduction in actual lending was a credible deterrent because instalments from loans were spread over time (they could extend over several months) and thus permitted close political monitoring.[70] Rothschilds also split the loan in two subsequent issues, thus giving themselves time to see how the situation would evolve. Last, Rothschilds made sure the public would know of this clause, which was leaked to the press. By doing this, they ensured a tight correspondence would be created in the mind of investors between the adoption of peaceful ways by nations and their standing in the capital market.

Belgium was not the only nation subjected to pressure. During the Belgian insurgency, the press contained repeated discussion of war conditionality arrangements implemented by Rothschilds. As markets grew nervous with all borrowers (pushing up yield sand increasing information asymmetries) the value of Rothschild's seal of approval increased and they took advantage of this to lobby on all interested parties into a peaceful resolution of the crisis. In March 1831, a loan to Austria included an explicit no-war condition.[71] A loan to France in April 1831 required the Finance Minister to publicly announce the loan had no war purposes.[72] As the situation deteriorated a general embargo was imposed on loans. A loan

[70] *The Times*, 24 December 1831.
[71] Gille, *Histoire de la Maison Rothschild*, vol. I (1965), 216.
[72] *The Times*, 22 April 1831

request by Russia in late 1832 was turned down by Rothschilds (and Barings) because of the concern it would serve to fund a war and scepticism as to Russia's ability to pre-commit. Discussion in the *Times* provides an illustration of the motive we argued deterred prestigious banks from lending to a country considering war: namely that the prestigious house would harm itself. As the journal explained, it would be to the "*houses of the first class* in the city of London, those of Rothschild and Baring […] *probably more injurious to assist in such a project, by the consequences it would have on their other investments, than any gain by the contract itself could compensate for*. [The lending house] would require explicit assurances, or pledges, from the Russian Government that war was not in the most distant contemplated […] Thus, the Russian Government, if really requiring such loan for pacific purpose, *would find it so much for its interest to wait till the affair of Holland and Belgium is disposed of, that the very pressing it now would carry with it the suspicion of bad faith in that respect*, etc.".[73] Two days later the journal added that only "*houses of less note* appear to be wavering about […] acceptance" of issuing the loan. This made sense, since these did not face a reputational risk. However the journal argued that it was unlikely that they could issue the loan on account of their being too ordinary to convey valuable signals in a difficult market.[74] In the end the Russian "Ambassador has no alternative but to wait till it is made apparent to the dullest capacity that his government means honestly,

[73] *The Times*, 1 December 1832.
[74] It is "clearly impossible for them [the ordinary houses], at such time as this, to conduct an operation of that nature"; *The Times*, 3 December 1832.

and that the danger of a continental war is removed by the settlement of the Belgian question."[75]

Rothschilds continued to apply pressure on Belgians afterwards: while war had been avoided, peace was not yet signed and Belgians refused giving up territorial claims. The late 1830s provided opportunity to resolve the matter. In 1838 Belgians needed to access markets again and a new loan again had the peace conditionality clause in the same language as in 1831.[76] Faced with continued Belgian resistance to signing a peace treaty however, 1839, the bank openly refused to lend, stating (as we have quoted earlier) that they would not provide Belgium with a stick for them "to kick us with."[77] Pressure mounted until the government was coerced into signing the final settlement of the Peace Treaty. The signature was tied to the provision of one short term "treasury notes" loan (both concluded in March and April 1839). The short term loan ensured that if Belgium had second thoughts it would be checked by the market. According to Gille, the issue of the treasury notes had a clause that again conditioned the supply of funds on the pursuit of peace.[78] Insider sources from the Rothschild house showed that had Belgians had boasted that if only "Rothschilds were to agree to give them 30 millions, then we shall not care for France and Britain and will obstruct [to peace]".[79] This is evidence, from the point of view of borrowers, that conditionality was effective. Reporting upon the

[75] Ibid.
[76] Contract of June 17, 1838, Rothschild Archives, Roubaix, 132 AQ 38.
[77] Gille, *Histoire de la Maison Rothschild*, vol. I (1965), 298; Bouvier, 1983, p. 117
[78] Gille, *Histoire de la Maison Rothschild*, vol. I (1965), 299.
[79] Richtenberg to Rothschild Frères, February 8, 1839.

episode to Chancellor Metternich, the Austrian Ambassador concluded that "the House of Rothschilds has rendered a new distinguished service to the cause of order and peace."[80]

b) The Wars that Were: A Study of Military Funding 1845-1913

To complement the previous case study, we now take a closer look at those wars financed in the London foreign debt market (Section I). Table 5 organizes relevant evidence to assess who received funding from whom and at what price. We provide information on the 15 wartime capital market access events identified in Section I for the period 1845-1913. The Table distinguishes between types of wars in the same way as Table 1 (wars between powers, wars involving powers, colonial wars and others). For each loan, we report the name of the underwriting bank, the yield spread at issue, and a benchmark yield spread for average or typical previous peacetime issues.[81] We report information on estimated casualties, an indicator of the "viciousness." Finally, we report an estimate of the market "discount," i.e. the price difference between the issue price of the loan and the secondary market price of a comparable one. Modern financial economics suggest that this discount is a proper measure of information asymmetries.[82]

[80] Apponyi [Austria Ambassoador to France] to Metternich, February 12, 1839, Quoted in Gille, *Histoire de la Maison Rothschild*, vol. I (1965), 297.
[81] See the notes to Table 5 for details.
[82] See for example Dennis E. Logue, "On the Pricing of Unseasoned Equity Issues: 1965-1969," *Journal of Financial and Quantitative Analysis* 8 (1973): 91-103; Roger G. Ibbotson, "Price Performance of Common Stocks New Issues," *Journal of Financial Economics* 2 (1975): 235-272; and Robert E. Miller and Frank K. Reilly, "An Examination of Mispricing, Returns, and Uncertainty for Initial Public Offerings," *Financial Management* 16 (1987): 33-38. This market discount is computed by comparing the price at which the wartime issue is sold to the price at which similar bonds by the same governments traded in other circumstances. Denote by $P_{i,P}$ the issue price of country i's new security and by $E(P_{i,S})$ the secondary market price for this security. This price must equal $P_{i',S}$, the current market price of a similar security from the same country. Thus the issue

Table 5. Cost of War Loans, 1845–1913

Loan	Underwriter	Name of conflict	Casualties	Yield premia		Issue discount
				War	Peacetime	
WARS BETWEEN FOREIGN POWERS						
1870 France 6%	Morgan	Franco-Prussian	240,000	3.81	1.16	20.00
1855 Turkey 4%	Rothschilds	Crimean War	298,000	0.71	4.3	N.A.
WARS INVOLVING FOREIGN POWERS						
1877 Turkey 5%	Glyn Mills, Currie	Russo-Turkish	155,000	6.86	5.94[a]	3.00
1904 Japan 6%, 1	Parr's, YSB, HSBC	Russo-Japanese	210,000	3.56	2.32	9.40
1904 Japan 6%, 2	Parr's, YSB, HSBC	*id.*	*id.*	3.77	2.32	14.50
1905 Japan 4.5% 1	Parr's, YSB, HSBC	*id.*	*id.*	2.19	2.32	6.00
1905 Japan 4.5% 2	Parr's, YSB, HSBC	*id.*	*id.*	2.19	2.32	8.50
COLONIAL WARS						
1885 China 7%	HSBC	Sino-French	15,000	4.28	5.02	N.A.
1894 China 7%	HSBC	Sino-Japanese	60,000	4.60	3.26	9.00
1895 China 6%	HSBC	*id.*	*id.*	3.81	3.26	5.50
OTHER WARS						
1852 Brazil 4,5%	Rothschilds	Arg.–Br.–Urug.	1,600	1.74	5.88	6.50
1865 Brazil 5%	Rothschilds	Triple All. War	424,000	3.42	1.88	10.44
1866 Argent. 6%	Barings	Id.	*id.*	4.57	3.83	8.50
1863 Confed. 7%	Erlanger	U.S. Civil War	620,000	4.57	1.67[b]	N.A.
1913 Roman. 4.5%	Shroders	2nd Balkan War	72,500	1.54	1.34[c]	10.00

Source: Authors' calculations; see text for details
Notes: We excluded one loan for lack of relevant information. Romania's loan issued in 1913 (during the second Balkan War) had no reasonably recent peacetime counterpart. YSB = Yokohama Specie Bank; HSBC = Hong Kong and Shangai Bank. "id." denotes "same as above". "N.A." (not applicable) means that we found no meaningful way to compute a reliable IPO discount. Entries under "Peacetime" are based on the last spread at issue in peacetime except when otherwise stated.
[a] Peacetime loan is average of the five Turkish loans made between 1865 and 1870.
[b] Peacetime loan is U.S. 5% loan of 1871.
[c] Peacetime loan is Romania 4% loan of 1898, issued in Paris.

A first striking result from Table 5 is the involvement of high finance versus that of the ordinary underwriters. With but a single exception, prestigious banks never funded wars involving any power. This is consistent with the view that all wars involving powers were more dangerous risk for prestigious banks' charters and accordingly they funded none. The lone exception is the 1855 loan to fund Turkey's effort in the Crimean War.[83] This exception was rightly identified by

discount (which we may call an IPO discount) is $IPO_i = P_{i',S} - P_{i,P}$. As previous research has shown, there is much evidence of pervasive arbitrage in nineteenth-century bond markets, so that securities with similar characteristics eventually traded at the same price. This measure is thus a nice way to capture the "genuine" discount suffered by marginal issues.
[83] Turkey, with the help of Britain and France, was fighting Russia.

Polanyi as a challenge to his ideas. In contrast to Polanyi, who brushed the episode aside as "a more or less colonial event," an interpretation that is perfectly consistent with our theory builds on the fact that the Crimean loan was guaranteed by Britain and France: An Ottoman default on the 1855 Crimean loan would have led to the French and English governments footing the bill: There was no reputational risk for Rothschilds. And they must have been happy to deliver their seal of approval.[84]

The other cases of prestigious banks' involvement are found in the "other wars" group: Rothschilds' funding of Brazil (in 1852 and 1865) and Barings's funding of Argentina (in 1866). Why prestigious bankers became involved in these conflicts is again understood in terms of liability risk: there was little doubt of the outcome in either war (the countries supported by the prestigious bankers would win) and the conflicts raised no geopolitical issue. The Argentina–Brazil–Uruguay war of 1852 was a mini-conflict. During the Triple Alliance War against Paraguay (1865–1866) Brazil and Argentina (helped by Uruguay and backed by leading London bankers) entered Paraguay and slaughtered its population.[85] In other words, high finance was not the Red Cross. Nor did they dislike wars – they only disliked losers. Consistently, prestigious banks could make an exception and promote a murderous war provided it would be a "winning" one with a geopolitical threat. If

[84] We may also see in this loan, which helped contain Russia's advance, a way of defending the geopolitical status quo and thus protecting London's position. On this account, the attentive reader will have already noted that, according to Table 5, countries involved in a war with one power and that secured their funding in London were all adversaries of Russia.

[85] It was reported that about 70% of Paraguay's population was killed. Diego Abente, "The War of the Triple Alliance: Three Explanatory Models," *Latin American Research Review* 22, no. 2 (1987): 47-69; Thomas L. Whigham and Barbara Potthast, "The Paraguayan Rosetta Stone: New Insights into the Demographics of the Paraguayan War, 1864-1870," *Latin American Research Review* 34, no. 1 (1999): 174-186.

such was not the case, then the war was discriminated against. Confirming this, Table 5 shows that all other conflicts were funded by ordinary houses.

Another feature worth mentioning is that wartime loans were generally penalized through higher spreads and also big IPO discounts (consistently with the argument in this paper). In part, this reflected the fact that countries at war were forced to go to a lesser underwriter. When this was not the case (when prestigious banks accepted to get involved), wartime borrowing terms could actually be better for peace terms. For instance, we see that the Crimean War loan to the Ottoman Empire had a lower spread than the peacetime benchmark: markets preferred to lend to the Turks-at-war certified by Rothschilds, than to the Turks-at-peace, underwritten by the House of Nobody. This is also true of the Brazilian loan of 1852, which was made on better terms than the peacetime benchmark. This shows that bankers' reputation could outweigh the effect of war in determining spreads, and reinforces our notion of the control they had over diplomacy -- the ability of prestigious houses to "tax" wars they did not support by coercing borrowers to turn to "houses of less note."

A lower-end estimate of how costly a punishment prestigious bankers could inflict by abstaining is measured by looking at the conditions under which warring countries were forced to borrow when they went without the backing of a prestigious bank. France in 1870 provides an example (war with Prussia). Whereas Rothschilds had brought out French international loans in previous decades, it turned down this application. France found itself going to Morgans, a second-order

London shop. Compared to the peacetime benchmark, the yield spread for this loan was huge (260 basis points) and so was the issue discount, the highest of all in the group (20% or 23% of the issue price, for a further increase of about 130 basis points). Hence the total yield premium at issue was close to 400 basis points. This is the largest penalty in the entire table and it was painfully resented by French officials, who complained about "morganatic" financial terms. This was an allusion to "morganatic marriages" (marriages between one of royal birth and one of lower rank) and it implied that this was a match "below France's kind" that had poorly reflected on France's credit.[86] Obviously, this did not prove sufficient: But the fact that there are not many other war time issues in the Table, shows that in many cases it worked (as in the Belgian case study). This result is consistent with our conjecture that prestigious banks, by refusing to get involved in dangerous conflicts, did orient policies toward peace at the core of the European system.

Table 5 also shows that wartime market access through ordinary banks (all types of wars) was generally more costly than peacetime access with the same or other ordinary banks, but not systematically so.[87] This is understandable because countries not sponsored by a serious bank in peacetime were considered risky and thus the advent of conflict was not *always* big news. In those cases, a lot therefore depended upon country specifics, historical accidents, market expectations regarding the likely duration of war, etc. as well as countries' own "reputation" (à la

[86]Archives du Ministère des Finances, Fontainebleau.
[87] For instance, the funding of China's "colonial wars" occurred uniformly at rates similar to those in peacetime.

Tomz). Pushing the argument further, we predict that, for a country lacking a reputation, a war might even turn out to be a good thing. A country that won a war could, for example, "self-certify" by exhibiting its military (and thus industrial) prowess.

An illustrative example is provided by the evolution of the spreads paid by Japan during its war against Russia (1904-1905). When war erupted (Japan attacked Russia by surprise), markets were anxious. Peacetime Japan had not been underwritten by a prestigious house, nor was wartime Japan. Accordingly, the first two loans had large spreads (130 and 150 basis points) and large issue discounts (about 10% and 15%). The total penalty however was less than France's in the previous example. This is natural because Japan was not losing the support of prestigious banks and thus the penalty was accordingly smaller. To facilitate market access, Japan tried, but failed, unsurprisingly, to secure the help of a prestigious house (Barings).[88] However, Japan soon wiped out Russia's Baltic's fleet in Tsushima: The world got to know there was a new power in the Far East. Japan then returned to the markets and made two further two loans: unsurprisingly, they ware made at lower spreads than peacetime benchmarks.[89] This is a perfect illustration of our argument about the competition between private authorities and national governments in certification. In the instance, Japan had managed to establish its

[88] Suzuki quotes Japanese authorities deploring that "Baring brothers had felt that they could not have their name […] publicly connected with Japan" although this "would have been of value to the Japanese government." Suzuki, 92.
[89] Rumors then started spreading that Barings and Rothschilds would be involved with Japan's future loans. Suzuki.

credit despite the lack of support of haute finance. It is ironic, but perfectly consistent with our theory, that they had managed to do so that they precisely did it by waging a successful war. Once properly deconstructed, the relation between intermediaries, reputation and global peace is more subtle than Polanyi's narrative suggested.

V. Conclusions

This paper's unique contribution is to combine explicitly a variety of approaches and marshal new data to provide a reinterpretation of Polanyi's conjecture of the role of high finance in stabilizing geopolitics. Our novel intuition is that prestige addresses asymmetries of information, providing a foundation for Polanyi's idea that certain financial actors can control lending and successfully implement pro-peace policies. Unlike Polanyi and previous authors we argue that *haute finance*'s reluctance to finance war reflected its concern with protecting its own property rights to global financial certification.

In summary, our analysis suggests that prestigious houses were not averse to war per se. This runs counter to Polanyi's suggestion that *haute finance* found legitimacy by providing a public good (international peace). Had Polanyi been right, Rothschilds would never have funded any war—but it did. In our rational choice model, prestigious houses are averse only to the dangers that war posed to their own ability to certify. The Rothschilds logic should not be conflated with humanitarian goals.

The weapon prestigious houses controlled was costing. Their reluctance to underwrite certain loans increased the costs, an effect of which this paper has reported abundant evidence. Note that when prestigious banks declined the opportunity, ordinary banking houses could involve themselves in conflicts: we found that about 20% of wars received international funding during the period 1845-1913 and most of them were underwritten by non-prestigious houses. Our analysis and data thus suggests war borrowing was not "impossible" (despite the somewhat exaggerated claim of Polanyi): only it was very expensive. Other things being equal, this cost increase was a deterrent to war and in many cases it proved successful in tilting the balance in favor of peace (we give a case study and abundant evidence that there was an anti-war bias in the capital market).

This result is important because it provides foundations for different attitudes towards war finance within the politically amorphous group of "financiers". We argue that the split operated according an *industrial organization* divide and that they had *political* effects. During the *Pax Britannica*, prestigious banks were involved in diplomacy. Ordinary ones were not. Having less or no reputation, ordinary houses had less to lose from underwriting a war loan. But in both cases the reason for the strategy chosen was business. This shows how industrial organization can have an effect on international organization. We are not aware of works that have shown this. We conclude that a better theory of the relation between banking and war should give more consideration to organization within the financial industry.

We also found that Tomz' theory of self-certification by countries through repeat play and investment in reputational capital deserves very serious consideration but should be extended and improved. We uncovered the existence of other players in the reputation game – players whose role Polanyi emphasized but failed to explain, players whom Tomz ignored. Our analysis led us to recognize that countries' attempts at asserting their credibility can be contradicted by the efforts of strange "competitors" neglected in earlier analyses. Theory could achieve significant mileage by looking at interplay between reputation providing intermediaries (today rating agencies, medias, NGOs, etc.) and states in a certification game, rather than focus narrowly on reputation acquisition by "stand alone" governments facing a continuum of investors. As a result, countries' own attempts can be seen as competing against other providers of certification. This insight provides a theoretically rigorous interpretation of why prestigious bankers hated conflicts: they were just as the incumbent firm in the industrial economist's model -- leery of competitors entering its market and making sunk costs investments to prevent entry.

This conclusion helps recast Polanyi and also open new perspectives. It explains why certification systems exhibit a conservative bias: because they have vested interests in the existing regime, providers of certification tend to resist change. Paradoxically, in so doing they encourage radical transformation. As the Japanese experience teaches us, a country's own military victory is a kind of self-certification. We infer from this that the rise of new powers can always be interpreted as a crisis in the existing certification regime. Emerging powers' attempts

to garner international recognition always result in a confrontation with incumbent norms, labels, and beliefs. In the nineteenth century, Japan "certified" itself by waging and winning a war against Russia. Today, China expressed public skepticism of rating agencies in the wake of the sub-prime crisis, and suggested that the agencies' criteria should be revised. At the same time it was doing this, it also stepped into the market for certain crisis-ridden European sovereign securities. If our reasoning has relevance, then China's key enabler of these actions is its own economic prowess and financial resilience during the "sub-prime" crisis – a reminder that, if Rothschilds are ancient history, the theoretical issues they helped us identify and which Polanyi was the first to point his finger at (the importance of competition between private and public seals of approval) are alive and well.

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