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EMPIRE, PUBLIC GOODS, AND THE ROOSEVELT COROLLARY

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ABSTRACT

The Roosevelt Corollary to the Monroe Doctrine marked a turning point in American foreign policy. In 1904, President Roosevelt announced that, not only were European powers not welcome in the Americas, but that the U.S. had the right to intervene in the affairs of Central American and Caribbean countries that were unstable and did not pay their debts. We use this change in U.S. policy to test Kindleberger's hypothesis that a hegemon can provide public goods such as increased financial stability and peace. Using a newly assembled database of weekly sovereign debt prices, we find that the average sovereign debt price for countries under the U.S. "sphere of influence" rose by 74% in the year following the announcement of the policy. With the dramatic rise in bond prices, the threat of European intervention to support bondholder claims in the Western Hemisphere waned, and the U.S. was able to exert its role as regional hegemon. We find some evidence that the Corollary spurred export growth and better fiscal management by reducing conflict in the region, but it appears that debt settlements were driven primarily by gunboat diplomacy and the threat of lost sovereignty.

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Empire, Public Goods, and the Roosevelt Corollary

"If a nation shows that it knows how to act with reasonable efficiency and decency in social and political matters, it keeps order and pays its obligations, it need fear no interference from the United States. Chronic wrongdoing, or an impotence which results in a general loosening of the ties of civilized society, may in America, as elsewhere, ultimately require intervention by some civilized nation, and in the Western Hemisphere the adherence of the United States to the Monroe Doctrine may force the United States, however reluctantly, in flagrant cases of such wrongdoing or impotence, to the exercise of an international police power." (Theodore Roosevelt, December 6, 1904)

I. Introduction

Imperialism has long been associated with economic expansion. Political or military power can be used to acquire natural resources and raw materials, create overseas markets for exports, and expand the investment opportunities for home-country investors. Marx, for example, saw imperialism as a means for sustaining capitalist economies. Imperialism can also transform the economies of supplicants. Reduced sovereignty can lead to political instability and undermine economic growth, but it can also create opportunities for the acquisition of new institutions and technology, direct foreign investment, and expanded trade opportunities. Imperialism can potentially lead to the creation of global public goods, such as peace and stability.[1]

The demise of the Soviet Union, which has left the U.S. as the last world superpower, and the return of globalization at the end of the twentieth century, which some commentators link to the expansion of cultural and economic power of developed countries such as the United States, have sparked new interest in understanding the linkages between the use of power and economic outcomes. For example, Ferguson has argued that British imperialism in the nineteenth century fostered economic growth in its overseas dependents by facilitating the transfer of a set of institutions that made long-term growth possible.[2] On the other hand, looking at the evidence on the cost of capital in Latin America, Taylor argues that this region did not benefit from (British) empire during the classical gold standard period.[3] Others examining this period, notably Bordo and

[1] Kindleberger, "Dominance;" Lal, "Globalization."
[2] Ferguson, *Empire*.
[3] Taylor, "Foreign Capital."

Rockoff,[4] have stressed that the gold standard rather than empire lowered the cost of capital.

Locating episodes where the effects of empire can be empirically tested, free of thorny estimation issues such as endogeneity, has proved vexing for economists. Rather than attempting to measure and identify the channels through which empire influences economic outcomes, economists have largely confined their empirical tests to examining theoretical interpretations of imperialism.[5]

This paper sheds light on the economic effects of empire by examining the expansion of U.S. imperial power in Latin America that resulted from the announcement of Theodore Roosevelt's 1904 Corollary to the Monroe Doctrine and the subsequent policies used to make it credible. We make two main contributions to the literature. First, we provide a quantitative assessment of the Roosevelt Corollary by focusing on how the response to its announcement in the sovereign debt market shaped foreign policy and helped cement U.S. commercial and political objectives. Although a new American foreign policy towards its southern neighbors had been evolving in the preceding decades, diplomatic historians and political scientists have argued that the announcement of the Corollary signaled an important shift in political and economic relations between the United States and Latin America as well as between the U.S. and Europe in the Western Hemisphere.[6] Despite its recognized importance in these fields, previous studies of the Roosevelt Corollary have not examined the response by financial markets that can be used to draw some insights into the effects of the policy, especially in the absence of macroeconomic data for many Central and Caribbean countries during this period.[7]

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[4] Bordo and Rockoff, "Gold Standard."

[5] Zevin, "Interpretation."

[6] Historians and political scientists regard Roosevelt as the first internationalist President of the United States and argue that the Corollary marks a significant shift towards a more expansionist U.S. policy in Latin America. For examples, see Rippy, "British Bondholders;" Healy, *Drive*; and Becker and Wells, *Economics*. Field ("American Imperialism") reviews the literature by historians. For the gradual change in U.S. policy towards Latin America that led to the pronouncement of the Corollary, see Gardner, LaFeber, and McCormick, *Creation*.

[7] Zevin ("Interpretation") provides an overview of U.S. imperialism dating from the country's founding to later episodes in order to test the Marxist interpretation of imperialism; however, his focus is not the Roosevelt Corollary. Examining the Leninist critique of imperialism, Lebergott ("Returns") examines what impact U.S. foreign investment from 1890 to 1929 had on Latin American factor returns, and concludes that it had little effect on labor incomes or landholders' capital gains in the recipient countries. LaFeber (*New Empire*) argues that America's imperial policy grew out of domestic economic distress of the 1890s (a point disputed by Zevin ("Interpretation") and Becker and Wells (*Economics*)). Rosenberg (*Financial*

Second, we use the Roosevelt Corollary and the experience of the U.S. in Central America and the Caribbean as a laboratory for testing whether empires or hegemons produce global public goods.[8]

In this paper, we focus on the connection between the announcement of the Roosevelt Corollary, the reaction to this policy in British financial markets, and the subsequent expansion of U.S. hegemony in Latin America. We assess how the Corollary permitted the U.S. to extend its "sphere of influence" in the Caribbean, Central America, and smaller countries of South America. Our empirical section uses newly-gathered, weekly data on Latin American sovereign bond prices to analyze the effects of the Roosevelt Corollary on financial markets. Because we examine how U.S. diplomatic news affected bond prices for Latin American sovereigns on the London Stock exchange, we are able to assess the impact of *exogenous* political news on market prices. We show that, on average, Central and South American sovereign debt issues listed on the London Stock Exchange rose by 74% after one year, and by 91% nearly two years after the initial pronouncement of the Roosevelt Corollary.[9] Our econometric evidence suggests that the most plausible explanation for the enormous rally that occurred in Latin American sovereign bonds was the announcement of the Corollary and actions by the American government that established the credibility of the policy.

The Roosevelt Corollary provides the answer as to why bond markets reacted to the news in such a pronounced manner. Bondholders believed that increased intervention and policing by the U.S. in Central America would provide greater peace and financial stability in the region. The new foreign policy towards Central America and the Caribbean was made credible in the eyes of bondholders with a dedicated commitment of resources and action by the U.S. government: the U.S. sent gunboats to Santo Domingo

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Missionaries) examines the extension of Roosevelt's policies during the Taft administration, so-called "Dollar Diplomacy."

[8] For accessible surveys on hegemonic stability theory, see Haggard and Simmons ("Theories") and Keohane (*After Hegemony*).

[9] Our results stand in contrast to Cutler, Poterba, and Summers ("What Moves Stock Prices") and others who have argued that important news events (including political and military developments) explain a relatively small portion of financial market movements. In a study on government bond prices and events surrounding World War II, Frey and Kucher ("History") find mixed evidence that political events are reflected in bond prices. Willard, Guinnane, and Rosen ("Turning Points") and Weidenmier ("Turning Points") also find little evidence that political events led to large price changes in Northern and Southern currency prices during the American Civil War.

in 1905 and took over customs collection to pay foreign creditors after it had defaulted on its external debt. Sovereign debt prices were bid up in the two years after the announcement under the belief that the shift in U.S. foreign policy and intervention in Santo Domingo had increased the prospects of debt settlement for the chronic defaulters in the Caribbean and in Central and South America.

Rising bond prices reduced the incentive for European powers to intervene on behalf of their creditors in the Western hemisphere (as they had done with gunboats in Venezuela in 1902). As the specter of military conflict with Europe fell, the costs to the U.S. of extending its hegemony over the region declined. But after winning the initial approval of bondholders through intervention in Santo Domingo, the Roosevelt administration did not use the repeated application of force to ensure debt settlement in the region. The high political and economic costs of this type of direct intervention made it less attractive than serving as the region's "policeman" and a promoter of peace and regional stability; the latter became the chief goal of Roosevelt's foreign policy towards Latin America. Not only was the promotion of regional security a lower cost alternative, it was compatible with broader U.S. political goals: it further reduced the threat of foreign intervention (by raising the prospects for prosperity in debtor countries) and advanced U.S. commercial interests (including the construction of the Panama Canal).

Lasting peace could promote prosperity, better export performance, and more stable streams of government revenue, leading to improved prospects for the repayment of foreign loans. The Roosevelt administration's success in brokering a lasting peace among five Central American states by 1907 (and providing a public good) improved the probability of repayment. Exports and government revenues of the Central American countries grew after the shift in U.S. foreign policy, and most of the countries saw either exports or government revenues rising at a faster pace than their debt service costs – suggesting an improved ability to pay. Most significantly, after periods of long default, many of the republics reached debt workouts under newly negotiated terms subsequent to the announcement of the Corollary. The historical evidence we present suggests that recalcitrant debtors in Central America and around the Caribbean Sea were *willing* to enter into negotiations with creditors to resume payment on their external debt because of

the threat of gunboat diplomacy and lost sovereignty (U.S. seizure of foreign customs houses) – a threat that was made credible by earlier U.S. intervention in Santo Domingo.

In the next section, we describe how the provisions of the Roosevelt Corollary affected the perceptions of foreign bondholders, and how the policy shift towards Central America and the Caribbean that culminated in the actions of 1904-05 led to an increase in U.S. regional hegemony. Section 3 provides empirical evidence that the announcement of the Corollary had a substantial effect on Latin American bond prices and tests this interpretation of the bond rally against alternative hypotheses. Section 4 argues that the U.S. government made the new policy credible in the eyes of European bondholders through 'Big Stick' diplomacy, which included taking over customs collection in Santo Domingo in 1905, sending its navy on a tour to showcase its power in the region, and engaging in high-level diplomatic missions throughout its sphere of influence. Section 5 examines whether the power that the U.S. gained as a result of the Corollary was used to provide global public goods as hypothesized by Kindleberger.

II. The Roosevelt Corollary and European Bondholders

Although the Victorian era is generally associated with the military and economic dominance of the British Empire, the last two decades prior to World War I saw the emergence of a new power in international relations, the United States. Its focus began to shift from settling the continent to outward expansion and engagement in world politics. As has been noted elsewhere, the emergence of the United States at the turn of the century as a player in international politics did not signal its dominance, but rather its arrival.[10] After securing victory in the brief Spanish-American War in 1898 and modernizing its navy (quadrupling spending between 1898 and 1909)[11], the U.S. emerged from its isolationist past and began to exert itself on the world's stage. With the annexation of Puerto Rico, Cuba, the Philippines, and Guam, and control of the Isthmus of Panama, foreign policy during the first decade of the 1900s became associated with

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[10] Kindleberger, *World*.
[11] Sylla, "Experimental Federalism."

imperialistic motives, as canonized in Theodore Roosevelt's famous quip: "Speak softly and carry a big stick."

Despite U.S. ambitions in Latin America and a gradual shift in its policy towards it, U.S. dominance was far from certain at the turn of the century. European powers were extending their empires at this time, and saw Latin America as an open frontier for expanding finance and trade.[12] Britain had used its naval power to seize the port of Corinto in 1895 in order to secure an indemnity from Nicaragua for property damage and it had also intervened to support British Guiana in a boundary dispute with Venezuela in 1895-96, which contemporaries in the U.S. viewed as a guise for extending the British Empire.[13] The French were the first to try to build a canal across the Panama Isthmus in 1880s. Although they failed after nearly 20 years, their attempt sharpened U.S. attention on the region and reinvigorated U.S. efforts to establish more naval bases and refueling depots around the Caribbean Sea and locate a feasible route for shipping cargo more quickly.

But the greatest threat to U.S. regional hegemony was linked to global finance. The nineteenth century witnessed tremendous growth in sovereign debt issue, much of which funded Latin American countries despite the region's high incidence of default. As long as European creditors were concerned with the ability of Central and South American governments to honor their debts, the specter of European military intervention to enforce creditor claims was present. To varying degrees, European powers had exerted direct control over Egypt, Turkey, Serbia, and Greece after they defaulted in the 19th century,[14] and there was concern among U.S. policymakers that a similar pattern would be established in Latin America if the U.S. did not block it.

European military intervention in Latin America in 1902, in conjunction with Venezuela's debt default, marks a logical departure point for understanding the Roosevelt Corollary and how sovereign debt default shaped the policy. Venezuela had experienced a revolution in 1898, which lasted more than two years, during which time substantial foreign property was destroyed and the government ceased payments on its debt. Although property damage was the pretext for British government involvement in the

[12] Feis, *Europe*.
[13] Healy, *Drive*, p. 6.

blockade, British creditors had strongly pressed their claims for a debt workout with the Venezuelan government, and after they failed, had sought redress with their own government.[15] President Castro of Venezuela refused to reply to foreign claimants. In response Britain, Germany, and Italy blockaded the ports of La Guiara and Puerto Cabello and seized customhouses in December 1902. Germany then unilaterally bombarded the fort at San Carlos. Castro acquiesced in February 1903, and in that same month, signed protocols agreeing to arbitration and a gradual liquidation of Venezuelan debt. Under the eventual decision reached by the Hague Tribunal in 1904, the European countries that blockaded Venezuela were given right to a preferential payment of 30% of claims since they had footed the bill and provided the force that resulted in benefits to all creditors; claims of countries that did not participate in the military occupation, including the U.S., were subordinated.

Even though he was a strong supporter of using the International Court of Arbitration at Hague, Roosevelt saw the Court's 1904 decision regarding Venezuela as setting a dangerous precedent – the use of European gunboats to enforce creditor claims in Latin America.[16] With U.S. interests expanding around the Caribbean Sea after its territorial acquisitions in the 1890s, Roosevelt was concerned that such a decision would provide justification for further European military action or permanent occupation in Central or South America and ultimately conflict with American commercial and strategic goals. As Roosevelt wrote to Secretary of State Root in 1904, "If we are willing to let Germany or England act as the policeman of the Caribbean, then we can afford not

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[14] Platt, *Finance*.

[15] Borchard, *State Insolvency*, p. 270. Although it felt an obligation to protect the property and safety of its citizens, the British government was, for the most part, reluctant to intervene on behalf of its creditors in independent nations that had defaulted on their obligations. They not only recognized the moral hazard if they readily lent their support (as Herbert Spencer said, "the ultimate result of shielding men from the effects of folly is to fill the world with fools"), but they were generally averse to pursuing interventions that might undermine the confidence in new sovereign nations, and ultimately undercut British commercial interests (Lipson, *Standing Guard*). Such a position had been maintained by the Foreign Office at least since the defaults of the early 1820s. Exceptions to this policy, however, were numerous, including Greece, Turkey, and Egypt (Platt, *Finance*), and as Lipson (*Standing Guard*) points out, were often made for strategic interests. As we discuss, the case of Venezuela in the Western Hemisphere is another notable exception.

[16] Latin American countries were equally disturbed by this ruling and, in response, lobbied for the adoption of the Drago doctrine, which, under international law, would have prohibited the use of armed force to settle debts.

to interfere when gross wrongdoing occurs. But if we intend to say 'hands off' to the powers of Europe, then sooner or later we must keep order ourselves."[17]

Signaling a shift in its relations with its southern neighbors and the culmination of earlier steps towards a new policy, the Roosevelt administration outlined a more activist interventionist policy in 1904, which came to be known as the Roosevelt Corollary to the Monroe Doctrine.[18] The United States would police the nations of Central America, northern South America, and the Caribbean (providing peace and stability), and protect the interests of European investors by using its regional power to ensure that sovereign debts of these Latin American nations would be honored. By proposing a larger role for the U.S. in the region, Theodore Roosevelt aimed simultaneously to assert U.S. dominance in the region (which included the construction of the Panama Canal) and to check any military expansion of Europeans.[19] The corollary to the Monroe Doctrine was first articulated by the Roosevelt administration in a speech delivered by Secretary Root on May 20, 1904. (Although as we point out later, U.S. military intervention in Santo Domingo in February foreshadowed this change in policy) The U.S. began contemplating such a policy during the 1890s under President Grover Cleveland.[20] But no explicit policy statement with respect to U.S. policing of bondholders' interests was made until the Roosevelt administration's decree in 1904, and Cleveland's administration was largely anti-imperialistic (Field, 1978). As Root explained, the U.S. would henceforth play the role of enforcing creditors' claims in Central America, the Caribbean, and the northern reaches of South America:

"If a nation shows that it knows how to act with decency in industrial and political matters, if it keeps order and pays its obligations, then it need fear no interference from the United States. Brutal wrong-doing, or an impotence which results in a general loosening of the ties of civilized society, may finally require intervention by some

[17] As quoted in Gilderhus, *Second Century*, p.29.
[18] Field, "American Imperialism," argues that U.S. policy through 1898 had largely been a defensive response to Europe.
[19] Prior to this, Roosevelt took a different attitude towards European intervention in the region. In 1901, he wrote, "If any South American state misbehaves towards any European state, let the European country spank it." (quoted in Schoultz, *Beneath the United States*, p.180).
[20] In reference to South America, Richard Olney, Secretary of State under Grover Cleveland, stated "Today, the United States is practically sovereign on this continent, and its fiat is law upon the subjects to which it interposes" (Zevin, "Interpretation," p.329).

civilized nation, and in the Western hemisphere the United States cannot ignore the duty."[21]

Theodore Roosevelt elaborated upon his interpretation of the Monroe Doctrine in two subsequent speeches – to Congress on December 6, 1904 (as quoted in italics above) and on August 11, 1905, when he reiterated the "duty" and "responsibility" of the United States to ensure that countries washed by the Caribbean sea acted with "decency" and paid "their obligations"[22]

III. The Effects of the Roosevelt Corollary

A positive response in bond markets facilitated the success of the Corollary and U.S. regional hegemony. If the U.S. could convince European nations that their creditors' interests would be taken care of, then the likelihood of military intervention or occupation by Europeans in the Western Hemisphere would be reduced. Moreover, if market participants believed the threat of U.S. intervention and potential occupation in countries that shirked on payment was credible, perhaps through a substantial commitment of resources, then they would respond by bidding up sovereign debt prices in the London market on countries under the U.S. sphere of influence. This, in turn, would reduce the pressure for European nations to offer assistance to bondholders. We now turn to the data in order to test the effects of the U.S. pronouncement on bond prices and to compare its importance relative to other factors. In subsequent sections, we examine how the policy announcement was made credible and consider how the reaction in bond markets affected U.S. provision of global public goods.

A. Movements in Central and South American Sovereign Debt Prices

We collected weekly bond price data in the *Economist* for Colombia, Costa Rica, Guatemala, Nicaragua, and Venezuela for the period 1900-1913 – a sample of countries that were covered by the Roosevelt Corollary to the Monroe Doctrine and whose bonds

[21] As quoted in Rippy, "British Bondholders," p. 195.
[22] *New York Times*, August 12, 1905, pp.1 and 3.

actively traded in London.[23] We also collected monthly bond price data for Honduras from the *Investor's Monthly Manual*. Par value for all bonds in our sample was 100 pounds sterling. Written accounts summarizing bond market activity from the *Economist* and *Investor's Monthly Manual* indicate that these bonds were actively traded during our sample period.[24] Although one might argue that Mexico and the rest of South America should be included, our reading of U.S. foreign policy and the *Annual Reports* of the Council of Foreign Bondholders suggest that the Roosevelt Administration was primarily concerned with the smaller and less stable countries in the Caribbean, Central America, and northern part of South America. Roosevelt alluded to this point in a 1906 address to Congress:

"There are certain republics to the south of us which have already reached such a point of stability, order, and prosperity that they themselves, though as yet hardly consciously, are among the guarantors of the Monroe Doctrine. These republics we now meet not only on a basis of entire equality, but in a spirit of frank and respectful friendship, which we hope is mutual."[25]

Instead, Roosevelt viewed Argentina, Brazil, and especially Mexico as junior partners that would help enforce the Corollary. The American President, for example, pressured the Diaz government on several occasions to annex Central America (except for Panama) to stabilize the region and worked with it to broker a peace accord among warring Central American republics in 1906 and 1907. At one point, Roosevelt even

[23] We would like to have included debt prices for Cuba, El Salvador, and Panama. Panama does not issue bonds that trade on the London Stock Exchange prior to the announcement of the Corollary. Cuba, which was already under the U.S. sphere of influence after the Spanish American War, issues a new bond in 1904, which trades above par throughout our sample period. El Salvador's only outstanding foreign debt during our sample period was an issue of 1,000,000 pounds in 1908 by private London banks (Munro, *Five Republics*, p.290).

[24] For example, the December issues of the *Investor's Monthly Manual* frequently refers to these countries' bonds as constituting a "busy" or "lively section of the Foreign market" during our sample period, and the *Economist* regularly commented on the active price movements of the "rubbish issues" of Central and South America (since they were often in default) that occurred over the preceding week.

[25] As quoted in Schoultz (*Beneath the United States*, p.190). Later, in his memoirs, Roosevelt singled out "Brazil, the Argentine, and Chile" as countries in South America that had "progress, of such political stability and power and economic prosperity…it is safe to say that there is no further need for the United States to concern itself about asserting the Monroe Doctrine so far as these powers are concerned" (quoted in Healy, *Drive*, p.144). We also include Mexico in this group since this statement by Roosevelt was written after the Porfiriato; this had been a period when Mexico worked alongside the U.S. in establishing peace in the region.

hinted that the U.S. might expand into Mexico if its government did not bring order and peace to Central America.[26]

All bonds in our sample are in default at the beginning of the sample period, except for Nicaragua and Costa Rica (the latter of which defaulted in 1901). Figure 1 shows weekly bond prices for the 1.5 percent 1897 Colombian debt issue that traded on the London stock exchange for the period 1900-1913. Prices for the 2.7 million pound sterling obligation traded between 10 and 20 pounds in the first few years after the turn of the century. The Colombian security increased nearly one-third in value during the first half of 1903 following the end of a Thousand Days' War that had resulted in the deaths of approximately 100,000 Colombians. The United States dispatched the battleship *Wisconsin* to the region to help restore order and to assist in working out a truce among the warring factions. Debt prices fell again in response to American support of an uprising that led to the establishment of an independent Panama and ultimately to the completion of the Panama Canal in 1914. Colombian bond prices decreased to about 15 pounds sterling before rising more than 125 percent following Roosevelt's declaration that the United States would intervene in the affairs of Latin American countries that did not honor their foreign debt obligations. Prices stabilized after a successful debt workout with bondholders in 1905.

Figure 1 also shows sovereign debt prices for Costa Rica. The 3 percent A-Series 1885 bond (with an initial issue of 525,000 pounds) traded for about 30 pounds sterling during 1901, before falling to almost 16 pounds in response to domestic default. The sovereign debt issue then increased from 17 pounds sterling to nearly 60 pounds in the year following Secretary of State Root's speech outlining the Roosevelt Corollary. The prices remain higher than pre-announcement levels and stabilize with the debt settlement that is reached in 1911.

Sovereign debt prices for the 1.6 million pound sterling issue of Guatemala's 4 percent bond appear in Figure 1. The bond displays a pattern similar to the Colombian bonds. Debt prices fluctuated between 10 and 25 pounds sterling during the first 3 years of the 1900s, reflecting repeated attempts at resolving their defaulted debt. Sovereign debt prices then increased from 15 pounds to more than 40 pounds sterling between May

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[26] Schell, *Integral Outsiders*.

1904 and February 1906, again in response to the Roosevelt Corollary. In 1906, hostilities break out between Guatemala, Honduras, and El Salvador, causing bond prices to fall. Following the signing of a peace accord, bond prices recover.

Monthly bond prices for the Honduran 10 percent bond of 1870 are presented in Figure 2. Honduras defaulted on this issue of 2.5 million pounds sterling in 1873. Not surprisingly, the bonds traded for about 6 pounds sterling at the turn of century. The announcement of the Roosevelt Corollary increased expectations regarding repayment that led to a more than doubling of bond prices between March 1904 and the end of 1905. Debt prices then fell following the start of a war with Guatemala and El Salvador, but rebounded with the signing of a treaty. Bond prices fluctuated around 10 to 11 pounds sterling for much of the period leading up to World War I.

Figure 3 shows sovereign debt prices for 4 percent Nicaraguan bonds, with an initial issue of 5 million pounds sterling. The price increased from 50 pounds sterling in 1900 to 60 pounds in early 1902. It then stabilized until late 1904 when the debt issue rose from 58 pounds in late 1904 to 80 pounds in the summer of 1905. Debt prices fell in 1907 following the outbreak of war with Honduras and El Salvador, and then recovered with the cessation of hostilities and the signing of treaties among five nations in Washington, D.C., later in that same year.

Figure 3 also shows debt prices for the 3-percent Consolidated Debt of Venezuela (with an initial issue of 2.75 million pounds sterling) for the period 1900-1913. Bond prices rose briefly in 1901, following the arrival of three U.S. battleships that some bondholders mistakenly believed would put an end to a stand off over property claims to a pitch lake in Venezuela by U.S. companies.[27] Debt prices remain flat until the foreign blockade of Venezuela commences in December 1902, when they increase in response to positive expectations of debt repayment. Bond prices then begin a dramatic increase in the summer of 1904, from 28 pounds in May of that year to more than 50 pounds in early 1906 – an increase of nearly 90 percent. After Venezuela reaches an agreement with the Corporation of Foreign Bondholders in 1905 on its defaulted debt, prices for the 3 percent issue generally moved higher in the years leading up to World War I.

[27] McBeth, *Gunboats*.

The individual country plots reveal that both the Roosevelt Corollary and country-specific events moved sovereign debt prices during the first decade of the twentieth century. To measure the average movement of sovereign debt prices for countries under the U.S. sphere of influence, we construct a Central American/Caribbean Bond Price Index (CAC). The unweighted price index is computed by averaging the sovereign bond prices of Colombia, Costa Rica, Guatemala, Nicaragua, and Venezuela.[28] We then compare fluctuations in the CAC to two bond price indices designed to capture bond market movements in the London and world markets. The Core Bond Price Index (CORE) is an unweighted average of the prices of four "senior" debt obligations issued in London, Paris, Berlin, and Amsterdam – the most important European financial markets. The core index includes long-term debt prices for the 2.75 percent British consol, 3 percent French Rente, 3 percent German Imperial bonds, and 2.5 percent Dutch bonds. With the exception of the German Imperial bonds, all issues are perpetuities. In addition, we also construct an emerging market index (PERIPHERAL) to provide a measure of bond returns in peripheral countries. We compute the average price of 12 long-term emerging market bonds (Argentina, Australia, Brazil, Cape Town, China, Egypt, Greece, Japan, New Zealand, Norway, Spain, Sweden) with a minimum maturity of 10 years to measure sovereign debt returns in the extended market. All data are collected from the *Economist*. Figure 4 plots CAC against the CORE and PERIPHERAL Price Indices. CAC increased approximately 91 percent in the period 1904-1906 while the CORE Index is flat and the PERIPHERAL Index rose only 2 percent. This suggests that the effect we observe in the countries around the Caribbean Sea is not taking place in the markets of Europe or in other developing countries, but is region specific.

Some qualitative evidence that price movements were not related to other events can be drawn from the fact that five of the six countries in our sample were in default. Defaulted debt has no value unless there is at least the possibility of a debt settlement. Holders of defaulted debt thus have an incentive to push borrowers toward settlement (at terms that are as close to those in the original debt contract as possible). Other bond market participants would only be willing to acquire debt in default if they believed that

[28] We do not include Honduras in the CAC Index because that would entail interpolating 3 out of every 4 observations to convert the monthly bond price series into a weekly one. Nevertheless, as suggested by the

prospects of debt settlement improved, and that they could realize capital gains on upward price movements. Even though bondholders of Central American and northern South American debt were unhappy with the state of affairs in these countries,[29] the announcement of the Corollary, *ceteris paribus*, would have renewed interest among bond market participants in acquiring the debt of these countries, in anticipation of realized capital gains. The importance of the Roosevelt Corollary was that it raised the hopes of settlement of long outstanding debt obligations leading investors to purchase the bonds of Central American countries. Bond prices in Central America and northern South America experienced substantial increases after the announcement of the shift in U.S. foreign policy and before any debt settlements were effected (in the cases of Venezuela and Colombia).[30] Indeed, the Corporation of Foreign Bondholders also viewed the large increase in CAC bond prices as resulting from the announcement of the new U.S. policy: "the increase in values is largely due to the idea that the recent utterances of President Roosevelt with regard to the Monroe Doctrine."[31] The financial press also attributed the rally in Central American and Caribbean bond prices to the new interventionist approach of the U.S. government. The *Investor's Monthly Manual* commented at the end of 1905 that Roosevelt's new foreign policy towards Central America and its involvement in the construction of the Panama Canal project "having brought the United States government into relations with some of the Republics has raised hopes of settlements of long-outstanding obligations, which in turn have given rise to intermittent spasms of excited speculation in the bonds of the States concerned."[32] And the *New York Times*, on May 5, 1905, commented, "London stockbrokers are driving a roaring trade in South Americans, which have become a subject of lively, speculative interest on the theory that President

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graphical analysis, including Honduras as part of the CAC Index would not change our results.

[29] As was written about Guatemala in 1904 by the Council of Foreign Bondholders: "Another year has gone by, and Guatemala still remains in the same discreditable position as regards the payment of its debt. A reference to the history of the Debt prefixed to this Report will show that, all things considered, this Republic has, perhaps, outstripped any of the defaulting States of Spanish America in cynical disregard of its obligations to foreign creditors. In the three successive years the Government of Guatemala has repudiated three separate Agreements for the settlement of the Debt negotiated by its duly accredited representatives" (CFB, *Annual Report*, 1904-5, p.231).

[30] Bond prices may have increased in expectation of a greater ability to pay via improved revenues from export growth or willingness to pay in response to gunboat diplomacy. We further discuss this in section 5.

[31] CFB, Annual Report, 1904-5, p.11.

[32] *Investor's Monthly Manual*, December 1905, p.673.

Roosevelt has practically guaranteed all South American obligations. They bear the endorsement of the 'big stick,' so to speak."[33]

B. Econometric Tests of the Roosevelt Corollary

Although the time series plots and the historical record from newspaper accounts suggest that bond prices moved in response to the announcement of the Roosevelt Corollary, we have not controlled for general movements in the bond market as well as other factors that could have driven debt prices in the region during this period. We now turn to a statistical analysis to address these problems and provide further quantitative evidence that bond prices moved in response to the Roosevelt Corollary. We employ a series of event studies. Our objective is to use econometric evidence to establish: (1) that that sovereign bond prices for countries under the U.S. sphere of influence behaved anomalously from the sovereign debt market as a whole; (2) that the abnormal returns are not related to some general effect operating throughout Latin America; and (3) that the announcement effect is not due to other plausible events taking place during the same time window. Ideally, our treatment group would consist of a set of countries that defaulted, but were under the U.S. sphere of influence. Our control group would then consist of a set of countries that defaulted on their debt, were located in Central America or the Caribbean, but were not under the U.S. sphere of influence. The sample of countries in our CAC index satisfies the treatment group; however, history did not produce a set of countries satisfying the conditions for a perfect control group. Acknowledging the limits of what history produced for a control group, our identification strategy relies on a series of tests to sort out these issues; we now consider these in order.

1. Were Central American and Caribbean Bond Prices Abnormal?

We first estimate a market model for each of the six Central American/Caribbean countries and the CAC Index to control for general movements in sovereign debt prices.

[33] "Mr. Roosevelt as a Stock Boomer," *New York Times*, May 5, 1905 as cited in Corporation of Foreign Bondholders (*Annual Report*, 1905, p.186).

We compute bond returns by taking the natural logarithm of the bond price for country *i* at time *t* divided by the bond price of country *i* at time *t*-1. For the bond indices, we take the natural logarithm of the price relative for each country and then compute the average bond return for the six countries. The market model can be written as:

$$R_t^i = a_0 + \beta^i MKTRET_t + \varepsilon_t, \quad (1)$$

where R_t^i is the bond return for country *i* at time *t*, a_0 is a constant, β^i is the time-invariant beta coefficient for country *i*, $MKTRET_t$ is the market return at time period *t*, and ε_t is a Gaussian white noise error term.[34] β^i is a measure of the correlation of the bond return for country *i* with the market index. We employ CORE and PERIPHERAL as our measures of market returns in the leading European financial centers and emerging markets, respectively. β^i is a measure of the correlation of the bond return for country *i* with the market index. As Tables 1 and 2 show, the CAC Index and sovereign debt prices are, for the most part, correlated with market returns at the 1- or 5-percent levels of significance.

We then use the market model to provide further insight into the period following the announcement of the Roosevelt Corollary. We use it to calculate cumulative abnormal returns (CAR) for each bond series as well as for our different bond prices indices.[35] CARs are calculated by taking the partial sum of the residuals in equation (1). A CAR analysis is useful because it provides a week-by-week assessment of bond returns in Central America relative to the overall market. The CARs can then be used to determine if important political and economic events coincide with excess returns in financial markets. The results for the CAC index are plotted in Figure 5. Whether we examine the countries under the U.S. sphere of influence individually or aggregated, as shown in Figure 5, all of them exhibit large abnormal returns by 1905.[36] To test whether

[34] Campbell, Lo, and MacKinley, *Econometrics*.
[35] We converted the weekly bond price indices into monthly ones by using the price on the Friday nearest the end of the month as a proxy for the monthly closing price. We then used the monthly bond indices to calculate abnormal returns for Honduras.
[36] Consistent with our hypothesis that gunboat diplomacy raises bond prices, we also find that Venezuela experienced abnormal returns as a result of the European blockade in 1902. However, the effects are

the Roosevelt Corollary was statistically significant, we also included a dummy variable in the market model, which was set equal to one for the period May 1904 to May 1905. For all the countries under the U.S. sphere of influence and for the CAC Index as a whole (CAC), the Roosevelt-Corollary dummy variable was statistically significant at the 5-percent level, except for Honduras, which was significant at the 10-percent level (Table 3). As a robustness test, Figure 6 presents an alternative to the market model – cumulative total returns for the Central American-Caribbean Index (CAC); this may be useful since the bonds we are considering were in default. The cumulative returns for countries under the U.S. sphere of influence hover around zero until the announcement of the Corollary, after which they rise to over 60 percent in one year.[37]

2. Was the Movement in Bond Prices due to a Regional Effect?

Having shown that CAC bond price movements exhibit abnormal returns, we now consider whether the large upward movement in Central and Caribbean bond prices may simply have been part of a broader rally in Latin American securities. We employ Argentine and Brazilian sovereign debt issues to control for a general Latin American effect. As we described earlier, these two countries were unlikely targets of U.S. intervention since they are farther removed from the focus of American foreign diplomacy and economic interest, which was centered on the Caribbean Sea. For both countries, we employ 4.5 percent long-term gold bonds that were issued and actively traded on the London exchange. Table 4 reports the regression results of bond returns for the Central and Caribbean countries and the CAC Index on a constant, a bond index of long-term securities for Argentina and Brazil, and a dummy variable for the Roosevelt Corollary. The Roosevelt Corollary remains statistically significant at either the 5- or 10-percent level, and the economic effect is nearly identical to the results from the market model. Perhaps an even stronger test would be to consider a country within the Caribbean

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smaller than those associated with the Roosevelt Corollary and subsequent actions by the U.S. government to make it credible. Individual country plots of CARs are available in a working paper version of this article.

[37] We also tested each sovereign debt series for multiple structural breaks using the Bai-Perron structural break methodology (Bai and Perron, "Estimating and Testing Linear Models"). For each country and our

Basin, but not under U.S. sovereignty. This would allow one to isolate whether there was a general effect related to Central America, but not related to U.S. policy. Located on the Caribbean Sea, British Guiana was a colony and unlikely to be bombarded by U.S. gunboats enforcing debt repayment. We therefore examined bond prices for British Guiana's sovereign debt and found no abnormal returns for them.[38]

3. Is there an Alternative Explanation?

The statistical evidence thus far suggests that sovereign debt prices for Caribbean and Central American countries under the U.S. umbrella of influence exhibited positive cumulative returns beginning in 1904. Although the business press from the period and statements by the Corporation of Foreign Bondholders suggest that the main factor moving bond prices in this region was the pronouncement of the Corollary and the subsequent actions of the U.S. government, we nevertheless want to consider whether there is an alternative interpretation that might also be consistent with the behavior of the data. Perhaps the most plausible alternative explanation to the debt enforcement hypothesis is that Central American and Caribbean bond prices increased in response to the United States gaining control over the Panama Canal Zone following the resolution of a political struggle over rights to the isthmus. The construction of the Panama Canal could have generated higher bond prices if bond market participants in England anticipated that it would reduce shipping costs and increase regional trade in the area. This might lead to greater trade and an improved ability for Central American countries to pay off their outstanding debts.

American interest in a canal that connected the Atlantic and Pacific Oceans intensified in the late 1890s as the United States pursued an expansionist foreign policy by incorporating the Hawaiian Islands, colonizing the Philippines, and taking de facto control of Cuba. In 1898, President McKinley appointed a commission to investigate the cost and feasibility of building a canal through Nicaragua or the Panamanian Isthmus.

Latin American Index, we find a statistically significant structural break in the period following the announcement of the Roosevelt Corollary.

Although the commission initially recommended Nicaragua, the decision was subsequently overturned by Congress following some political maneuvering by supporters of the Panama route.[39] The Spooner Act, passed on June 28, 1902, called for the establishment of a canal commission to investigate problems with building a canal across the isthmus. The legislation also granted Roosevelt the power to negotiate the construction of a canal with Colombia and to buy out the French company that owned the rights to the land and had begun construction. Colombia rejected a proposed treaty with the U.S. in August 1903, prompting Roosevelt to support a revolution in Panama that led to the creation of a new country. Roosevelt officially recognized an independent Panama in November 1903 and negotiated a treaty that granted the U.S. a 99-year lease of the Canal Zone and a 10-mile wide area around it. The United States took control of the Canal Zone in February 1904 and began construction two years later.

The proximity in timing between the US gaining control of the Canal Zone and the announcement of the Roosevelt Corollary potentially introduces an identification problem in explaining the behavior of bond prices. To examine whether this alternative hypothesis has any explanatory power, we constructed two additional tests. The first one subjects the Panama Canal hypothesis to a test of market timing. If the Panama Canal had a large effect on bond prices, then one would expect that forward looking bond traders would have bid-up debt prices in response to the Spooner Act and the creation of the Isthmian Canal Commission which signaled the United States' intentions to build a canal across Central America in the near future. Table 5 reports the regression results of bond returns for the Caribbean Index and each individual Central American country on a constant, the market return, and a dummy variable that takes the value of 1 for the period July 1902 to June 1903, the year following the passage of the legislation.[40] The dummy variables are all insignificant at conventional levels except for Colombia, where U.S. gunboats intervened in 1902 and 1903 to help put an end to a long civil war. (The

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[38] Although the behavior of British Guiana may be idiosyncratic due its concentrated commercial interests, bond prices for its 4% bonds remained stable and did not experience abnormal returns during the 1904-1906 period, while the CAC increased more than 90 percent.

[39] LeFeber, *Panama Canal*.

[40] We also considered an alternative test of market timing by specifying the dummy variable to take the value of 1 in the year leading up to the passage of the Act. Notably, this period also includes the signing of the Hay-Pauncefote Treaty, in which Great Britain cedes canal building in Central America to the United States. The dummy variable is insignificant at the 5 and 10 percent levels.

significant dummy variable for Colombia suggests that even minor episodes of gunboat diplomacy can raise the prospects of debt repayment, leading to a significant increase in bond prices.)

Although the results of this do not support the Panama Canal interpretation, an event study of this sort may not be ideal since the passage of the legislation pre-dates the United States physically taking control of the area. To consider this possibility, we employ a second test with a new control to identify the trade effects of the Panama Canal. An ideal control would be a country whose trade would benefit from the construction of the Panama Canal, but would be insulated from either the influence of the Roosevelt Corollary or debt settlement. We employ the returns for long-term Chilean bonds trading on the London stock exchange to proxy for the effects of the Panama Canal.[41]

Located on the west coast of South America and possessing no Atlantic port, Chile was well positioned to benefit from the construction of a canal. Its high-value exports of minerals and nitrate would no longer have to sail through the dangerous Straits of Magellan to reach New York and Liverpool.[42] The American business publication *Dun's Review* commented in 1906 on the potential gains in trade for the west coast of South America from the construction of a Canal. "The completion of the Panama Canal ought to very profoundly influence the commerce between the United States and the west of South America."[43] Nearly a year later, *Dun's Review* noted that "the most important traffic in this whole coast is that in nitrate of soda and minerals arising in the region of Iquique, in northern Chile, which is about half way up the length of the South American coast. The saving in distance to New York is over 5,000 miles."[44]

Furthermore, Chile faithfully serviced its sovereign debts during the gold standard period and was widely considered more stable and secure than most countries in Central and South America.[45] Given its record of debt repayment and distance from the United

[41] The Chilean returns will contain both a market and Panama Canal effect. Alternatively, we ran regressions including both Chile and the CORE market return separately. The results were similar to what we report in table 6.
[42] We also would have liked to include bond prices for Ecuador and Peru in the analysis. Unfortunately, the *Economist* and *Investor's Monthly Manual* did not quote debt prices for the two South American countries during this period.
[43] *Dun's Review*, November 26, 1906, p. 4.
[44] *Dun's Review*, September 21, 1907, p. 9.
[45] Marichal, *Century*.

States, Chile was an unlikely target of gunboat diplomacy. Therefore, any movement in its sovereign debt prices in 1904-5 would most likely reflect gains from expanded trade via the proposed Canal rather than a Roosevelt Corollary effect. We therefore use Chile to deal with the identification problem. Table 6 shows the results of regressing the bond returns for the CAC Index and the individual bond returns for each country on a constant, the return on 4.5 percent Chilean (sovereign) bonds trading on the London stock exchange, and the Corollary dummy for the period 1900-13.[46] Since an upward movement in Chile's bond prices over the period 1904-5 may reflect country-specific factors, the overall market effect, and the effects of expanded trade via the canal, we are "overcontrolling" for the effects of the Panama Canal. The regressions show that the Corollary dummies remain statistically significant at the 5- or 10-percent level except for Honduras, and the economic effects are almost identical to the estimates obtained using the market index. The empirical evidence thus suggests that the potential opening of the canal was not the major factor moving Central American and Caribbean bond prices strongly upward in 1904 and 1905.[47]

One possible explanation for the absence of a significant trade effect is that bond traders heavily discounted news regarding construction of the Panama Canal. The French Canal company had failed to build a canal across the isthmus in the late nineteenth century and market participants were simply unconvinced that the American experience would be any different or that the canal would be completed anytime in the foreseeable future. Since the process of conceiving of an American-controlled canal across the isthmus (Bidlack Treaty of 1846) to actual completion of construction took more than 60 years, it may be too much to expect that high frequency data on sovereign debt prices could identify this slow-moving historical process. Moreover, even after the U.S. establishes the right to construct the canal in Panama, its final date of completion was far from certain. As reported in the financial press, canal engineers estimated, as of l905-06,

[46] We also tested to see if Chile experienced abnormal returns by regressing its bond return on a constant, the market index, and the Corollary dummy. The indicator variable was not significant at the 5 or 10 percent level and the size of the coefficient was approximately one-eighth the magnitude of the Corollary variable on the CAC Index.

[47] The lack of a strong Panama Canal effect in our data may simply reflect that the Roosevelt Corollary countries would not benefit nearly as much by the opening of the Panama Canal compared to other countries in the region since all of them already had Atlantic-facing ports (enabling them to trade easily with Europe and North America).

that it would not be completed for somewhere between eight and twelve years into the future.[48] This uncertainty may have dampened any response by British investors to the Canal. Some commentators in the financial press even questioned the potential increase in trade from the completion of the canal, noting that the economic effects largely depended on the toll schedules that apparently had not even been discussed by American officials: "The probable use of the canal will be greatly influenced by the rate of tolls. This is one of the things to which the government has apparently as yet given no attention, but is one which must be eventually settled as the result of much careful thought and study, for nothing will more profoundly influence the use and value of the canal."[49]

Another potential reason why Central American securities may have risen dramatically is that U.S. companies began to make long-range investments in the region during this period. This alternative hypothesis would argue that Central American countries would experience increased economic growth and development as well as a greater capacity to service their debts (a greater ability to pay) as a result of U.S. corporate investment, and that bond prices may somehow be reflecting this. Overall, U.S. direct investment was expanding in Latin America. Even though U.S. direct investment to the region was growing over this period, data from Cleona Lewis suggests such investments in Central America were relatively unimportant prior to 1914 compared to other countries.[50] Table 7 shows that the shares of U.S. investment in Central America paled in comparison to Mexico, Canada, and Europe.[51] U.S. direct investment in Cuba and the West Indies was generally 2 to 3 times greater than spending in Central America for the benchmark years of 1897, 1908, and 1914. While Latin American scholars have noted that the U.S. took a more activist role in encouraging foreign investment in the

[48] Estimates on the completion date are from *Dun's Review*, February 26, 1906 and *Bradstreet's* June 17, 1905.
[49] *Dun's Review*, September 21, 1907, p.9.
[50] Lewis, *America's Stake*. Wilkins (*Emergence*, p. 166) questions the relationship between U.S. political and economic interests. "I have found that the amount of U.S. investment bears no relation to the amount of U.S. government interest in any particular area at any time. The phrase, which was often used to justify American government intervention, "There are U.S. interests involved," is highly ambiguous and can mean anything from strategic interests, to $200,000, to millions of dollars."
[51] Lewis, *America's Stake*, pp. 605-6.

region, much of the U.S. government's role in promoting companies around the Caribbean seems to have reached its peak during Taft's era of dollar diplomacy.[52]

Lewis' data offer only a couple of snapshots of U.S. direct investment in Central America. We therefore construct an ex ante test to examine whether increased investment opportunities and the possibility for commercial expansion in Central America provide an alternative source for changing bondholders perceptions of a country's default prospects. If commercial expansion by U.S. firms significantly improved the ability of these countries to pay, then it seems plausible that we should also observe abnormal stock returns for American companies that invested heavily in the region. In particular, we should observe these returns in agricultural companies, since nearly half of U.S. FDI in Central America went into agriculture in 1908 – a trend that continued through 1914 (Lewis 1938). We therefore offer a more concrete test of the Roosevelt period by examining the behavior of stock returns for United Fruit – a U.S. company that was perhaps more committed in Central America than any other at this time, with millions of dollars in assets invested in fruit trees, plantations, and railroads.[53] We collected monthly stock price data on United Fruit from the *Commercial and Financial Chronicle* and plot its stock price against the Standard and Poors 500, a broad index of common US stocks, for the period November 1901-1913. Figure 7 suggests that United Fruit did not outperform the market in the period surrounding the announcement of the Roosevelt Corollary as stock prices for the firm remained constant while the overall market increased in value. We formally test this hypothesis by regressing stock returns for United Fruit on a constant, the market return (as measured by the S&P 500), and a dummy variable for the period May 1904-April 1905. As shown in Table 8, the dummy variable has the wrong sign and is not statistically significant at the 5 or 10 percent levels. Given that United Fruit is the bell-weather American firm in the region, the absence of abnormal returns for it and the insignificance of the coefficient on the dummy variable suggest that long-term investments were not driving securities prices during the relevant

[52] Rosenberg, *Financial Missionaries*; Wilkins, *Emergence*.
[53] See Wilkins, *Emergence*. Unfortunately, annual estimates of U.S. foreign direct investment in Central America and GDP are unavailable for our sample of countries, so we cannot construct an *ex post* test as well.

period of time.[54] Rather, as shown in Figure 7, the stock price for United Fruit increased more than 50 percent between late 1908 and early 1909 after it became clear that Taft would succeed Roosevelt as the next U.S. President. The rise of United Fruit's stock price in this period probably signaled the start of Dollar Diplomacy and increased American investment opportunities in Central America. Lewis estimated that U.S. direct investment in Central America increased 137 percent between 1908 and 1914.[55]

Although our statistical tests are by no means perfect, they nevertheless seem to cast serious doubt on the most plausible alternative explanations. Moreover, what is most striking about the time series plots for the countries under consideration is that the run up in sovereign debt prices occurs simultaneously. If broader market integration, driven by either investment or trade were the underlying causal mechanism for this coincident behavior, then there would have to have been a significant region-specific shock to either trade or investment that could explain the response seen in bond markets. However, there was no large, discrete change to investment that occurred during the 1904-5 period, and the only plausible trade shock that may explain the run up at that time, the Panama Canal, seems to have little power as an explanatory variable.

IV. Making the Threat Credible

Large and positive abnormal returns persisted in Latin American debt prices even after Root's Speech in May 1904 and Roosevelt's Address to Congress in December 1905 that outlined his revision of the Monroe Doctrine. We attribute the persistence of these positive returns to actions that the U.S. took to make the policy credible in the eyes of European bondholders and to the provision of global public goods.

The process of convincing the European bond markets that the U.S. would intercede in Latin America on their behalf was reinforced by subsequent pronouncements and actions, most notably, fiscal intervention in Santo Domingo (Dominican Republic) in

[54] It seems even more unlikely that the *coincidence* in movement of the bond series in 1904-05 could be explained by a slow-moving variable such as investment.
[55] Lewis, *America's Stake*, pp. 605-6. We also tested United Fruit for abnormal returns in the period surrounding the announcement and implementation of U.S. Dollar Diplomacy in 1909 and 1910. We find some evidence that United Fruit experienced abnormal stock returns in this period at the 10 or 15 percent level of significance.

1905, but also unprecedented tours taken by U.S. diplomats as well as American gunboats. (In July 1906, Secretary Root began a several-month tour through Latin America that extended to many other cities besides Rio, which was hosting the Pan-American Congress; and the American navy embarked on a two-year circumnavigation of the globe including port calls throughout Latin America beginning in 1907).[56] Under the corrupt regime of dictator Heureux, Santo Domingo (Dominican Republic) had spent profligately and accumulated a large national debt. Heureux was assassinated in 1900, civil war broke out, and Santo Domingo defaulted on its debts. Foreign warships were threatening to land troops and seize available customs revenues as payment for delinquent debts in 1904. The U.S. then sent the cruisers *Newark* and *Columbia* and the training boat *Hartford* to Santo Domingo in February 1904, and bombed the ports at Duarte and Pajarito to quell an uprising.[57] The initial foray of gunboat diplomacy by the U.S. likely explains why the run up in sovereign debt prices began slightly prior to Root's actual announcement – as it was an early signal that the U.S. was potentially willing to expend resources in the region to enforce debt payment. The Republic of Santo Domingo, facing bankruptcy, was forced to agree to terms with its international creditors in a treaty signed in July; it then failed to honor the terms of the treaty.

The Roosevelt administration, recognizing that European nations were likely to intervene on behalf of their disgruntled bondholders, as they had done in Venezuela, unilaterally took action by sending gunboats and troops to Santo Domingo to assist in the collection of customs duties after a request by President Carlos Morales in December 1904. It quickly assumed the role of the fiscal agent of the country – the role that Europeans had previously played when Turkey and Egypt had defaulted.[58] This was especially noteworthy since Great Britain, France, Belgium, Holland, and the U.S. had earlier agreed to mutually intercede and jointly collect customs if Santo Domingo

[56] *Bradstreet's* commented that "so long a journey by an American Secretary of State outside of his own country is a novelty, and it is likely that it will be productive of important results in relations between the United States and Latin American republics." (*Bradstreet's*, July 7, 1906, p.1)
[57] *Bradstreet's*, February 27, 1904, p.1.
[58] According to the business press, in January 1905, European nations requested that either the United States assist in collecting customs revenue and bring order to the "financial chaos" in Santo Domingo, or "assent to action to that end being taken by certain European creditors of that republic." (*Bradstreet's*, January 28, 1905, p.1).

defaulted.[59] On February 7, 1905, President Morales signed a treaty with the Roosevelt administration authorizing the U.S. to act as General Receiver and collector of customs.[60] With the signing of the treaty bogged down in the U.S. Senate, and foreign creditors pressuring Santo Domingo for claims, in April 1905 President Morales requests Roosevelt's assistance in nominating a U.S. citizen to act as receiver; he allows the U.S. to enter into possession of the customs houses at Puerto Plata and Monte Cristy to assure repayment to all creditors. Forty-five percent of the collected revenue was to be used to settle Santo Domingo's internal obligations, with the remainder placed in a trust and used to pay off creditors according to their claim amounts.

As a further signal of their commitment to involvement in the region, the U.S. repeatedly sent warships to Santo Domingo to put down numerous attempts at rebellion after the treaty was signed and to protect the customhouses under their control. To stop smuggling so that revenues could be collected and foreign claims honored, the American General Receiver of Customs in Santo Domingo organized a force of 120 Dominicans, the Customs and Frontier Guard, for policing the land and customs offices.

The degree of U.S. intervention in Santo Domingo in 1905 took British bondholders by surprise:

> "The past year has witnessed a new and altogether unexpected development in connection with the Debt of this country especially with regard to the rights of English holders of Santo Domingo Bonds, which were defined and guaranteed by the International Arbitration Award of July, 1904…Payments were duly made by the United States Government to the Improvement Company, and arrangements were in course of completion for a settlement with the English holders of Dominican Bonds included under the Arbitration Award."[61]

But it met with bondholder approval and was seen as evidence that the U.S. would intervene elsewhere in the region.[62] That the actions taken by the U.S. in Santo Domingo reinforced the credibility of the shift in U.S. policy can also be seen by comparing the

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[59] *Fenn on the Funds* (1898, 16th edition, p.471).

[60] During the week of February 11, Roosevelt tells the U.S. Congress that the negotiated treaty with Santo Domingo is necessary in order to enforce the Monroe Doctrine and stave off European intervention in the Americas (*Bradstreet's*, February 18, 1905, p.1).

[61] Statement of Bondholders of Santo Domingo, CFB, *Annual Report*, 1904-5, p. 21.

[62] Rippy, "British Bondholders," p. 198.

reaction in the press and by bondholders before and after the Santo Domingo intervention. Prior to the agreement that was reached with President Morales, *The Daily Mail* in London wrote:

"The little gamble which has been going on in Central American Securities lately naturally finds favor with Stock Exchange speculators. They have read in the recent utterances of President Roosevelt and Mr. Root an intimation that the Monroe Doctrine is capable of being extended into more than a cry of 'Hands off' to European interests. Some good folk even see a hint that the United States is disposed to go gunning in Central America on behalf of the British and other European investors. It is an entertaining idea, but one that unfortunately may end in mere theory."[63]

After the intervention, Europeans who held the debt of other Latin American countries in default were emboldened by the U.S. intervention in Santo Domingo. In a letter to the U.S. State Department on March 10th, 1905, British bondholders of Colombian debt wrote about the need for the U.S. to intervene in Panama to secure payment of Panama's share of Colombian debt:

"The President then gives as a special reason for the intervention of the United States in the Case of Santo Domingo, that certain Foreign Governments were becoming importunate and pressing their unsatisfied claims against the Dominican Government. We had therefore, we submit, good reason to hope that the President would be prepared to assist the holders of Colombian Bonds, whose claims are at least as good as those of the Santo Domingo Bondholders, and who, we venture to think, have a right to especial [sic] consideration in view of the prejudice which they have suffered in consequence of the secession of Panama from Colombia."[64]

Similarly, Guatemalan bondholders, who were frustrated at the repeated failure of Guatemala to come to an agreement with the CFB, stated in 1905 that "if the United States Government is really prepared, as it has intimated, to put pressure on the defaulting Spanish American States to respect their obligations, it would be difficult to find a better case to commence with than that of Guatemala."[65]

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[63] "Central America," *Daily Mail*, January 5, 1905 as cited in Corporation of Foreign Bondholders (*Annual Report*, 1905, p.173).
[64] CFB, *Annual Report*, 1904-5, p.97.
[65] CFB, *Annual Report*, 1904-5, p.238. See also the London-based publication, the *Financier*, 18th edition, 1905, which states that "those who are in touch with Central American affairs are convinced that the establishment of a Protectorate over these Republics by the United States is only a question of time, and in that event Uncle Sam would probably establish control over the Customs, as in the case of Santo Domingo." (Corporation of Foreign Bondholders, *Annual Report*, 1904-5, p.177).

V. Hegemony and Global Public Goods Provision

Kindleberger and Lal have suggested that empires are particularly well suited to the provision of global public goods, and argue that peace and financial stability are two "goods" that hegemons or empires might be capable of providing. Wyplosz suggests international financial stability is a global public good, or more aptly, financial instability is a global public bad, because it is associated with outcomes that affect non-market participants and that potentially spill across national borders.[66] He argues that financial instability produces non-pecuniary negative externalities in the form of "excessive volatility" (that volatility which cannot be priced), and that asymmetric information in financial markets makes policy intervention defensible. Hamburg and Holl argue that preventing deadly conflict and providing security fosters conditions that are indivisible and non-excludable and that offer benefits or positive externalities to inhabitants of a region, not just among warring parties. The literature on public goods provision, however, is less clear about the necessary conditions for their provision by a hegemon. For example, the public goods may need to be incentive compatible with broader policy objectives.[67] We therefore examine whether hegemons provide global public goods by first assessing whether the U.S., as a regional hegemon, was capable of furnishing them, and then by evaluating whether it did.

The willingness and ability of the U.S. to provide the public goods of peace and financial stability in the region were made possible by the response of the sovereign debt market in London as well as commitments to other strategic and commercial goals. If the Corollary had not been seen as credible and if bond prices had not risen, then it is likely that European powers would have wanted to maintain a stronger regional presence to

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[66] Kindleberger, "*Dominance*;" Lal, "Globalization;" Wyplosz, "International Financial Instability."

[67] Hegemonic stability theory holds that international regimes are defined by the rise and fall of a global hegemon that sets the rules of the game (Haggard and Simmons, "Theories"). Applied to Central America and the Caribbean, the United States provided two collective goods, peace and financial stability, that are beneficial to the hegemon as well as to the countries in the region. Other nations also consume the collective goods and try to free ride off the United States to avoid paying the costs of producing them. The United States must remain committed to pressuring and/or persuading other countries, such as Mexico, to support the system. Otherwise, the system will collapse. As discussed in the text, the United States provided a limited supply of collective goods (an incentive compatible amount) because American intervention in Santo Domingo significantly reduced the threat of European intervention. This may also

enforce property rights claims rather than acceding to U.S. policing for dealing with recalcitrant debtors. However, by the end of 1905, Britain had deferred to U.S. leadership in the region, and Roosevelt believed that he had successfully impressed upon the Kaiser of Germany that "violation of the Monroe Doctrine by territorial aggrandizement on his part around the Caribbean meant war, not ultimately, but immediately, and without delay."[68]

With Europe pacified, the U.S. could pursue strategic footholds for its Navy around the Caribbean Sea, build and control the Panama Canal with little opposition, and expand its commercial interests in the region. However, maintaining a constant police presence in the region in order to secure these goals was destructive and fiscally and politically costly. A far cheaper means of advancing its interests was to promote peace and regional stability. Free of civil strife, Central American and Caribbean countries would be able to focus on their fiscal balance and governance structures. As J.S. Mill suggested, a climate of improved stability and lasting peace would draw overseas investment to the region, promote exports, and stimulate growth. Moreover, promoting peace yielded an additional dividend to the United States: improved prospects of debt repayment by sovereigns (which lowered U.S. "collection" costs and reduced the likelihood of European intervention.)

According to political scientists, peace in Central America became the chief goal of American foreign policy after 1905, and for the remainder of Roosevelt's presidency.[69] Secretary of State Root rejected the routine use of force as a means for achieving regional stability, and instead vigorously pursued diplomacy.[70] Consistent with the Carnegie Commission on Preventing Deadly Conflict, the Roosevelt administration pursued two broad strategies:[71] (1) operational prevention, or measures to respond to an immediate

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explain why Central American and Caribbean bond prices increased dramatically after the change in American policy, but did not rise enough to be considered investment grade securities.

[68] As quoted in Healy, *Drive*, p.72.

[69] Healy, *Drive*. Writing about U.S. foreign policy towards Central America in 1918, Dana Munro (*Five Republics*, p.304) wrote, "The establishment of peaceful government in the Isthmus is a matter in which we are deeply interested for political reasons. The Monroe Doctrine must always be a paramount principle of our foreign policy, at least in so far as it deals with the countries of the Caribbean, because the exercise of political influence in that region by a foreign power could not be but a constant menace to our peace and security."

[70] Leonard, *Central America*.

[71] Carnegie Commission, *Preventing Deadly Conflict*.

crisis, and (2) structural prevention, or measures to keep crises from arising and from recurring. Operational prevention included ensuring elections with troops in Cuba in 1906 and in Panama in 1908. Structural prevention began in 1906, when the U.S., along with the aid of Mexico, initiated an effort to secure peace in the five unstable nations of Central America: Costa Rica, Honduras, Salvador, Nicaragua, and Guatemala. War broke out in that year, but the U.S. continued to pursue resolution and organized the *Marblehead* Conference on July 20, 1906 to mediate peace. In one day, the conveners were able to convince the factions to cease fighting and disarm, until a new peace conference was called in September. War continued sporadically until the U.S. (with the help of Mexico) was able to broker a lasting peace among the 5 states at the Central American Conference in Washington, D.C. in 1907. Eight treaties and conventions were signed and ratified, including provisions that made arbitration of disputes in a new Central American Court of Justice compulsory. Under U.S. stewardship, the Court succeeded in bringing peace to the republics for the next several years.[72] In light of these efforts by the Roosevelt administration to stabilize the region, contemporaries, such as Dana G. Munro of the Carnegie Institute of International Peace, argued that the United States had "already achieved one of its main objects, in that revolutions and international wars have been checked throughout the Isthmus"[73]

The Roosevelt Corollary (and its implied threat of force) and subsequent diplomacy may have managed to reduce conflict in the region, but U.S. strategy in securing regional financial stability was subject to scrutiny by European bondholders. Despite the success in extracting payment from Santo Domingo for foreign bondholders, the U.S. did not follow this episode with regular intervention on behalf of bondholders around the Caribbean. To the dismay of some European bondholders, the U.S. was unwilling to apply the Corollary and use force on behalf of foreign bondholders to ensure repayment of debt in "flagrant cases of wrongdoing or impotence." The lack of widespread intervention by the U.S to enforce debt repayment, coupled with the outbreak

[72] As historian Jurgen Buchenau (*In the Shadow*, p.78) has written, "Equally significant, the Washington Conventions diminished the likelihood of future trouble, since all Central American states had signed the treaties. Thus, the treaties promised to reduce the probability of U.S. intervention in Central America."
[73] Munro, *Five Republics*, p.307. The U.S. also intervened in Sonora, Mexico, to quell a rebellion in 1906, re-occupied Cuba between 1906 and 1909 to prevent a Civil War, and landed troops in Honduras to settle a war with Nicaragua in 1907.

of war in Central America, may explain the decline of Central American bond prices in 1905-07. The frustration of British creditors holding the bonds of countries such as Colombia, Guatemala, and Costa Rica is described in the *Annual Reports* of the Corporation of Foreign Bondholders. For example, writing in the 1908 CFB report, the Council of Foreign Bondholders wrote:

"The President has stated that it is the duty of the United States to see that the Spanish-American Republics 'behaved with decency in industrial matters and paid their obligations.' So far, however, far from putting pressure on Guatemala in order to obtain payment of the long-established Debt due to the Bondholders, the United States Government in 1906 lent its powerful support to a new Contract, made between the Government of Guatemala and an American Syndicate, under which the export duty of Coffee, pledged to Bondholders in 1895, and the 30 per cent of the Customs Duties payable in gold, promised to them under the Agreements of 1903 and 1904, were handed over to the Syndicate."[74]

Did the U.S. fail to provide the public good of financial stability as British bondholders' complaints suggest? Our interpretation is that it did not, but that the U.S. chose a policy path that was less costly and also compatible with its broader strategic and commercial goals. A strategy of repeated intervention would have been an inferior policy once the sovereign debt market in Europe responded favorably to the Corollary. The U.S. gained an important strategic advantage when market participants bid up sovereign debt prices: the reduced threat of conflict with Europe made expansion in the region less costly. But the lack of regular intervention elsewhere in the region does not imply that the U.S. failed to improve financial stability in the region. U.S. involvement in Santo Domingo sent a signal to countries under its sphere of influence that it was willing to intervene to promote repayment; the threat of lost sovereignty was coupled with its broader effort to secure peace and stability around the Caribbean through diplomacy, which in turn led to improved prospects for defaulting countries to make payments or reach new debt accords.

Since it would be quite difficult to construct the appropriate counterfactual (what would have occurred in the absence of the implied threat of loss of sovereignty and U.S. efforts to promote regional stability), we present several pieces of supporting evidence

[74] CFB, *Annual Report*, 1908, p.13.

that are consistent with the view that the Corollary increased the prospects for the repayment of sovereign debt. First, even though the U.S. did not always work directly with British bondholders to secure debt relief, and in some instances allowed its citizens to obtain securities preferentially pledged to British bondholders (such as in Guatemala, Honduras, and Nicaragua),[75] debt settlements were nevertheless reached with Colombia and Venezuela in 1905, Costa Rica in 1911, and Guatemala in 1913. It is quite impressive that most of these countries in default came to terms with bondholders considering that they had been in default for long periods prior to 1904. Costa Rica agreed to a debt settlement with foreign creditors because the country feared that the U.S. would take control of its customs houses.[76] Shortly after coming to terms with foreign bondholders, Costa Rica managed to float a new issue of bonds bearing 5 percent interest on the Paris Bourse in 1911 that were redeemed in 1925. Colombia also sold new debt on the Paris exchange in 1909 and again in 1913. In addition, Nicaragua signed the Dawson Pact in 1910 following pressure by the United States to promote debt repayment. The agreement required Nicaragua to set aside a percentage of its customs receipts to repay outstanding loans.[77] Two years later, Nicaragua came to terms with its bondholders after a brief default; the interest rate on Nicaragua's external debt was reduced from six to five percent. In exchange for the concession, Nicaragua allowed New York bankers and the Corporation of Foreign Bondholders (CFB) to petition the United States government for assistance if the Central American country violated the terms of the new debt workout.[78] British bondholders were also given a first lien on customs revenue and an American Collector-General was appointed to collect taxes and administer payment of the debt.[79] Overall, the Roosevelt Corollary marked the beginning of a new foreign policy that explicitly encouraged countries in the Caribbean and Central America to repay or settle their foreign debts.[80] The historical evidence suggests that direct intervention as well as

[75] CFB, *Annual Report*, 1911, p.13.
[76] Munro, *Five Republics*, p.313; Schulzinger, *U.S. Diplomacy*, p.49.
[77] Weeks, "Almost Jeffersonian."
[78] European powers were ready to intervene in Nicaragua if the United States "did not see to it that Nicaragua fulfilled her contractual obligations." (Young, *Central American Currency*, p.136.)
[79] CFB, *Annual Report*, 1909, p.142.
[80] We are unaware of an episode where the United States government intervened in the affairs of Central American or Caribbean countries to ensure repayment of sovereign debts prior to the Roosevelt Corollary.

the threat of gunboat diplomacy increased the probability of a debt workout by Central American and Caribbean countries in the years leading up to World War I.

Second, as we indicated earlier, bond prices in our Central American-Caribbean sample do not decline following the announcement. If British bondholders truly believed the Roosevelt Corollary had no impact on the prospects of debt settlement, then bond prices should have reflected this by falling. Bond prices, however, remained well above their pre-announcement values at the end of Roosevelt's term despite a war among several of the Central American countries and some disappointment among British bondholders hoping for wider U.S. military intervention for debt enforcement. Financial markets attributed much of the sustained rally in bond prices to peace and stability. For example, the *Investor's Monthly Manual* wrote that the rise in bond prices was the result of these countries "attaining a stable form of government, and in spite of temporary outbreaks the credit of their official securities is approximating European standards" and that the United States and Mexico "will be able to enforce peace among the quarrelsome States of the isthmus."[81] Even the Corporation of Foreign Bondholders acknowledged how the peace treaties signed in Washington in 1907 raised the prospects for debt repayment for countries in default.[82]

Finally, since regional peace fostered stable political regimes, this made it easier for governments to collect revenue and for export-producing industries to generate earnings. As the Governments Stock and Other Securities Investment Company of London wrote in 1905, "If she [the United States] interferes with matters of finance no doubt that will to a certain extent prevent revolutions in these countries…and there is no doubt that the majority of revolutions that take place in the Central and Southern America arise from matters of indifferent finance on the part of the President and the Government generally."[83] After peace was secured with the Conference in 1907, government revenues expanded, and in comparison to earlier periods, exports also grew rapidly (Table 9). Figure 8 shows a strong positive relationship between export growth and the movement of bond prices (between the announcement of the Corollary and the end of 1907), which

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[81] *Investor's Monthly Manual*, December 1909, p.682. A similar statement regarding improved stability in these countries is made in the *Investor's Monthly Manual* in December 1908, p.678.
[82] CFB, *Annual Report*, 1907, p.15.

is consistent with the hypothesis that the Roosevelt Corollary spurred export growth by reducing regional conflict. The ratio of external debt to exports, a measure of a country's ability to pay, declined for Costa Rica and Honduras in the five years after the announcement of the Corollary (Table 10).[84] The ratio of external debt to exports, however, increased for Colombia, Guatemala, and Nicaragua following the change in US. foreign policy. The decline in the ratio of external debt to exports for Costa Rica and Honduras suggests that the Roosevelt Corollary may have improved the ability of these two countries to repay their debts.[85]

An increased ability to pay may have also come from improved fiscal management. Cessation of hostilities in Central America during the Roosevelt presidency allowed countries in the region to reap a peace dividend, improve their revenue collection, and increase their ability to pay off their debts.[86] As the last column in table 10 shows, the ratio of external debt to government revenue for Guatemala, Honduras, and Venezuela declined in the years following the implementation of the new U.S. foreign policy.[87] On the other hand, Costa Rica experienced an increase in its ratio of external debt to government revenues after the announcement. The decline in the ratio for three countries suggests that the Roosevelt Corollary may have improved the ability of some CAC countries to repay their debts through improved fiscal management.

A combination of improvements in fiscal management and export earnings increased the CAC countries ability to service their debts, but reaching new debt workouts would likely not have been possible without gunboat diplomacy and the threat of intervention. What the Roosevelt Corollary did to effect debt settlement was to provide

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[83] "Governments Stock Investment," February 4, 1905, as cited in Corporation of Foreign Bondholders, *Annual Report*, 1905, p.175).

[84] More precisely, the denominator in this ratio is the face value of defaulted debt plus interest payments.

[85] If Honduras is excluded from the sample, then the Central American countries also had a lower ratio of external debt to exports than Argentina and Brazil – two countries with better repayment records.

[86] As the CFB stated in response to the peace agreements signed by the Central American republics: "It is to be hoped that the Governments of the Central American Republics will ratify and loyally abide by these Treaties, and that they will have the effect of putting an end to the constant quarrels which have hitherto been such a serious factor in retarding the development of the countries concerned. In the case of the States which are in default, the money hitherto spent in armaments may now well be devoted to the payment of their debts." (CFB, *Annual Report*, 1907, p.15). The peace dividend and improved prospects for debt repayment may have also taken the form of expenditure switching, from military to non-military uses, corresponding to a movement along the production possibilities frontier rather than an expansion. We leave this issue as a topic for future research.

a mechanism for ensuring that countries were more *willing to pay* and increased Central American countries ability to pay by fostering peace and stability in the region. As the debt accords described briefly above suggest, enforcement aspects of the Roosevelt Corollary – U.S. policing of the region and the threat of gunboat diplomacy or lost sovereignty – made Central American and Caribbean countries think twice about staying away from the bargaining table. U.S. intervention in Santo Domingo made the threat credible and ensured that these countries would be more willing to pay their debts. It bears repeating that, until these debt agreements were reached under the watchful gaze and Big Stick of the Roosevelt administration, these countries were viewed by the CFB as among the most recalcitrant of debtor nations.[88] Between 1870 and 1913, Central American and Caribbean countries had been in default for over 140 combined years: Colombia for 13 years, Costa Rica for 26 years, Guatemala for 31 years, Honduras for 40 years, Nicaragua for 8 years, and Venezuela for 20 years.

VI. Conclusion

The history of U.S. imperialism at the turn of the century provides a powerful illustration of the effects of news on financial markets. The Roosevelt Corollary prompted one of the largest bond market rallies in the early twentieth century. Abnormal returns on sovereign debt issued by countries around the Caribbean Sea were substantial in 1904 and 1905, but not in other areas of the globe or Latin America, suggesting that the bond rally was the result of Teddy Roosevelt's new policy of intervention. Viewing

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[87] Due to missing observations, unreliability of the data reported, and the territorial loss of Panama and its effects on reported trade statistics, we excluded Colombia from the table.

[88] That the CFB regarded improved ability to pay as insufficient for inducing debt repayment or settlement is evidenced in the following statement with respect to Guatemala: "It has always been understood that a fall in the price of coffee has been urged by Guatemala as the excuse for not paying her creditors, but it would appear that this plea is hardly a valid one, as the Minister of Finance, in referring to the Decree raising the Export Duty on coffee to $6 paper, stated that: 'This measure was, in general, well received, since all agree that this being the most productive branch of national industry, is the one called upon, in difficult circumstances, to contribute to the maintenance of the administrative expenses, whilst the favourable price of the article on foreign markets admits thereof, and as long as the Treasury can count upon other resources with which to face public exigencies.' From the above it would also appear that the Treasury can count upon other resources to meet public exigencies besides the tax on coffee. It seems, however, that the Government of Guatemala does not consider the payment of Foreign Bondholders a public exigency." (CFB, *Annual Report*, 1901, pp.184-5)

the policy as credible, market participants bid up the price of bonds in anticipation of greater U.S. involvement in resolving debt disputes.

The costs of securing regional hegemony declined as the threat of European intervention in the region receded. And as prices of sovereign debt rose in London, the need for the U.S. to intervene on behalf of creditors fell because the primary reason for European intervention (to support creditor claims) became less of a concern. However, the U.S. did not have to commit to a long-run policy of direct intervention. Its commitment of resources and direct intervention in Santo Domingo sent a signal to countries under its sphere of influence that it was willing to intervene, use “Big Stick” diplomacy, and take away sovereignty; but its chief long-run strategy was to promote peace and regional security. The reduced incidence of conflict in Central America and the Caribbean encouraged exported growth and revenue collection in the region, but the threat of gunboat diplomacy or lost sovereignty, made credible by prompt U.S. intervention in Santo Domingo, led many Central American and Caribbean countries to settle long outstanding defaulted debts. The new American policy was cheaper than repeated direct intervention and improved the prospects of debt settlement by increasing the willingness of Central American countries to pay their debts, and was incentive compatible with U.S. commercial and military interests in the region. The response of financial markets to the Corollary made it possible for the U.S. to provide the public goods of empire, and their provision was a cost effective means of promoting its broader strategic objectives.

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Table 1. Market Model Results with CORE Market Index

Dep.Variable	Constant	$Beta_t$	DW	R-squared	Obs	Sample
Central Am.-Caribbean Index	.001 (.0007)	.780 (.209)***	1.656	.031	430	1900/1/6-1908/3/28
Colombia	.002 (.001)	1.210 (.344)***	2.119	.017	730	1900/1/6-1913/12/26
Costa Rica	.001 (.002)	.586 (.523)	1.879	.003	430	1900/1/6-1908/3/28
Guatemala	.001 (.001)	.337 (.390)	2.020	-.0003	730	1900/1/6-1913/12/26
Honduras	.008 (.006)	2.141 (.695)***	2.182	.054	167	1900/2-1913/12
Nicaragua	.0006 (.0005)	.404 (.137)***	1.530	.013	686	1900/1/6-1913/2/22
Venezuela	.001 (.0009)*	.981 (.250)***	2.166	.021	730	1900/1/6-1913/12/26

Table 2. Market Model Results with PERIPHERAL Market Index

Dep.Variable	Constant	$Beta_t$	DW	R-squared	Obs	Sample
Central Am.-Caribbean Index	-.0008 (.0007)	1.277 (.220)***	1.674	.073	430	1900/1/6-1908/3/28
Colombia	.002 (.0012)	1.650 (.381)***	2.111	.025	730	1900/1/6-1913/12/26
Costa Rica	.0007 (.0018)	1.432 (.556)***	1.881	.015	430	1900/1/6-1908/3/28
Guatemala	.001 (.002)	1.652 (.524)**	2.083	.017	730	1900/1/6-1913/12/26
Honduras	.004 (.006)	2.571 (.736)***	2.200	.069	167	1900/2-1913/12
Nicaragua	.0006 (.0005)	.943 (.168)***	1.462	.051	686	1900/1/6-1913/2/22
Venezuela	.001 (.001)	1.365 (.352)***	2.200	.025	730	1900/1/6-1913/12/26

Notes: *denotes significance at the 10 percent level. **denotes significance at the 5 percent level. ***denotes significance at the 1 percent level. Standard errors are in parenthesis and the Durbin-Watson statistic is denoted by DW.

Table 3. The Roosevelt Corollary and Latin American Bond Prices

Dep.Variable	Constant	$Beta_t$	Roosevelt Corollary	DW	R-squared	Obs	Sample
Central Am.-Caribbean Index	-.003 (.0008)	.741 (.204)***	.009 (.002)***	1.741	.083	430	1900/1/6-1908/3/28
Colombia	.001 (.001)	1.179 (.343)***	.012 (.0045)**	2.142	.025	730	1900/1/6-1913/12/26
Costa Rica	-.002 (.002)	.502 (.514)	.018 (005)***	1.929	.033	430	1900/1/6-1908/3/28
Guatemala	.0006 (.001)	.230 (.380)	.010 (005)**	2.048	.007	730	1900/1/6-1913/12/26
Honduras	.005 (.006)	2.055 (.692)***	.038 (.021)*	2.224	.072	167	1900/2-1913/12
Nicaragua	.0001 (.0005)	.387 (.136)***	.005 (.0015)***	1.550	.026	686	1900/1/6-1913/2/22
Venezuela	.0009 (.0009)	.961 (.249)***	.006 (.003)**	2.166	.021	730	1900/1/6-1913/12/26

Table 4. The Roosevelt Corollary with the Latin American Control

Dep.Variable	Constant	$Beta_t$	Roosevelt Corollary	DW	R-squared	Obs	Sample
Central Am.-Caribbean Index	-.0004 (.0008)	.211 (.070)***	.010 (.002)***	1.763	.069	430	1900/1/6-1908/3/28
Colombia	.0006 (.001)	.428 (.138)**	.011 (.005)**	2.140	.022	730	1900/1/6-1913/12/26
Costa Rica	-.002 (.002)	.037 (.175)**	.019 (.005)***	1.933	.041	430	1900/1/6-1908/3/28
Guatemala	.0005 (.001)	.131 (.151)	.010 (.005)*	2.055	.006	730	1900/1/6-1913/12/26
Honduras	-.001 (.006)	.595 (.257)**	.035 (.021)*	2.234	.052	167	1900/2-1913/12
Nicaragua	-.00009 (.0005)	.114 (.054)**	.005 (.002)***	1.576	.021	686	1900/1/6-1913/2/22
Venezuela	.0004 (.0009)	.322 (.101)***	.006 (.003)*	2.192	.019	730	1900/1/6-1913/12/26

Note: A bond index composed of long-term Argentine and Brazilian bonds is employed as the Latin American market control.

Table 5. The Spooner Act and Latin American Bond Prices (Spooner Dummy set equal to 1 for July 1902-June 1903)

Dep.Variable	Constant	$Beta_t$	Spooner Act	DW	R-squared	Obs	Sample
Central Am.-Caribbean Index	.001 (.0008)	.787 (.210)***	.002 (.002)	1.658	.033	430	1900/1/6-1908/3/28
Colombia	.001 (.001)	1.227 (.343)***	.011 (.004)**	2.128	.025	730	1900/1/6-1913/12/26
Costa Rica	.001 (.002)	.590 (.524)***	.001 (.006)	1.879	.003	430	1900/1/6-1908/3/28
Guatemala	.002 (.001)	.287 (.377)	-.003 (.005)	2.041	.001	730	1900/1/6-1913/12/26
Honduras	.007 (.006)	2.157 (.697)***	.014 (.022)	2.187	.057	167	1900/2-1913/12
Nicaragua	.0006 (.0005)	.399 (.138)***	-.001 (.002)	1.529	.013	686	1900/1/6-1913/2/22
Venezuela	.001 (.0009)	.970 (.250)***	.004 (.003)	2.181	.022	730	1900/1/6-1913/12/26

Table 6. The Roosevelt Corollary with Chile as the Panama Canal Control

Dep.Variable	Constant	$Beta_t$ (Chile)	Roosevelt Corollary	DW	R-squared	Obs	Sample
Central Am.-Caribbean Index	-.00006 (.0008)	.104 (.077)	.009 (.002)***	1.721	.045	430	1900/1/6-1908/3/28
Colombia	.0009 (.001)	.288 (.142)**	.011 (.005)**	2.125	.014	730	1900/1/6-1913/12/26
Costa Rica	-.001 (.002)	.036 (.191)	.017 (.006)***	1.909	.022	430	1900/1/6-1908/3/28
Guatemala	.0006 (.001)	-.099 (.155)	.010 (.005)**	2.034	.006	730	1900/1/6-1913/12/26
Honduras	.0016 (.006)	.544 (1.007)	.036 (.023)	2.211	.019	167	1900/2-1913/12
Nicaragua	-.00004 (.0004)	.319 (.054)***	.005 (.002)***	1.584	.064	686	1900/1/6-1913/2/22
Venezuela	.0006 (.0009)	.170 (.104)	.006 (.003)*	2.189	.009	730	1900/1/6-1913/12/26

Note: Long-term Chilean bonds are employed as the ‘Panama Canal’ market control.

Table 7. Estimates of U.S. Direct Foreign Investment to Various Parts of the World

Country or Region	1897 ($ Millions)	1908 ($ Millions)	1914 ($ Millions)	Percentage Change 1897-1908	Percentage Change 1908-1914
Mexico	200	416	587	108	41
Canada and Newfoundland	160	405	618	153	53
Cuba and Other West Indies	49	196	281	300	43
Central America	21	38	90	81	137
South America	38	104	323	174	211
Europe	131	369	573	182	55
Asia	23	75	120	226	60
Total	635	1638	2652	158	62

Source: Lewis (1938).

Table 8. The Roosevelt Corollary and United Fruit Stock Returns

Variable	Coefficient Estimates
Constant	.001 (.004)
Market	.146 (.112)
Roosevelt Corollary	-.007 (.015)
DW	1.974
R-squared	.011
Sample Period	1900/12-1913/12

Table 9. Export and Government Revenue Growth in Latin America (Percent)

Country	Annual Government Revenue Growth Rate 1907-12	Annual Export Growth Rate 1907-12	Annual Export Growth Rate 1890-1912	Annual Export Growth Rate 1850-1912
Colombia	1.6	17.0	2.4	3.5
Costa Rica	5.1	18.9	0.5	3.5
Guatemala	11.3	5.1	2.4	3.6
Honduras	9.2	12.3	-0.3	1.4
Nicaragua	14.3	0.3	2.3	2.9
Venezuela	28.2	12.9	1.2	2.7
Average	11.6	11.1	1.6	3.0

Sources: Bulmer-Thomas (1994) and CFB *Annual Report* (various years).

Table 10. Measures of Ability to Pay for CAC Countries 1900-1909
(Ratios)

Country/Region	1900-1904 External Debt to Exports	1905-1909 External Debt to Exports	1900-1904 External Debt to Gov. Revenue	1905-1909 External Debt to Gov. Revenue
Central America/Caribbean (full sample)	40.4	36.6	18.78	16.38
Central America/Caribbean (without Honduras)	4.6	6.2	2.6	2.35
Colombia	3.7	6.5	NA	NA
Costa Rica	5.5	3.5	3.1	3.8
Guatemala	6.9	12	1.4	1.0
Honduras	175.1	158.6	83.7	72.5
Nicaragua	2.0	2.6	1.2	1.8
Venezuela	NA	NA	4.5	2.8

Source: The external debt service to exports ratios are calculated from data provided by Kelly (1998). Data on government revenues are from the *Annual Reports of the Corporation of Foreign Bondholders*.
Notes: NA = Not Available. The denominator in these ratios is the face value of defaulted debt plus interest payments.

Figure 1
Colombia 1.5-3%, Costa Rica 3% 'A', and Guatemala 4%, 1900-1913

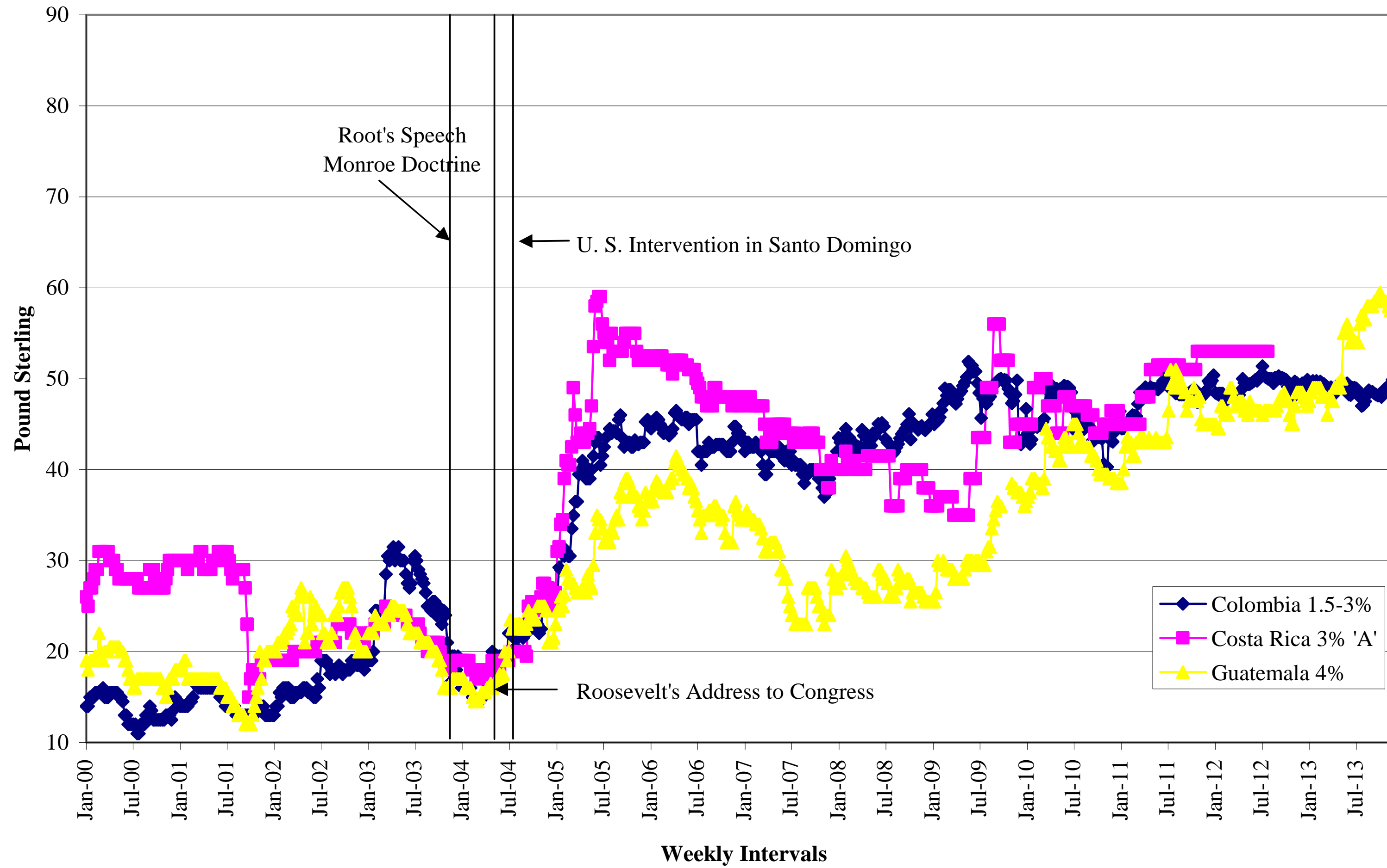

Figure 2
Honduras (1870) 10%, 1900-1913

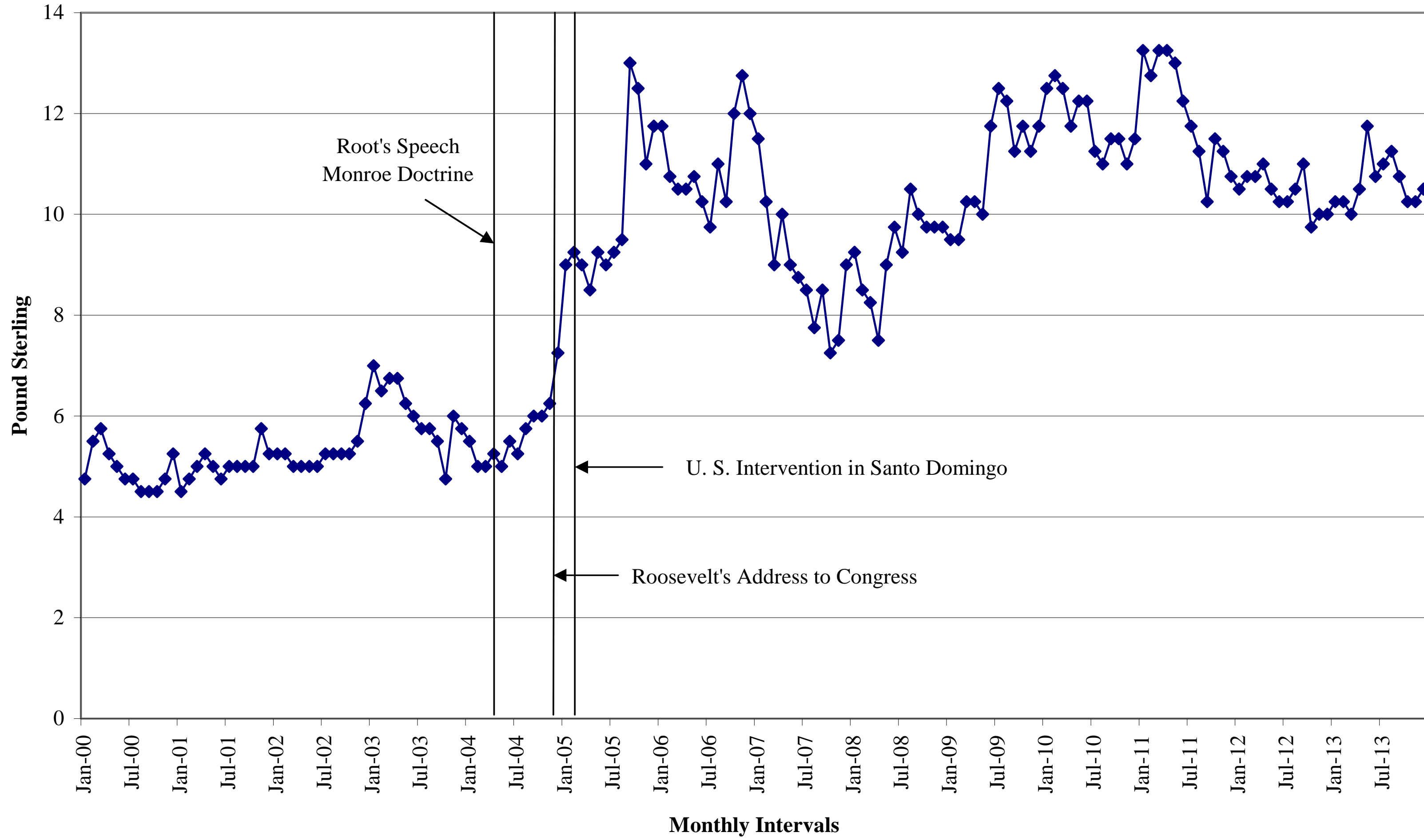

Figure 3
Nicaragua 4% and Venezuela Consolidated Debt 3%, 1900-1913

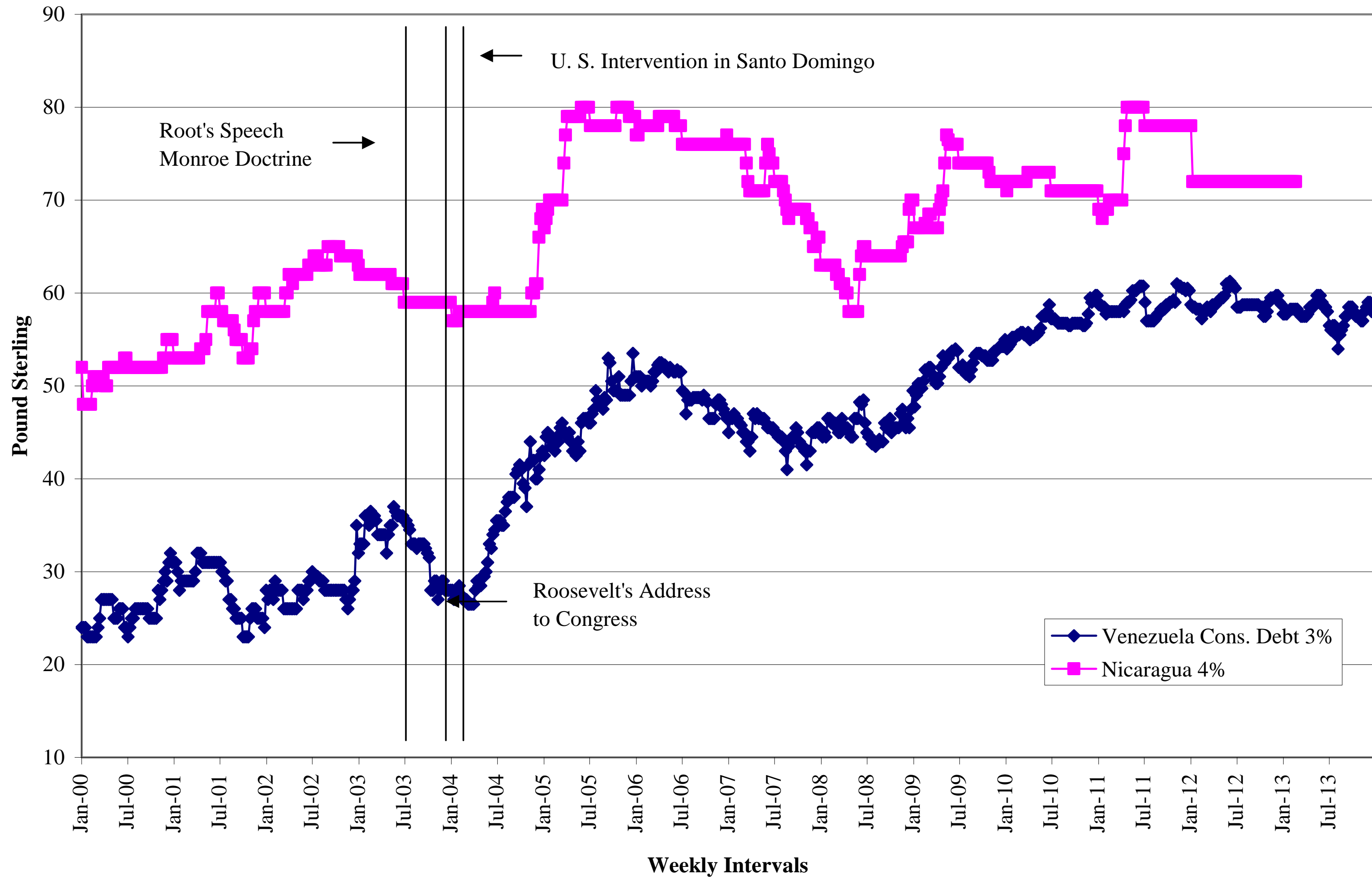

Figure 4
Central American/Caribbean Bond Index (CAC) vs. CORE and PERIPHERAL Bond Price Indices, 1900-1908

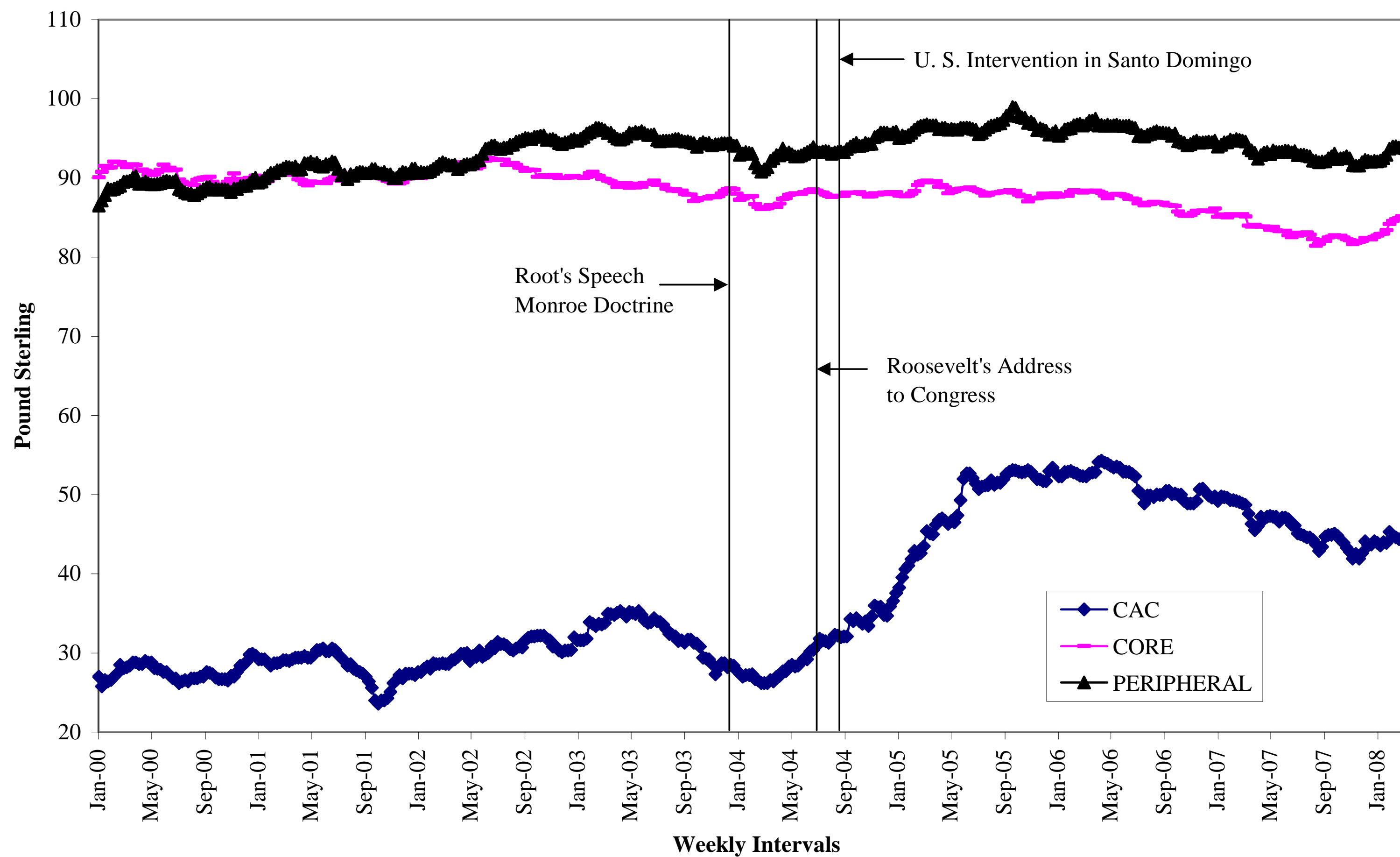

Figure 5
Cumulative Abnormal Returns for Central American Bond Index, 1900-1908

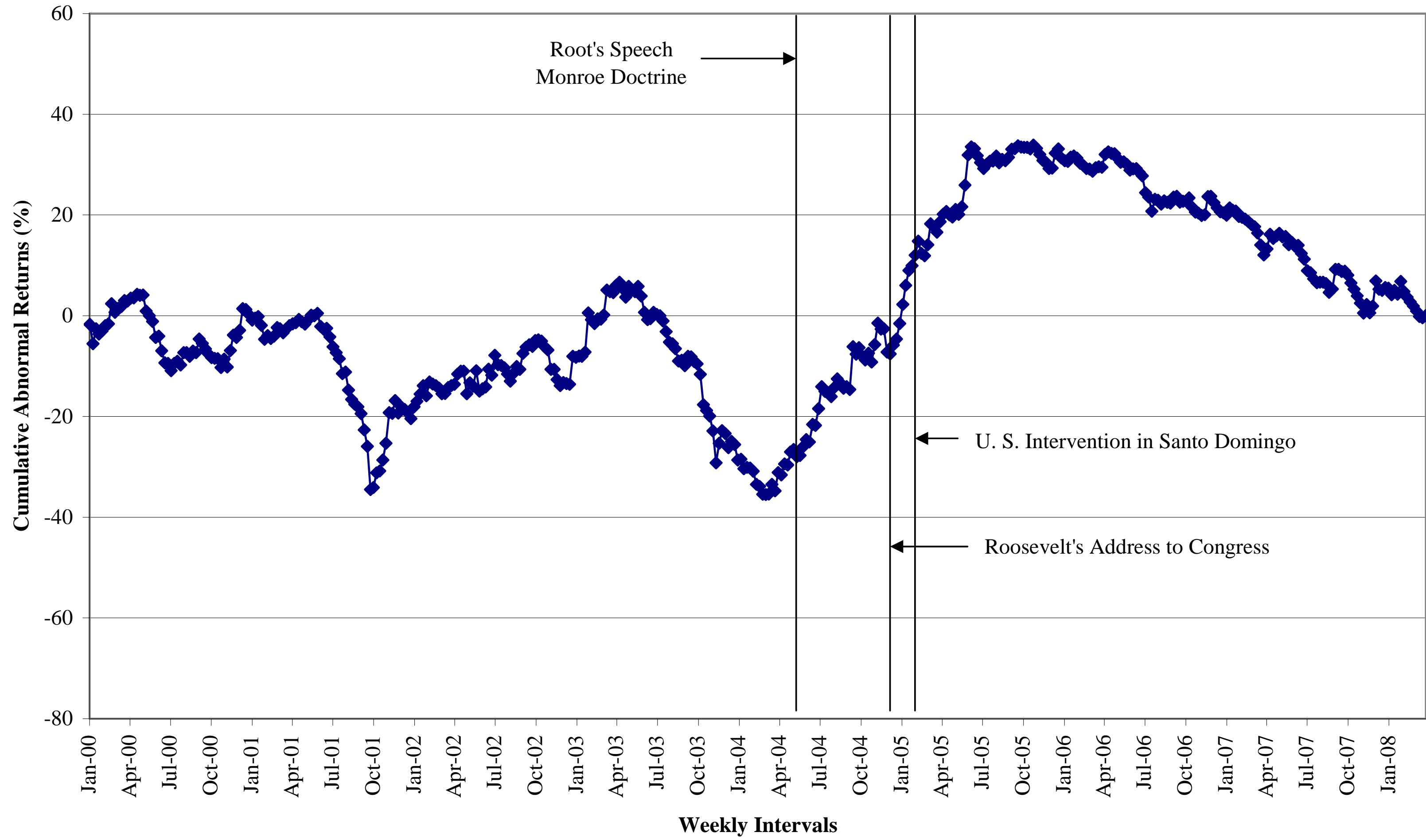

Figure 6
Cumulative Total Returns Central American Bond Index
January 1900-March 1908

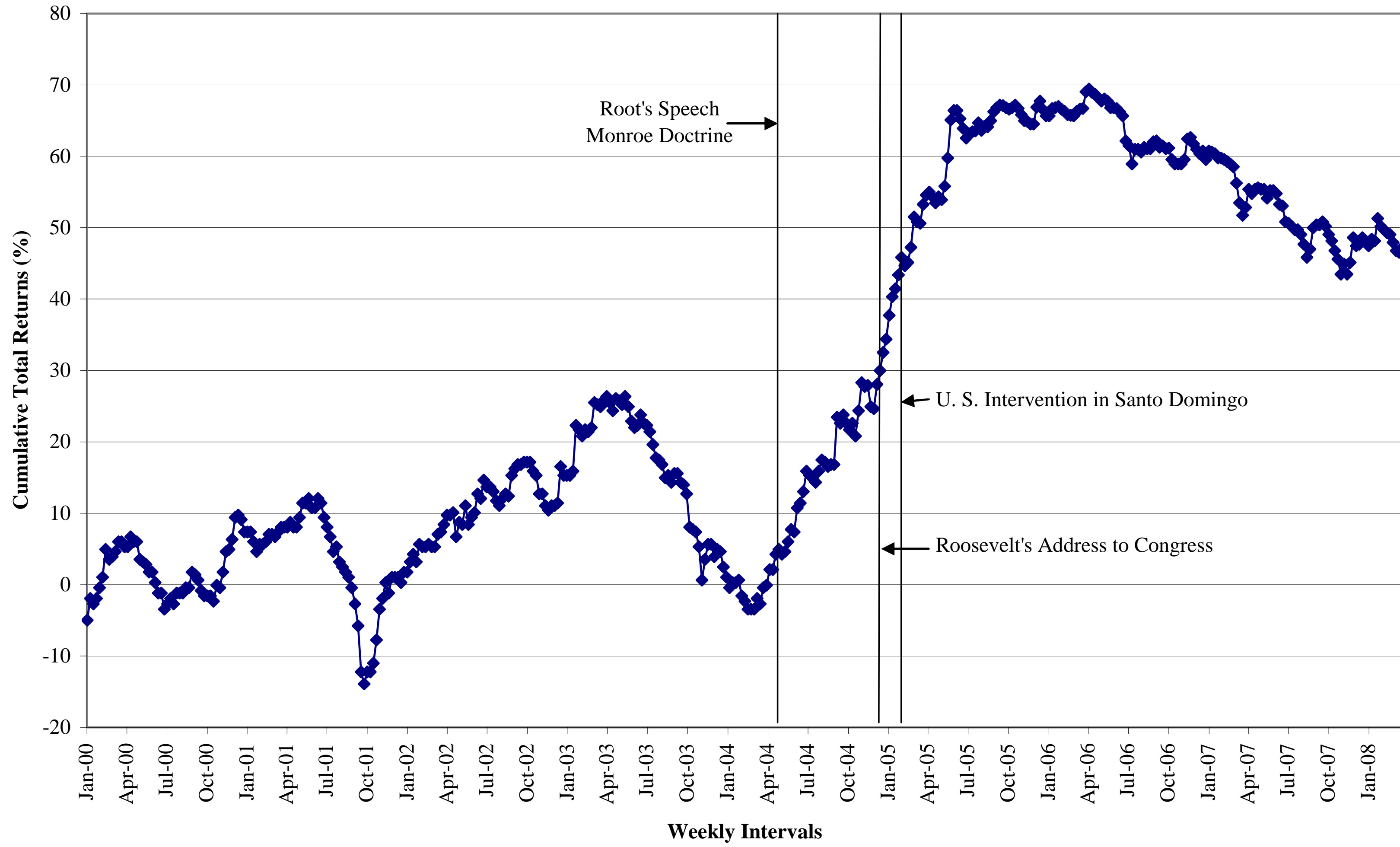

Figure 7
S&P 500 and United Fruit Stock Prices, Nov. 1900-1913

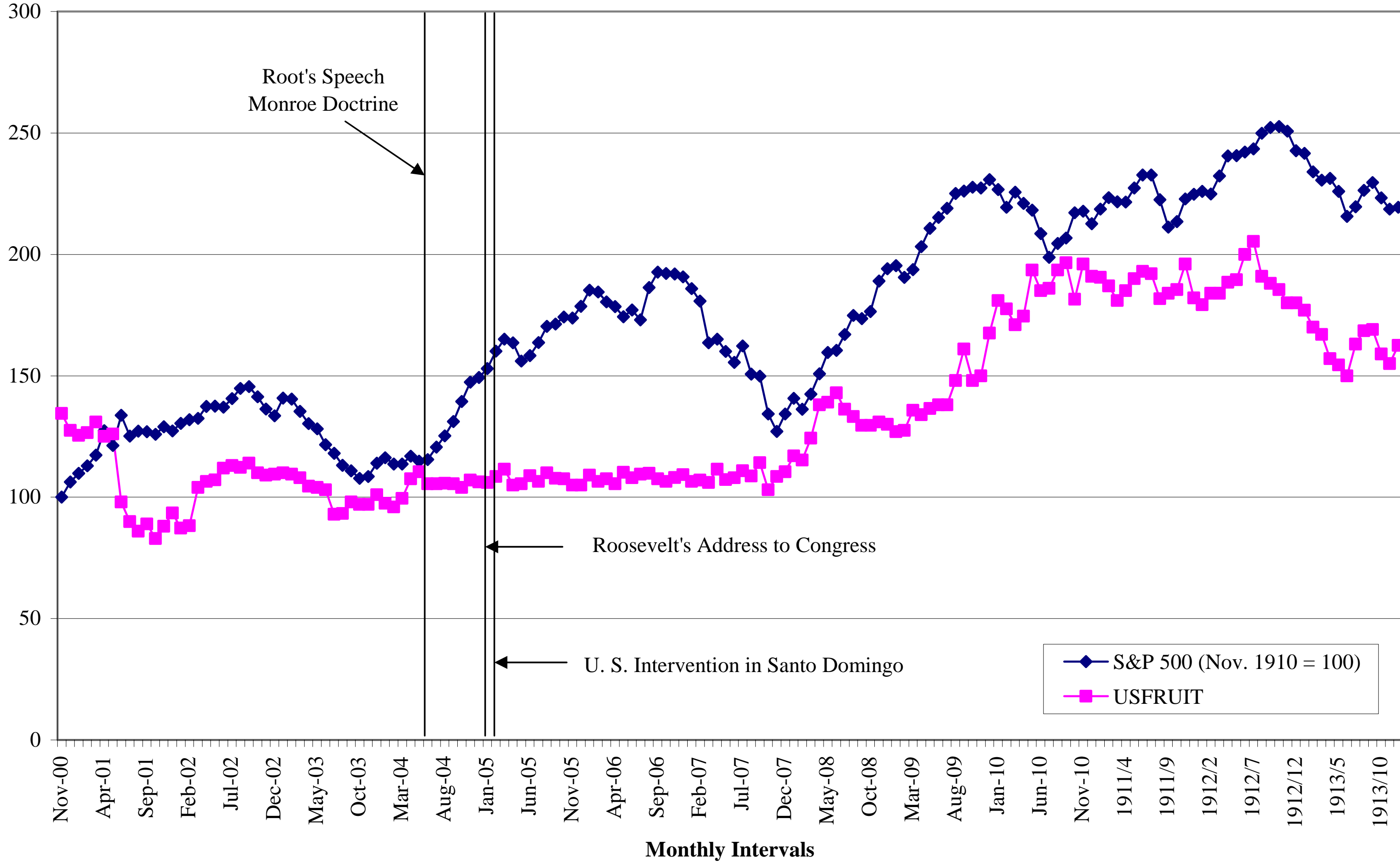

Figure 8
Annual Export Growth 1907-1912 vs. Corollary Effect on Bond Prices