The Baring Crisis and the Great Latin American Meltdown of the 1890s

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The Baring Crisis is the nineteenth century's most famous sovereign debt crisis. Few studies, however, have attempted to understand the extent to which the crisis mattered for countries other than Argentina and England. Using a new database consisting of more than 15,000 observations of weekly sovereign debt prices, we first assess the extent to which the Barings Crisis affected other emerging-market borrowers. Using event studies, we find empirical evidence of a regional crisis. Following the onset of the crisis in 1890, sovereign yield spreads for Central and South American borrowers increased by nearly 800 basis points in the year following the crisis and by nearly 1,400 basis points in the five years after the crisis, while interest-rate spreads in other emerging-market borrowers were generally flat. We next consider whether the regional crisis in Central and South American identified with time series data can be explained by country-specific information that was available to investors in the nineteenth century. Using a panel data set of 28 countries for the period 1886-96, we find Latin American countries saw their yield spreads during the crisis rise by over 330 basis points even after controlling for macroeconomic, trade, political-institutional factors, or other country-specific effects. We speculate that European investors may have experienced a wake-up call and sold or reduced their holdings of Latin American securities in the wake of the Baring Crisis.

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I. Introduction

The widespread occurrence of emerging market financial crises in the past two decades has sparked interest among economists and investors in understanding their nature, causes, and consequences. These episodes are often characterized by volatile capital flows, cross-country spillovers (contagion), unsustainable or non-credible commitments to fixed exchange rates, currency mismatches, liquidity mismatches, and weak regulation and supervision of banking systems. The real side effects of such crises are often substantial (Bordo, Eichengreen, Klingebiel, and Martinez-Peria, 2001; IMF, 1998), which has prompted some policymakers to call for a reform of the international financial architecture (Goldstein, 1998; Eichengreen, 1999).

The global integration of financial markets that has facilitated the virulent nature of recent emerging market crises is not without historical precedent. Indeed, the recent period resembles the late-nineteenth and early-twentieth century in terms of the size of the flows (scaled by GDP) and the absence of barriers which would otherwise impede the flow of capital (Obstfeld and Taylor, 2003, 2004). The similarity in degree of financial integration begs the question as to whether the late-nineteenth century exhibited crises in emerging market similar to those of the 1990s.[1]

To answer this question, this paper turns back the clock and examines the most famous sovereign debt default of the nineteenth century – the Baring Crisis of 1890. The crisis originated in Argentina, and was then transmitted back to London via the House of Baring (an investment bank in London that held large amounts of Argentine debt that could not be placed in the London market). There is a large scholarly literature by economists and historians analyzing the effects of

[1] For related discussion on this point, see Mauro, Sussman, and Yafeh (2002), which examines monthly sovereign yield spreads over the entire gold standard period for 13 emerging market countries and Bordo and Eichengreen (1999), which provides a chronology of banking and currency crises between 1870 and 1973.

the crisis on the British and Argentine economies, as well as on the Bank of England's rescue operation and the cooperative assistance provided by the Russian and French central banks.[2] Considerably less attention has been paid to the international effects of Barings. Triner and Wandschneider (forthcoming) examine the effects of Barings on Brazil. Suter (1992) suggests that the Argentine default may have been part of a broader episode of defaults in the 1890s, and Bordo and Murshid (2001) examine cross-country correlations in weekly sovereign bond prices for seven countries in the year 1890.[3] Finally, Marichal (1989) has noted that capital flows to Latin American countries dried up in the wake of Barings.

In this paper, we break new ground by thoroughly examining the effects of the Baring Crisis on 28 emerging market borrowers using a new database of over 15,000 weekly sovereign debt prices collected from the *Economist*. Our goal is to document and quantify the extent to which Barings was a regional or global emerging-market crisis. We focus on bond prices and yield spreads to measure the effects of the crisis since there are limited macroeconomic data for emerging markets during this period.

The empirical analysis of sovereign debt prices and yield spreads suggests that the Baring Crisis had significant effects for emerging market borrowers, but these effects were largely regional. The average sovereign debt price for Latin American countries declined considerably – more than 25 percent in the one-year period after the onset of the crisis, and over 40 percent five years after the outbreak of the emerging market crisis. This represented more than a 735 basis-point increase in the country risk premium for Latin American countries between 1890 and 1891, and more than a 1,400 basis-point increase in yield spreads between 1890 and 1895. In contrast, bond prices and yield spreads for non-Latin emerging markets and "core" or high-income countries were generally flat or unchanged during this period.

[2] For examples, see della Paolera and Taylor (2001), Eichengreen (1999), Ford (1956, 1962), and Williams (1920).
[3] Their sample includes Argentina, Brazil, Canada, Chile, France, Holland, and the United Kingdom.

We next construct a panel data set consisting of annual data for 28 sovereign borrowers, which includes macroeconomic indicators, trade variables, political and institutional factors, and other country-specific controls. We include indicators that were widely available to European investors at the time to shed light on the movement of bond yields over the period 1886-95. In particular, we test whether the Baring Crisis can account for the movement in yields in Latin-America or whether the movement in the yields of the Latin American countries' is simply accounted for by "fundamentals" or country-specific effects. We also assess the extent to which transmission of the crisis may have come via trade linkages or the gold standard.

The results from the fixed-effect regressions suggest that bond yields in Latin-American countries were over 330 basis points higher as a direct result of the Baring Crisis – even when we control for a country's macroeconomic fundamentals (such as its debt burden, budget deficit, and trade balance) other country-specific effects (including gold-standard membership, whether it was part of a formal empire, and whether it was involved in a conflict). This finding is consistent with literature on modern crises that emphasizes their regional nature (Rose and Spiegel, 1999). We do not find evidence that the crisis was spread by adherence to the gold standard or through trade with England. We speculate that European investors may have experienced a wake-up call and sold or reduced their holdings of Latin American securities in the wake of the Baring Crisis.

In the next section, we provide some historical background on the crisis. Section 3 describes our new database of sovereign debt prices, and presents graphical and summary evidence regarding the effects of the crisis on emerging market borrowers. Section 4 provides an event-study analysis. We perform market tests, exploiting the time-series variation in the individual bond series. Section 5 then examines the evidence concerning the regional nature of the Barings crisis using our panel data. The last section offers some concluding comments about the global nature of the crisis.

II. The Baring Crisis of 1890

The Baring Crisis marked the end of a decade of large capital inflows to Argentina. In the 1880s, the South American country used these to finance long-term investment projects in infrastructure, including the building of railroads and transportation networks, and the improvement of cultivable lands. Taylor (2003, p.177) suggests that "the 1880s stand out as a period of totally unprecedented capital inflows into an emerging market at any time in history." The current account deficit, as a percent of GDP, averaged 20 percent from 1884 to 1889.

During this period, credit and money also expanded rapidly in Argentina. From 1884 until the crisis hit, the monetary base grew at an annual average rate of 18 percent (driven by the issuance of paper currency emissions), inflation averaged 17 percent, and the paper peso depreciated at an average rate of 19 percent (Paolera and Taylor, 2001, p.80). The 1887 Law of National Guaranteed Banks was at the root of the problem. It permitted banks meeting minimum capital requirements to issue paper notes backed by government gold bonds. The bank notes, however, were not redeemable in gold. And the bonds that the banks bought were new issues, constituting a new liability on the government's balance sheet. The banks that participated in the note issuance scheme floated loans in Europe to finance the purchase of the domestic gold bonds. This scheme worked as long as foreign investors agreed to purchase the Argentine bonds and as long as additional note issuances were backed 100 percent by specie. Foreign investors, however, essentially were backing a credit boom in Argentina, financed by the issuance of new paper currency.[4]

The Argentine economy began to experience greater turbulence towards the end of the decade. As much as 40 percent of the foreign borrowing was going towards debt service, and 60 percent of imports were going toward consumption goods. Argentina was also running a substantial budget deficit. Railway net profits had peaked in 1888 and the gold premium on paper

[4] For a detailed discussion, see della Paolera and Taylor (2001).

pesos rose to 94 percent in 1889 despite continuing foreign investment (Fishlow, 1989, p.88). It was becoming clear that paper pesos were inadequate to cover the normal service on the internal and external debt. In that same year, the government broke its promise and paid off some of its gold-denominated liabilities with paper currency. In response, primary issues on the London market were met with a tepid response by investors and domestic investors attacked the paper peso. The government used the gold (that backed the note issues) to defend the exchange rate – putting Argentina on a dirty float – but by December 1889, the stock of gold at the Banco Nacional had dwindled such that it could no longer carry out this currency operation. Strikes, demonstrations, and a failed coup by military leaders in 1889-1890 further reduced the willingness of foreign investors to hold Argentine securities. The questionable fiscal and monetary policies drained the banking system of specie, provoked multiple banking crises beginning in 1890, and thus ushered in the Baring Crisis. In order to generate resources to meet debt service needs, the Argentine economy underwent a massive structural shift in exports, imports, the public budget, and consumption (Taylor, 2003, p.178). As a result, real GDP fell by 11 percent between 1890-1, but this adjustment proved insufficient to prevent Argentina's default.

From a global perspective, the Baring Crisis is notable for its size and scope as well as its similarity to modern crises.[5] As a result of the open capital markets that prevailed in the nineteenth century, Argentina was able to borrow extensively abroad. It was the fifth largest sovereign borrower in the world. It attracted roughly 40 to 50 percent of all British lending in the 1880s, and absorbed a little more than 10 percent of all new issues on the London market. (In contrast, North America had a population 20 times Argentina's and floated only 30 percent of the

[5] Textbooks aimed at helping investment professionals assess country risk often cite the Baring Crisis of 1890 as the canonical historical case study. See, for example, page 1 of *Country Risk Assessment: A Guide to Global Investment Strategy* (The Wiley Finance Series) by Michael Henry Bouchet, Ephraim Clarke, and Bertrand Groslambert (2003).

new issues in London.[6]) Its default, on nearly £48 million of debt, constituted nearly 60% of the world's defaulted debt in the 1890s. The Baring Crisis was typical of many emerging market debt crises of then and now in that sovereign borrowing took the form of fixed-interest loans denominated in foreign currency, or gold in Argentina's case. The borrowed funds were meant for financing railroads and land improvement projects, which in turn would promote internal development, exports, and economic growth. As in many other crises, the slow maturation of the development projects likely impeded the country's ability to service its debts. Argentine banks had liabilities denominated in gold (as a result of note issuance) and assets (loans for development) denominated in domestic paper currency; currency mismatch thus posed a problem. When capital inflows from England and the rest of the world ceased, Argentina was unable to meet its consumption and debt service needs (in part a result of the maturity mismatch) and a crisis ensued. Argentina's bond spread jumped dramatically when the Baring Crisis erupted, revealing the market's perception of Argentina's situation.

Even though the Baring Crisis had its origins in Argentina, its effects were quickly felt in other parts of the world, including in London. Baring Brothers, the firm that underwrote most of Argentina's foreign debt issues, was not sheltered from that country's problems. The investment bank was saddled with the Buenos Aires Water Supply and Drainage Loan, a new debt issue the investment house failed to sell on the London market (Eichengreen, 1995). On the verge of bankruptcy and unable to meet its debt obligations, the House of Baring notified the Bank of England of its financial problems in early November 1890. The central bank pooled resources from the Bank of France, Russia's central bank, and British financial institutions to form a rescue fund to save the troubled financial institution that threatened to bring down British financial

[6] della Paolera and Taylor (2001, p.53).

markets. The rescue operation succeeded and the Bank of England prevented a general financial collapse.[7]

Although the scope and nature of the crisis has been thoroughly documented for Argentina and England, much less is known about its effects on other countries, particularly other emerging-market economies. The rest of this paper thus examines the extent to which the Baring Crisis could also be characterized as a regional or global emerging-market crisis.

III. Movements in Emerging Market Bond Prices and Yield Spreads

A. Time series evidence

To provide some insight into the global nature of the Baring Crisis, we collected weekly prices on long-term government bonds from the *Economist* with maturities greater than 10 years.[8] The database contains over 15,000 weekly observations of bond price data from the London Stock Exchange for 34 countries and British colonies, for the period 1887-1895.[9] There are several reasons our analysis focuses on the sovereign debt market to measure the economic effects of the Baring Crisis. Annual GDP estimates and other macroeconomic data (i.e., investment spending) from the gold standard period are generally incomplete, and available only for the core or high-income countries or a handful of emerging markets. Second, many scholars have questioned the quality of nineteenth century GDP estimates, especially for the emerging market sample, since the figures are often constructed by back-casting and interpolation between decadal benchmarks.[10]

In contrast, the sovereign debt market was very liquid during the gold standard period and data are available at the weekly frequency for most emerging market countries. High

[7] The historical episode provides an early example of a central bank performing the lender-of-last-resort function (Eichengreen, 1995).
[8] Par value for all bonds in our sample was 100 pounds sterling. Maturity length depended on availability.
[9] For a discussion of the terms of each bond employed in the analysis, see the Data Appendix.
[10] See Maddison (2003) for a discussion.

frequency data can be used to identify the effects of important events and policies on sovereign debt markets and to measure the overall impact of the crisis on country risk during this turbulent period. The sovereign debt market likely provides greater insight into the global effects of the Baring Crisis than broad macroeconomic indicators, such as GDP, given their wider coverage, higher frequency, and higher quality of bond price data during this period.

We constructed yield spreads – or the country risk premium – for each country or colony, which is defined as the current yield on a sterling bond for country or colony *i* minus the yield on the "risk-free" British consol at time *t*.[11] We then divided the sample of countries and colonies into three groups to analyze the global and regional behavior of yield spreads in the period surrounding the Baring Crisis. The three groups consist of: (1) Latin American countries, (2) non-Latin Emerging markets, and (3) core or high-income countries. The Latin American sample consists of 14 countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Portugal, Spain, Uruguay, and Venezuela. Portugal and Spain are initially included in the Latin American sample because two the countries had significant trade linkages with their former Central and South American colonies, although throughout the paper, we test whether our results our sensitive to their inclusion in the Latin American group. Austria, Canada, the Cape of Good Hope (South Africa), Egypt, Greece, India, Japan, New South Wales (Australia), New Zealand, Norway, Russia, Sweden, and the Ottoman Empire (Turkey) makeup the 14 non-Latin Emerging Markets. The five core/high income countries in the sample are Belgium, France, Germany, Netherlands, and the United States.

Figures 1-33 show sovereign yield spreads for the countries and colonies in our sample. Each figure contains a vertical line, denoting the outbreak of the Baring Crisis in Argentina. We dated the onset of the crisis to the summer of 1890 based on our reading of the secondary literature and the *Investor's Monthly Manual* – a widely-read British financial publication that

[11] France, Netherlands, and the United States issued debt in their domestic currency with gold clauses during this period. We calculated the country risk premium for these three countries by subtracting the current yield of the domestic currency bond minus the current yield on the British consol.

provided a weekly summary of important events affecting the London money market. Although one might potentially choose a slightly different date to indicate the crisis, as shown in Table 1, the IMM reported a cluster of economic and political events that occurred in July and early August 1890, suggesting that British investors were becoming particularly concerned with the situation in Argentina at this time. First, the Banco Nacional, a major, "official" Argentine national bank, informed Baring Brothers in July that it would suspend service on its foreign debt obligations, signaling a deeper banking and debt crisis was emerging. Finance Minister Francisco Uriburu, who was still defending the government's role as a lender of last resort, needed to pass a package of fiscal reforms so that the note issues used to prop up the banking system were not seen as the only part of the adjustment process; his reform package failed, and he resigned in early July. The government tried to lend to note-issuing banks to prevent a liquidity crisis, but without the reform package, a banking crisis was not averted, and runs on banks began. A few weeks later, a group of military officers unsuccessfully tried to overthrow the Argentine government. President Miguel Juarez Celman then resigned on August 6, 1890, in response to public discontent over his decision to pursue policies of open inflation and acceptance of external default rather than liquidation of the "official" banks.[12]

The events highlighted by the financial press seem to have signaled to the London bond market that Argentina had entered into a series financial crisis in July and August 1890, and that foreign investors were reassessing Argentina's credit risk. It also appears that the financial press was reconsidering credit risk in other emerging markets, much like the so-called "wake up call" that occurred in the Asian financial crisis of 1997. The *Economist*, for example, frequently commented on the effects of events in Argentina on the sovereign debt prices of other countries in Latin America. The *Economist* referred to Central and South American securities in the early 1890s as a group distinct from other countries and regions of the world (while at the same time

[12] The Foreign Securities Section of the *Economist* also began devoting more attention to Argentina's economic problems during this period.

noting the importance of country specific events for all securities). Consider the following report from the July 5, 1890, Foreign Securities Section of the *Economist*:

"The feature in South American descriptions has been the heavy fall in Argentine Cedulas, which close about 3 percent lower all round, although the final prices are somewhat above the usual. The fall has been due to the great rise in the gold premium at Buenos Ayers-which has resulted from the passing by the National Bank of its demand. This action of the Bank has raised anew great doubts as to its stability and its ability to get through the present difficulties without shipwreck. ***All other issues such as Uruguay, Brazilian, & c., have given way sympathetically.***"

The weekly record of the sovereign bond market suggests that there may have been a common factor driving Latin American securities in the early 1890s, in addition to country specific events that moved sovereign debt prices.[13]

Some modern scholars of the Baring crisis have also noted a large drop in emerging market debt prices with the outbreak of the Baring Crisis. Most of these studies are not very clear on whether the decline in sovereign debt price was global in nature or confined to Latin America, however. Fishlow (1989, p.88), for example, noted that "Not only did Argentine issues immediately move to substantial discounts on the London market, so also did those of other peripheral countries. Many were forced to reduce their debt service in the years that followed." Suter (1992, p. 81) states that "the crisis was triggered by the state insolvency of Argentina, the Latin American debtor country most strongly incorporated into the Atlantic economy." Kindelberger (1984) suggests that the crisis spread to other Latin American debtors and emerging market borrowers in the European periphery.

To quantify the global and regional effects of the crisis, Figures 1-14 show yield spreads for the 14 Latin American countries in our sample. Yield spreads for Argentine sterling bonds, presented in Figure 1, declined from 1887 until 1889, before dramatically increasing from the summer of 1890 until early 1892. The country risk premium falls from its high of 1,400 basis points in 1892 to approximately 800 basis points by 1896. The country risk premium for Brazil,

[13] Suter (1992, p. 81) states: "Thus, the crisis was triggered by the state insolvency of Argentina, the Latin American debtor country most strongly incorporated into the Atlantic economy."

shown in Figure 2, rises from 200 basis points in the late summer of 1890 until it reaches its peak at more than 550 basis points in late 1892. The Brazilian yield spread then declines in 1892, briefly rises in 1894, and then falls for the remainder of the sample period. The country risk premium for Chile in Figure 3 is quite stable until the outbreak of the Baring Crisis. The yield spread for the Latin American country increased in 1890-91 before stabilizing at 225 basis points in 1892. The country risk premium rose again in late 1893 and then declined to about 210 basis points.

Figure 4 shows the yield spread for Colombia. The yield spread declines in the years leading up to the Baring Crisis. Country risk for the South American country rises for the next several years and averages more than 3,000 basis points by the end of 1896. The yield spread for Costa Rica, presented in Figure 5, falls by approximately 200 basis points in the years leading up to the Baring Crisis. Country risk for the Central American country then rises after the crisis to more than 1,500 basis points in 1895. Figure 6 shows the country risk premium for Guatemala. The yield spread fluctuated by around 400 basis points until the summer of 1890 when country risk for Guatemala increased to more than 1,000 basis points. Yield spreads for the Central American country then declined to approximately 600 basis points in 1892-93. Guatemalan country risk increased for about a year before falling to a level of 900 basis points in 1896.

The country risk premium for Honduras is presented in Figure 7. The yield spread for the serial debt defaulter declined from nearly 20,000 to 5,000 basis points prior to the onset of the Baring Crisis. The yield spread then increased to 25,000 basis points in 1893 before falling to 15,000 basis points in 1895-96. Figure 8 shows the country risk premium for Mexico. The yield spread on Mexican bonds is flat in the early part of the sample and then gradually rises from 360 to 500 basis points between July 1890 and June 1892.

The yield spread for Nicaraguan bonds, shown in Figure 9, was generally flat in the late 1880s before rising gradually after the Baring Crisis. Country risk for the Central American country increased to over 2,000 basis points in 1895. The yield spread for Paraguay, presented in

Figure 10, declined in the early part of the sample and then increased from 100 basis points to more than 1,000 basis points between 1890 and 1894. Figure 11 shows the yield spread for Portugal. Country risk declined from approximately 400 to 200 basis points in the first half of the sample. Yield spreads then rose from 200 basis points to more than 1,000 basis points following a debt default and domestic financial problems.

Spain's yield spread is presented in Figure 12, and declined from 450 to 250 basis points in the year leading up to the Baring Crisis. Country risk then rose in the two-year period following the start of the financial crisis. In 1894, the yield spread for Spain fell by approximately 100 basis points before rising at the end of the sample. The country risk for Uruguay (Figure 13) follows a U-shaped pattern, dramatically falling from a level of more than 450 basis points in the late 1880s to slightly more than 100 basis points on the eve of the Baring Crisis. The yield spread then climbs to over 600 basis points by 1892. Uruguayan debt prices are then taken off the London market after the country briefly defaulted on its debt obligations. Figure 14 shows that the yield spread for Venezuela declined by approximately 400 basis points prior the onset of the Baring Crisis. Country risk then rises to over 900 basis points in 1892 before declining to a level of 500 basis points by the end of the sample.

Yield spreads for the non-Latin Emerging Markets appear in Figures 15-28. The Austrian yield spread, shown in Figure 15, averaged approximately 150 basis points over the sample period and appears relatively insensitive to events in Argentina. The Canadian country risk premium in Figure 16 has a slight upward trend, increasing from 80 basis points in 1886 to nearly 120 basis points by the end of 1895. The country risk premium for the Cape of Good Hope (part of the future South Africa), shown in Figure 17, fluctuated between 100 and 120 basis points before and after the Baring Crisis. Egyptian and Greek yield spreads, presented in Figures 18 and 19, display very different patterns. The country risk premium for Egypt fell by approximately 150 basis points in the years leading up to outbreak of the Baring Crisis. This may reflect the country's improved credit standing as the British government restructured the country's finances

and assumed fiscal control following a debt default in the 1870s (Mitchener and Weidenmier, 2005). Egyptian yield spreads are flat in the five year period after the onset of the financial crisis. The Greek yield spread fell at beginning of the sample period before increasing dramatically in 1893 after the country defaulted on its foreign debts.

The yield spread for Indian bonds, shown in Figure 20, fluctuated within a range of 10 to 60 basis points. In Figure 21, the yield spread for Italian government securities increased slowly over the sample period rising from 200 basis points in 1886-87 to about 275 basis points in 1893. Italian yield spreads jumped more than 400 basis points as the country left the gold standard in 1894. The country risk premium for Japan is shown in Figure 22. Japanese bonds traded between 300 and 400 basis points over the British Consol and possessed a slight upward trend. Yield spreads for New South Wales, presented in Figure 23, increased from about 80 to 120 basis points by 1895. The large percentage increase in the yield spread may reflect the transmission of the Baring Crisis to Australia that has been suggested by McLean (2005). As shown in Figure 24, country risk for New Zealand rose at the beginning of the sample and then declined in 1888-89. Yield spreads for this British colony generally ranged between 100 and 140 basis points.

Figure 25 shows the plot of the country risk premium for Norway. The yield spread for the Nordic country averaged about 25 basis points over the period 1886 to1891 before slowly rising over the remainder of the sample period. The country risk premium for Russia fell from about 300 basis points in 1888 to 150 basis points in 1891 (Figure 26). The yield spread for Russia then stabilized for the next two years before declining by approximately 40 basis points in late 1894 and early 1895. Yield spreads for Sweden and the Ottoman Empire (Turkey) appear in Figures 27 and 28. Both time-series plots are relatively smooth during the sample and do not display any sharp movements. Country risk for Ottoman Empire bonds declines approximately 50 basis points over the sample period. On the other hand, the yield spread for Sweden rises from about 100 to 140 basis points.

Yield spreads for the core or high-income countries were relatively calm compared to Latin American securities during the sample period. Figure 29 shows the country risk premium for Belgium. The yield spread for the European country generally fluctuated between 20 and 40 basis points during the sample period except for a couple of brief, but sharp rises in 1891 and 1893. The yield spread for France, presented in Figure 30, averaged approximately 80 basis points until early 1890, when the spread fell dramatically to about 30 basis points. The country risk premium for France then moved between 20 and 40 basis points. The yield spread for Germany, shown in Figure 31, was generally flat for the entire for the sample period until the country risk premium took on an upward trend towards the end of sample. The country risk premium for Germany increased from slightly more than 100 basis points to 120 basis points by the end of 1895.

Figure 32 presents the yield spread for the Netherlands, which fluctuated between 40 and 70 basis points prior the onset of the Baring Crisis. The Dutch yield spread traded in a narrow range from late 1890 until early 1893. The country risk premium for the Netherlands fell about 20 basis points between late 1893 and the beginning of 1894. Yield spreads for the United States, presented in Figure 33, show that the country risk premium increased from less than 10 basis points to more than 90 basis points during the sample period. The upward trend in the country risk premium might reflect domestic political concerns that the United States would monetize silver, expand the money supply, and increase inflation (Friedman and Schwartz, 1963).

B. Summary Statistics of Changes in Yields and Bond Prices

Although the figures suggest that the Baring Crisis had a larger effect on Latin American countries relative to other emerging markets and core or high-income countries, the graphical results provide only suggestive evidence. To supplement the time series plots, Tables 2-4 present summary statistics of changes in bond returns and yield spreads between 1890 and 1894 for Latin

America, non-Latin Emerging Market countries, and the core/high income countries discussed above. To provide some insight into the performance of emerging market debt after the Baring Crisis, we examine the one-, two-, and five-year horizons after the onset of the crisis: (1) July 1890-June 1891, (2) July 1890-June 1892, and (3) July 1890-June 1894.[14]

Table 2 shows that bond prices for most Latin American countries fell precipitously in the early 1890s. Sovereign debt prices for Argentina, Colombia, and Honduras declined by more than 50 percent (or more than 670 basis points) in the first year of the crisis. Bond prices for Guatemala, Paraguay, Portugal, and Uruguay also fell by more than 25 percent during this period. The average yield spread for these countries increased by more than 190 basis points in the one-year window. As for the other Latin American countries in the sample, bond prices fell by more than 18 percent for Chile, 20 percent for Costa Rica, 15 percent for Venezuela, and less than 10 percent for Brazil, Mexico, Nicaragua, and Spain in the one-year window. The average yield spread for Chile, Costa Rica, Venezuela, Mexico, and Nicaragua increased approximately 81 basis points in the year following the outbreak of the financial crisis in Argentina. Overall, bond prices declined an average of 25 percent for Latin American countries in the year after the onset of the Baring Crisis. This represents a 735 basis point increase in the average yield spread for a Latin American country. As Table 2 shows, the large decline in bond prices and increase in yield spreads remains, even when Spain and Portugal are dropped from the sample as well as when Argentina is omitted.

Table 2 also shows that the decline in bond prices (and increase in yield spreads) is generally more pronounced in the longer sub-sample periods. Bond prices for Argentina fell more than 55 percent in the two- and five-year windows. Yield spreads for the South American country increased 682 basis points two years after the onset of the crisis and 689 basis points after five

[14] Consistent with the graphical analysis of yield spreads, we selected July 1890 as the starting date of the Baring crisis. Changing the crisis date to correspond to other important events in 1890, such as the Bank of England's announcement that they would rescue the House of Baring, does not change the basic tenor of the results that are presented in the tables and regressions.

years. Sovereign debt prices for Brazil fell 31 percent between July 1890 and June 1892, and 19 percent between July 1890 and June 1894. The decline in bond prices corresponds to a 227 and 130 basis-point increase in the yield spread in the two windows, respectively. Chilean bond prices declined nearly 9 percent in the first year after the outbreak of the crisis and approximately 13 percent in the five-year window. This represents a 44 and 73 basis point increase in the Chilean yield spread in the two- and five-year windows.

Bond prices also declined in the smaller Latin American republics. Sovereign debt prices for Colombia, Honduras, and Portugal all declined more than 40 percent in the two and five-year windows after the Banco Nacional announced its debt default. Yield spreads for each of these three countries increased more than 700 basis points in the two-year window and more than 800 basis points in the five-year window. Bond prices for Costa Rica, Guatemala, and Nicaragua fell more than 19 percent in the two-year window and more than 27 percent in the five-year window.

Sovereign bonds for Paraguay also declined significantly over this period, falling more than 50 percent between July 1890 and June 1892 and more than 72 percent in the five-year window. The yield spread for this landlocked, South American country increased 401 basis points in the two-year sub-sample and 908 basis points between July 1890 and June 1894. Sovereign debt prices for Spain declined more than 10 percent in the two-year and five-year windows. The country risk premium for Spain increased 61 and 83 basis points in the two periods, respectively. Unfortunately, bond prices for Uruguay are not available for the two longer windows (April 1890-April 1892 and April 1890-April 1894). The *Economist* stopped reporting debt prices for the South American country after it briefly defaulted on its bonds and arranged a debt conversion with its bondholders in the early 1890s.[15] Bond prices for Venezuela declined 28 percent in the two-year window and 30 percent in the five-year window. This represents a 224 and 254 basis point increase in the yield spread.

[15] It is possible that other financial newspapers reported Uruguyuan bond prices from 1892 and 1893. We intend to investigate this possibility in a future draft of the paper.

For all Latin American countries in our sample, the average bond price declined 31 percent in the two-year window and nearly 42 percent in the five-year window. The average yield spreads for Latin American countries increased 702 and 1,431 basis points in the two- and five-year periods after the onset of the financial crisis. As shown in Table 2, the large decline in the value of Latin American securities for the two- and five-year crisis periods are robust to dropping Spain and Portugal or Argentina from the sample.

A very different picture emerges if we examine the time-series and cross-sectional behavior of non-Latin American emerging market borrowers. As Table 3 shows, bond prices did not rise or decline by more than 7 percent for any of the 14 other emerging market borrowers between July 1890 and June 1891. As a group, the average bond price for non-Latin Emerging Markets declined by 1.2 percent in the first year after the onset of the crisis. The average yield spread fell by one basis point over the same period.

Columns (3) and (4) report summary statistics for bond returns and yield spread changes for the non-Latin American Emerging Markets between July 1890 and June 1892. The results largely resemble the findings in Columns (1) and (2) with the average bond price falling less than two percent in the two-year window. Yield spreads increased an average of almost nine basis points over this period. The increase in yield spreads is almost entirely driven by Greek bonds, which declined more than 14 percent in the two-year window. (Greece's yield spread rose by more than 90 basis points). If Greece is excluded from the sample, then bond prices declined by less than one percent and yield spreads rose by little more than two basis points.

In the five-year window, bond prices fell four percent for non-Latin Emerging markets and the yield spread increased by more than 83 basis points. The result is driven again by Greece, which defaulted on its debts in 1893. Bond prices and yield spreads are flat if the Greece is excluded from the sample. Nevertheless, even if Greece is included in the sample, the average bond price in Latin American countries declined 42 percent in the five-year window compared to a four percent drop in the non-Latin Emerging market sample.

Table 4 reports summary statistics for the five core countries in the sample. Bond prices and yield spreads were generally flat for the core countries in the one-year window. Bond prices changed by less than five percent for all of the high-income or core countries. As a group, bond prices increased less than one percent between July 1890 and June 1891, while yield spreads declined by approximately nine basis points.

The summary statistics for the two- and five- year windows resemble the results from Columns (1) and (2). Bond prices for Belgium, Germany, Netherlands, and the United States moved less than 10 percent in the two- and five- year windows. The country risk premium moved less than 30 basis points for these countries except for the United States which experienced a 31 basis point increase in its yield spread in the five- year window. French bonds showed the greatest movement in the longer windows, with bond prices rising nine percent between July 1890 and June 1891 and increasing 10 percent in the five-year window. The movement in French bonds constituted a 28 and 23 basis point decline in the country risk premium in the two windows. As a group, bond prices moved less than five percent in the two- and five-year windows. This represented less than a three basis point move in yield spreads. Overall, bond prices and yield spreads were generally very flat in the core/high income countries during the early 1890s.

IV. Time-Series Analysis of Emerging Market Bond Prices

The ocular regressions and summary statistics suggest that the Baring Crisis primarily impacted the yield spreads and bond prices of Latin American countries. The financial crisis appears to have had a much smaller effect in non-Latin emerging markets and core countries. To formally test this hypothesis, we employ a series of event studies, and analyze the behavior of Latin American bond returns using a market model. The model can be written as:

$$LATIDXRET_t = \alpha_t + \beta_t CORERET_t + \beta_1 CRISIS9091_t + \beta_2 CRISIS9092_t + \beta_3 CRISIS9094_t + \varepsilon_t, \quad (1)$$

where $LATIDXRET_t$ is the return on the Latin American Bond Index. The index is measured as the first difference of the natural logarithm of the (unweighted) average price of the 14 Latin American securities in our sample at time *t*. α_t is a time-invariant constant. $CORERET_t$ is the return on a core country bond index, which is computed as the first difference of the natural logarithm of the (unweighted) average price of the five core or high-income bonds in our sample. Three dummies variables, *CRISIS9091*, *CRISIS9092*, and *CRISIS9094* are also employed to test whether bond returns in Latin America were significantly lower than bond returns for core/high income securities in the one-, two-, and five-year periods after the onset of the financial crisis, respectively. Consistent with the summary statistics presented above, the crisis dummies are set equal to one beginning in July 1890. The Gaussian white noise error term is given by ε_t. The models are estimated using robust standard errors. The results appear in Table 5.

Column (1) shows that Latin American bonds returns are significantly correlated with the return on the core market index. Columns (2) through (4) add the crisis dummies sequentially to the baseline model to test whether bond returns in Latin America were significantly lower than returns in the high-income group. The crisis variables are statistically significant at the one percent level all three variations on the length of crisis: the one-, two-, and five- year windows. The coefficients on the crisis variables indicate that Latin American bond returns fell substantially after the crisis began. They fell by the most during the first year of the crisis, when they averaged 0.54 percent lower per week. But they continued to fall over longer horizons in the one-year window, 0.38 percent lower per week in the two-year window, and 0.35 percent lower per week in the five-year window.

Although the core income regressions reported in Columns (1)-(4) suggest that bond returns were significantly lower in Latin America after the onset of the Baring crisis, the

empirical results may be driven by an omitted factor that is common to emerging markets but is not captured by the core or high-income bond index. It is probably more appropriate to benchmark fluctuations in Latin American bonds to other emerging markets that possess similar risk characteristics. As a result, we re-estimate the baseline specifications in Columns (5)-(8), replacing the core index with an unweighted emerging market bond index constructed from the sample of 14 non-Latin countries in the database. The basic tenor of the results remains unchanged. Latin American bond returns are significantly correlated with the emerging market index. The coefficient on emerging market returns is now significantly greater than one, indicating that Latin American bond returns were more volatile than returns in other emerging markets during this period. The crisis dummies are also statistically significant at the one- or five-percent levels in the three different specifications. The coefficient estimates on the dummy variables suggest that Latin American bond returns were 0.47, 0.33, and 0.27 percent lower per week in the one-, two-, and five-year windows after the onset of the crisis.

Another potential bias in the regression analysis is that the results may be driven by including the crisis country in the empirical analysis. To test whether including Argentina was driving our results, we remove it from the sample and re-estimate the baseline regressions. The basic results presented in earlier tables are robust to this test. Latin American bond returns are still significantly correlated with bond returns in the core index as well as the emerging market index (Table 6). The crisis dummies are all statistically significant at the one- or five-percent level in all specifications. The size of the coefficients on the crisis variables and market indices are also quite similar to the results reported in the baseline specifications (Table 5).

We also estimated the baseline specifications dropping Portugal and Spain from the Latin American Bond Index given that the two countries are geographically separated from many of their former colonies by the Atlantic Ocean. As shown in Table 7, the results remain unchanged by removing the two European countries from the sample. The crisis dummies are all statistically significant at the one- or five-percent levels except for the two-year crisis dummy in the emerging

market specification that is now significant at the 10-percent level. The size of the coefficients on the market indices and crisis variables are also quite similar to the parameter estimates reported in the baseline regressions and sensitivity tests.

The empirical results may also be driven by country-specific shocks (economic and/or political) in other Latin American countries that occurred at almost the same time as the Baring Crisis. Mauro, Sussman, and Yafeh (2002) point out that Brazil and Chile had domestic political shocks in the same year as the outbreak of the financial crisis in Argentina. Although it is difficult to disentangle the effects of the Baring crisis from political events in Brazil and Chile in a market model with dummy variables, we attempt to provide some insight into this question by dropping the two South American countries from the sample. Table 8 shows that the empirical results remain statistically and economically significant by removing Brazil and Chile from the Latin American Bond Index. Moreover, the coefficient estimates are roughly the same size reported in the baseline regressions and other robustness checks.

We also estimated market models removing Portugal and Spain from the Latin American Index and adding the two European countries to the non-Latin Emerging Market sample. The results from the empirical exercise are presented in Table 9. The three crisis dummies are statistically significant at the 5-percent level in the regressions using the core- country bond index as the market control. Using the emerging market index as market control, we find that the crisis dummy is statistically significant at the one percent level in the one-year window and statistically significant at the 10-percent level in the two- and five-year windows. The economic effects are quite large, suggesting that Latin American bond returns were 0.5 percent, 0.28 percent, and 0.26 percent lower per week in the one-, two-, and five-year windows (and employing the lower bound estimates when the market is defined as other emerging market borrowers).

Another potential concern with the empirical results is that sovereign debt defaults may account for the economically large and statistically significant results. The sovereign debt defaults could have been caused by time-inconsistent monetary or fiscal policies rather than a

shock originating from Argentina. Table 10 lists the universe of debt defaulters on the London market during the late 1880s and early 1890s. Costa Rica, Greece, Guatemala, Paraguay, Portugal, and Uruguay defaulted on their foreign debts within a few years after the onset of the Baring Crisis. To test for the possibility that debt default drives the empirical results, we dropped all Latin and Emerging Market countries from the sample that defaulted between 1890 and 1896.[16] We also added Spain to the non-Latin Emerging Market Index. The empirical results for this specification appear in Table 11. Although Latin American bond returns are not significantly correlated with the bond returns in the core index, the crisis dummies are still statistically significant at the five percent level in the eight different regressions. The coefficient estimates on the crisis dummies in the emerging market specifications suggest that Latin American bond returns were 0.60 percent lower per week in the one-year window, 0.39 percent lower per week in the two-year window, and 0.36 percent lower per week in the five-year window after the onset of the Baring Crisis.

Overall, we interpret the results from the regressions as strong evidence that the Baring Crisis was largely a regional phenomenon that significantly reduced bond prices (and increased country risk) in Latin America, but had little effect in other emerging markets and high-income countries.

V. What Factors Account for the Movement in Bond Yields during the Crisis?

We now turn to analyzing the determinants of yield-spread movements over the period 1886-1896 and to exploring the nature of the regional effect indicated above. We construct a panel data set consisting of annual data for our sample of emerging market borrowers, which includes macroeconomic indicators, trade variables, institutional arrangements and political

[16] Countries that were in default for the entire sample period were still included in the regressions shown in Table 11 along with emerging-market borrowers that came to terms with their foreign creditors prior to the onset of the Baring Crisis.

factors, and country-specific controls. We use a variety of estimation strategies (pooled OLS and fixed effects models) to examine the movements in bond spreads. In the spirit of Ferguson and Schularick (2006) and Flandreau and Zumer (2005), our strategy is to employ a variety of indicators that were readily available and widely used by emerging market investors in the late nineteenth century to assess country-specific financial risk. We use these variables to test whether the Baring Crisis can account for the movement in prices in Latin-America or whether the movement in prices in these countries is simply accounted for by macroeconomic factors or other country-specific effects. We also develop some measures that are used to assess whether the gold standard or trade linkages were potential channels of transmission from Argentina to other emerging-market borrowers.

To capture how investors viewed the macroeconomic status of emerging market borrowers, we employ three measures: (1) the budget deficit (expenditures-revenues) as a share of revenue, (2) the ratio of total public debt (internal and external) as a share of government revenue, and (3) a dummy variable indicating whether the country is in default and has stopped servicing its foreign debt. Ceteris paribus, a country with sound fiscal policy (as reflected by a small or negative ratio) should have lower sovereign risk and a lower probability of default since it would have a better capacity to service its debt obligation out of revenue or a greater ability to respond to other exogenous shocks which may make it more difficult to repay its debt obligations. A country with a lower debt to revenue ratio should have a greater ability to repay its debts, suggesting, ceteris paribus, less sovereign risk and a lower probability of default for such a country. A sovereign debt default is a strong signal to the bond market that the country has serious financial problems and is a high credit risk.

Trade statistics were important for assessing sovereign risk in emerging markets during the gold standard era since measures like gross domestic product (GDP) had not been developed, since taxes on trade were a major source of revenue, and since exports provide a means for generating foreign currency to service debt denominated in sterling or gold. Annual import and

export figures were regularly reported in investment manuals such as the *Statement's Yearbook* and *Fenn on the Funds*. In particular, we consider two measures of trade that investors used to assess the financial health of the borrower: (1) the trade balance (exports minus imports) scaled by exports, and (2) the sterling value of exports per capita. Countries with a current account surplus were generally regarded as having a greater ability to service their foreign debts by emerging market investors. As Ferguson and Schularick (2006) note, since nineteenth century investors did not have GDP per capita at their disposal (to indicate the degree of institutional and economic development of a country), they used exports per capita as an alternative measure to proxy for the risk-reducing factors associated with economic development.

Institutional and political factors may also have been used by investors to price sovereign debt during the late nineteenth century. Bordo and Rockoff (1996) argue that the gold standard was a "good housekeeping seal of approval" that lowered sovereign risk for ermerging market borrowers during the gold standard period. The gold standard was a contigent rule that solved the classic time inconsistency problem by tying the hands of the monetary and fiscal authorities. However, Bordo and Murshid (2001) suggest that adherence to the gold standard may also facilitate the transmission of shocks or contagion. Finally, Eichengreen and Sachs (1985) suggest that strict adherence to the gold standard may make it more difficult to pursue the beggar-thy-neighbor policy of devaluation. We thus employ a dummy variable that takes a value of one if a country was a member of the gold club using gold standard dates from Meissner (2005).

Ferguson and Schularick (2006) show that British colonies charged lower interest rates on its debt because the bonds were implicitly backed by Her Majesty's Government. An empire indicator variable is thus set equal to one for the four British colonies in our sample: Canada, the Cape of Good Hope, New South Wales, and New Zealand. As for the political variables, we code international and civil conflict variables to capture the effects of local and interstate conflicts on sovereign risk. The inclusion of these conflict variables is motivated by the frequent discussion of

the effects of coup d'etats and wars on bond prices in the Foreign Government Securities Section of the *Economist*.

We use a number of variables to test for the presence of a regional effect in Latin America after the onset of the Baring Crisis. First, we code a crisis variable that takes a value of one beginning in 1890 until the end of the sample period (1895), when it is generally agreed that Argentina had recovered from the crisis. This variable potentially captures the overall effect of the crisis on all emerging market borrowers. Second, we interact the crisis indicator variable with the Latin American indicator variable to test if, ceteris paribus, yield spreads in Central and South America increased following the outbreak of the financial crisis.

As mentioned above, we also included some measures to capture potential channels through which the crisis may have spread. First, we coded the emerging market borrower's trade share with England (exports and imports to the UK as a share of total trade). Since England was the major recipient of most emerging market countries' exports and also a major source of imported manufactured goods, we use this measure to examine whether changes in trade with England (the country from which most of these countries also borrowed from) affected bond spreads. Given England's role in the Baring Crisis, the UK trade share variable is also interacted with the crisis dummy to see if the crisis spread globally through trade ties with England. We use this second measure and interact it with the Latin American dummy variable to test whether countries in Central and South America with strong trade ties to England experienced a larger increase in their yield spreads following the onset of the Baring Crisis. We also coded a measure of the distance from Argentina to test whether emerging market borrowers far away from the South American republic were charged lower interest rates.[17] If investors used Argentina as a bellweather country to value securities in the entire region, then we might expect sovereign bonds in distant countries to trade at a premium with the onset of a financial crisis. As a third channel,

[17] We use distance information calculated from http://www.indo.com/distance/, which is based on the "geod" program – a part of the "PROJ" system available from the U.S. Geological Survey and data from Rose (2002).

we also considered the role of the gold standard, and interacted this in the same way – first with the crisis variable, and then with both the crisis and Latin American variables. This allows us to determine whether Central and South American countries that were on gold had a differential effect associated with the Baring Crisis.

The empirical specification can be written as:

$$YLDSPREAD_{it} = \beta_0 + \beta_1 DEFAULT_{it} + \beta_2 BUDGETBALANCE_{it} + \beta_3 DEBT/REVENUE_{it} + \beta_4 TRADEBALANCE_{it} + \beta_5 EXPORTSPC_{it} + \beta_6 EMPIRE_i + \beta_7 GOLD_{it} + \beta_8 GOLD*CRISIS_{it} + \beta_9 INTERSTATE_{it} + \beta_{10} CIVIL_{it} + \beta_{11} LATIN_i + \beta_{12} CRISIS_{it} + \beta_{13} LATIN_i*CRISIS_{it} + \beta_{14} UKTRADESHARE_{it} + \beta_{15} CRISIS_{it}*UKTRADESHARE_{it} + \beta_{16} LATIN_i*UKTRADESHARE_{it} + \beta_{17} LATIN_i*CRISIS_{it}*UKTRADESHARE_{it} + \beta_{18} ARGDISTANCE_i + \varepsilon_{it}, \quad (2)$$

where YLDSPREAD is the average current yield on a sovereign sterling bond for country i at time t minus the current yield on the British consol. The other variables are defined as:

- $DEFAULT_{it}$ is a binary variable which is unity if country i is in default at time t;
- BUDGET BALANCE is revenues minus expenditures for country i at time t;
- $DEBT/REVENUE_{it}$ is ratio of total public debt to government revenue for country i at time t;
- $TRADEBALANCE_{it}$ is the current account position of country i at time t;
- $EXPORTSPC_{it}$ is the ratio of exports to population for country i at time t;
- $EMPIRE_i$ is a binary variable which is unity if emerging market borrower i is a member of the British Empire;
- $GOLD_{it}$ is a binary variable which is unity if country i is on the gold standard at time t;
- $GOLD*CRISIS_{it}$ is an interaction term that is defined as country i being on the gold standard and in the crisis period at time t;
- $INTERSTATE_{it}$ is a binary variable which is unity if country i is involved in an interstate war at time t;
- $CIVIL_{it}$ is a binary variable which is unity if country i is involved in a domestic war at time t;
- $LATIN_i$ is a binary value if country i is part of Latin America;
- $CRISIS_{it}$ is a binary variable which is unity for country i after the onset of the Baring Crisis in 1890;
- $LATIN_{it}*CRISIS_{it}$ is an interaction term which is unity if country i is located in Latin America and the year is 1890 or later;
- $UKTRADESHARE_{it}$ is country i's share of total trade with the UK at time t;
- $CRISIS_{it}*UKTRADESHARE_{it}$ is an interaction term between the crisis variable and a country's total share of trade with the UK at time t;
- $LATIN_{it}*UKTRADESHARE_{it}$ is an interaction term between the Latin American dummy and a country's total share of trade with the UK at time t;

- $LATIN_{it}$*$CRISIS_{it}$*$UKTRADESHARE_{it}$ is an interaction term between the Latin American dummy, the crisis variable, and a country's total share of trade with the UK at time t;
- $ARGDISTANCE_i$ is the natural logarithm of the distance between Argentina and country i;
- β are estimated coefficients;
- and ε is a white noise error term capturing other influences on yield spreads.

For the dependent variable, we constructed annual yield spreads by averaging the monthly data used in the time series analysis above. We primarily rely on data from Ferguson and Schularick (2006) for the construction of various macroeconomic and trade indicators, and augment their data for additional countries using information from British Board of Trade Publications, *Fenn's* Compendium, the *Statesman Yearbook*, and the *Annual Reports* of the Corporation of Foreign Bondholders. We calculated country trade shares with the UK using these same sources.

The empirical results for our sample of 28 sovereign borrowers appear in Table 12.[18] All models are estimated with robust standard errors. Columns (1) and (2) report on pooled OLS regressions, with and without year dummies, and show that our baseline model captures roughly 60 percent of the variation in yield spreads. Ceteris paribus, a country in debt default has yield spreads that are more than 700 basis points higher than a sovereign borrower that is servicing their debts. A better trade balance significantly reduces country risk in the baseline specification. Yield spreads for countries on the gold standard are more than 250 basis points lower than a country on paper or the silver standard. The budget-deficit ratio and exports per capita variables are statistically significant in the OLS regressions without the year dummies, but insignificant after the time variables are added to the model. Membership in the British Empire and the political variables do not have a statistically significant effect on sovereign yield spreads.

[18] We drop Guatemala, Honduras, Nicaragua, Paraguay, and Norway from our sample due to insufficient data. Argentina is excluded from the panel regressions so that we can include distance measures from the South American country to help test for the presence of a regional effect. Ecuador is added to the sample.

The empirical results for the fixed effect models are reported in Columns (3) and (4) of Table 12. The country fixed effects control for time-invariant omitted variables specific to an emerging-market borrower. The default variable remains statistically significant at the one percent level, although the size of the coefficient is substantially smaller. The reduction in the size of the coefficient on the default variable can probably be explained by the use of the difference-in-difference estimator that uses the change in the yield spread as the regressor rather than the level of country risk, which is commonly employed in an OLS regression. The change in the country risk premium is probably a more appropriate methodology for examining the effects of a debt default on yield spreads given that it captures the marginal effect of suspending debt service. The trade balance is statistically significant in the fixed-effects models, but the sign on the variable has changed from negative to positive. This might be explained by the use of country fixed effects that are capturing omitted variables which are correlated with the trade measure. The gold standard variable is also no longer statistically significant at conventional levels. The insignificance can probably be explained by the fact that there is very little identifying variation in gold standard membership in our sample of sovereign borrowers. Membership in the British Empire is time-invariant and dropped from the fixed-effects models, while the political variables remain statistically insignificant from zero.

The empirical results with the regional variables appear in Table 13. The additional variables in these specifications allow us to explain over 70 percent of the variation in yield spreads. The debt default continues to have a large economic and statistically significant positive effect on bond spreads. The Latin-crisis variable (the interaction between Latin America and the Baring Crisis) also has a large economic and statistically significant effect on yield spreads. The crisis appears to have increased yields spreads in Central and South America by more than 330 basis points. The trade balance significantly reduces sovereign risk in the OLS specifications but is positively related to the country risk premium in the fixed-effects models. The budget variable is not statistically significant in the OLS regressions, but a sound fiscal house is associated with

lower yield spreads in the fixed effects model without year dummies (Column 3). Exports per capita are not statistically significant at conventional levels in the four empirical models. The gold standard variable is again only significant in the pooled OLS regressions. However, the gold standard-crisis interaction term is statistically significant at the 10-percent level in the fixed effect specifications. All else equal, gold standard countries had yield spreads that were 100 basis points lower after the onset of the financial crisis. This provides some evidence that membership in the gold club provided some shelter for borrowers during a financial crisis. Empire status and the dummy variable for interstate conflict are still not significantly different from zero in the four different specifications. The statistical significance of the civil conflict dummy variable reported in the pooled OLS specifications disappears with the addition of country fixed effects.

As for the regional trade variables, only the UK trade share is statistically significant in the pooled OLS specifications—Columns (1) and (2). The small size of the UK trade variable along with the insignificance of the interaction terms suggests that the Baring Crisis did not spread via trade channels through the British Isles. The crisis dummy is insignificant in three out of the four regressions. The distance from Argentina variable is statistically significant and has the wrong sign in the two pooled OLS regressions. This result may capture the small overall rise in yield spreads among non-Latin emerging markets shown in Table 3 given that the empirical specifications have controlled for a wide range of economic and regional factors.

Although the sign and significance of some of the variables change, depending on the empirical specification, the debt default variable and Latin American-crisis dummy variable have economically large effects and are statistically significant in all specifications. While the economic interpretation of the debt default variable is relatively straightforward, the Latin American crisis dummy is open to greater interpretation. It is possible that this interaction term is capturing some omitted effect that is common to all Central American and South American borrowers during the crisis. One candidate that we would like to test in the future would be a country's trade share with Argentina, although given the insignificance of other trade variables,

we are doubtful that this will change the underlying result. A second, and perhaps more plausible interpretation of the large and statistically significant interaction term on the Latin American-crisis indicator variable, is that it is capturing the fact that European investors sold off or reduced their holdings of Latin American bonds following revelations of Argentina's economic problems and news of its debt default in 1890. The Baring Crisis may have served as a wake-up call for bondholders who re-assessed the risk of Latin American securities following Argentina's economic collapse. This might be especially true for Central American countries where there was limited information on the economic and financial health of these republics – as shown by the fact that Costa Rica was the only Central American with sufficient data in the *Statesman's Yearbook* that could be included in the panel regressions. As a result, emerging market investors may have rationally sold their Latin American securities under the assumption that the crisis in Argentina was a signal that other countries with similar characteristics were on the verge of a meltdown. It could have been panic selling given European investors' imperfect ability to gather information about the health of these economies. (This theory receives some support from our regression results in that many of the indicators they used were statistically insignificant predictors of yield spreads *ex post*.) On the other hand, panic selling could have been driven by some form of irrational behavior in the market – a hypothesis that would be difficult to test given the limited information set available to investors in Latin American securities during this period.

Conclusion

In this paper, we offer quantitative evidence of the effects of the Baring Crisis on a global sample of emerging market borrowers. Using a new database of more than 17,000 bond prices collected from the *Economist*, we find that the Baring Crisis was largely a regional phenomenon. The average sovereign debt price for Latin American countries in our sample declined by 25, 30, and 40 percent in the respective one-, two-, and five-year periods after the onset of the financial

crisis. On the other hand, bond prices and yield spreads in non-Latin emerging markets and core or high-income countries were generally flat during the same period.

We then analyzed the determinants of sovereign yield spreads between 1886 and 1896 in a panel framework to shed greater light on the regional nature of the crisis. We were particularly interested in determining whether the Latin American effect could be explained by macroeconomic fundamentals (a budget deficit ratio, a ratio of debt-to-revenue, a default indicator variable), trade indicators (trade balance, exports per capita), political variables (interstate and domestic conflict) and institutional variables (being on the gold standard, being part of an empire) – information available to emerging market investors in the late nineteenth century.

The empirical analysis of sovereign yield spreads using pooled OLS and panel regressions suggests several conclusions. Trade measures and political variables were generally not very important for pricing sovereign debt during this turbulent period. The results also suggest that membership in an empire or the gold club did not significantly lower yield spreads or contribute to the spread of the financial crisis, but being on the gold standard offered safe haven for borrowers that committed to this policy regime during the 1890s. On the other hand, we find that countries that suspended debt service were charged much higher interest rates in financial markets.

Finally, and perhaps most importantly, the results suggest the existence of a large Latin American effect, even after controlling for a wide range of macroeconomic, trade, political, institutional, and regional variables. Yield spreads were more than 330 basis points higher for Latin American countries during the crisis. Although there may be competing hypotheses for why the Baring Crisis that originated in Argentina turned into a meltdown for all of Latin America, we suggest two possibilities. Emerging market investors may have considered Argentina's collapse as an indicator of economic and financial weakness in the entire region. They then re-assessed sovereign risk in Latin America and reduced their holdings of government bonds issued by

countries in the region. The wake-up call hypothesis seems quite plausible given that there was limited economic and financial data on many Latin American economies. Or, bondholders irrationally dumped their Latin American securities and did not use all available information to price Latin American securities. Regardless of the exact reason(s) for the dramatic decline in Latin American bond prices in the early 1890s, the empirical results of this paper document that the Baring Crisis was largely a regional crisis confined to Latin America that appears to have had little effect on non-Latin emerging market borrowers.

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Table 1. Central and South American Events Reported in the *Investor's Monthly Manual*

March 26, 1890	Argentine Government announce their resolve to meet the economic crisis by immediately adopting energetic measures, some of which they specify.
April 2, 1890	Registration of the Peruvian Corporation, formed to carry out conversion of debt.
April 16, 1890	Resignation of Argentine Ministry, and announcement of project purchase of Western Railway of Buenos Ayres by an Anglo-French syndicate.
May 14, 1890	Expected withdrawal of gold for the Argentine Republic. Mexican Senate passes a bill for the funding of the railroad debt.
May 28, 1890	Uruguayan Finance Committee recommend the government to issue a new loan in connection with the budget deficit.
June 11, 1890	Resignation of the Argentine Finance Minister, Signor Uriburu.
July 2, 1890	Negotiations for loan of 5,000,000 pounds to Argentina, which ultimately prove abortive. Argentine National Bank suspends interim dividend.
July 9, 1890	Financial crisis in Uruguay.
July 23, 1890	Revolt in Buenos Ayres, with three or four days' fighting. Fighting in Central America and San Salvador.
July 30, 1890	The Argentine insurrection results in a nominal victory for the government.
August 6, 1890	President Celman of the Argentine Republic, yielding at last to public feeling, resigns, and the Ministry is changed.
August 13, 1890	Directors of Argentine National Bank resign
August 27, 1890	Brazilian decree issued practically establishing a system of Cedula issues.
September 3, 1890	Proposal in Argentine Congress to suspend payments on Cedulas for two years rejected. Mexican loan, 8,000,000 pounds, for redemption of railway subsidies.
September 10, 1890	New Argentine Railway concessions annulled-Finance Minister's message refers to entanglement of Government in monetary affairs-and to insolvency in Buenos Ayres.
September 17, 1890	Dr. Plaza appointed in Argentina to visit Europe on a financial mission, principally to arrange a 4,000,000 pound loan.
September 24, 1890	Argentine Federal government proposes to assume provincial liabilities.
October 29, 1890	Issue of Brazilian Decree rendering import duties payable in gold.
November 19, 1890	Fall of Barings announced simultaneously with "Guarantee" scheme of assistance. Committee formed to inquire and suggest as to Argentine affairs.
November 26, 1890	Chilian government refuses proposed terms of settlement of Dreyfus claim.
December 3, 1890	Argentine Committee report their conclusions.
December 10, 1890	German delegate to Argentine Conference issues his report.
December 17, 1890	A scheme is propounded for the conversion of the Argentine Cedula issues.
December 30, 1890	Dr. Plaza intimates the willingness of the [Argentine] government to accept the proposals of the Rothschild Committee subject to minor modifications. Cordova and Entre Rios announce that interest payments on their coupons are "postponed pending negotiations."

Table 2. Average Changes in Latin American Bond Prices and Yield Spreads, 1890-1894

Country	July 1890–June 1891		July 1890–June 1892		July 1890–June 1894	
	Bond Price (1)	Yield Spread (2)	Bond Price (3)	Yield Spread (4)	Bond Price (5)	Yield Spread (6)
Argentina	-54.55%	675.26	-54.55%	682.53	-54.55%	689.44
Brazil	-9.09%	44.58	-30.68%	227.05	-19.32%	130.06
Chile	-17.82%	90.06	-8.91%	44.30	-12.87%	73.44
Colombia	-53.49%	1263.79	-44.19%	875.23	-62.79%	1871.72
Costa Rica	-20.45%	139.54	-25.00%	190.10	-36.36%	332.30
Guatemala	-29.82%	291.69	-19.30%	168.52	-57.89%	972.53
Honduras	-50.00%	7136.30	-42.86%	5357.85	-62.50%	11912.38
Mexico	-7.57%	44.77	-10.70%	75.83	-37.86%	389.39
Nicaragua†	-9.09%	33.84	-19.19%	96.67	-27.27%	159.14
Paraguay	-25.58%	113.35	-53.49%	401.87	-72.09%	908.78
Portugal	-25.71%	162.98	-59.59%	723.04	-62.86%	836.51
Spain	-1.17%	-0.22	-10.20%	61.50	-12.37%	83.19
Uruguay	-33.10%	202.48	NA	NA	NA	NA
Venezuela	-15.09%	94.07	-28.30%	224.15	-30.19%	252.39
Group Average	-25.18%	735.18	-31.30%	702.20	-42.23%	1431.64
Group Average (without Spain and Portugal)	-27.14%	844.14	-30.65%	758.55	-43.06%	1608.33
Group Average (without Argentina)	-22.92%	739.79	-29.37%	703.84	-41.20%	1493.49

Either the percentage change in prices or the increase or decrease in yield spreads (measured in basis points) is reported.
† Nicaragua unilaterally reduced its interest rates on the interest on its bonds from 4 to 6 percent beginning in December 1894.

Table 3. Average Changes in Emerging Market Bond Prices and Yield Spreads, 1890-1894

Country	July 1890–June 1891		July 1890–June 1892		July 1890–June 1894	
	Bond Price (1)	Yield Spread (2)	Bond Price (3)	Yield Spread (4)	Bond Price (5)	Yield Spread (6)
Austria	1.08%	-11.14	1.08%	-3.87	4.30%	-10.12
Canada	-1.90%	0.84	0.00%	0.71	1.90%	0.50
Cape of Good Hope (South Africa)	-0.99%	-2.60	-0.99%	4.67	0.99%	3.74
Egypt	0.79%	-9.82	1.83%	-6.83	6.81%	-19.07
Greece	-6.59%	32.22	-14.29%	92.29	-65.93%	1071.07
India	-3.32%	3.94	-0.77%	3.07	1.02%	4.53
Italy	0.13%	-7.29	-0.54%	3.64	-15.38%	105.77
Japan	0.93%	-12.62	0.00%	0.71	0.00%	7.62
New South Wales (Australia)	0.00%	-6.56	0.00%	0.71	0.97%	3.89
New Zealand	-0.48%	-4.70	-0.48%	2.57	4.33%	-8.33
Norway	-4.00%	5.94	-3.00%	9.99	-1.00%	10.65
Russia	-0.85%	-2.88	-2.56%	11.96	5.98%	-16.50
Sweden	-0.97%	-2.75	0.97%	-3.02	-0.97%	11.43
Ottoman Empire (Turkey)	-1.94%	3.05	-0.97%	5.47	0.97%	2.95
Group Average	-1.29%	-1.03	-1.41%	8.72	-4.00%	83.44
Group Average (without Greece)	-0.89%	-3.58	-0.42%	2.29	0.76%	7.47

Either the percentage change in prices or the increase or decrease in yield spreads (measured in basis points) is reported.

Table 4. Average Changes in Core Market Bond Prices and Yield Spreads, 1890-1894

Country	July 1890–June 1891		July 1890–June 1892		July 1890–June 1894	
	Bond Price (1)	Yield Spread (2)	Bond Price (3)	Yield Spread (4)	Bond Price (5)	Yield Spread (6)
Belgium	4.30%	-19.86	3.23%	-9.37	3.23%	-2.46
France	4.44%	-20.74	9.44%	-28.05	10.00%	-22.68
Germany	0.97%	-10.29	1.94%	-6.69	0.97%	3.89
Netherlands	-2.47%	1.25	-3.70%	12.58	9.88%	-20.12
USA	-3.25%	4.37	-4.88%	17.39	-7.32%	33.29
Group Average	0.80%	-9.06	1.21%	-2.83	3.35%	-1.62

Either the percentage change in prices or the increase or decrease in yield spreads (measured in basis points) is reported.

Table 5. The Baring Crisis and Latin American Bond Returns, 1887-1895
(Dependent Variable: Latin American Bond Index)

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-.051 (.064)	.008 (.068)	.033 (.070)	.104 (.069)	-.058 (.060)	-.006 (.064)	.015 (.066)	.061 (.065)
Core Mkt. Beta	.727*** (.259)	.714*** (.258)	.719*** (.257)	.723*** (.253)				
Emerging Mkt. Beta					1.626*** (.161)	1.606*** (.162)	1.609*** (.162)	1.598*** (.160)
Baring9091		-.538*** (.200)				-.468*** (.174)		
Baring9092			-.381*** (.165)				-.329*** (.152)	
Baring9094				-.348*** (.134)				-.266** (.124)
D-W	1.576	1.596	1.596	1.600	1.727	1.747	1.744	1.740
R-squared	.029	.043	.042	.044	.168	.179	.177	.177
Obs.	469	469	469	469	469	469	469	469

Robust standard errors are in parentheses. The regressions were estimated for the period January 1887 through December 1895 using weekly bond price data collected from the *Economist*.
*denotes significance at the 10 percent level.
**denotes significance at the 5 percent level.
***denotes significance at the 1 percent level.

Table 6. The Baring Crisis and Latin American Bond Returns Excluding Argentina from the Sample, 1887-1895

(Dependent Variable: Latin American Bond Index excluding Argentina)

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-.034 (.065)	.017 (.069)	.044 (.074)	.123 (.076)	-.042 (.061)	.003 (.067)	.026 (.070)	.080 (.072)
Core Mkt. Beta	.678*** (.259)	.667*** (.259)	.671*** (.257)	.674*** (.253)				
Emerging Mkt. Beta					1.580*** (.162)	1.563*** (.162)	1.564*** (.163)	1.552*** (.161)
Baring9091		-.467** (.186)				-.397** (.162)		
Baring9092			-.355** (.155)				-.304** (.143)	
Baring9094				-.353*** (.134)				-.273** (.125)
D-W	1.594	1.609	1.612	1.619	1.748	1.761	1.762	1.762
R-squared	.035	.035	.035	.040	.155	.163	.163	.164
Obs.	469	469	469	469	469	469	469	469

Robust standard errors are in parentheses. The regressions were estimated for the period January 1887 through December 1895 using weekly bond price data collected from the *Economist*.

*denotes significance at the 10 percent level.

**denotes significance at the 5 percent level.

***denotes significance at the 1 percent level.

Table 7. The Baring Crisis and South & Central American Bond Returns, 1887-1895

(Dependent Variable: Latin American Bond Index without Portugal and Spain)

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-.043 (.072)	.023 (.076)	.041 (.080)	.121 (.079)	-.051 (.068)	.008 (.073)	.023 (.077)	.079 (.076)
Core Mkt. Beta	.623** (.279)	.609** (.279)	.615** (.278)	.619** (.273)				
Emerging Mkt. Beta					1.551*** (.172)	1.528*** (.173)	1.533*** (.173)	1.520*** (.171)
Baring9091		-.596*** (.216)				-.528*** (.200)		
Baring9092			-.380** (.180)				-.329* (.169)	
Baring9094				-.368** (.150)				-.290** (.142)
D-W	1.640	1.661	1.657	1.662	1.767	1.787	1.780	1.780
R-squared	.017	.031	.027	.031	.123	.134	.131	.131
Obs.	469	469	469	469	469	469	469	469

Robust standard errors are in parentheses. The regressions were estimated for the period January 1887 through December 1895 using weekly bond price data collected from the *Economist*.

*denotes significance at the 10 percent level.

**denotes significance at the 5 percent level.

***denotes significance at the 1 percent level.

Table 8. The Baring Crisis and Latin American Bond Returns Excluding Brazil and Chile from the Sample, 1887-1895
(Dependent Variable: Latin American Bond Index without Brazil and Chile)

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-.063 (.076)	.003 (.081)	.031 (.085)	.124 (.087)	-.070 (.072)	-.013 (.077)	.011 (.082)	.078 (.084)
Core Mkt. Beta	.781*** (.290)	.766*** (.289)	.771*** (.287)	.775*** (.282)				
Emerging Mkt. Beta					1.738*** (.190)	1.716*** (.191)	1.719*** (.191)	1.704*** (.148)
Baring9091		-.590*** (.230)				-.516*** (.200)		
Baring9092			-.421** (.185)				-.366*** (.171)	
Baring9094				-.404*** (.156)				-.332** (.148)
D-W	1.634	1.651	1.653	1.659	1.755	1.772	1.771	1.770
R-squared	.024	.036	.035	.039	.137	.146	.145	.146
Obs.	469	469	469	469	469	469	469	469

Robust standard errors in parentheses. The regressions were estimated for the period January 1887 through December 1895 using weekly bond price data collected from the *Economist*.
*denotes significance at the 10 percent level.
**denotes significance at the 5 percent level.
***denotes significance at the 1 percent level.

Table 9. The Baring Crisis and Central and South American Bond Returns, 1887-1895

(Dependent Variable: Latin American Bond Index with Portugal and Spain removed and added to Emerging Market Index)

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-.043 (.072)	.023 (.076)	.041 (.080)	.121 (.079)	-.042 (.067)	.014 (.072)	.021 (.076)	.076 (.075)
Core Mkt. Beta	.623** (.279)	.596** (.217)	.615** (.278)	.619** (.273)		1.547*** (.154)	1.549*** (.155)	1.541*** (.152)
Emerging Mkt. Beta					1.571*** (.153)			
Baring9091		-596*** (.217)				-.500*** (.191)		
Baring9092			-.380** (.180)				-.284* (.165)	
Baring9094				-.368** (.150)				-.264* (.140)
D-W	1.640	.1661	1.657	1.662	1.807	1.824	1.815	1.816
R-squared	.017	.031	.027	.031	.152	.162	.157	.159
Obs.	469	469	469	469	469	469	469	469

Robust standard errors in parentheses. The regressions were estimated for the period January 1887 through December 1895 using weekly bond price data collected from the *Economist*.

*denotes significance at the 10 percent level.

**denotes significance at the 5 percent level.

***denotes significance at the 1 percent level.

Table 10. Sovereign Debt Defaults on the London Market, 1887-1895

Country	Default	Resumption	Default	Resumption
Argentina	1890	1894		
Colombia	1879	1896		
Costa Rica	1895	1896		
Greece	1894	1898		
Guatemala	1875	1889	1894	1896
Honduras	1873	1927		
Nicaragua	1894	1896		
Paraguay	1892	1897		
Portugal	1892	1903		
Uruguay	1892	1893		

Sources and notes: Corporation of Foreign Bondholders, *Annual Report* (various issues), Borchard (1951), and Correa (1926).

Table 11. The Baring Crisis and Central and South American Bond Returns Excluding Defaulters, 1887-1895
(Dependent Variable: Latin American Bond Index excluding Spain and Portugal)

Independent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	.010 (.082)	.085 (.088)	.109 (.093)	.192** (.088)	-.009 (.078)	.057 (.084)	.078 (.089)	.152 (.083)
Core Mkt. Beta	.321 (.342)	.305 (.342)	.311 (.342)	.316 (.337)	1.619*** (.223)	1.593*** (.224)	1.596*** (.224)	1.596*** (.220)
Emerging Mkt. Beta								
Baring9091		-.670*** (.221)				-.595*** (.223)		
Baring9092			-.444** (.193)				-.386*** (.184)	
Baring9094				-.407** (.170)				-.359** (.161)
D-W	1.841	1.867	1.861	1.866	1.942	1.965	1.958	1.962
R-squared	.004	.018	.015	.017	.095	.107	.104	.106
Obs.	469	469	469	469	469	469	469	469

Countries that defaulted between 1890-96 were dropped from the sample. Spain is included in the emerging market index. Robust standard errors are in parentheses. The regressions were estimated for the period January 1887 through December 1895 using weekly bond price data collected from the *Economist*.
*denotes significance at the 10 percent level.
**denotes significance at the 5 percent level.
***denotes significance at the 1 percent level.

Table 12: Analysis of Sovereign Yield Spreads, 1886-1896
(Dependent Variable: Yield Spread)

Independent Variable	Pooled OLS	Pooled OLS	Fixed Effects	Fixed Effects
Default	768.113***	731.776***	360.131***	337.156***
	(130.09)	(151.13)	(69.87)	(69.21)
Budget Deficit Ratio	-84.213*	-77.342	-154.298*	-125.333
	(44.79)	(73.05)	(82.67)	(82.32)
Debt/Revenue	-17.201**	-18.506	4.102	-7.552
	(6.83)	(12.22)	(13.41)	(13.49)
Trade Balance Ratio	-307.382***	-340.586**	317.286***	274.230***
	(96.52)	(134.75)	(70.16)	(70.10)
Exports/Population	-4.107***	-3.725	-15.277	-6.525
	(1.42)	(3.92)	(16.15)	(16.30)
Empire	54.398	59.961		
	(42.22)	(105.45)		
Gold	-252.477***	-262.242***	-18.589	-49.01
	(43.54)	(71.68)	(66.89)	(65.25)
Interstate Conflict	-76.759	-124.461	80.094	49.667
	(56.88)	(96.87)	(123.57)	(122.22)
Civil Conflict	-9.14	-55.254	15.288	-20.012
	(32.05)	(55.40)	(91.94)	(91.27)
Country Fixed Effects	NO	NO	YES	YES
Year Dummies	NO	Yes	NO	YES
Observations	291	291	291	291
Adjusted R-squared	0.61	0.64		

Robust standard errors are in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 13. Analysis of Yield Spreads and the Baring Crisis, 1886-1896
(Dependent Variable: Yield Spread)

Independent Variable	Pooled OLS	Pooled OLS	Fixed Effects	Fixed Effects
Default	692.624***	679.882***	332.630***	339.609***
	(127.20)	(123.61)	(71.57)	(70.69)
Budget Deficit Ratio	-81.678	-67.69	-170.744**	-129.714
	(50.70)	(51.35)	(85.74)	(85.01)
Debt/Revenue	-13.152	-13.324	3.918	-2.151
	(9.37)	(9.40)	(13.69)	(13.75)
Trade Balance Ratio	-366.924***	-375.392***	203.127***	183.096**
	(117.96)	(117.55)	(73.93)	(73.26)
Exports/Population	-2.288	-2.175	5.943	9.48
	(3.16)	(3.28)	(16.81)	(16.82)
Empire	8.899	7.334		
	(95.29)	(96.37)		
Gold	-197.660***	-199.074***	22.771	-1.776
	(54.07)	(55.15)	(82.70)	(81.55)
Gold*Crisis	-24.775	-28.237	-104.872*	-105.538*
	(108.25)	(105.86)	(58.34)	(57.29)
International Conflict	-40.65	-39.674	20.468	19.792
	(85.85)	(77.83)	(121.88)	(120.76)
Civil Conflict	-163.936*	-222.235**	2.236	-50.429
	(86.66)	(103.21)	(89.02)	(89.32)
Latin	0.110**	0.068	0.088**	0.078
	(0.05)	(0.05)	(0.04)	(0.06)
Crisis	-99.783	-253.457**	-21.753	83.036
	(80.94)	(114.59)	(61.62)	(86.93)
Latin*Crisis	466.761***	471.536***	153.535**	167.598**
	(157.83)	(157.69)	(68.14)	(67.12)
UK Trade Share	4.013**	2.425	-0.021	1.287
	(1.90)	(2.35)	(4.08)	(4.43)
Crisis*UK Trade Share	2.524	6.306	3.853*	5.114
	(2.72)	(4.00)	(2.23)	(3.63)
Latin*UK Trade Share	-0.002*	0	-0.001	0
	(0.00)	(0.00)	(0.00)	(0.00)
Latin*Crisis*UK Trade Share	0	-0.003	-0.001	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)
Distance from Argentina	95.288**	90.627*		
	(44.04)	(45.20)		
Country Fixed Effect	NO	NO	YES	YES
Year Dummies	NO	YES	NO	YES
Observations	291	291	291	291
Adjusted R-squared	0.70	0.72		

Robust standard errors are in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%

Figure 1
Yield Spreads for Argentina, 1886-1895

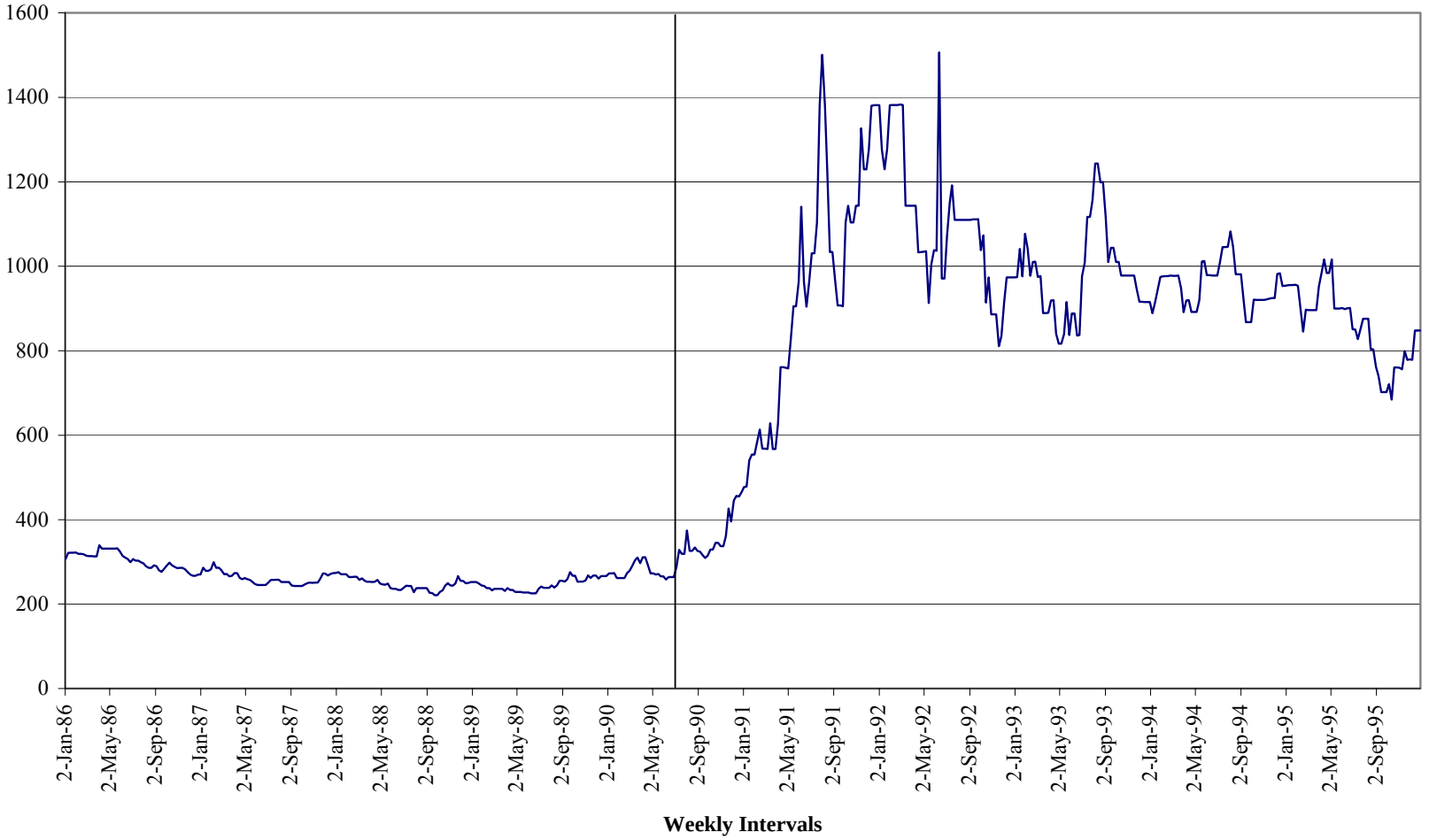

Figure 2
Yield Spreads for Brazil, 1886-1895
(Basis Points)

Figure 3
Yield Spreads for Chile, 1886-1895
(Basis Points)

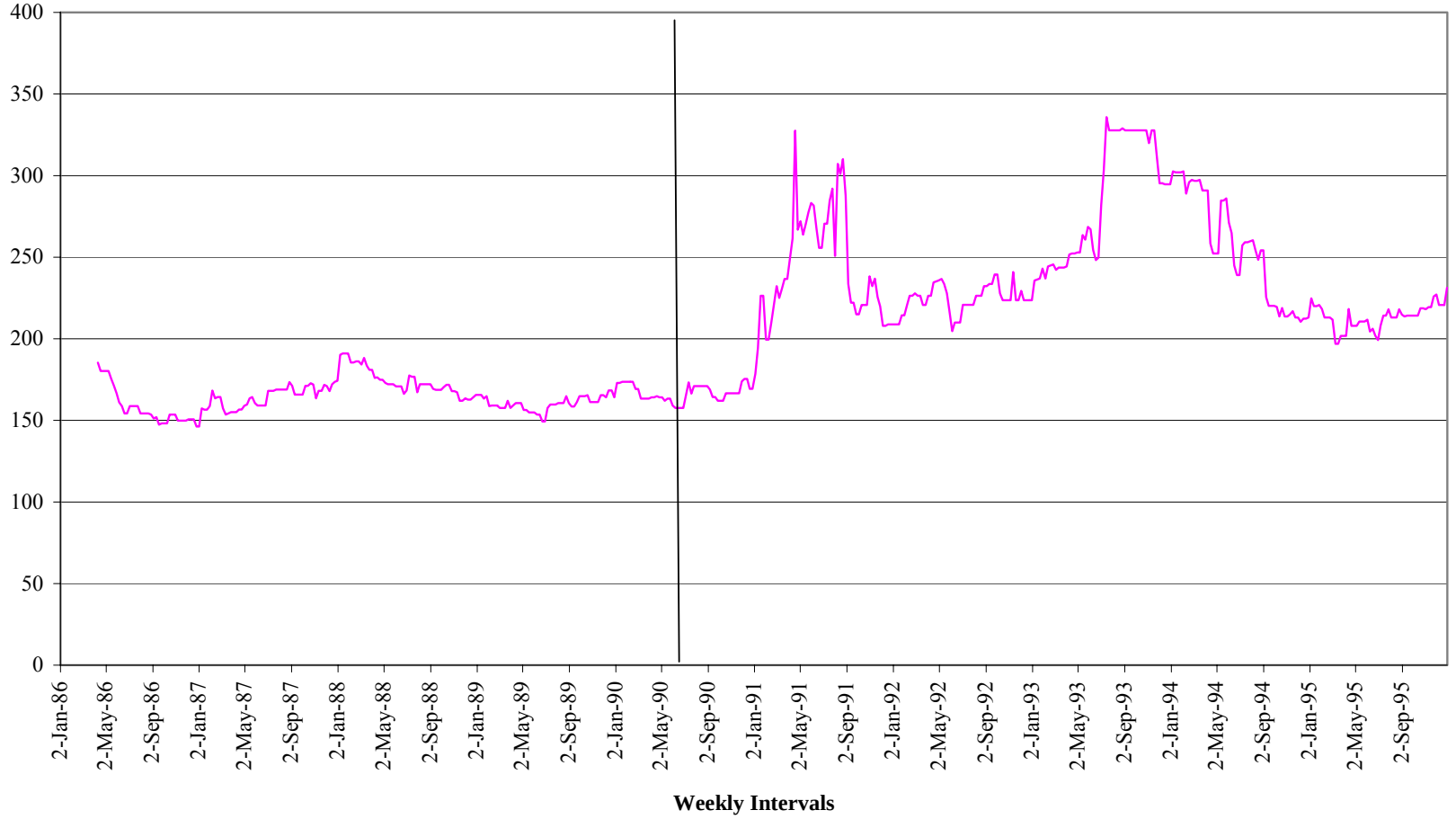

Figure 4
Yield Spreads for Colombia, 1886-1895
(Basis Points)

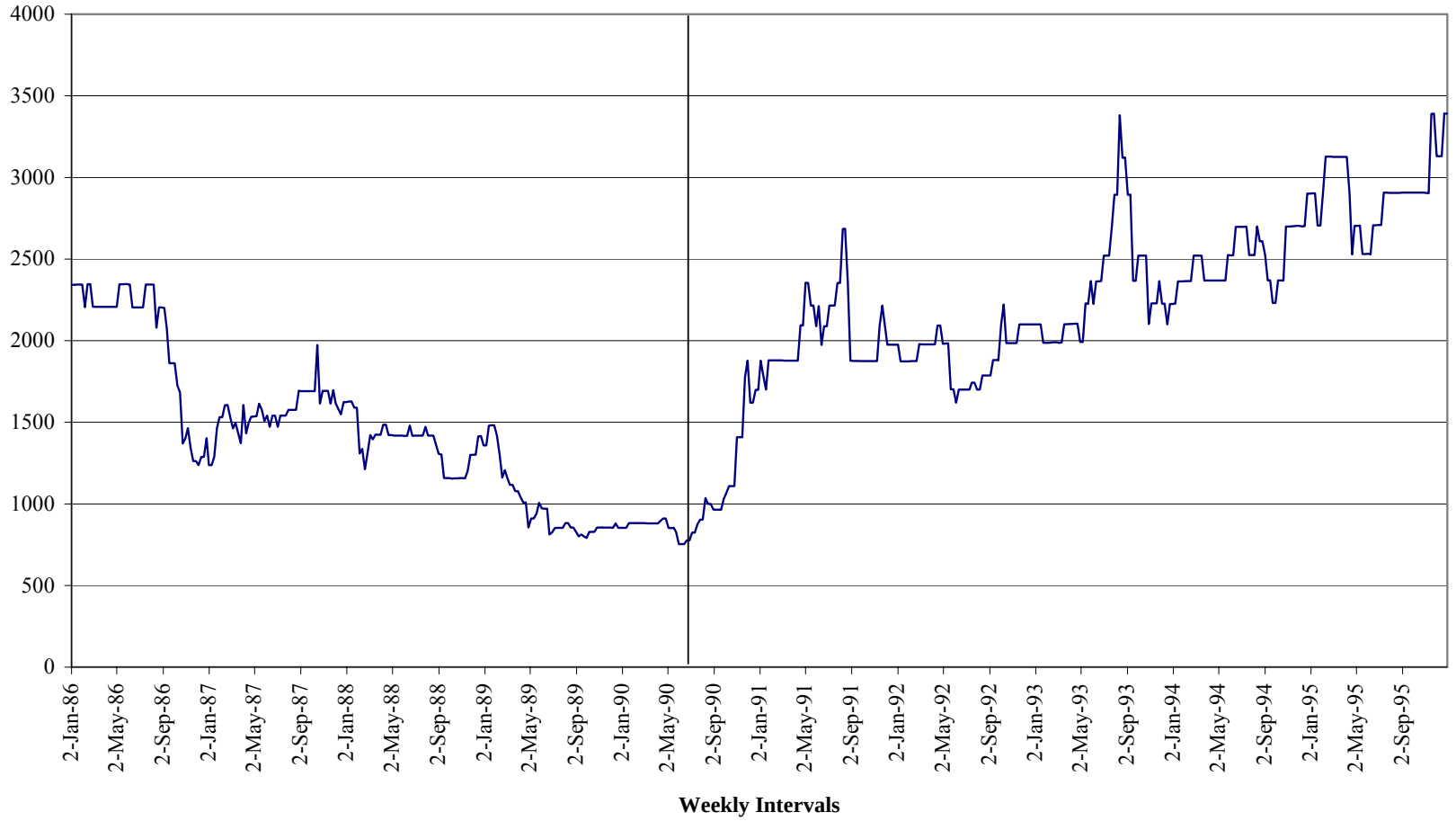

Figure 5
Yield Spreads for Costa Rica, 1886-1895
(Basis Points)

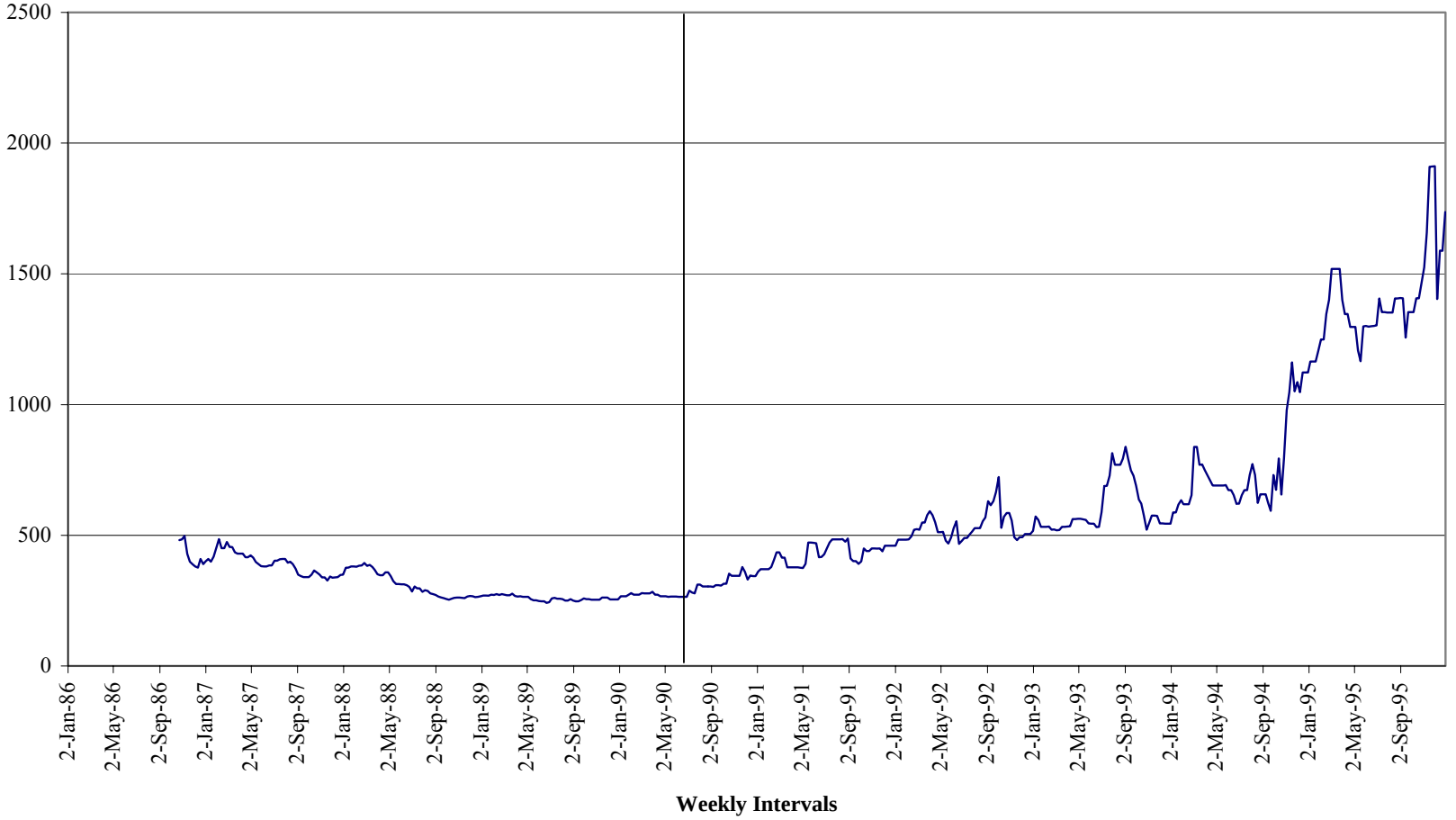

Figure 6
Yield Spreads for Guatemala, 1886-1895
(Basis Points)

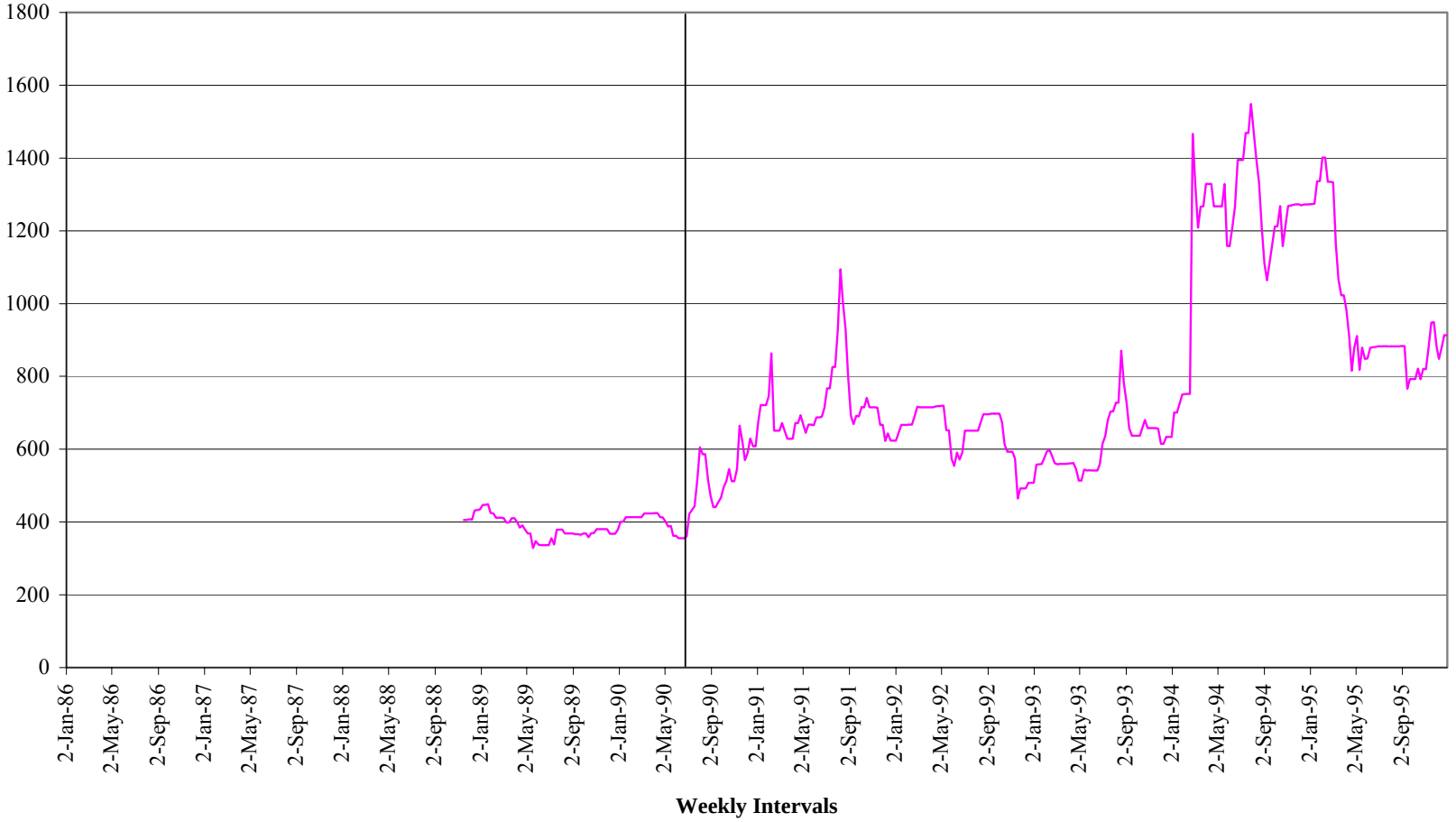

Figure 7
Yield Spreads for Honduras, 1886-1895
(Basis Points)

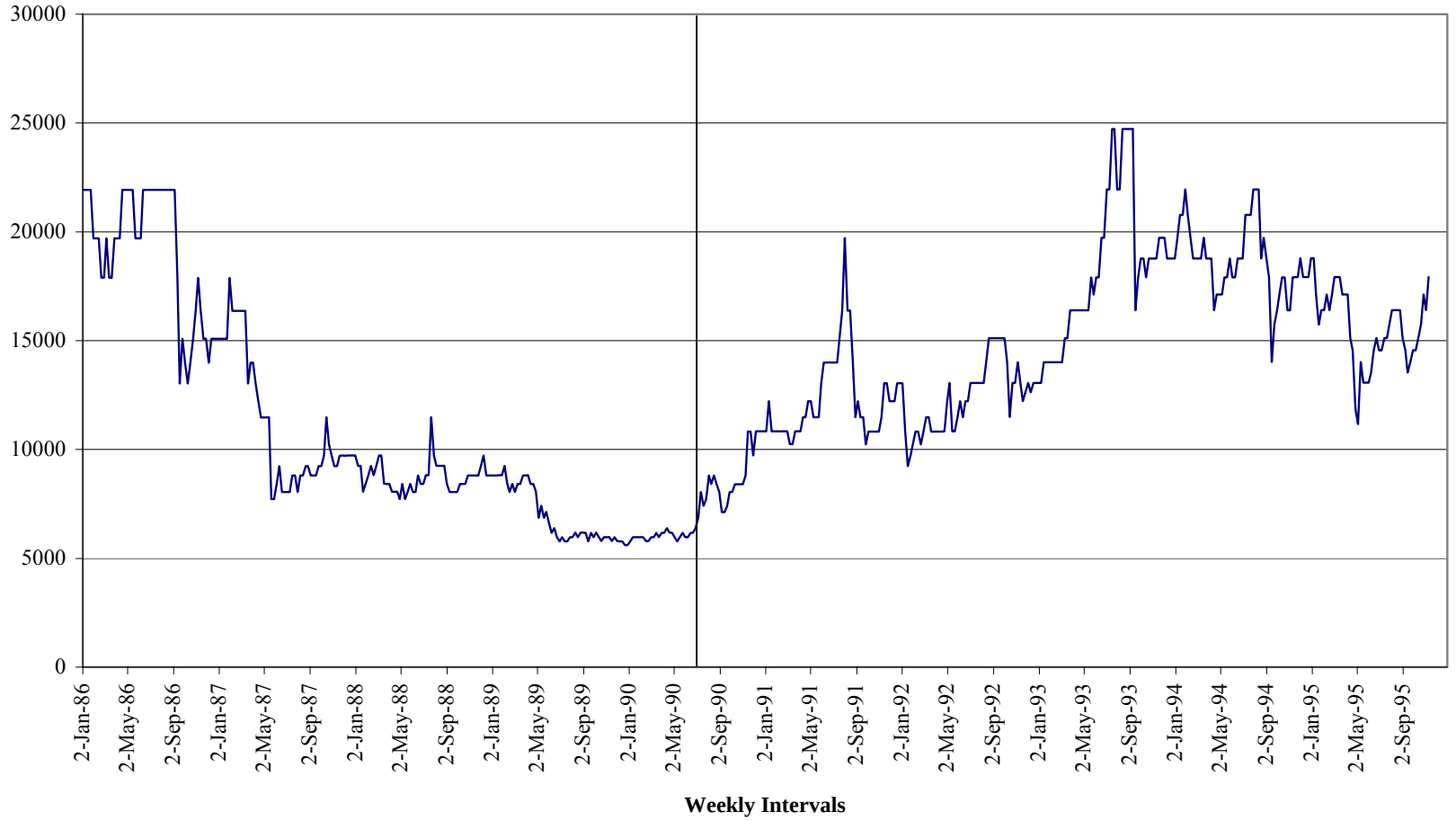

Figure 8
Yield Spreads for Mexico, 1886-1895
(Basis Points)

Figure 9
Yield Spreads for Nicaragua, 1886-1895
(Basis Points)

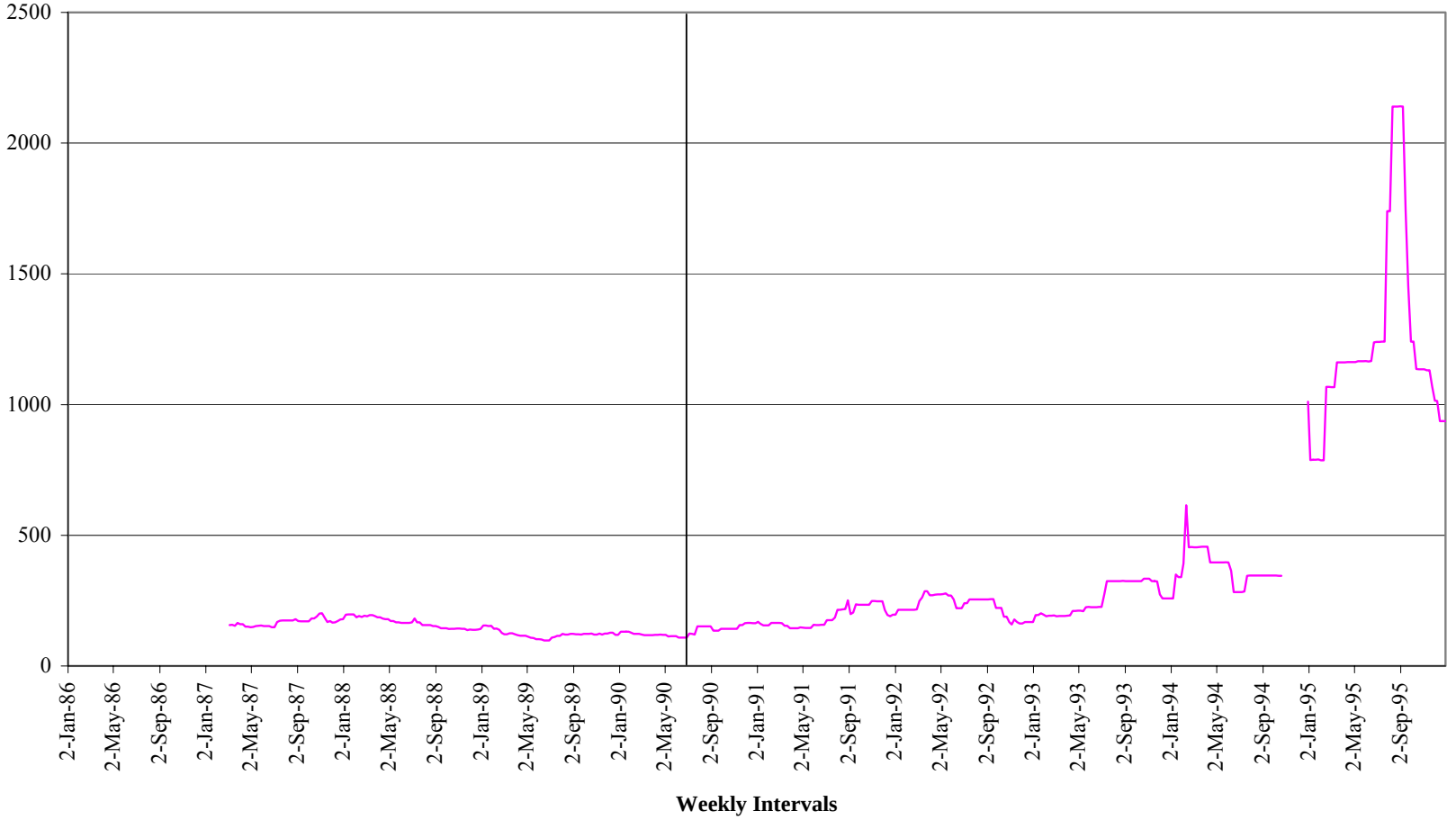

Figure 10
Yield Spreads for Paraguay, 1886-1895
(Basis Points)

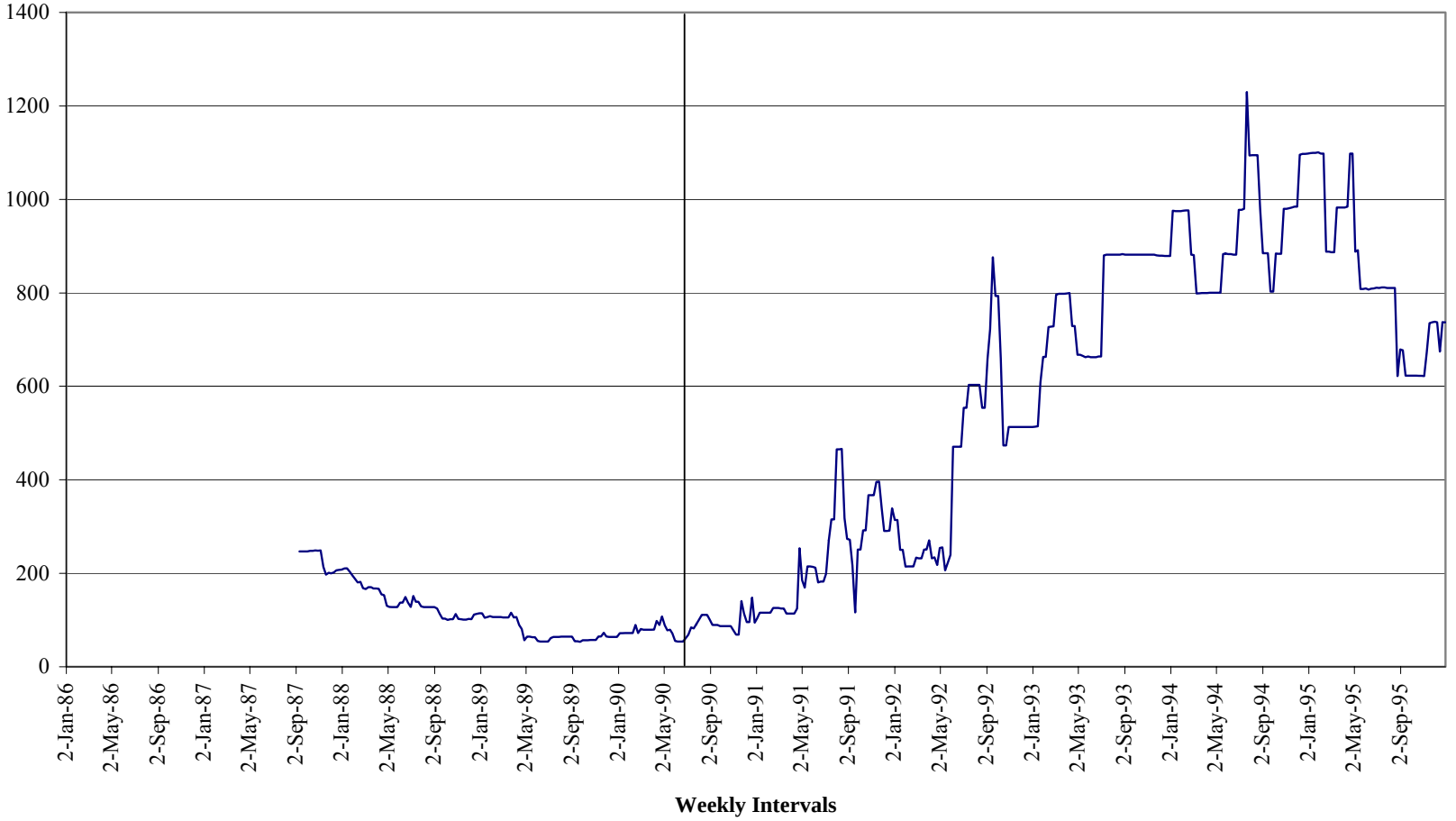

Figure 11
Yield Spreads for Portugal, 1886-1895
(Basis Points)

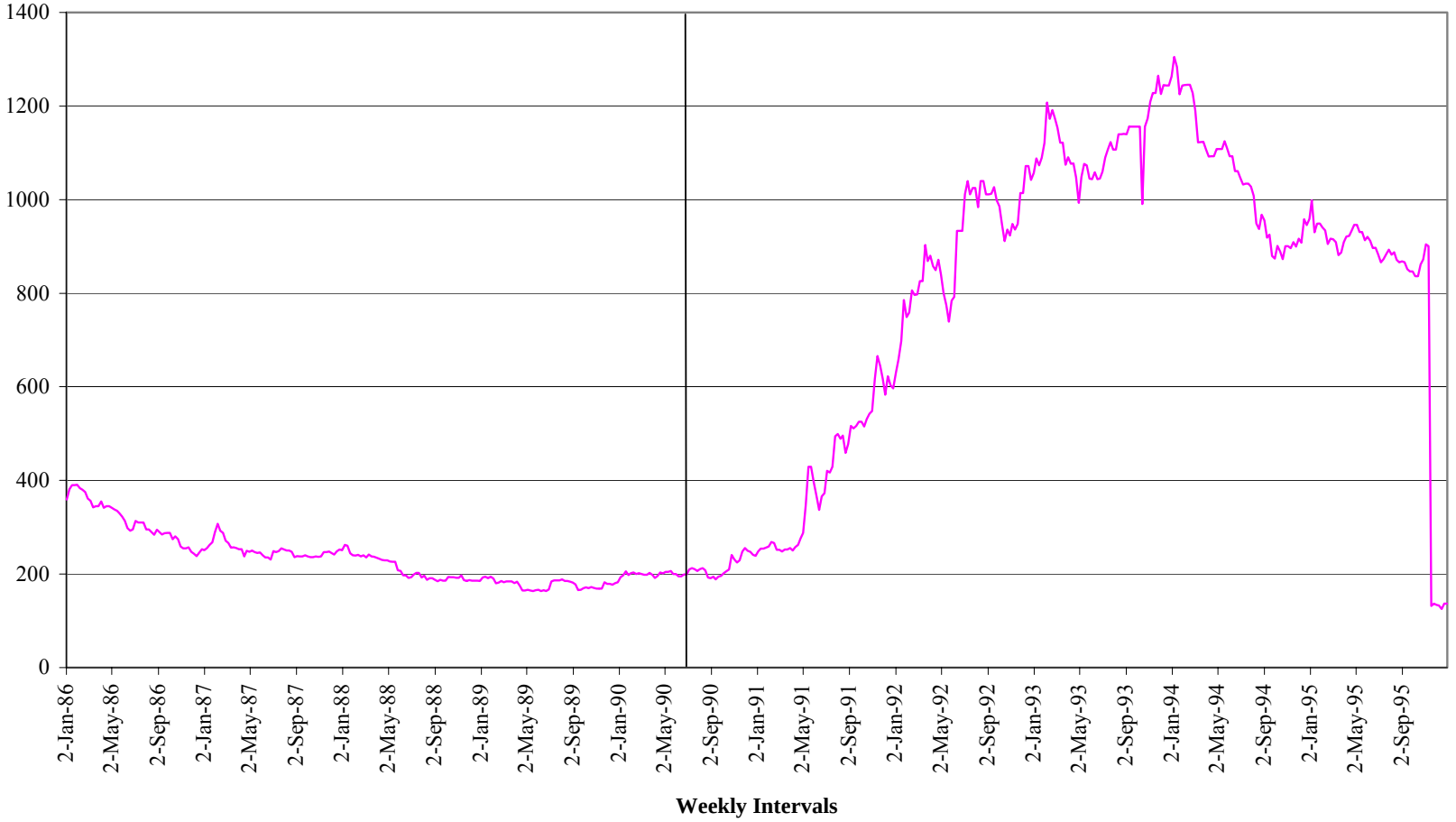

Figure 12
Yield Spreads for Spain, 1886-1895
(Basis Points)

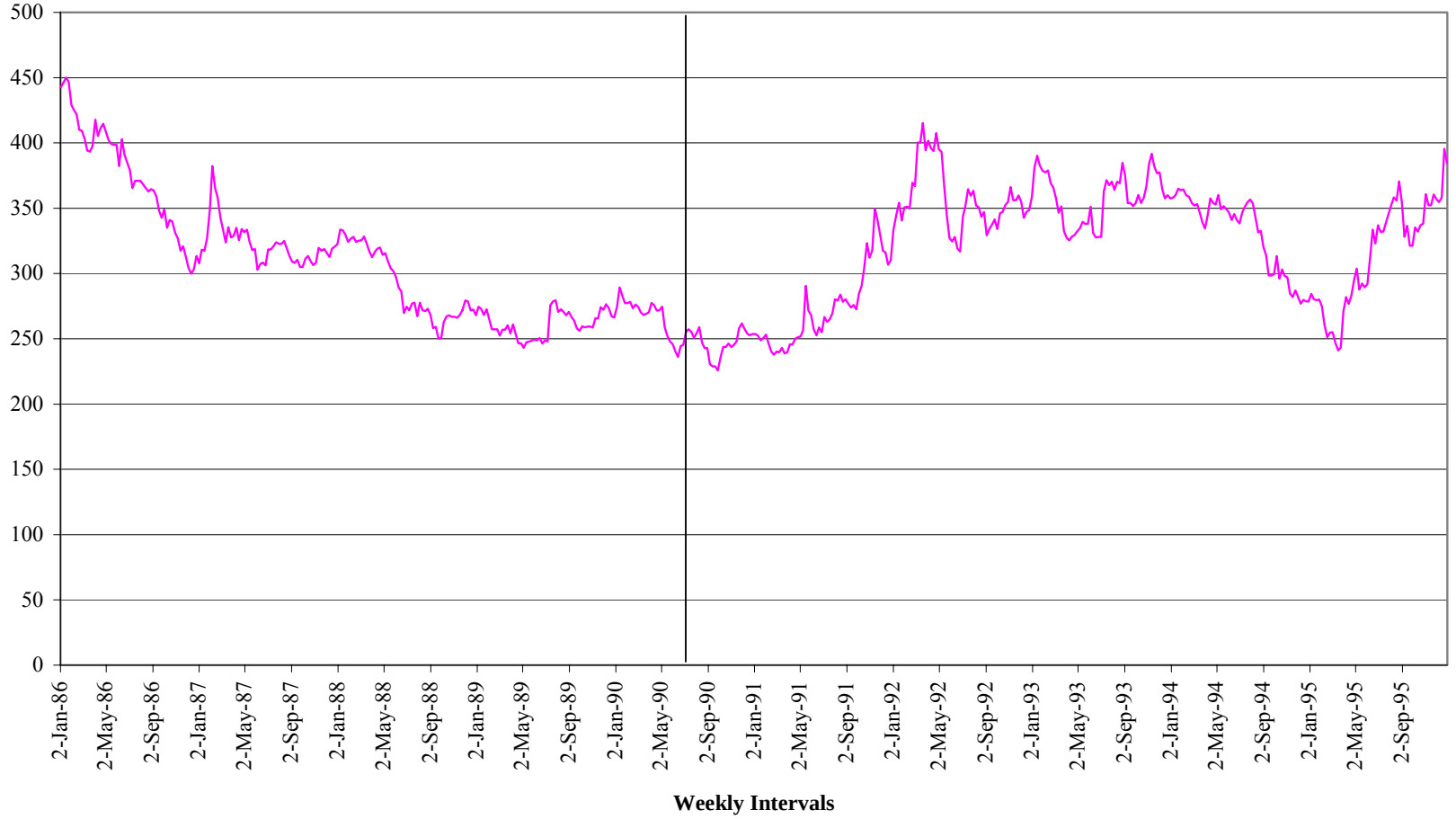

Figure 13
Yield Spreads for Uruguay, 1886-1895
(Basis Points)

Figure 14
Yield Spreads for Venezuela, 1886-1895
(Basis Points)

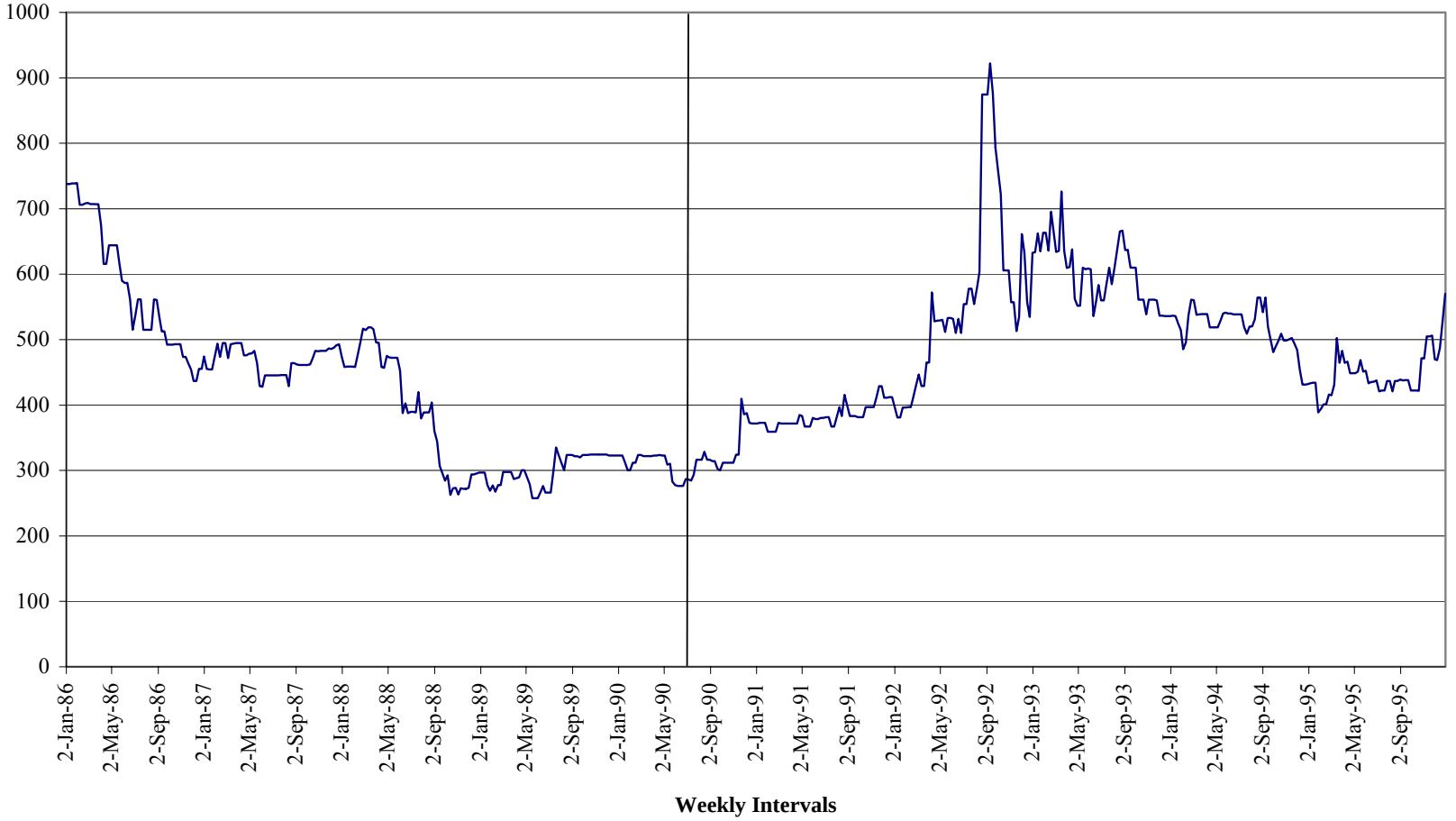

Figure 15
Yield Spreads for Austria, 1886-1895
(Basis Points)

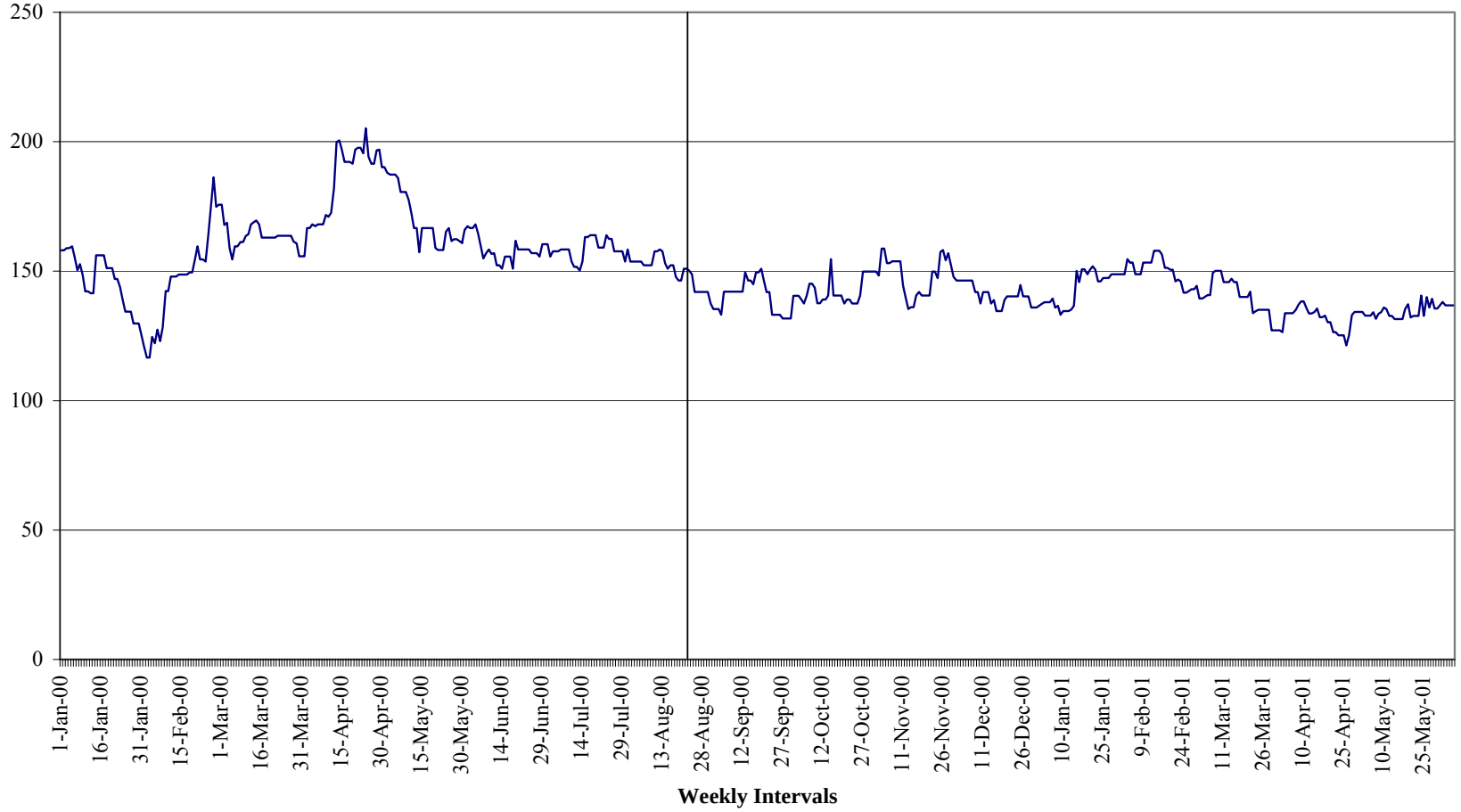

Figure 16
Yield Spreads for Canada, 1886-1895
(Basis Points)

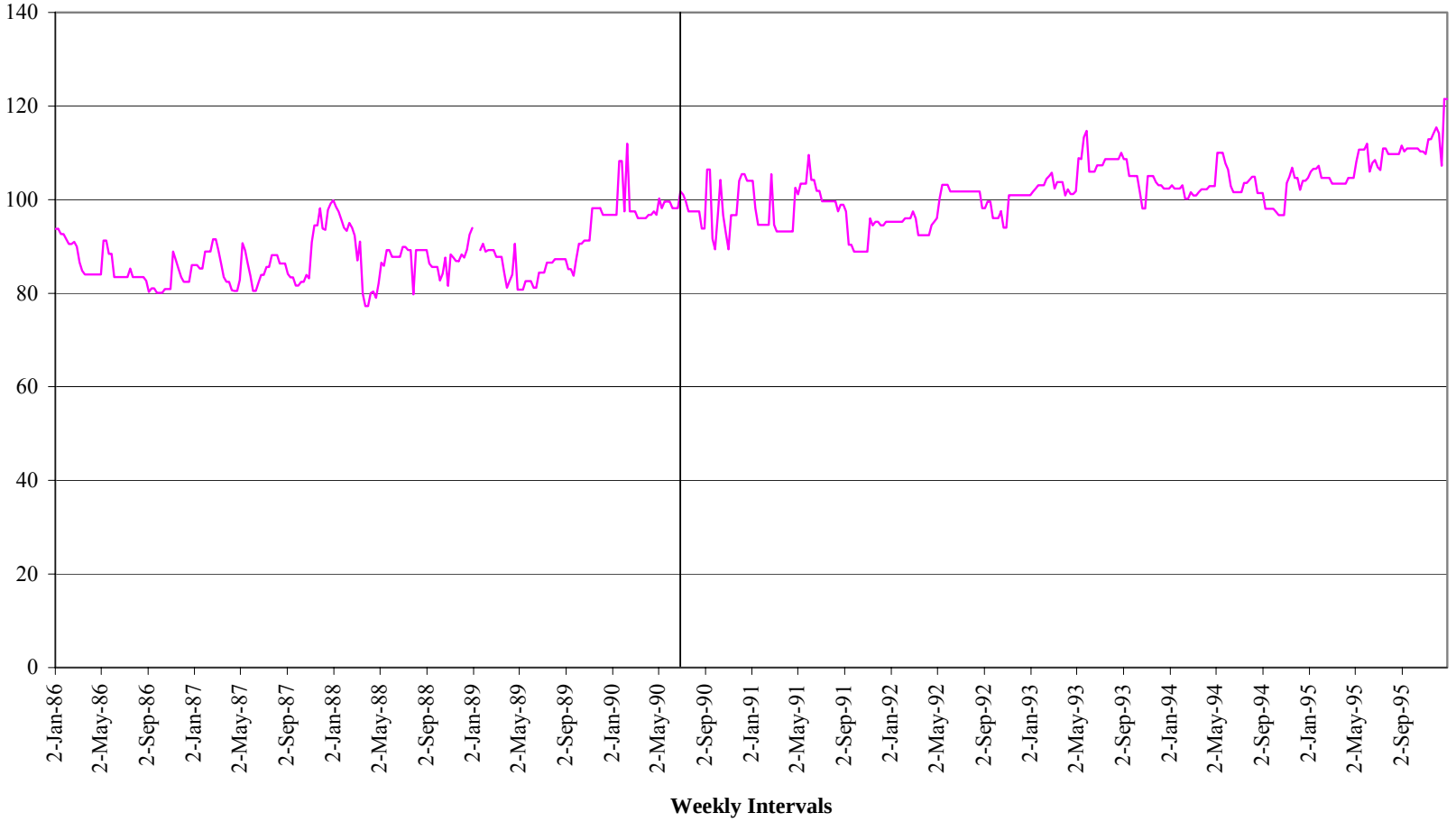

Figure 17
Yield Spreads for Cape of Good Hope, 1886-1895
(Basis Points)

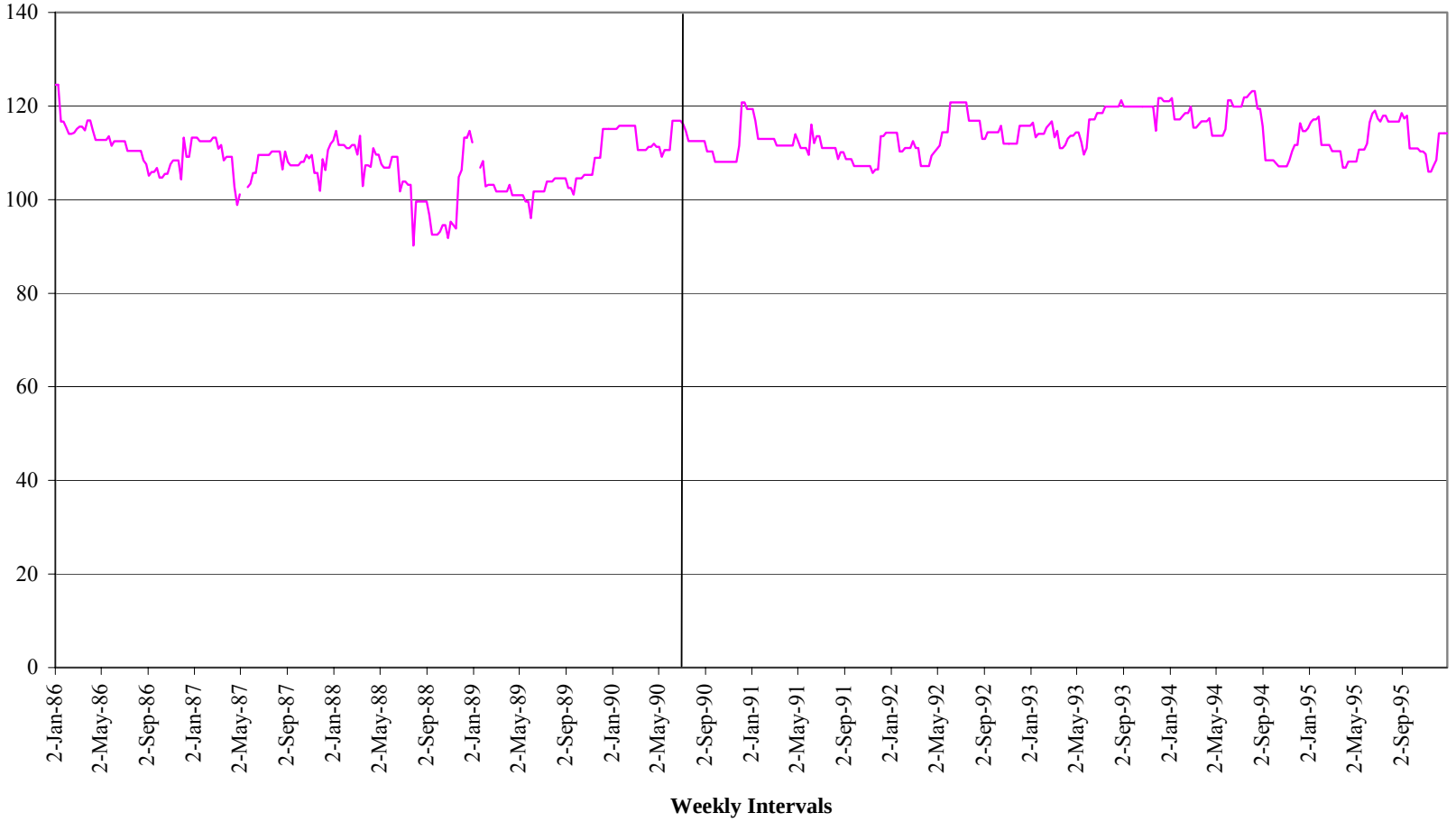

Figure 18
Yield Spreads for Egypt, 1886-1895
(Basis Points)

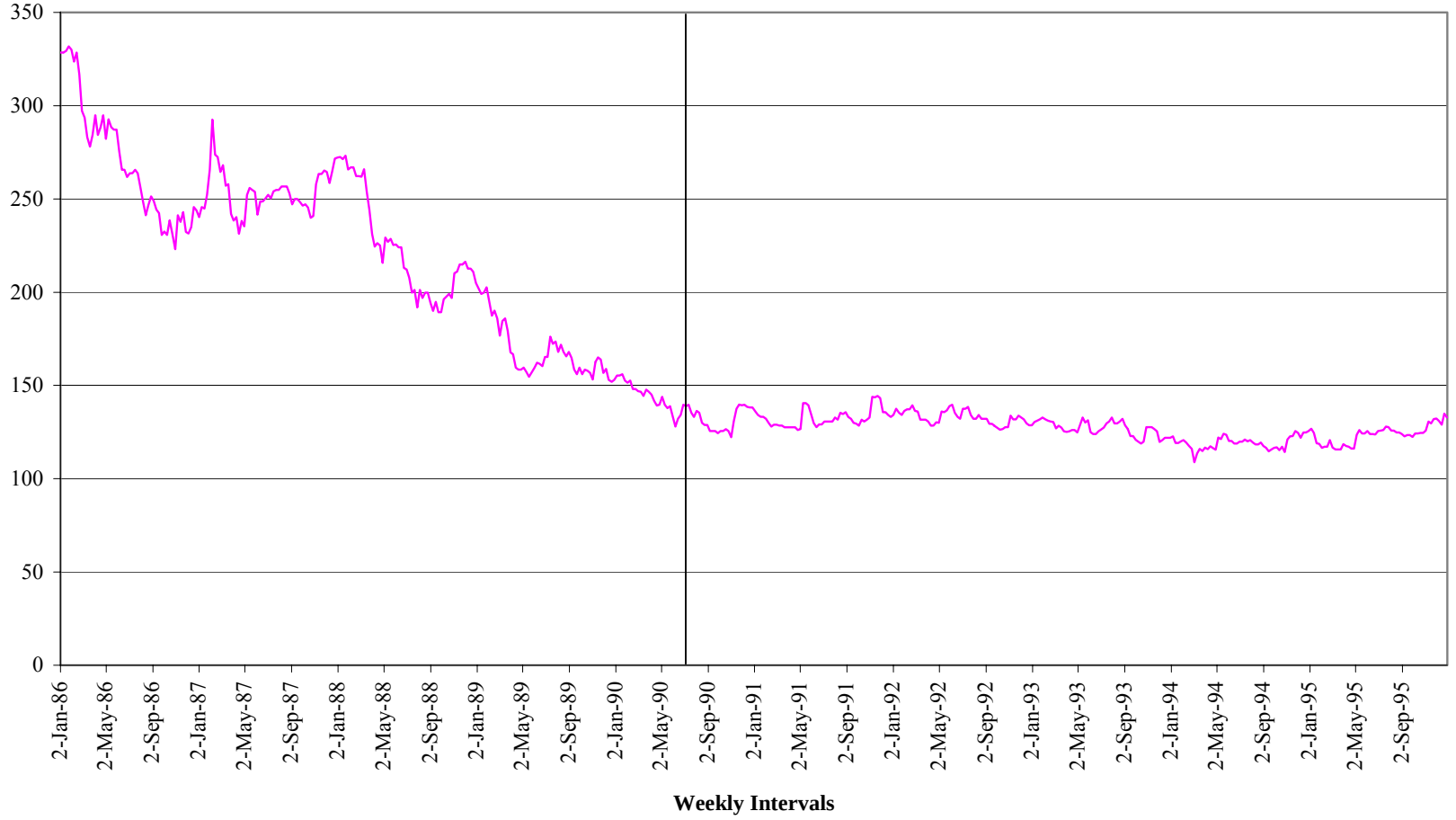

Figure 19
Yield Spreads for Greece, 1886-1895
(Basis Points)

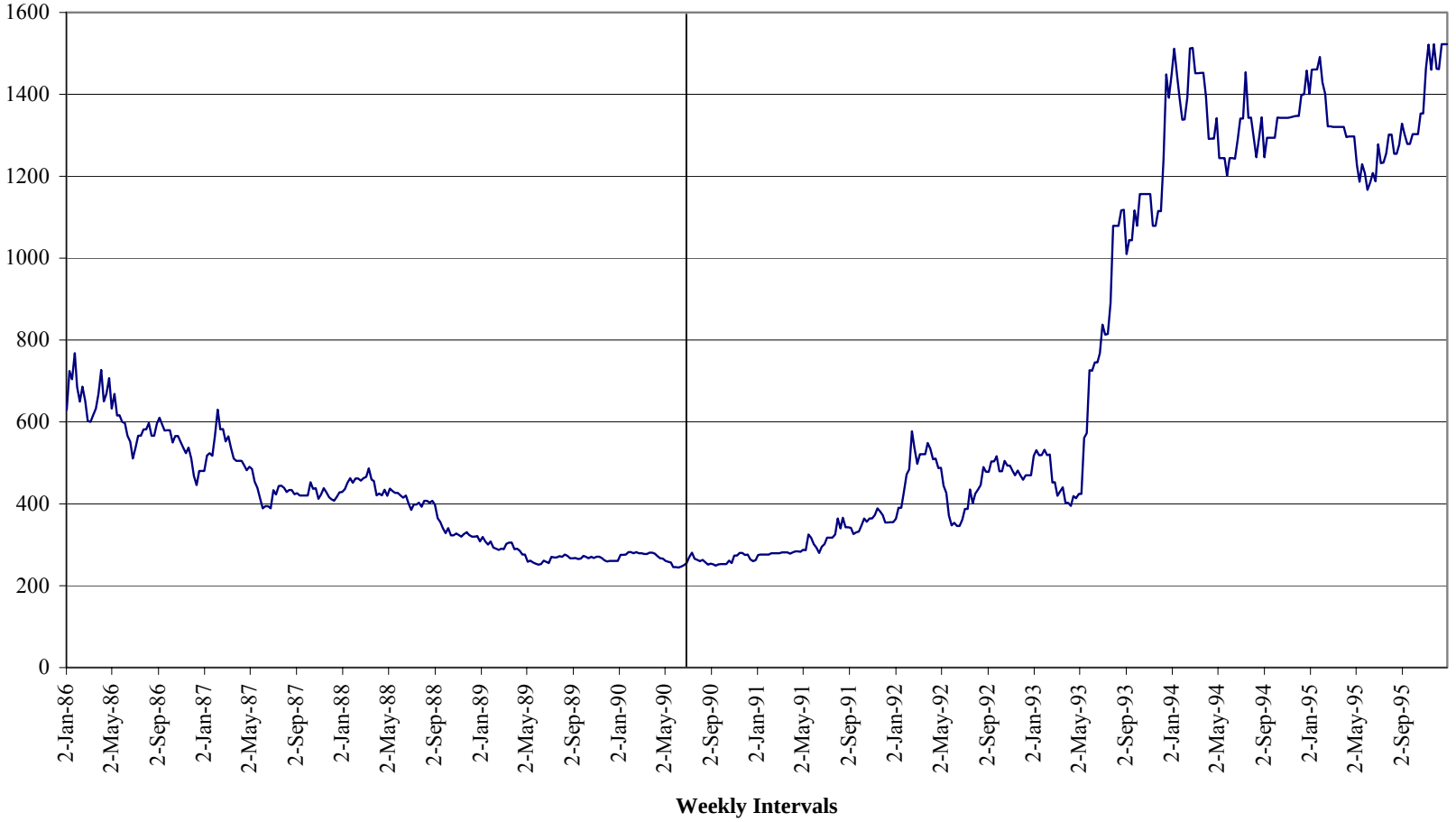

Figure 20
Yield Spreads for India, 1886-1895
(Basis Points)

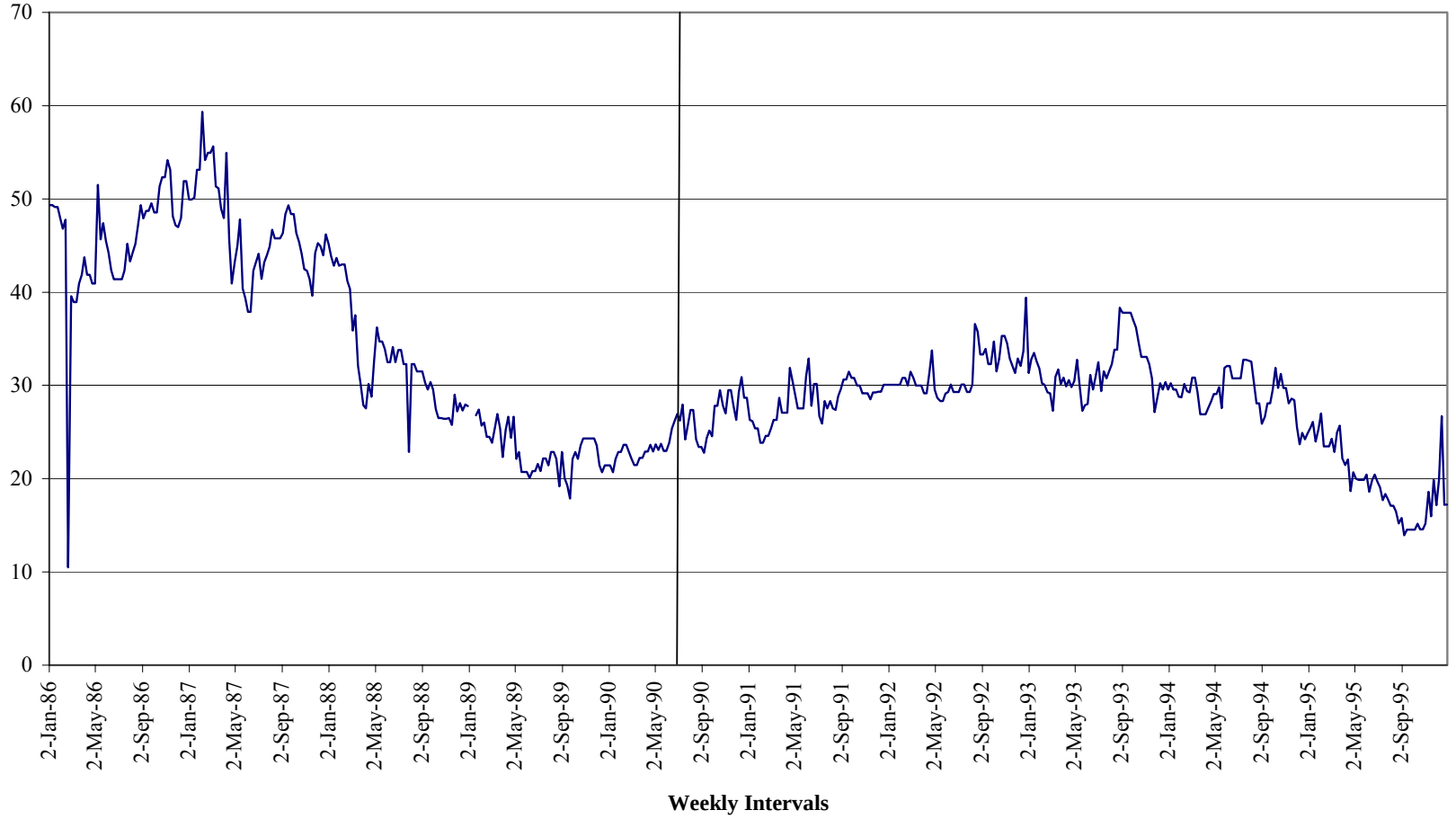

Figure 21
Yield Spreads for Italy, 1886-1895
(Basis Points)

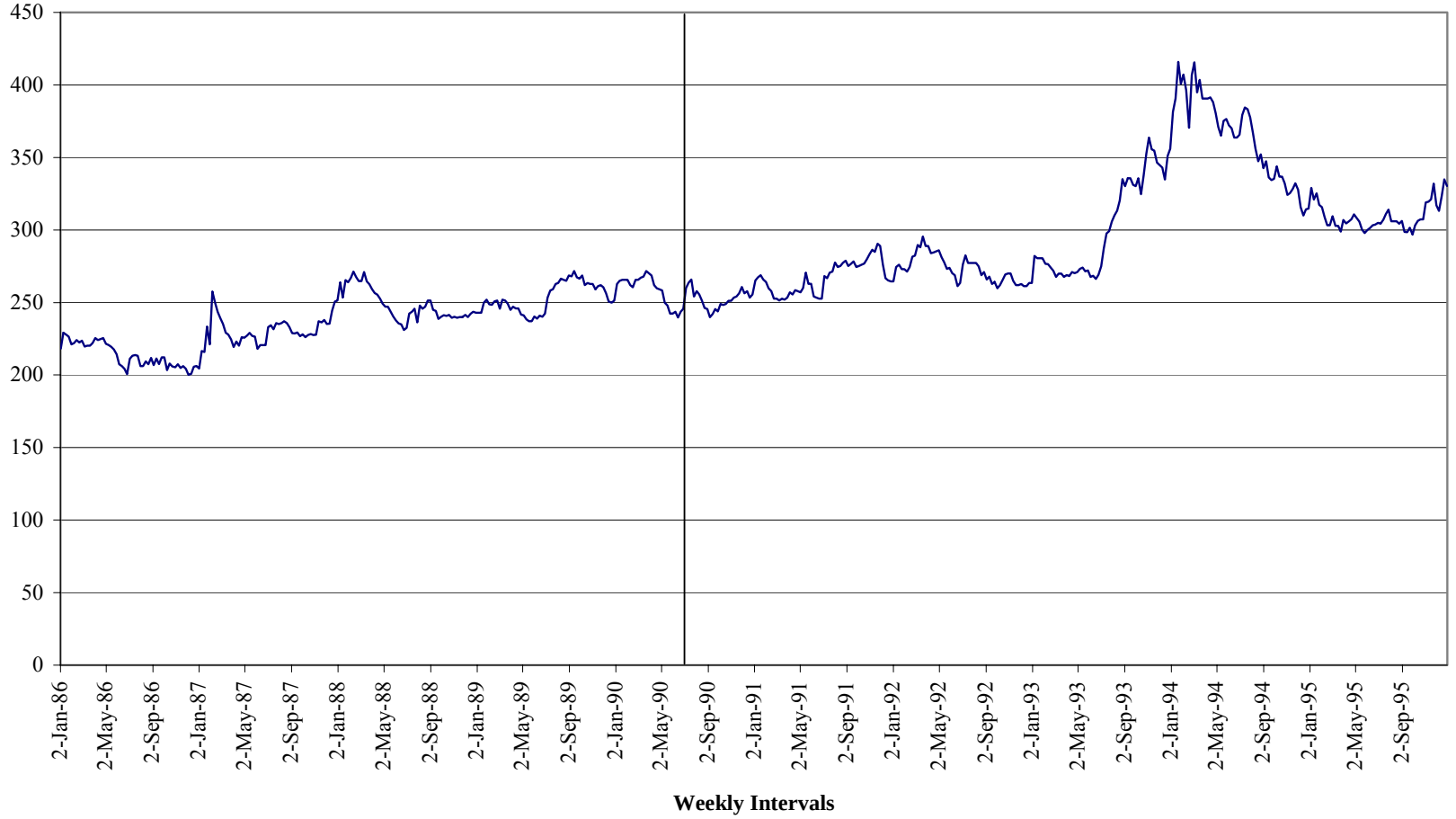

Figure 22
Yield Spreads for Japan, 1886-1895
(Basis Points)

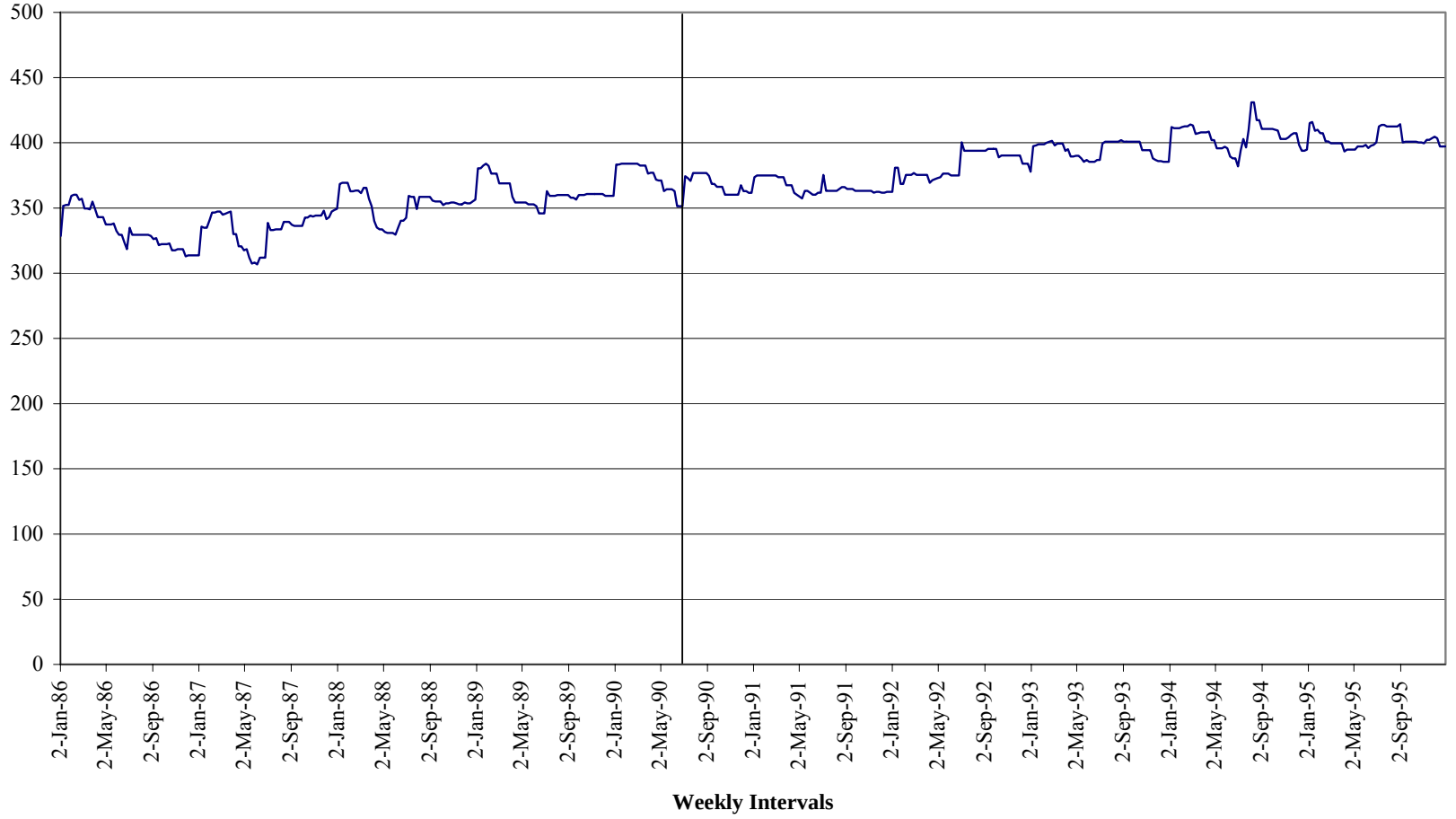

Figure 23
Yield Spreads for New South Wales, 1886-1895
(Basis Points)

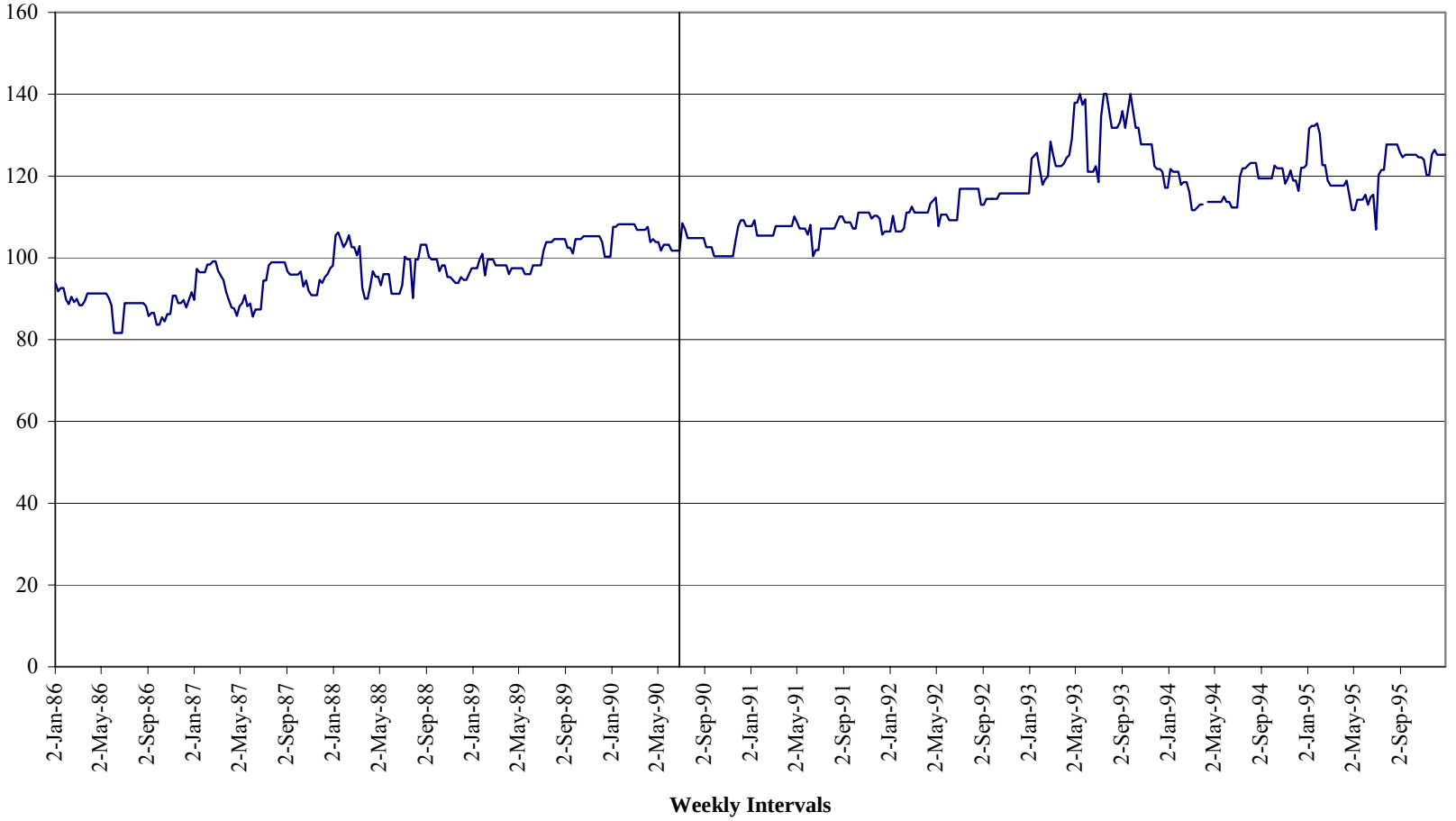

Figure 24
Yield Spreads for New Zealand, 1886-1895
(Basis Points)

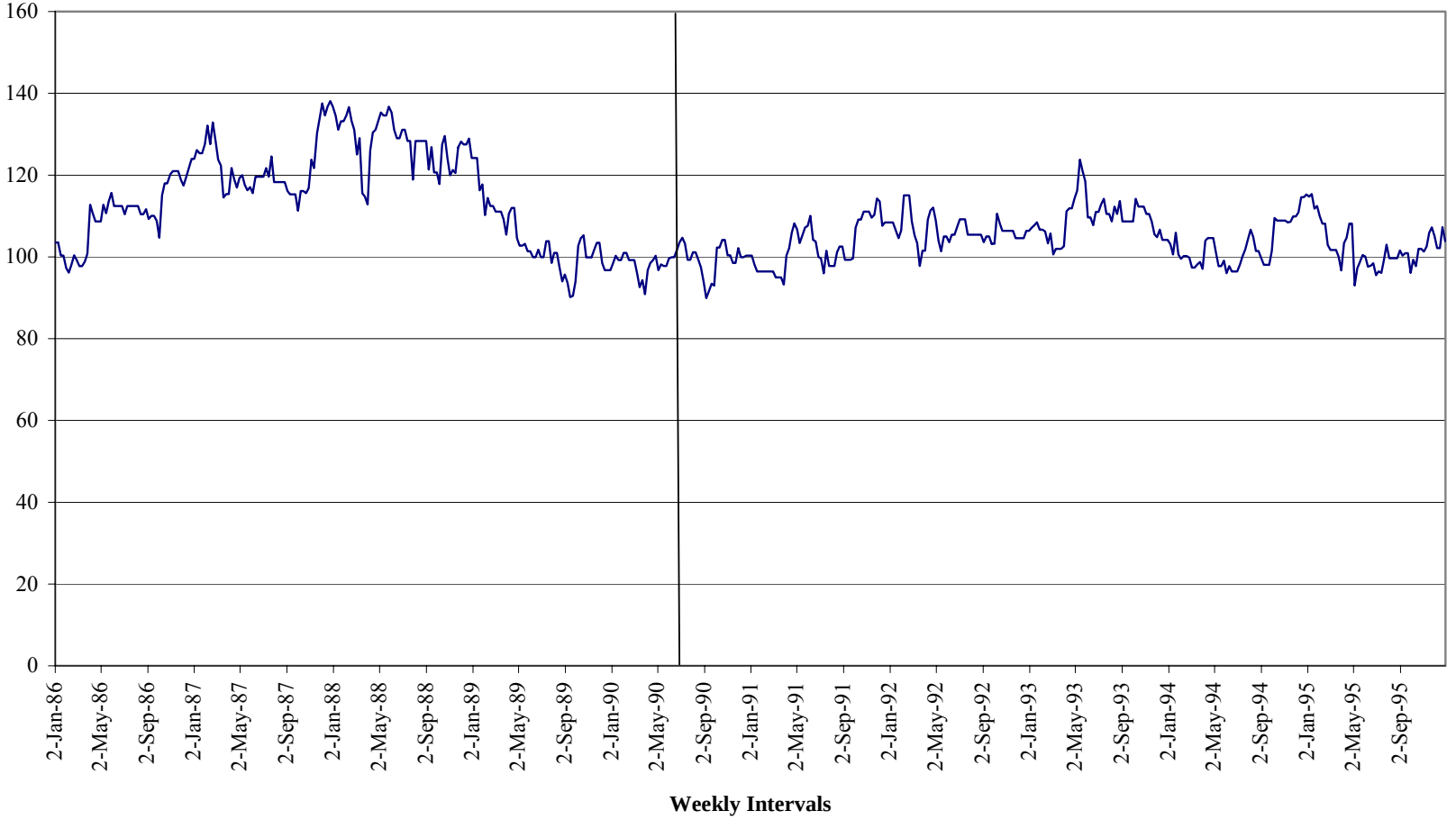

Figure 25
Yield Spreads for Norway, 1886-1895
(Basis Points)

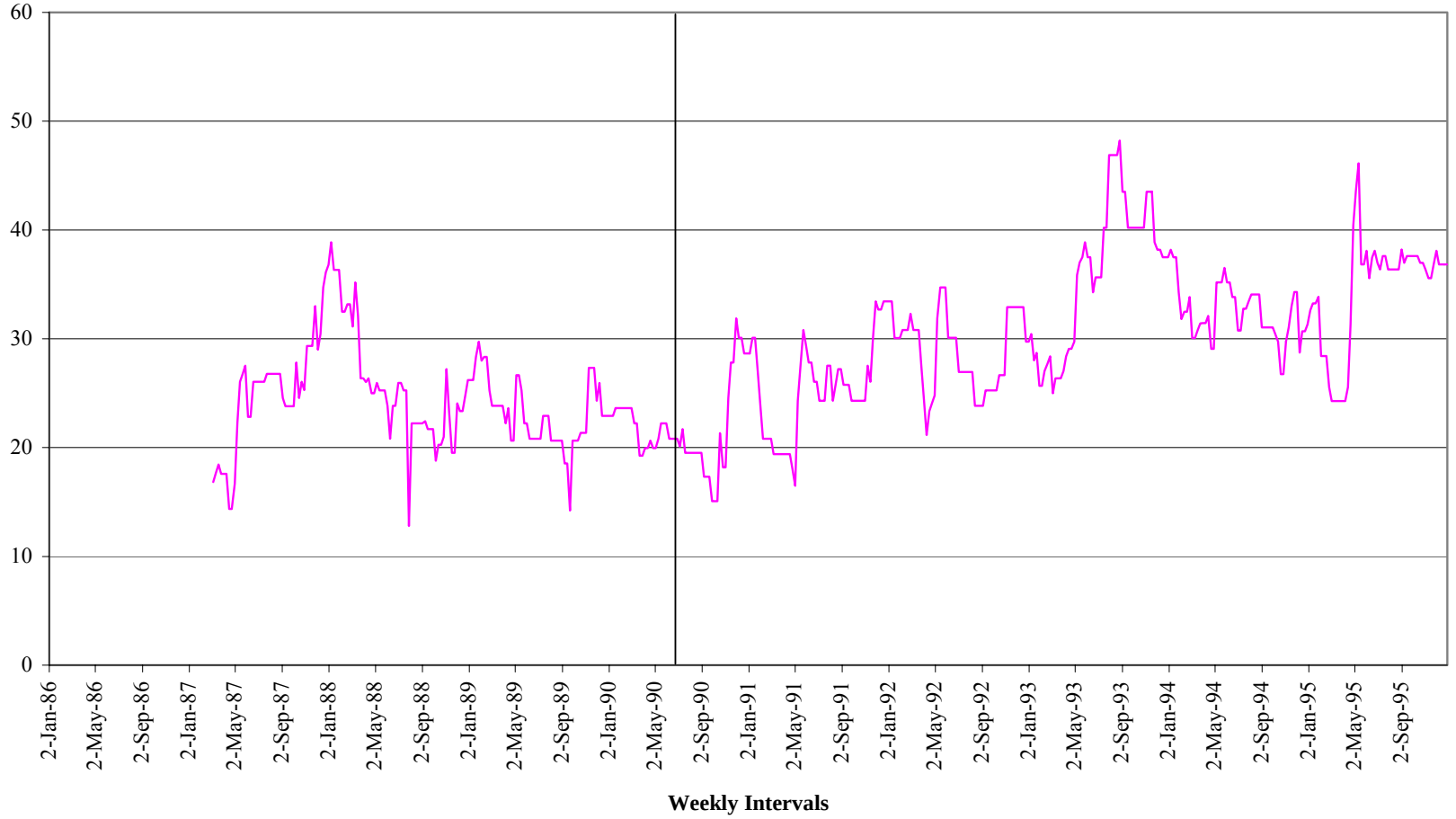

Figure 26
Yield Spreads for Russia, 1886-1895
(Basis Points)

Figure 27
Yield Spreads for Sweden, 1886-1895
(Basis Points)

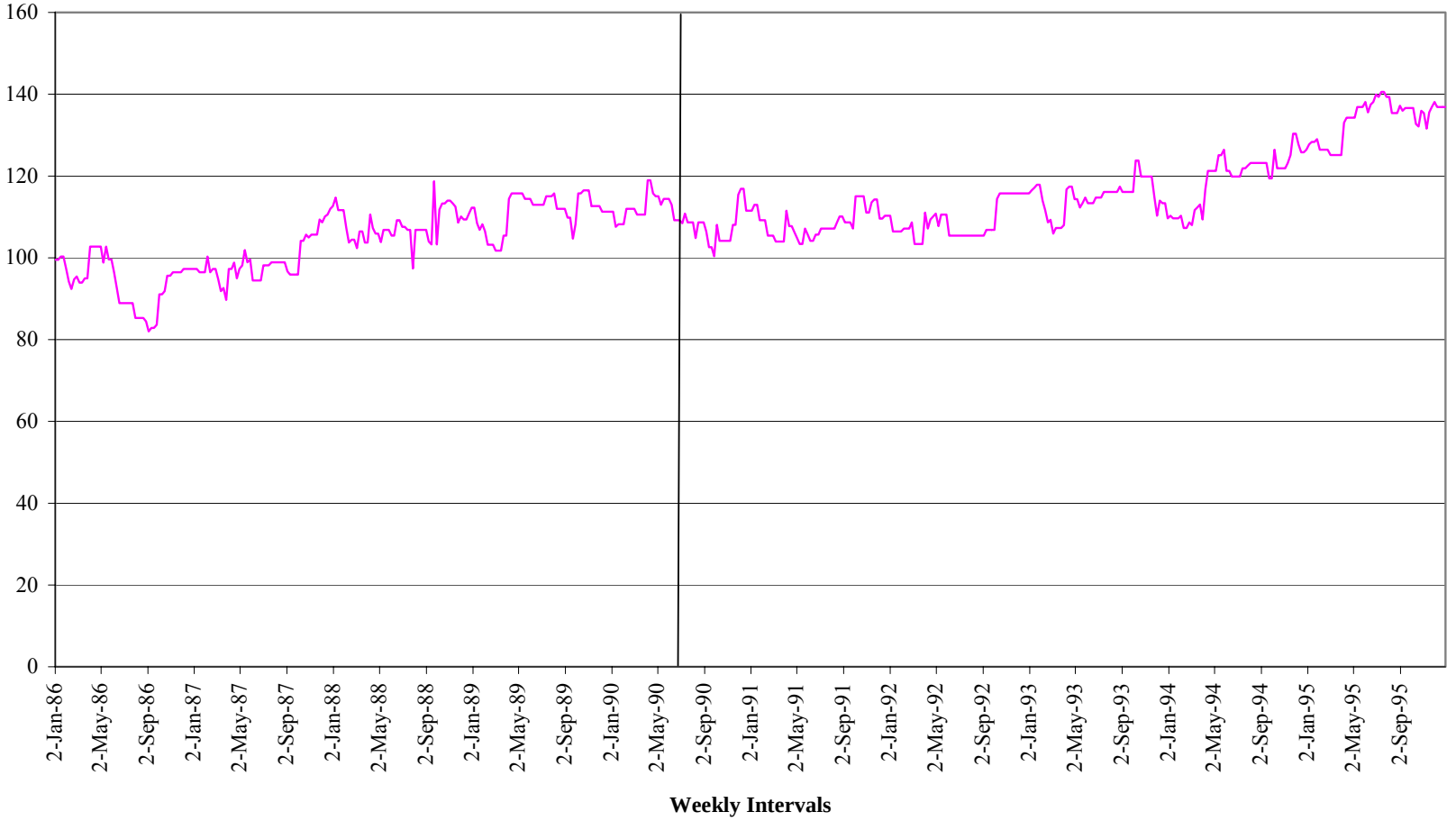

Figure 28
Yield Spreads for Turkey, 1886-1895
(Basis Points)

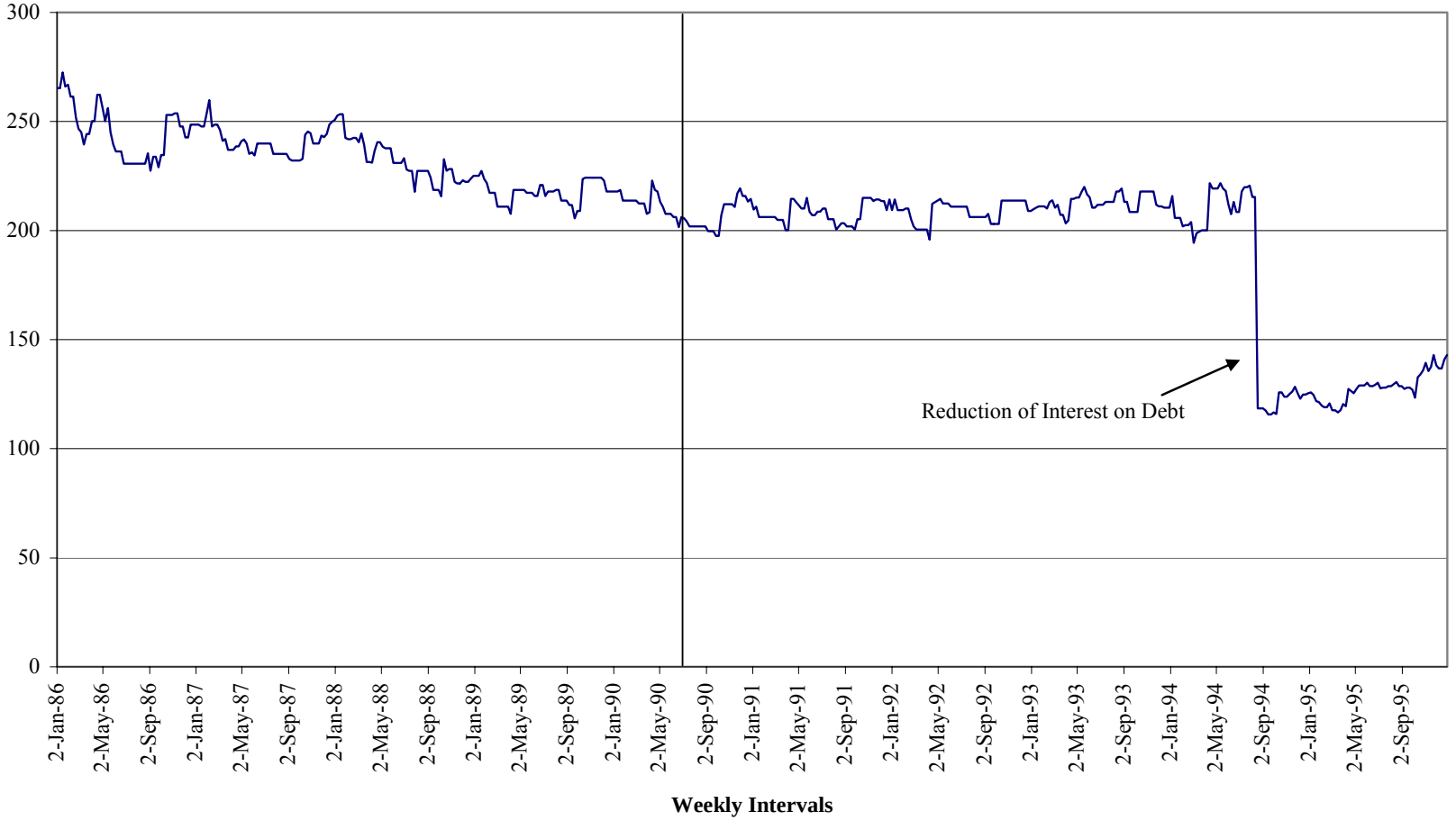

Figure 29
Yield Spreads for Belgium, 1886-1895
(Basis Points)

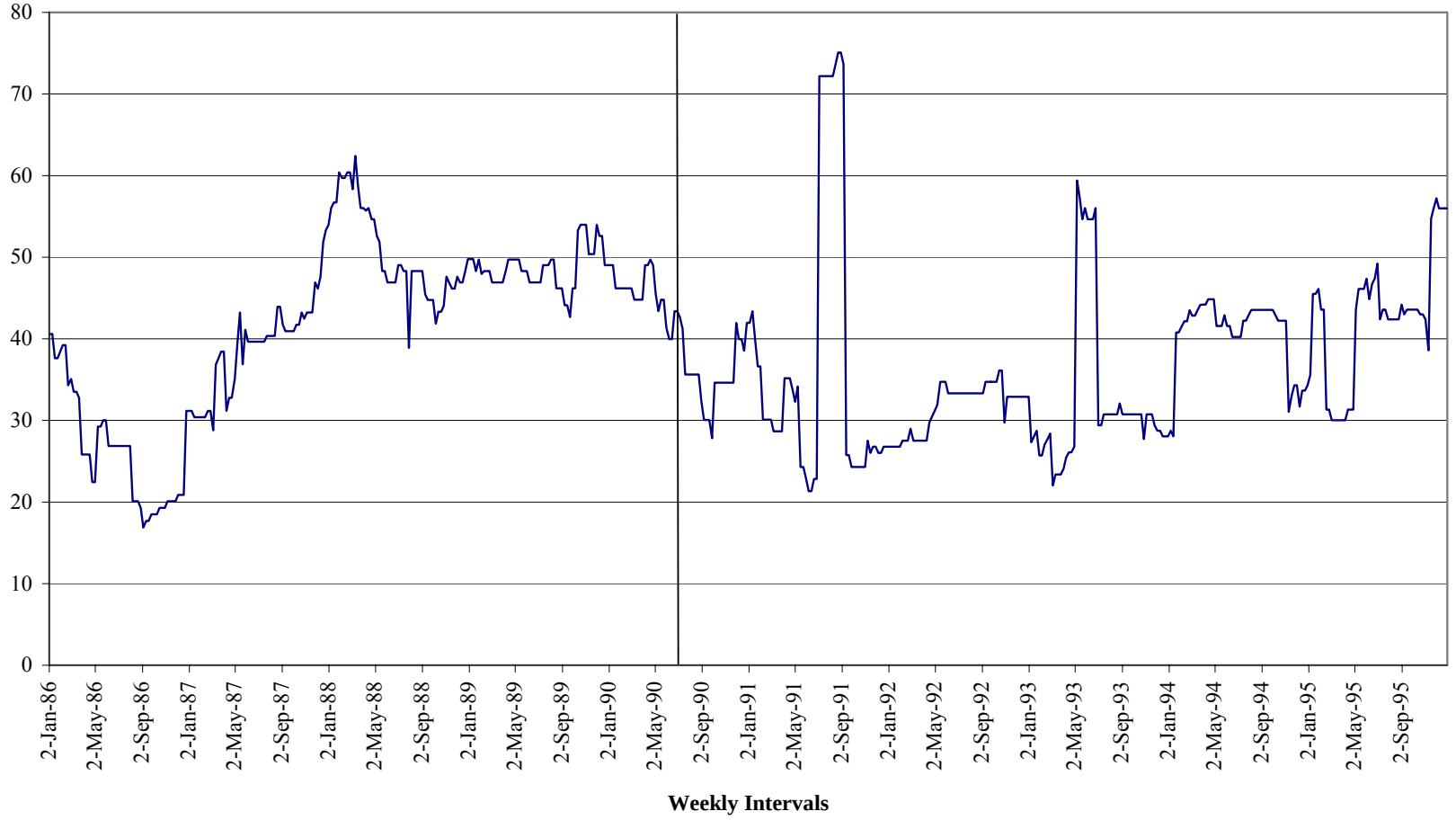

Figure 30
Yield Spreads for France, 1886-1895
(Basis Points)

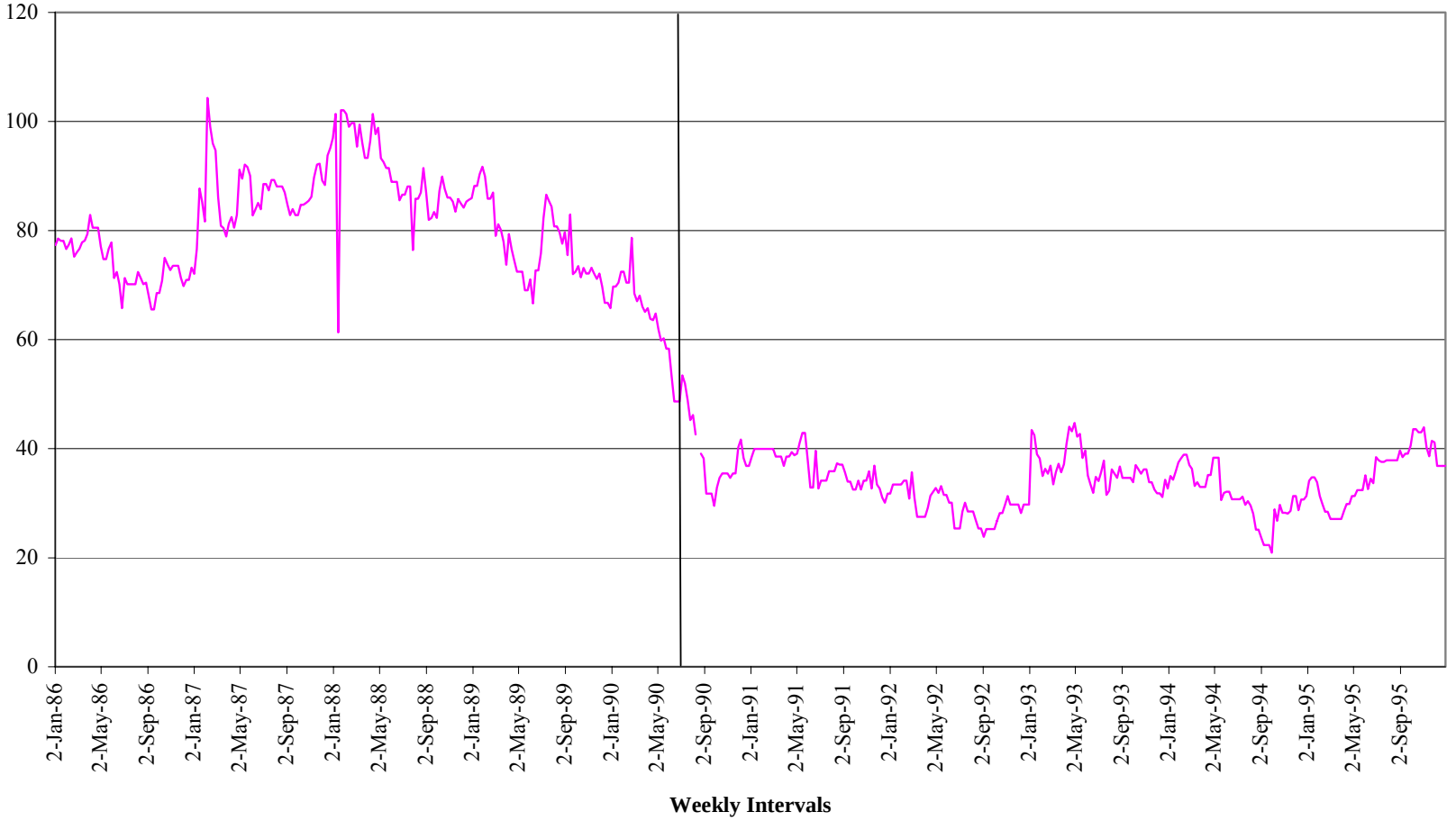

Figure 31
Yield Spreads for Germany, 1886-1895
(Basis Points)

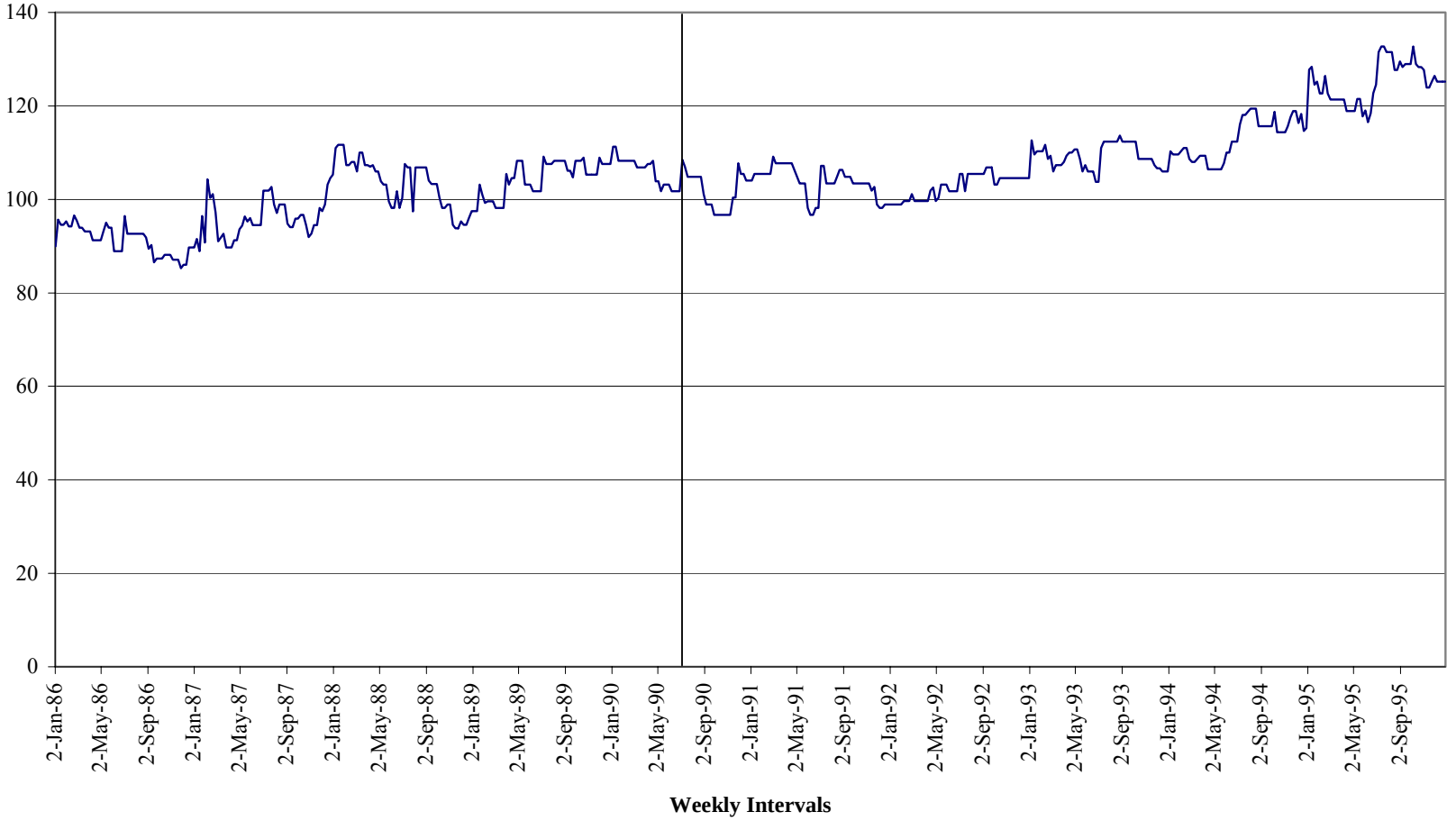

Figure 32
Yield Spreads for the Netherlands, 1886-1895
(Basis Points)

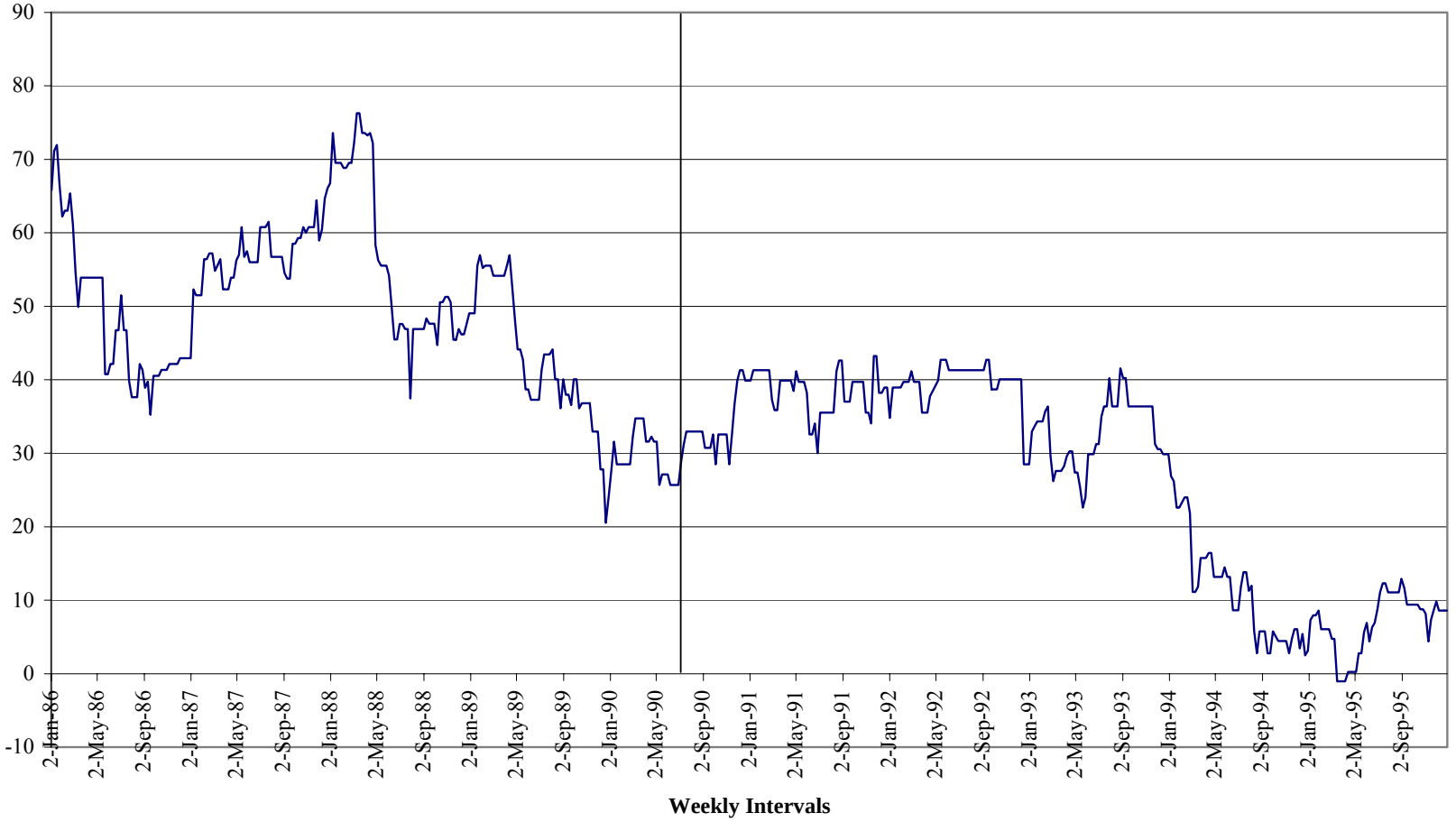

Figure 33
Yield Spreads for the United States, 1886-1895
(Basis Points)