4

Political Regimes and Credit Risk

Dincecco presents a new database for free-market yields on long-term government bonds from 1750 to 1913. His main theoretical contribution is that fiscal centralization and limited government typically led to substantial reductions in bond yields (compared with British consols). He illustrates this in the cases of France, the Netherlands, and Spain.

Fiscal fragmentation and absolutism characterized the Old Regime. Fundamental political transformations resolved weak- and strong-state fiscal problems: European states gained tax force through fiscal centralization, and restricted executive power through limited government. The final result was institutional balance. By the eve of World War I in 1913, states could gather large tax revenues, and rulers faced parliamentary spending constraints. This claim guides the rest of the inquiry, which the book now pursues through a rigorous examination of the new database, using a combination of descriptive, case-study, and statistical methods.

The empirical investigation of the effects of political transformations on public finances starts with sovereign credit. The ability of governments to tap the resources of society to fund expenditures through borrowing is important in its own right. Furthermore, like an electrocardiogram, which documents the activity of the human heart, we may think of free-market long-term rates of interest on government bonds as vital signs of the fiscal health of nations.[1] When these rates are charted as time series, the impacts of political reforms, wars, revolutions, defaults, and other events are evident. This chapter first characterizes the theoretical links between political change and credit risk. It then describes the yield data and examines the times series for select Group 1 countries. In turn, we gain a basic understanding of the fiscal effects of political transformations.

[1] See Homer and Sylla (2005, p. 3).

4.1. Regimes and Risk: Theory

By establishing parliament's power of the purse, limited government reduced the likelihood of poor spending decisions by executives. Rather than using funds for foreign military adventures or other ill-advised items, states should have devoted greater amounts to fiscally prudent policies like debt service. Limited government should have thus improved sovereign credit risk relative to absolutist regimes. Chapter 5 considers two explicit mechanisms through which credit reductions may have occurred.

The relationship between fiscal centralization and sovereign credit risk is more ambiguous than that of limited government. By resolving the problem of local tax free-riding, centralization enabled states to gather larger revenues. It should have thus been easier for responsible governments to follow sound fiscal policies, decreasing credit risk. However, there was always the chance that rulers would waste the new funds on reckless wars or the monarchy itself. The consolidation of fiscal powers may have thus exacerbated problems of executive control. If so, then credit risk should have risen after fiscal centralization.

Table 4.1 summarizes the sovereign credit risk characteristics of the four possible political regimes: fragmented and absolutist, centralized and absolutist, fragmented and limited, and centralized and limited. Credit risk under centralized and limited regimes should have been lower than that under fragmented and absolutist ones. By eliminating local tax free-riding, fiscal centralization implied an increase in public funds. Similarly, limited government placed spending constraints on executives, suggesting an improvement in fiscal prudence. The combination of greater revenues and parliamentary control should have improved credit risk.

By this logic, sovereign credit risk should have decreased under fragmented and limited regimes relative to fragmented and absolutist ones. Theory cannot predict whether there was an improvement in credit risk under centralized and absolutist versus fragmented and absolutist regimes, since fiscal centralization generated new funds that executives could have used to repay debts responsibly or spent recklessly. We may definitively say, however, that credit risk under centralized and limited regimes should have been the lowest of all, since both weak- and strong-state fiscal problems had been resolved.

A final point: although the theoretical predictions are in ceteris paribus terms, factors beyond political regimes also influenced sovereign credit

TABLE 4.1. *Sovereign Credit Risk Characteristics of Political Regimes*

Fragmented and absolutist	High due to free-riding and lack of credible commitment
Centralized and absolutist	Fall due to resolution of free-riding, but rise due to executive consolidation of fiscal powers
Fragmented and limited	Fall due to credible commitment, but still-free riding
Centralized and limited	Low due to resolution of free-riding and credible commitment

risk. The regression analysis in Chapter 7 explicitly controls for the yield effects of a wide variety of political and economic variables, including large debt burdens.

4.2. The Data

The analysis uses a new database for free-market yields on long-term government bonds from 1750 to 1913. Unlike nominal yields, which simply report the government's stated rate of interest, market-determined yields provide direct measures of investor perceptions of sovereign credit risk. Appendix A.1 displays the time series data.

These data are from a variety of primary and secondary sources. Appendix A.2 describes the data sources and construction methods. One key source was the Global Financial Database (GFD), which offered high-frequency (i.e., weekly or monthly) data. Comparison of the GFD time series with data, typically low frequency (i.e., yearly), from Homer and Sylla (2005) indicate that these series were generally similar.

Since bond prices often exhibited high volatility, the use of annual data (one observation per year) increased the likelihood of misrepresenting yield trends. To mitigate this possibility, yearly averages of weekly or monthly data were calculated. Appendix A.2 documents the details.

Homer and Sylla (2005, pp. 1–13) discuss the limitations of the historical yield data. Demand for sovereign bonds was not integrated or elastic, and governments faced different domestic and foreign opportunities to market their debts. Bonds for Group 1 countries were typically traded on home exchanges, while those for Group 2 countries were traded in London. Before the nineteenth century, moreover, most governments did not offer a public asset comparable to the British consol, which was perpetual, widely used, easily negotiated, and relatively risk free, but

issued a multitude of debt instruments, each subject to different terms and conditions. In these cases, the sovereign bond that best captured long-term yield levels was chosen. Appendix A.2 provides the details.

Table 4.2 displays the descriptive statistics for the panel of government bond yields. There are 1,027 observations: 108 for fragmented and absolutist regimes, 186 for centralized and absolutist ones, 74 for fragmented and limited ones, and 659 for centralized and limited ones. Average yields for centralized and absolutist (5.77 percent), fragmented and limited (4.26 percent), and centralized and limited (4.24 percent) regimes were low relative to those for fragmented and absolutist ones (6.59 percent).[2] These trends also hold within Groups 1 and 2, and within individual countries. In France, for instance, average yields fell from 6.11 percent under the fragmented and absolutist regime to 5.30 percent under the centralized and absolutist one and to 3.57 under the centralized and limited one.

4.3. Regimes and Risk: Case-Study Evidence

To see how sovereign credit risk evolved with political regimes, this section examines the time series for three Group 1 countries: France, the Netherlands, and Spain. Austria is omitted from the analysis, because the available yield data do not start until 1874, seven years after the establishment of a centralized and limited regime.[3] Due to the unusual fiscal patterns that it displays, the investigation of credit risk in Prussia is postponed until the next chapter, when Prussian revenues and deficits are also examined.

[2] Following Ferguson and Schularick (2006), 16 observations with yields of 20% or more were excluded. These were the Netherlands, 1811 and 1813, and Spain, 1824–33 and 1876–9. However, the inclusion of such observations only strengthened the regression results described in Chapter 7.

[3] Homer and Sylla (2005, p. 529) note that the history of Austrian interest rates over the nineteenth and early twentieth centuries resembled that of Germany but was comparatively brief. Ferguson (2006, fig. 1) collected yield data for Austria from 1843 onward. Those data, which are discontinuous, reveal that yield spreads were around 100 basis points at the start of the 1840s but rose to 200 to 400 points during the late 1840s, when Austria fought the First Italian War of Independence (1848–9). Spreads rose even further with the Franco-Austrian War (1859), the Second Italian War of Independence (1859–61), the Second Schleswig-Holstein War (1864), and the Austro-Prussian War (1866). The GFD series that begins in 1874 indicates that spreads also spiked with the Austrian conquest of Bosnia in 1878. Thereafter, spreads fell to around 100 basis points through 1913. Pammer (2010, p. 152) notes that the major increase in public debt in Austria took place during the 1850s, just after fiscal centralization in 1848. In response to the new loan (called the National Loan), the long-term public debt grew by half of its previous value.

TABLE 4.2. *Descriptive Statistics for Sovereign Bond Yields*

		All Regimes	Fragmented and Absolutist	Centralized and Absolutist	Fragmented and Limited	Centralized and Limited
Totals	Obs	1,027	108	186	74	659
	Mean	4.76	6.59	5.77	4.26	4.24
	St dev	1.95	2.92	2.16	1.25	1.39
	Min	2.41	3.27	3.45	2.41	2.45
	Max	16.19	15.65	16.19	8.93	16.15
Group 1						
Totals	Obs	670	54	186	16	414
	Mean	4.74	7.65	5.77	3.09	3.95
England	Obs	164				164
	Mean	3.58				3.58
France	Obs	157	40	73		44
	Mean	5.02	6.11	5.30		3.57
Netherlands	Obs	131		49	16	66
	Mean	4.36		5.60	3.09	3.74
Spain	Obs	79	14	31		34
	Mean	7.98	12.06	8.52		5.80
Austria	Obs	40				40
	Mean	4.67				4.67
Prussia	Obs	99		33		66
	Mean	4.14		4.50		3.96
Group 2						
Totals	Obs	357	54		58	245
	Mean	4.82	5.53		4.58	4.72
Belgium	Obs	82				82
	Mean	3.96				3.96
Denmark	Obs	88	27		50	11
	Mean	4.16	4.34		4.16	3.71
Italy	Obs	52				52
	Mean	5.32				5.32
Portugal	Obs	89	27		8	54
	Mean	6.44	6.71		7.20	6.19
Sweden	Obs	46				46
	Mean	3.91				3.91

Note: Sovereign bond yields are expressed as percentages per year.

Source: See Appendix A.2.

Recall from Chapters 2 and 3 that England had a centralized and limited regime from 1688 onward. British consols thus function as the benchmark bond.[4] For each case, yield spreads over consols, the difference between the yield on a country's bonds and that of consols, were computed. This method is standard for historical financial market investigations.

The case studies of France, the Netherlands, and Spain provide a first test of the theoretical predictions that relate political transformations to improvements in sovereign credit risk. The findings suggest that fiscal centralization and limited government alike typically led to notable reductions in yield spreads. They also highlight the impacts of external and internal conflicts and other factors on credit risk.

4.3.1. *France*

Figure 4.1, which plots French yield spreads from 1750 to 1913, indicates that spreads averaged more than 150 basis points under the fragmented and absolutist regime that lasted through 1789. The two peaks, occurring around 1760 and 1770, represent default episodes.[5] The French Revolution led to the establishment of a national tax system with uniform rates. In the short run, domestic upheaval reduced the tax base, and the government turned to confiscation, capital levies, and an inflation tax to fund expenditures, including the War of the First Coalition (1792–7). At war's end, the government reduced the value of interest payments on the public debt by two-thirds, ruining France's reputation as a borrower. Though Napoleon lacked access to credit, Bordo and White (1991) argue that major tax reforms like fiscal centralization enabled him to gather enough in revenues to fund war efforts. Indeed, France never again defaulted on its public debt.[6]

French yield spreads remained high through the end of the Napoleonic Wars in 1815, but fell in the aftermath. Though the Bourbon monarchy was restored, the next decades saw intense fights between liberal and royal forces (see Chapter 3). The July Revolution of 1830 established a short-lived constitutional regime. After an initial spike, spreads stayed around 60 basis points or fewer. Spreads peaked once more during the Year of Revolutions in 1848 and the start of the First Italian War of

[4] The British consol was created in 1751 (Ferguson, 2006, p. 76).

[5] See Sargent and Velde (1995). According to Reinhart et al. (2003, table 2), France defaulted eight times on its external debt from 1500 to 1789: in 1558, 1624, 1648, 1661, 1701, 1715, 1770, and 1788.

[6] See Bonney (2010a, pp. 88–9, 98–9).

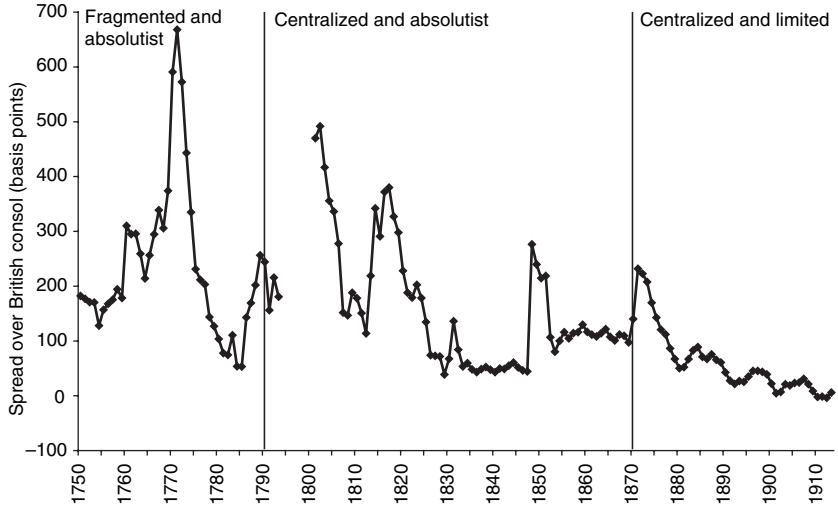

FIGURE 4.1. Yield spreads, France, 1750–1913.
Source: See Appendix A.2.

Independence (1848–9). Under Napoleon III, who established an authoritarian regime in 1851, spreads doubled from July regime levels to more than 100 basis points.

Yield spreads spiked again during the Franco-Prussian War (1870–1), which France lost. In the aftermath, Napoleon III was deposed, and the Third Republic, a stable centralized and limited regime, was established. Spreads fell steadily over the 1870s and 1880s. By the start of the 1890s, French yields had reached near parity with those of the British consol, where they stayed through 1913.

The evolution of sovereign credit risk over French political regimes fits with the theoretical predictions. The evidence suggests that both fiscal centralization and limited government led to fiscal improvements. Wars and political turmoil also affected French credit risk.

4.3.2. *The Netherlands*

The Dutch Republic (1572–1795) is typically classified as a constitutional regime, although it was not limited in the nineteenth-century sense of a parliament that regularly monitored executive spending.[7] By investing heavily in government bonds, ruling elites aligned lender and borrower

[7] For instance, the coding schemes of Tilly (1990), De Long and Shleifer (1993), Acemoglu et al. (2005), and Stasavage (2005) characterize the Dutch Republic as constitutional.

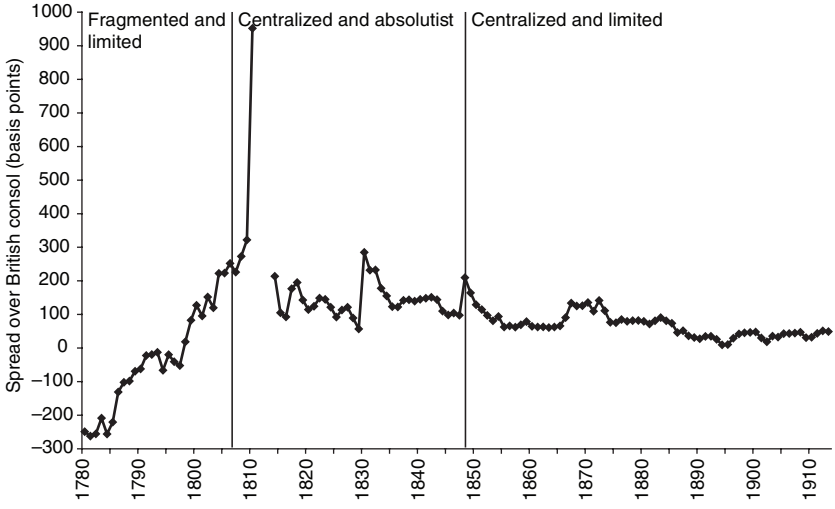

FIGURE 4.2. Yield spreads, Netherlands, 1780–1913.
Source: See Appendix A.2.

incentives and provided a credible commitment to repay debts.[8] Figure 4.2, which plots Dutch yield spreads from 1780 to 1913, highlights the success of this mechanism. Since the Republic received loans at lower rates of interest than England, spreads were negative through the 1790s.

Fiscal institutions in the Dutch Republic were fragmented, however, because each of the seven provinces had separate tax systems. As described in Chapter 2, van Zanden and van Riel (2004, chs. 1–2) argue that fiscal fragmentation weakened the Republic's ability to raise funds and service debts over the long term. Although each province was required to pay a fixed amount toward collective military and administrative expenditures, other provinces typically shirked their obligations and free-rode on Holland, the most populated and wealthiest province, whose quota was almost 60 percent of the total burden. This institutional deficiency not only created an unsustainable financial situation, but weakened the Dutch military. Indeed, spreads rose rapidly in the years before French conquest in 1795.

Dutch yield spreads rose once more with the start of the War of the Second Coalition (1798–1801). Though fiscal centralization occurred in

[8] See Tracy (1986), t'Hart (1997), van Zanden and van Riel (2004, chs. 1, 2), and Fritschy (2007). Gelderblom and Jonker (2011) highlight the role of private savings as a necessary complement to credible fiscal institutions in the Republic.

1806, spreads remained high throughout the Napoleonic Wars. The major spike in 1810 corresponds to Napoleon's tiërcering of the public debt, which reduced all interest payments to one-third of previous amounts.

The Constitution of 1815 granted absolutist power to William I, who became king at the end of the Napoleonic era. Promulgated at 10-year intervals, parliamentary authority over government expenditures was ineffective (see Chapter 3). William I spent heavily on the military, infrastructure, and the monarchy itself, and budget deficits rose through the 1820s. Yield spreads spiked with the Belgian Revolt of 1830 and subsequent War of Independence. Though an armistice was declared in 1833, William I continued to spend large sums on the military. The loss of tax revenues from the now-independent southern provinces, including Belgium, also aggravated Dutch finances.[9] During the late 1830s, spreads were nearly three times those of the constitutionally limited July regime in France. This result suggests that, in the absence of effective parliamentary constraints, fiscal consolidation may have exacerbated problems of executive control.

Throughout his reign, William I used a variety of semi-legal tactics to hide the true state of public finances. When fiscal troubles finally became public in 1839, the parliament vetoed the upcoming 10-year budget, and William I was forced to abdicate. The constitutional reform of 1840 granted parliament the right to monitor the budget every two years. Dutch yield spreads fell by the mid-1840s. The Year of Revolutions in 1848 led to the establishment of a stable centralized and limited regime, with parliamentary budget authority coming at annual intervals. After an initial spike, spreads averaged fewer than 70 basis points through 1913.

The ways in which sovereign credit risk evolved with political transformations in the Netherlands are also consistent with the theoretical predictions, though with a twist. As for France, the evidence suggests that limited government reduced Dutch yield spreads. This finding bolsters the case that parliamentary reforms had positive effects on credit risk.

Recall from Section 4.1 that theory could not predict with certainty how fiscal centralization would affect yield spreads. If the ruler spent the new revenues generated by centralization on responsible debt service, then sovereign credit risk should have fallen. The evidence described in the preceding section suggests that the establishment of a national tax system in France had a positive fiscal effect by curtailing the likelihood of default. If the ruler impulsively spent the new funds, however, then centralization

[9] See Fritschy et al. (2001, pp. 20–2).

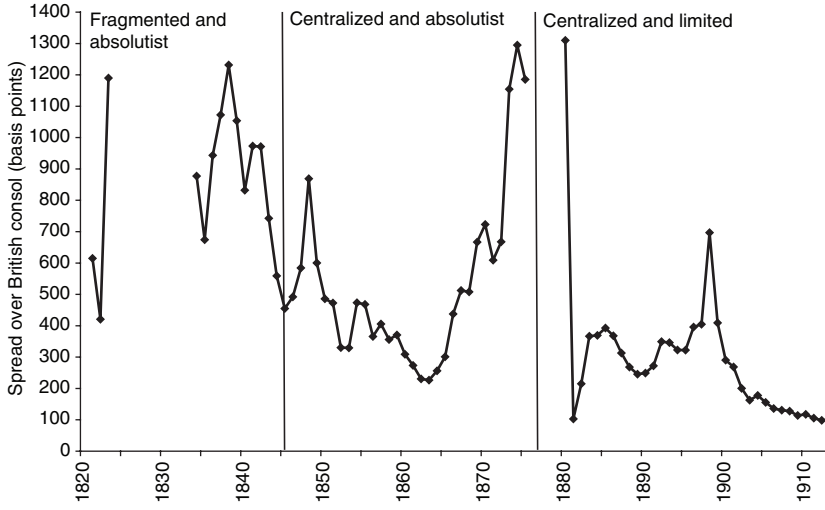

FIGURE 4.3. Yield spreads, Spain, 1821–1913.
Source: See Appendix A.2.

should have increased credit risk. The evidence for the Netherlands suggests that this outcome occurred during the reign of William I, when yield spreads rose dramatically as a result of reckless fiscal policies. The Dutch case thus illustrates a diverse theoretical implication of fiscal centralization.

4.3.3. *Spain*

In contrast to France or the Netherlands, Spain saw three major civil conflicts over the nineteenth century: the First (1833–9), Second (1847–9), and Third (1872–6) Carlist Wars. Figure 4.3, which plots Spanish yield spreads from 1821 to 1913, indicates that each of these conflicts led to large spikes in yield spreads of 1,000 basis points or more.

Nonetheless, we may still characterize the impact of political transformations on Spanish sovereign credit risk. Unlike France or the Netherlands, fiscal centralization did not take place in Spain until the mid-1840s (see Chapter 2). Although Spanish absolutists had often previously neglected responsible debt payments, Comín (2010, pp. 236–7) shows that debt service soon became a key spending item. Debt payments rose from less than 10 percent of total state expenditures during the first half of the 1800s to more than 50 percent from the end of the 1840s to 1870. After peaking with the Second Carlist War, yield spreads fell steadily to a little more than 200 basis points by the mid-1860s. Overall, average spreads under the

centralized and absolutist regime were more than 300 basis points fewer than those under the fragmented and absolutist one. This finding suggests that fiscal centralization had a positive effect on Spanish credit risk.

Political instability continued to plague Spain, however. The late 1860s saw the Spanish Glorious Revolution, and the 1870s the Third Carlist War. A stable centralized and limited regime was established at war's end in 1876. Yield spreads fluctuated between 200 and 400 basis points through the 1890s. Though large, these levels represented an improvement in Spanish credit risk relative to earlier periods: average spreads under the centralized and limited regime were more than 200 basis points less than those under the centralized and absolutist one, and roughly 600 basis points less than those under the fragmented and absolutist one. With the exception of 1882, moreover, Spain no longer defaulted on its external debt, something it had done six times since the end of the Napoleonic Wars in 1815.[10] Spreads spiked once more during the Spanish-American War (1898), which Spain lost. Thereafter, they fell to around 100 basis points through 1913.

As for the French and Dutch cases, the evolution of sovereign credit risk over Spanish political regimes corresponds to the theoretical predictions. The evidence suggests that limited government led to an improvement in Spanish yield spreads. This result reinforces the argument that constitutional change had positive fiscal impacts. As with France (but not the Netherlands), the evidence suggests that fiscal centralization in Spain also generated a reduction in yield spreads. Taken in combination, these findings suggest that the establishment of national tax systems with uniform rates had positive net effects on credit risk. Finally, the Spanish case highlights the negative impact of prolonged domestic turmoil on yield spreads.

Sovereign credit is a vital sign of the fiscal health of nations. This chapter has examined the effects of political transformations on yield spreads of long-term government bonds. Both the descriptive and case-study evidence indicates that fiscal centralization and limited government typically led to notable improvements in yield spreads. The next chapter takes the empirical investigation further by examining two specific channels through which political reforms actually reduced credit risk.

[10] See Reinhart et al. (2003, table 2). Also see Chapter 5.