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Government risk premiums in the bond market: EMU and Canada

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ABSTRACT

This paper focuses on risk premiums paid by central governments in Europe and sub-national governments in Germany, Spain, and Canada, using data for bond yield spreads for the period 1991–2005. We find that risk premiums by central governments respond positively to debt and deficits; German states enjoyed a favourable position in financial markets before EMU but not thereafter; Spanish and Canadian provinces risk premiums over the whole period; German and Spanish sub-central governments pay liquidity-related interest rate premiums; Canadian and German provinces/states that benefit from fiscal equalization lower spreads. This is evidence of market discipline at work and of credibility of the EU no-bailout clause.

1. Introduction

The potential effect of credit risk on government bond yields is an important issue for economists and policy makers alike. By charging risk premiums on bond yields that increase with government debt or deficits, financial markets can penalize governments for a lack of fiscal discipline, thus imposing discipline on them. Government bond yields would then be signals of the markets' assessment of the sustainability of fiscal policy. Market-imposed discipline of this kind is especially relevant in large federal states, such as Canada or the US, and in monetary unions, such as the European Economic and Monetary Union (EMU), where governments of the member states can issue debt in their own right but are more restricted in their ability to respond to financial difficulties since they do not control their own monetary policies. Faced with a fiscal crisis, such governments are likely to turn to other governments or the common central bank and ask for a bail-out.[1] This would allow them to spread the costs of their profligate fiscal policies over the entire federation or monetary union. To the extent that market-imposed discipline leads to more prudent fiscal policies and helps prevent fiscal crises in federal states and monetary unions, it protects the citizens against having to pay for the profligacies of the governments of other states.

In light of this, the existence of default risk premiums in sovereign bond yields has received a lot of attention in the debate over monetary union in Europe; see Bernoth et al. (2006) for a review of the literature. One way to detect and estimate such risk premiums is by considering the yield spreads of government bonds relative to a suitable benchmark. Following this approach, Goldstein and Woglom (1992), Bayoumi, Goldstein and Woglom (1995), and Poterba and Rueben (1999) show that state governments in the US pay risk premiums on their debt and that these premiums depend on indicators of fiscal performance. Lemmen (1999) shows that the yield spreads of bonds issued by state governments in Australia, Canada, and Germany over central

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[1] Sub-central government defaults can involve large externalities on the rest of the federation or the other members of a monetary union, which make it unattractive for the other states or the central government to refuse a bail-out (See e.g., Wildasin, 2001 and von Hagen et al., 2000).

government bond yields depend positively on the ratio of state debt to GDP. Booth et al. (2007) find that bond yield spreads of Canadian provinces over the federal government respond positively to measures of provincial indebtedness.[2]

Lonning (2000) compares the yields of a very small sample of DM issues of 11 EU governments with equivalent German government bonds in the mid-1990s and finds a positive, though not always significant impact of government debt and deficits. Gómez-Puig (2006) uses adjusted spreads of the yields on bonds issued by 10 European countries over DM bonds, where the adjustment uses appropriate swap rates to eliminate exchange rate uncertainty. She finds that the spreads increase with increasing debt relative to Germany.[3] Pagano and von Thadden (2004) show that average yield differentials of 10-year bonds issued by EMU member state governments relative to German 10-year bonds are positively correlated with bond ratings. Manganelli and Wolswijk (2007) show that spreads in euro area countries are systematically related to credit ratings, whereas Afonso et al. (2007) provide evidence that ratings are also driven by budgetary developments.

In a recent paper, Bernoth et al. (2006) analyze the spreads of yields-at-issue of sovereign bonds issued by EU central governments in DM (in Euros after 1999) or US dollars to estimate default risk premiums. The use of DM (Euro) and USD denominated bonds avoids the problems of exchange rate risk and different tax treatments that have plagued earlier studies using yields on bonds denominated in national currencies. Looking at yields-at-issue assures the comparability of yields at different points in time, since, in contrast to average yields on debt outstanding, the residual maturity is always the full maturity and the bonds are actively traded on the day when the yields are recorded. Bernoth et al. use data from before and after the start of EMU, allowing them to assess the impact of monetary union on bond yield spreads. Their results show that yield spreads respond significantly to measures of general government debt and deficits both before and after the start of EMU. This indicates that sovereign debt markets continue monitoring the fiscal performance of member states and exert disciplinary pressure on their governments.

Furthermore, Bernoth et al. show that yield spreads are affected by liquidity premiums. Countries with larger market shares in the DM (Euro) or USD markets pay significantly lower interest rates than EU countries with smaller market shares. In the euro-denominated debt market, however, these liquidity premiums have vanished with the start of EMU, a result consistent with the empirical analysis in Pagano and von Thadden (2004) and Favero, Pagano, and von Thadden (2005). Finally, Bernoth et al. find a significant flight-to-quality effect in the sense that spreads over US government bond yields respond positively to an increase in the spread between low-grade US corporate bonds and US Treasury bonds, a proxy for the general degree of risk aversion in international bond markets.

This paper extends the analysis of Bernoth et al. in several ways. First, we consider the response of risk premiums in central government bond yields to central rather than general government debts and deficits. This gives a more specific link between central government fiscal policy and the potential risk premium. We also control for a larger set of financial market variables to test for risk premiums.

Second, by using the German federal government as the benchmark borrower, Bernoth et al. cannot say anything about the consequences of EMU for public sector borrowing in Germany itself. To do this, we estimate the risk premiums on debt issued by German state governments, which, like provinces in Canada and states in the US, can issue debt in their own right and have used this right extensively in the past.[4] While state governments have full budgetary authority over their expenditures, their ability to raise taxes is limited by the fact that the rates of the main taxes are set jointly by all states and the federal government. Furthermore, their tax bases are smaller and more mobile than the federal government's tax base. As a result, one would expect state governments to pay risk premiums in excess of the federal government. Finding such premiums indeed corroborates the interpretation of the observed yield spreads as risk premiums related to credit risk. We also use yield spreads on bonds issued by provinces in Spain, the only other EMU country for which we were to find the fiscal data and economic data required for our empirical analysis.[5]

A significant feature of Germany's federal system is that state governments can expect financial help from the federal government, if they find themselves in financial troubles. This expectation is based on a highly noticed ruling by Germany's Constitutional Court in 1992. In a case brought forward by the state governments of the two small states of Bremen and Saarland, the Court concluded that states experiencing "extreme budgetary hardship" are entitled to financial support from the federation. Both states had issued large amounts of debt in the 1970s and 1980s, when their economies went into persistent decline. By the late 1980s, the servicing of these debts had become such a large burden on the state budgets that the governments threatened to cut the supply of public services dramatically. The Court ruled that the federal government owed the states financial aid to prevent that from happening. Financial markets apparently perceived this ruling as an indication of the default risk of German states being as low as that of the federal government, witness the fact that state governments have consistently received the same AAA-ratings as the federal government from Fitch Ratings in recent years.[6] In our context, this implies that we should not find a risk premium on German state debt relative to the German federal government.

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[2] Balassone et al. (2004) show that yields spreads against Germany of government bonds issued by the other EU countries in their national currencies between 1980 and 2003 depend positively on the change in the government debt-to-GDP ratio. Using issues in national currencies, however, they cannot distinguish between credit risk and exchange rate risk, which distinction is no longer relevant in EMU.

[3] Alesina, De Broeck, Prati and Tabellini (1992) use data from 12 OECD countries and show that the differential between public and private bond yields is positively related to the level of public debt. In a similar vein, Lemmen and Goodhart (1999) and Codogno, Favero and Missale (2003) show that the differential between government bond yields and the corresponding swap yield of the same maturity depends positively on the level of public debt, while Heppke-Falk and Hüfner (2004) find that expected deficits have a positive impact on this differential in Germany, France, and Italy. It is not clear, however, that this differential properly reflects sovereign risk, since the credit risk of private issuers is likely to be correlated with the credit risk of their governments. See also Afonso and Strauch (2007) and Faini (2004).

[4] For another recent study that looks at German state government debt see Heppke-Falk and Wolff (2007).

[5] While our data source includes yield spreads do exist for many regions and municipalities in other EMU member states, data for regional and municipal debts, deficits, and GDP do not exist.

[6] See www.fitchratings.com. Standard & Poor and Moody's give German state governments ratings slightly below the federal government.