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Credit ratings and cross-border bond market spillovers☆

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ABSTRACT

This paper studies spillovers across sovereign debt markets in the wake of sovereign rating changes. We compile an extensive dataset covering all announcements by the three major agencies (Standard & Poor's, Moody's, Fitch) and daily sovereign bond market movements of up to 73 developed and emerging countries between 1994 and 2011. To cleanly identify the existence of spillover effects, we perform an explicit counterfactual analysis which pits bond market reactions to small revisions in ratings against reactions to all other, more major changes. We also control for the environment in which an announcement is made, such as the anticipation through watchlistings and the interaction of similar rating actions by different agencies. While there is strong evidence of negative spillover effects in response to downgrades, positive spillovers from upgrades are much more limited at best. Furthermore, negative spillover effects are more pronounced for countries within the same region. Strikingly, this cannot be explained by fundamental linkages and similarities between countries.

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1. Introduction

Ever since tensions began to surface in the eurozone in late 2009, the announcements by credit rating agencies (CRAs) on the creditworthiness of member states have continuously made the headlines and rattled financial markets. In particular, while not specific to the ongoing crisis, the notion that rating actions pertaining to one country might have a major impact on the yields of other countries' sovereign bonds, too, has regained the attention of policymakers. In fact, concerns over so-called negative spillover effects have been running so deep that the European Commission was at one stage considering a temporary restriction on the issuance of ratings under exceptional circumstances (Financial Times, 2011). This may provide one explanation for why the Commission has just recently set up stricter rules for the agencies. In particular, CRAs are now only allowed to issue ratings for EU member states' sovereign debt at three pre-defined dates every year (European Union, 2013).

While spillovers are thus highly relevant from a policy perspective, their presumed existence is not straightforward to identify in financial markets, where confounding events are ubiquitous and hamper the establishment of clear counterfactuals. In this paper, we therefore propose a novel empirical strategy to cleanly identify the existence of cross-border spillover effects of sovereign rating announcements. To this end, we collect an extensive dataset that comprises a complete history of both the sovereign rating actions by the "Big Three" (Standard & Poor's, Moody's, and Fitch) and daily sovereign bond market movements for up to 73 countries between 1994 and 2011. The dataset contains substantial variation as it covers both crisis and non-crisis periods as well as a broad set of developed and emerging countries across all continents.

Crucially, this variation allows us to perform an explicit counterfactual analysis that pits bond market reactions to small revisions in an agency's assessment of a country's creditworthiness against bond market reactions to all other, more major changes. This not only helps us get around the problems associated with a classic event-study approach in a spillover context. It also does not require the additional assumptions made by a number of papers.

A traditional event-study procedure, where bond market movements in an estimation window serve as the counterfactual for bond market reactions in an event window, is suitable in principle but, in a spillover context, places too high demands on the necessary non-contamination of the estimation window. Hence, in this paper, we use a pooled cross section of short event windows, in which small changes of the actual rating serve as the counterfactual for larger changes.

While some papers also investigate spillovers in a pooled cross section framework, they rely on a so-called "comprehensive credit rating" (see Afonso et al., 2012; Alsakka and ap Gwilym, 2012; Gande and Parsley, 2005; Ismailescu and Kazemi, 2010). This combines two different types of rating announcements — actual rating changes and watchlistings — into a single scale. Their identification therefore depends on additional assumptions on the relative informational content of watchlistings and actual rating changes.

In contrast, we focus solely on the class of actual rating changes. In detail, we test whether a country's sovereign bonds react more heavily to upgrades or downgrades elsewhere when those are "large" — ie, when the actual rating changes by two notches or more. The group of "small" one-notch changes serves as the counterfactual during that exercise. At the same time, we explicitly allow for differences in the informational content of sovereign rating changes by controlling for watchlistings that may build anticipation in the market. Moreover, we are also able to account for the fact that an announcement is often followed by a similar one from a different agency soon after, which may further influence the reception of the later announcements.

Our findings on the existence of cross-border spillover effects point to an important asymmetry in the sovereign debt market's treatment of rating changes. On the one hand, we find significant spillovers in the wake of sovereign rating downgrades, which turn out to be robust to a number of tests. On the other hand, reactions to upgrades appear to be much more muted, if anything.

We then investigate to what extent spillovers are driven by country characteristics. Importantly, we find that spillovers from downgrades tend to be significantly more pronounced for countries within the same region. We proceed by testing whether this can be explained by bilateral trade linkages, financial