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The role of macroeconomic news in sovereign CDS markets: Domestic and spillover news effects from the U.S., the Eurozone and China

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ABSTRACT

The impact of domestic and spillover macroeconomic news from the U.S., the Eurozone and China on national sovereign credit default swap (CDS) spreads and spread volatility are examined over a recent period of financial instability from November 2007 to March 2012. We find that better than expected (i.e. good) news tend to reduce sovereign CDS spreads, whilst worse than expected (i.e. bad) news increases spreads. News from the three major economies has significant spillover effects on other national sovereign CDS markets but the volatility responses to domestic news and foreign news from the major economies differ. CDS spread volatility increases in response to all domestic news and good news tends to exert relatively stronger effects than bad news. In contrast, good news from the major economies is market calming and consistently reduces spread volatility and they are also economically more important than bad news. Bad news from China and the Eurozone generally increase volatility in other sovereign CDS markets but bad news from the U.S. has been calming for other sovereign CDS markets in the extended crisis period from 2007 to 2012. Our results suggest that market participants in the market for sovereign credit protection pay more attention to good news than bad news both at home and from the major economies in times of financial instability.

1. Introduction

The sovereign credit default swap (CDS) markets have received considerable attention since the onset of the recent European sovereign debt crisis. The benefits of sovereign CDS's for investors and speculators were verified when the restructuring of Greece's outstanding sovereign debts in March 2012 triggered an estimated US$2.5 billion payout to the holders of Greek sovereign CDS contracts. The rapid development of sovereign CDS markets spurred by recent financial crises and the demand for credit protection has fuelled much uncertainty and speculation on the likelihood of other sovereign defaults. Given that sovereign default risk is mainly determined by the macroeconomic soundness of sovereign obligors, macroeconomic news should affect changes in aggregate perceptions of sovereign credit risks and be reflected in daily changes in CDS spreads and spread volatility.

In this study, we focus on the following three research questions to improve the current understanding on what moves sovereign CDS market spreads and the volatility of spread changes. First, to what extent do sovereign CDS markets respond to the release of macroeconomic news? Second, do better than expected news elicit different responses compared to worse than expected news in the market for sovereign credit protection? Third, how do national sovereign CDS markets respond to news spillovers from major economies in the world?

To address these issues we firstly, ascertain the presence of macroeconomic news effects in a global sample of nineteen developed and emerging countries' sovereign CDS markets from November 2007 to March 2012 and investigate the potential asymmetric effects of good news and bad news on the pricing and volatility of national sovereign CDS spreads. Second, we examine the extent of international spillover news effects from China, the U.S. and the Eurozone to other sovereign CDS markets using EGARCH-X models that can accommodate macroeconomic news as exogenous determinants of CDS spread changes and their conditional volatilities.

The key findings from this study are that both domestic and foreign macroeconomic news exhibit statistically significant and asymmetric impacts on daily sovereign CDS spreads. Consistent with expectations, good (bad) news lowers (raises) spreads. We

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also find new evidence that both good and bad macroeconomic news from the major economies is important for restoring financial stability in the market for sovereign credit protection in times of financial instability. This result is consistent with the behavioural analyses of Conrad et al. (2002) and Beber and Brandt (2010) who find that during recessions, bad news can actually have positive effects when the result is not worse than what was initially feared. In contrast, we find that both good and bad domestic news tends to create uncertainty and increases CDS spread volatility.

This study complements the extant macroeconomic news literature (Andersen et al., 2003, 2007; Balduzzi et al., 2001) yet extends current knowledge by providing new evidence on the impact of macroeconomic news in the market for sovereign credit protection in times of financial turmoil. Our study is most closely related to the work of Beetsma et al. (2013) on news impacts on European sovereign yield spreads during the recent debt crisis. However, we differentiate our work by examining foreign macroeconomic news spillovers from the three major economies of China, the Eurozone and the U.S. to improve the current understanding on information transmission across international sovereign credit markets. This comprehensive analysis is warranted given the increasing interconnectedness observed in international sovereign credit markets in recent years (Longstaff et al., 2011; Ang and Longstaff, 2013). Macroeconomic developments in major economies like the U.S., the Eurozone and China have significant ramifications for both regional and global economic prosperity and thus should also affect other countries' sovereign credit risk.

A sovereign CDS contract is effectively an insurance product against a default event on a debt instrument issued by a sovereign obligor. A sovereign CDS is sold by insurance providers (typically investment banks and hedge funds) to insure against potential default on the underlying sovereign debt in exchange for an annual premium amount in basis points (payable during the life of the CDS contract). In the event of a default on the underlying debt, the protection seller makes the default payment to the CDS holder. Thus, sovereign CDS spreads are pure forward-looking measures for sovereign credit risk so there exists a direct relationship between the CDS spread (or premium) and the ex-ante likelihood of sovereign default. In contrast, sovereign bond yields incorporate not only the compensation for expected sovereign default risk but also compensation for other components reflective of general market conditions (interest rates, changes in sovereign bond demand and supply, funding liquidity and so on). To the extent that sovereign CDS spreads represent market-based assessments on sovereign default risks, these will change at least on a daily basis in accordance with the market's varying perception on a sovereign's credit risk. It has been shown that sovereign CDS spreads respond quickly to sovereign credit rating changes assessed by international credit rating agencies that are known to rate 'through the cycle' (Ismailescu and Kazemi, 2010). In particular, the daily movements of CDS spreads should reflect changing market sentiments on the perceived riskiness of sovereign obligors as market participants react to new information releases. Scheduled macroeconomic announcements contain new information relating to a country's economic health that would directly influence a sovereign's fiscal position and its default probability. Therefore, the new information conveyed in macroeconomic announcements should immediately be priced into national sovereign CDS spreads if sovereign credit markets are efficient.

Yet, as there is no requirement for a CDS holder to hold any debt issued by the underlying reference entity, CDS contracts can be used for speculative purposes with speculators expecting future deteriorations in a sovereign's credit worthiness taking out a naked long position on the sovereign's CDS to bet on a sovereign default. 'Naked' trading in CDS markets received much attention during the recent European sovereign debt crisis.[2] A popular view shared during the debt crisis was that naked CDS positions were potentially having destabilizing effects on financial markets as speculators traded in CDS contracts on the sovereign debt of some highly indebted European governments. Hence, our findings in this study have significant policy implications as we can assess the impact of potentially speculative CDS trading in response to macroeconomic news releases on CDS market stability.

The remainder of this paper is structured as follows. Section 2 provides a review of the related literature. Section 3 details the data used and the variable construction process. Section 4 examines the methodology used while Section 5 provides a discussion of the main results before conclusions are made in Section 6.

2. Related literature

Whilst there is a well-established literature on the determinants of CDS spreads, the literature is scant on information transmission within CDS markets. The impact of news releases on CDS pricing has to date only been examined via the impact of corporate earnings announcements on the corporate CDS market (Greatrex, 2009b). In a similar vein, Baum and Wan (2010) report that macroeconomic uncertainty can explain individual firm's CDS spreads in the U.S. and Marsh and Wagner (2012) find equity market returns lead CDS returns. Despite the literature on market efficiency affirming that new public information leads to financial market adjustments, there is little evidence on the impact of macroeconomic news flow on credit spread movements within national sovereign CDS markets. An investigation is warranted given the potentially destabilizing effects of sovereign defaults on other financial markets and the real economy.

Our study relates to the extensive literature documenting how the flow of macroeconomic news impacts different types of financial markets. Andersen et al. (2003) examine the effects of macroeconomic news on exchange rates, whilst Balduzzi et al. (2001) find an asymmetric impact of macroeconomic news on the U.S. treasury bond market and Kim et al. (2004) document the broader effects on U.S. bond, stock and foreign exchange markets. Moreover, Andersen et al. (2007) and Gande and Parsley (2005) examine the impact of macroeconomic and rating news spillovers on international debt markets, respectively. In addition, the impact of macroeconomic news on return co-movements between different financial markets has also been studied (Brenner et al., 2009; Christiansen and Ranaldo, 2007). Furthermore, macroeconomic news is known to have impacts on higher return moments. For instance, Goeij and Marquering (2006) document the asymmetric impact of macroeconomic news on the volatility of bond returns.

The analysis on international macroeconomic news spillover effects in CDS markets is very limited to date. Despite the extensive literature on international market co-movements (for example, Karolyi and Stultz, 1996; Bae and Karolyi, 1994) establishing that macroeconomic news, particularly from major economies such as the U.S. and Japan, have statistically significant spillover impacts on other markets, there has been a dearth of attention on the impacts of macroeconomic news from current major economies on sovereign credit markets. One exception is the European study by Beetsma et al. (2013) looking at the effect of macroeconomic news spillovers from individual peripheral Eurozone countries (namely, Greece, Ireland, Italy, Portugal and Spain – GIIPS) to each other and to non-GIIPS countries within Europe. They measure the news

[2] On 1 November 2012, a ban on naked positions came into effect within the European Union and trading volumes on European sovereign CDS contracts subsequently declined but our sample period stops in March 2012 before this regulatory change was implemented.