Journal of Eurasian Studies 7 (2016) 71–84

Contents lists available at ScienceDirect

Journal of Eurasian Studies

journal homepage: www.elsevier.com/locate/euras

Causality between sovereign, quasi-sovereign credit risks and global volatility: The case of Russia

Mikhail Stolbov

Department of Applied Economics, Moscow State Institute of International Relations (MGIMO–University), 76 Vernadskogo Prospect, Moscow 119454, Russia

ARTICLE INFO

Article history:
Received 26 July 2014
Accepted 18 May 2015
Available online 29 October 2015

Keywords:
credit default swaps (CDS)
causality-in-mean
causality-in-variance
bailouts
the Breitung–Candelon test
"too big to save" effect
VIX index

ABSTRACT

The article examines causalities between sovereign, most important quasi-sovereign CDS prices (Gazprom, VTB, Sberbank) for Russia and the global volatility factor embedded in the VIX index dynamics. The analysis refers to the post-bailout period in this major emerging economy (May 2009–July 2013). The causalities are assessed in the time (the Hong test) and frequency (the Breitung–Candelon test) domains. The VIX index dynamics has a strong impact on all Russian CDS, but also receives a non-negligible feedback from them. The sovereign and quasi-sovereign CDS prices exhibit a strong causal connectedness in both domains, with the impact of the quasi-sovereigns (in particular, that of banks) getting more pronounced in the longer run, i.e. over longer time horizons and at lower frequencies. High foreign exposure of the quasi-sovereigns, explicit/implicit public guarantees and the holdings of the Russian sovereign debt on their balances underlie the causalities. Given the systemic role that the government-controlled entities play in the Russian economy, this may lead to the "too big to save" effect with negative implications for financial and fiscal stability.
Copyright © 2015 Production and hosting by Elsevier Ltd on behalf of Asia-Pacific Research Center, Hanyang University.

1. Introduction

One of the salient features of the initial phase of the Great Recession was the credit risk transfer between corporate sector and sovereigns. In autumn 2008, when many national governments announced rescue packages for corporate sector (primarily, financial firms), risk spreads of the corporate sector declined while sovereign spreads increased as investors perceived possible negative effects of these bailouts for public debt sustainability.

The credit risk transfer has been well documented in credit default swap (CDS) markets,[1] especially with respect to the EU countries. However, post-bailout linkages between sovereign and corporate credit risk have received less attention, though the nexus between the two remains tight and is often dubbed "deadly embrace" or "doom loop" (Fahri & Tirole, 2014). The repercussions of the "deadly embrace" are primarily studied for advanced economies while little is known about the post-bailout linkages between sovereign and corporate credit risk in case of the major emerging economies that faced the credit risk transfer. The mechanics of the "deadly embrace" in these countries may be different from the advanced countries' experience due to lower public indebtedness levels and significant public stakes in systemically important financial and non financial firms.

The paper attempts to partly fill in this gap by examining causal linkages between sovereign and major corporate CDS series (Gazprom, Sberbank and VTB) for Russia from May 2009 to July 2013. It also studies causality between the Russian CDS series and the global volatility factor embedded in the VIX index dynamics. The peculiar feature of such

76 Vernadskogo Prospect, Moscow 119454, Russia.
E-mail address: stolbov_mi@mail.ru.

[1] See Augustin, Subrahmanaym, Tang, and Wang (2014a) for a comprehensive review of recent trends in corporate and sovereign CDS markets.

http://dx.doi.org/10.1016/j.euras.2015.10.006
1879-3665/Copyright © 2015 Production and hosting by Elsevier Ltd on behalf of Asia-Pacific Research Center, Hanyang University.

research for Russia is that the mentioned entities are government-controlled. Therefore, the focus is actually on the causality between global volatility, sovereign and quasi-sovereign credit risk. This analysis also appears important as it sheds light on causal linkages between the sovereign and major corporate CDS shortly before the imposition of sanctions. The baseline analysis makes a distinction between two types of causality – causality-in-mean and causality-variance.

The paper uncovers two notable findings. First, global volatility contributes significantly to the Russian CDS prices, both sovereign and quasi-sovereign. This impact is particularly pronounced with respect to causality-in-mean. The causality-in-variance tests reveal a moderate yet statistically significant feedback in the opposite direction – from the sovereign and bank CDS prices to the VIX index. Second, similar to the Eurozone experience, the article provides evidence for causality-in-mean running from the sovereign CDS prices to the bank ones after the Russian government interventions to bail out the financial sector in late 2008 while bi-directional linkages are found regarding causality-in-variance.

Bi-directional linkages between the sovereign and bank CDS prices are confirmed when causal relations are investigated in the frequency rather than time domain by means of the Breitung and Candelon (2006) test. High foreign exposure of the quasi-sovereigns, explicit/implicit public guarantees and the holdings of the Russian sovereign debt on their balances underlie the causal connectedness. In view of the systemic role that the government-controlled entities play in the Russian economy this may lead to the "too big to save" phenomenon with negative implications for financial and fiscal stability.

The remainder of the paper is organized as follows. Section 2 reviews relevant literature, Section 3 presents the data, Section 4 describes econometric methodology. Section 5 discusses the results, Section 6 presents the robustness checks and Section 7 concludes.

2. Relevant literature review

The empirical literature on the credit risk transfer observed in CDS markets during the Great Recession hinges around two initial contributions by Acharya, Drechsler, and Schnabl (2014) and Ejsing and Lemke (2011). They provide evidence for the credit risk transfer and subsequent two-way feedback between financial and sovereign credit risk using data on CDS series of the Eurozone countries in 2007–2010 and 2008–2009 respectively.

In line with these studies, Stanga (2011) discovers only a temporary post-bailout drop in the credit risk of Spanish and Irish banks, pointing to a co-movement between bank and sovereign CDS spread dynamics. Alter and Schuler (2012) also focus on Eurozone countries and characterize the pattern of post-bailout sovereign and financial sector CDS price co-movement. They conclude that after the government interventions changes in the sovereign CDS spreads contribute permanently to financial sector CDS spreads, while changes in banks' default risks affect the sovereign CDS spreads transitorily. They have a strong impact in the very short run (up to 2 days) but this effect becomes insignificant in the long run (up to 3 weeks) with the exception of Italy, Spain and Portugal. Mody and Sandri (2012) track the developments that made sovereign and bank credit risks intertwined and conclude that the outbreak of the Greek crisis in 2010 was as important in strengthening this co-movement as the collapse of Lehman Brothers in September 2008. Similar evidence is provided by Alter and Beyer (2014) who quantify spillovers between bank and sovereign CDS spreads for the Eurozone from October 2009 to July 2012 and compute a special contagion index, showing that the interdependencies between banks and sovereigns had been on the rise throughout the period, though the negative impact of PIIGS began to diminish after the implementation of IMF/EU stabilization programs.

Avino and Cotter (2014) find that sovereign and bank CDS spreads in 6 major EU economies are cointegrated variables at the country level. They also conclude that sovereign CDS play a pivotal role for the price discovery of bank CDS in the most distressed economies (Portugal, Spain) while more resilient economies (Germany, Sweden) show a leading role for the bank CDS. Gross and Kok (2013), Corzo Santamaría, Gómez Biscarri, and Lazcano Benito (2014), López Pascual and Lovreta (2014) provide evidence that the credit risk transmission from the sovereigns to banks has been more pronounced since the outbreak of the European debt crisis than the transmission running in the opposite direction. In line with this evidence, Beckenfelder and Schwaab (2015) assert that by late 2014 there was already no credit risk transmission from banks to respective sovereigns in stressed EU countries. They also find a significant cross-border component in the bank–sovereign nexus as non-stressed economies did bear the risk by providing guarantees to banks in the stressed ones.

De Bruyckere, Gerhardt, Schepens, and Vander Vennet (2013) identify three channels of the "deadly embrace" – public guarantees, asset holdings and collateral channel. Kallestrup, Lando, and Murgoci (2013) confirm the significance of explicit and implicit government guarantees extended to an EU country's banking system as a channel of contagion between sovereign and bank CDS and add an increased foreign exposure of banks to the list of the contagion channels. Bedendo and Colla (2015) find that government guarantees is an important transmission mechanism between sovereign and corporate credit risk in case of non-financial corporate CDS spreads.

Bai and Wei (2012) study the strength of the credit risk transfer from the sovereigns to the private sector for government and corporate CDS series from 30 countries in January 2008–February 2010 and find that on the average a 100 basis points increase in the sovereign CDS spreads results in an increase in corporate CDS spreads by 71 basis points. Interestingly, in light of this research they also assert that this relationship is stronger for government-controlled companies. Bedendo and Colla (2015) arrive at similar findings regarding the adverse role of public ownership. Nevertheless, it may be mitigated by strong property rights that prevent the state facing the risk of debt default from expropriating the private sector. In addition to this argument explaining the intimate interrelation between sovereign and corporate credit risk, a high share of sovereign debt on bank balance sheets contributes to these

Download English Version:

https://daneshyari.com/en/article/1127181

Download Persian Version:

https://daneshyari.com/article/1127181

Daneshyari.com