



ELSEVIER

Contents lists available at ScienceDirect

Journal of International Financial Markets, Institutions & Money

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



Putting the “C” into crisis: Contagion, correlations and copulas on EMU bond markets



Dionisis Philippas^{a,*}, Costas Siriopoulos^b

^a Department of Finance, ESSCA Grand Ecole de Management, 55 Quai Alphonse Le Gallo, 92513, Paris, France

^b Department of Business Administration, University of Patras, 26500 Rio, Greece

ARTICLE INFO

Article history:

Received 15 July 2013

Accepted 23 September 2013

Available online 30 September 2013

JEL classification:

C32

G12

G15

Keywords:

Bond markets

Contagion

Spillover effects

Correlation

Copula

ABSTRACT

We investigate the contagion appetite generated by the current debt crisis in Greece by focusing on six European Monetary Union bond markets, namely the Netherlands, Germany, Italy, Spain, Portugal and France. We use a framework that contains two procedures, a spillover regime/switching model and a time-varying copula model. The empirical evidence confirms contagion appetite to European Monetary Union countries, which are prone to contagion, some because of their excessive macroeconomic imbalances and others because of the sovereign's risk perception and the arbitrage appetites of international bond portfolios; but not an overall contagion effect from the crisis country to all others.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

This paper is concerned with the contagion appetite generated by the transmitted shock of Greece's debt crisis to six European Monetary Union (hereafter EMU) bond markets, namely Italy, Spain, France, Portugal, Germany and the Netherlands, using two processes: a spillover regime/switching framework and a time-varying conditional copula. We provide new evidence for the ongoing debate that links the dynamics of conditional correlation and a contagion effect that occurs beyond integration across the

* Corresponding author. Tel.: +33 634385971.

E-mail addresses: dionisis.philippas@essca.fr (D. Philippas), siriopoulos@eap.gr (C. Siriopoulos).

EMU bond markets, during the Greek debt crisis, starting in 2010. Finally, our analysis has strong implications for international investors' optimal portfolios because we analyse the behaviour of correlations between EMU bond markets around and after the beginning of the European debt crisis.

Over the first years of Eurozone life, scholars have shed much-needed light on evidence that the EMU has driven to sovereign bond yields integration because of global prospects, such as liquidity conditions (Pagano and von Thadden, 2004; Favero et al., 2010) and the low risk aversion of investors (Geyer et al., 2004) despite deteriorating macroeconomic fundamentals. Such convergence has been driven by the consequent elimination of global risk and asymmetrical shocks, by allowing cheaper access to debt financing with less uncertainty in financial markets and by fulfilling the vision of European integration (Kim et al., 2006; Abad et al., 2010).

However, since 2010, EMU periphery bond yields started to experience similar large increasing trends and tended to raise when its sovereign risks got higher and when its domestic financial sector worsened. Starting in 2010 and onwards, Greece, Ireland and Portugal all had to withdraw from international bond markets, putting intense pressure on the yields of other EMU members such as, recently, Spain and Italy. European policymakers took measurements in these countries; however, these measurements do not seem to have been enough to ease the spreading recession in EMU economies. As a result, German government bond yields operated as a 'flight-to-quality' asset during the crisis (Beber et al., 2009), putting upward pressure on all EMU government bond yields spreads.

On the other hand, recent empirical studies argue that domestic macroeconomic imbalances have lead to a significant rise in external borrowing in some EMU countries and the current bursting of government bond bubbles. The combination of high-risk aversion and large current account deficits tended to magnify the incidence of deteriorated public finances on government bond yield spreads (Berger and Nitsch, 2010; Longstaff et al., 2011) beyond EMU bond market integration.

There is a wide international literature on what the term "contagion" entails. Some theories argue that contagion is a significant increase in cross-market linkages after a shock to one country, whereas other theories argue that contagion occurs whenever a shock to one country is transmitted to another country, even if there is no significant change in the cross-market relationships (e.g., Forbes and Rigobon, 2002; Chiang et al., 2010; Moshirian, 2011). In general, the contagion is distinguished between three types (Pericoli and Sbracia, 2003): (a) the "wake-up-call" contagion in which the crisis initially restricted to one country, providing new information that prompts investors to reassess the default risk of other countries, (b) the "shift" contagion that occurs when the normal cross-market channel intensifies after a crisis in one country with an increased sensitivity to global risk factors instead of country-specific factors and, (c) the "pure" contagion which covers any instance of contagion that is completely unrelated to the level of fundamentals.

A large body of empirical research on contagion focuses on emerging economies (e.g., Forbes and Rigobon, 2002; Corsetti et al., 2005; Chiang et al., 2010) because such economies require greater relative support from the international financial community, while sovereign bonds are closely linked with sovereign risk. Moreover, the linkages and spillovers within and across bonds, stocks and exchange rates have been examined and have been largely explained by within-market interactions and cross-market effects (Engle, 2002; Cappiello et al., 2006; Ehrmann et al., 2011; Dimitriou and Kenourgios, 2013). As the current European debt crisis became more widespread, recent studies investigated the contagion effects in EMU financial sectors (Beirne and Fratzscher, 2012; De Santis, 2012; Argurou and Kontonikas, 2012; Kalbaska and Gatkowski, 2012; Samitas and Tsakalos, 2013).

This paper is concerned with the correlations, the spillover effects and the patterns of time-varying correlations between the realised volatility of Greek bond returns and the realised volatility of bond returns of six EMU economies, namely Italy, Spain, Portugal, France, Germany and the Netherlands during the latest European debt crisis. Firstly, this paper adopts the definition that contagion is a significant increase in cross-market correlations of volatility after a shock; however, the interdependency between markets that exists in all economies is not necessarily act as the mechanism vehicle for the contagion effect.

Secondly, we examine whether a volatile Euro member's bond market (i.e., the burst of the Greek crisis) lead to a simultaneous increase in the risk of other EMU bond portfolios or; if such impact is different across borrowers by distinguishing a contagion appetite within EMU bond markets. We define contagion appetite as a type of contagion, which is a sentimental behaviour of selective risk/arbitrage

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات