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Spain and the European sovereign debt crisis

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ABSTRACT

This paper presents empirical evidence indicating that German and Spanish government bond yields are cointegrated. Thus, a stable long-term equilibrium relationship among these two variables seems to exist. However, there is also empirical evidence for the existence of a structural break in early 2009. Following Basse, Friedrich and v. d. Schulenburg (2011) we interpret this finding as an indication that financial markets started to see a higher sovereign credit risk in Spain. The structural break may even signal some fears about the return of exchange rate risk. Given that the break date is quite early; our empirical findings could be an indication that bond markets are at least partially efficient.

1. Introduction

This paper examines the European sovereign debt crisis focussing on Spain. The crisis which started in Iceland, Ireland and Greece meanwhile reached Portugal and Spain. This is of major importance because Spain due to its size is one of the major Eurozone countries. Cointegration analysis is utilized to examine the relationship between German and Spanish government bond yields in order to search for indications that the crisis has affected the market perception of sovereign credit risk. We also focus on timing issues following an approach suggested by Basse et al. (2011).

This paper is structured as follows: Section 2 summarizes the economic developments in Spain. Section 3 briefly reviews the literature focussing on empirical studies. In Section 4 the methodology used is discussed and the data examined are introduced. Section 5 gives some information about our empirical findings. Section 6 then concludes.

2. Background information about the economic situation in Spain

Since the introduction of the Euro in 1999 Spain has experienced both the advantages and disadvantages of being part of a currency union. While the economy grew quite strongly during the first years of the Euro, Spain now has to fight the economic consequences of the financial crisis and the sovereign debt crisis. Between mid 2008 and end 2009 the country was in an economic recession. Furthermore since the end of 2012 Spain is in a recession again (Source: Eurostat). Especially the European sovereign debt crisis has lead to the need of a wide saving package of the public sector with negative consequences for economic demand. High unemployment rates, little or even negative growth of real GDP, and strongly increasing long-term interest rates for Spanish government bonds paired with high budget deficit ratios are the most pressing economic challenges. For example the

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unemployment rate, published by the Spanish Ministry of Labor, has increased from 8% in 2007 up to around 25% in 2012 (Source: Eurostat). These developments are a result of the decreasing competitiveness of the Spanish economy as a whole and an asset price bubble in the national real estate market. The decreasing competitiveness can be illustrated by the development of unit labor costs. Between 2000 and 2008 the Spanish unit labor costs increased more than 30%. In Euroland only the Greek and the Irish unit labor costs increased stronger. In the same time the German unit labor costs only changed little (Source: Eurostat).

At the end of the last millennium, the perspective of the introduction of the Euro as official currency in some parts of Europe and the introduction itself came along with a convergence of government bond yields of the participating countries. While the spread of ten year government bond yields of Spain and Germany was more than 500 basis points in 1995, this spread decreased down to around 25 basis points in 1999 (see Fig. 1). The spread of five year government bonds yields of Spain and Germany was around 500 basis points in 1995 and almost 20 basis points in 1999.

Other European countries such as Greece or Portugal have similar interest spread figures (see Gruppe and Basse (2012)). The spread convergence was mainly driven by decreasing bond yields of the weaker countries and not by increasing bond yields of the stronger ones. While Spain had to pay around 9.6% for ten year bonds in January 1996, the price came down to 5.6% in December 1999. During the same time the yields for ten year German government bonds (Bunds) hardly moved. Thus, the European Monetary Union (EMU) helped the weaker countries by giving them some kind of joint creditworthiness leading to lower refinancing rates for them.

As a result, economic growth in Spain in 1999 and the following years was driven by low interest rates. More and more investments became attractive and took place. As a consequence the real GDP increased during 1999 and 2005 with an average rate of 3.7%. During the same time in Germany the real GDP growth rate was just 1.1% on average. This economic growth helped to improve the situation in the Spanish labor market. The unemployment rate came down from more than 20% in 1997 to less than 10% in 2005 (Source: Eurostat). Especially the real estate market benefited from the historically low interest rates. Widening building activity and increasing housing prices underlined the boom at the housing sector. It is quite possible that consistently increasing housing prices supported the willingness of the banking sector to finance even more real estate projects, which again lead to increasing prices. This development seems to be similar to the experience in the subprime real estate sector in the United States.

This development came to a stop in 2008 when higher inflation rates in Spain as well as in the whole Eurozone was leading to higher interest rates and increasing lending costs. In the Eurozone the European Central Bank increased their interest rates due to rising inflation risks since the end of 2005. The Main Refinancing Rate was raised from 2.00% in 2005 up to 4.25% in 2008. The number of defaults increased – not only in Spain – and the not-systematic risk of default turned into a systematic risk. As a consequence the housing prices and the bubble at the real estate market burst in a number of countries, which directly triggered the financial crisis.

In March 2012 the Greek debt swap showed that government bonds of Eurozone members cannot be considered a risk-free asset any longer. In the so called 'Private Sector Involvement (PSI)' more than two thirds of private bondholders agreed to

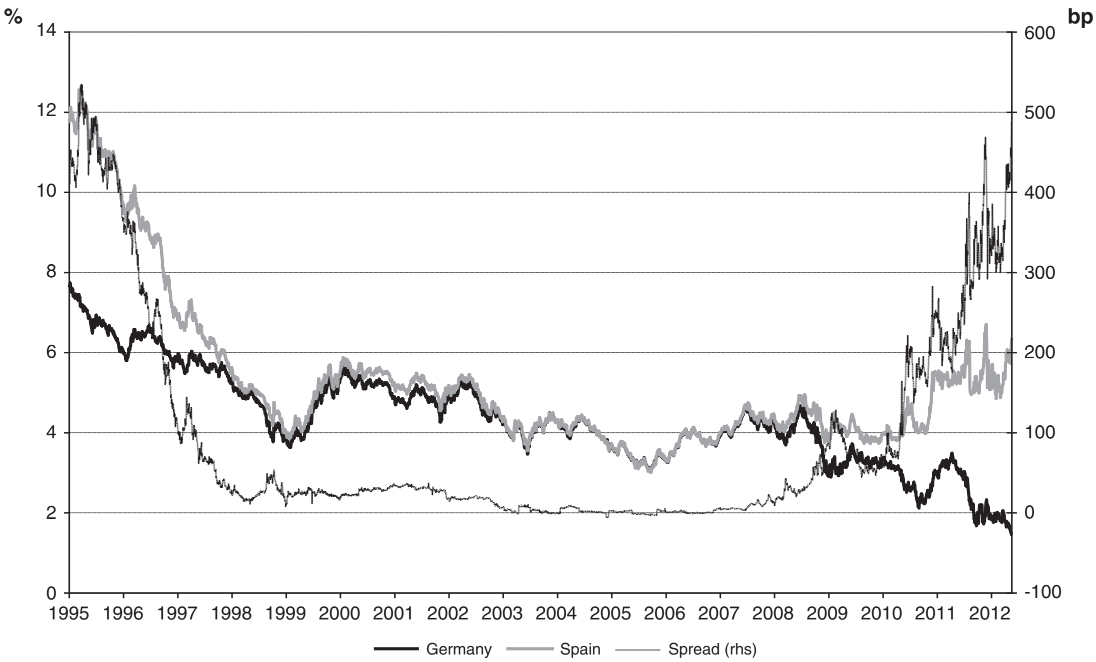

Fig. 1. Government bond yields in Spain and Germany.