

# Swiss Finance Institute Practitioner Roundups



## Understanding the Dynamics of Sovereign Bond Market Integration

Understanding the dynamics and quantifying the results of bond market integration can help inform domestic fiscal and monetary policy and ensure a sound grasp of those policies' limits. It may also tell us much about the future of a single European currency.

Local currency debt is significant in developed markets and increasingly important in emerging markets. Over the past decade and across major emerging markets, the average fraction of external sovereign debt in local currency increased from around 15 to almost 60 percent. Despite the importance of this asset class, not much is known about the extent to which sovereign bonds denominated in local currency are integrated into the world bond market, how this level of integration has varied over time, and what the drivers of sovereign bond market integration are.

What might segment sovereign bond markets? Investment barriers are not burdensome in major developed markets during quiet times, but they may be prohibitive in markets that are not well developed, are undergoing a financial/currency/political crisis, or have defaulted in the recent past. These markets' bonds may be more prone to fire-sale risk, and investors might therefore abstain from investing in the public bonds of such markets. The reluctance of foreign investors to buy sovereign bonds issued by Greece and Argentina has been well documented. And during the eurozone crisis, bonds from peripheral countries were mainly bought by local investors (banks). The widespread practice of banks holding local government debt—often encouraged by financial regulation—could prevent market integration.

What might integrate sovereign bond markets? The continued trend of the international liberalization of financial markets, marked by the tremendous increase in the trading of bond funds, closed-end bond funds, and bond ETFs over the last few years has helped integrate international bond markets. Bond funds were the largest segment of the closed-end fund market at the end of 2010. The integration measurement used in this paper accounts for the role of such assets and spans the entire range, from full integration to complete bond market segmentation.

**“Major developed markets and developing markets experience different dynamics. Also, the dynamics of sovereign bond market integration differ across maturities.”**

The authors show that while integration has trended upward for most countries and across maturities, there is substantial dispersion. Sovereign bond market integration in emerging markets is lagging behind that in developed markets. This is not surprising in view of the lack of maturity of the

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### **“What is driving sovereign bond market integration? Four factors are in play.”**

What are the drivers of sovereign bond markets' integration? Local currency bond yields have (at least) four components: the risk-free real interest rate, compensation for inflation, compensation for the risk of default, and compensation for liquidity. Each of these components may vary across countries. We would then expect countries with more illiquid bonds and a higher level of credit risk to experience a lower level of co-movement with more liquid, low-credit risk countries. At the same time, countries with low and stable inflation would most likely exhibit higher levels of co-movement with each other. The authors' results confirm these expectations. They find that more illiquid bonds and those issuing from lower credit quality countries experience a lower level of integration compared to more liquid bonds and those from countries with a higher credit quality. Countries with low, stable inflation (thus with low inflation volatility) as well as low political risk exhibit higher levels of integration. The authors also observe that while credit quality is the dominant factor for developed markets, political and inflation risk factors play a much more significant role with regard to the integration of emerging market bond markets.

### **“Greater integration reduces funding costs.”**

Heightened integration implies increased globalization, with a consequent decline in the importance of local factors and declining expected returns on the sovereign bond. Thus, an increasing degree of integration should, *ceteris paribus*, lead to declining funding costs. By how much does the funding cost of a sovereign country decrease as its bond market becomes more integrated?

In order to answer this question, the authors examine the relationship between market integration and the credit default swap (CDS) spread or yield spread, which proxy for the sovereign country funding cost. Given a constant recovery rate, this would help infer the sovereign country's default probability. The relationship between this measure of integration and the CDS spreads is statistically and economically meaningful. A 1 percent increase in integration corresponds to an average decrease in the cost of funding of about 3 percent of the average five-year CDS spreads across all developed bond markets. Thus, higher market integration can significantly mitigate the funding costs of sovereign borrowing.

### **“Understanding the workings of this relationship can help inform domestic policy and international debate, including that on the future of the eurozone.”**

Why does all of this matter? This set of results can guide domestic fiscal and monetary policies and in parallel help us to understand the limitations of such policies given the observed trend of heightened integration in the international bond market. The findings also have implications with regard to the current debate over the euro sovereign crisis. Indeed, if real interest rates were increasingly determined internationally and domestic inflation risk were low, then a breakup of the eurozone would perhaps not lead to much higher levels of real interest rates. At the same time, the decrease in market integration during times of crisis documented in the authors' study could also be interpreted as an illustration both of the important benefit of reductions in funding risk brought about by the move to European Economic and Monetary Union and of the probably high cost of abandoning the euro. Last but not least, sound asset allocation decision-making requires a good understanding of how integrated sovereign bond markets actually are.

The full paper can be found at <http://bit.ly/2lcJPRU>.

#### **Key Words**

Credit default swap  
Market integration  
Market segmentation  
Sovereign funding cost

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