



# Emerging market bond returns—An investor perspective

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## Abstract

The novel features of this study consist in applying a conventional multifactor global market model to emerging market sovereign bond index rates of return that are denominated in US dollars and subsequently relating the unexplained residuals from the market model's estimates of each country's total bond index return to country-specific factors. They include political and financial risks as well as other presumed determinants of bond index rates of return. The results of our study confirm that sovereign countries' bond index rates of return that include interest payments and capital gains/losses may be explained in terms of conventional bond pricing models by combining global market factors with local risk and other country-specific influences.

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## 1. Introduction

The last 25 years provided international investors in sovereign bonds of emerging market countries with a colourful experience consisting of several defaults that resulted in protracted, frustrating and – most importantly – costly salvage operations.<sup>1</sup> It therefore appears natural to ask

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<sup>1</sup> Bond issues and defaults followed each other in surprisingly short intervals. The period spanning the creation of Brady bonds in 1982 out of the ashes of the preceding Latin American debt binge, the bond defaults associated with the Asian Crisis in 1997, Russia's bond default in July 1998, the near-collapse of the LTCM in September 1998, the Brazilian crisis that started with the devaluation of the Real in 1999 to the ongoing saga of the Argentinean default is characterized by market failures. Myopic behaviour of international investors and borrowers' careless assessment of their economies' strength made resulted in costly mistakes for both. However, bond defaults on a massive scale have a much longer history (see Mauro et al., 2002; Winkler, 1933).

how international investors have priced sovereign bonds under these challenging conditions. The contribution of this study to the literature is two-fold. *First*, we apply a conventional multifactor global market model to emerging market sovereign bond *index rates of return* that are denominated in US dollars. *Second*, the unexplained residuals from the market model's estimates in each country's total bond index return are then related to country-specific factors. They include political and financial risks as well as other presumed determinants of bond index rates of return. The estimation approach allows us to separate out the common influences of global bond market movements from the country-specific factors that drive rates of return on the outstanding bonds of 19 emerging market countries from Latin America, Transition Economies, Asian and African countries.

In the literature on emerging market debt securities, the explanation of *bond spreads* has been the focus of attention where spreads are defined in a variety of ways. Some authors use issue yields of emerging market bonds minus the interest rate on a riskless benchmark bond such as the 10-year US government security or LIBOR for the calculation of spreads—also called launch spreads.<sup>2</sup> Others compute corresponding yield spreads from bonds trading in secondary markets. Yield spreads are then related to a range of macroeconomic determinants, for example, by Edwards (1984), Kamin and von Kleist (1999), Eichengreen and Mody (1998) and Min et al. (2003). Mauro et al. (2002) explain and compare spreads in the 1990s with those prevailing in an earlier globalization period, 1870–1913. Alternatively, such credit spreads are linked to credit ratings and other presumed economic determinants; Cantor and Packer (1996), Cunningham (1999) and Sy (2002) are investigations in this mould. Secondary market credit spreads plus the riskless rate of the appropriate maturity provide, *inter alia*, a risk adjusted measure of the debt cost of capital for emerging markets. Launch yields measure marginal debt costs and are thus particularly important for borrowers. Credit spreads and bond returns for that matter, may be obtained for individual securities or indices of emerging market bonds. Due to liquidity, size and ratings requirements, and most importantly availability, yield spread studies of emerging markets focus on sovereign bonds.

However, from the investor perspective emerging market bond yields and associated credit spreads derived from yields to maturity are of limited value as they remain silent about holding-period yields that fall short of the maturity of the bond. Such investment returns include, besides accrued or received coupon and amortization payments, capital gains (losses) as a result of general market interest rate falls (increases) and of country-specific risk premia adjustments. Total return bond indices capture these various return components on a daily, weekly, monthly or any other desired period. By basing our estimates on such indices our research approach pays more attention to the investor perspective than studies employing yields or credit spreads. In the presence of significant capital gains/losses (see Table 2), changes in expected total bond index returns provide a trigger for purchases or sales of bonds rather than pursuing a buy-and-hold strategy.

The research methodology we employ entails a two-stage regression test procedure. *First*, we estimate a two-factor international market model by regressing quarterly rates of return of a particular country's sovereign bond index on quarterly rates of return of the corresponding global bond market index and on crude oil price changes. For the country specific and the global bond

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<sup>2</sup> The required sovereign bond yield for a particular country is defined as the yield that sets the net present value of the discounted cash flows (coupon payments) equal to zero. This yield is also known as redemption yield, theoretical yield or as the bond's internal rate of return. It only accrues if the bond is held to maturity and reinvestment of interim cash payments at the current yield occurs.

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