The World Price of Credit Risk

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Asset-pricing models have failed to capture the cross section of country equity returns. While weak support for the conditional CAPM is documented in developed markets, international pricing models have been unable to explain the cross section of emerging market returns. Emerging markets have displayed strikingly large positive pricing errors and their returns have exhibited little correlation with developed markets and little exposure to global risk factors. Furthermore, country-level characteristics, such as credit ratings, variance, and co-skewness, have played a significant role in pricing international equities, suggesting that financial markets may not be fully integrated.

This paper offers a risk-based explanation that resolves these deviations from global asset pricing. This paper shows that a two-factor model, incorporating a world credit risk factor along with the world market factor, resolves these deviations from international asset pricing. Our proposed world credit risk factor is computed as the difference between equity returns of high and low credit risk country portfolios sorted on credit ratings. Over the 1989-2009 period, the risk premium for systematic credit risk exposure is 83 basis points (bps) per month and its importance has increased dramatically in recent years.

The choice of a world credit risk factor is motivated as a response to bad consumption data as well as the restrictive assumption that the world market portfolio is perfectly correlated with changes in world consumption. As Cochrane (2001) points out, "the consumption-based model is, in principle, a complete answer to all asset pricing questions, but works poorly in practice". Consumption data is low frequency and too smooth, making it impossible to infer its true volatility. As a result, proxies for consumption risk are plausible alternatives in empirical asset-pricing tests (see Savov, 2011). We argue that high credit risk assets are more likely to do poorly in bad states of nature when consumption is low. The default of such distressed assets would directly decrease consumption due to interrupted income streams. Hence high credit risk assets pose higher consumption risk, which would lead investors to demand high premiums on such assets.

Our empirical evidence reveals a strong cross-country relation between credit ratings and the volatility of consumption growth. Moreover, countries that experience a sovereign credit rating downgrade exhibit a 27-32% drop in consumption growth, suggesting that downgrades are quite costly. Furthermore, Andrade and Chhaochharia (2011) find a sovereign default leads to a 37% reduction of a country's equity capital. Finally, we find that a country's risk exposure to the world credit risk factor is significantly cross-sectionally related to the volatility of consumption growth. Combining the world market factor with the world credit

risk factor provides a considerably improved proxy for investors' marginal utility.

We show that equities of countries in the high credit risk tercile outperform equities of countries in the low credit risk tercile by 57 bps per month over the 1989-2009 period. This return differential is 125 bps per month in the second half of our sample period. High returns in higher credit risk countries are not explained by global risk factors, such as the world market, value, momentum, foreign exchange, and liquidity factors. In contrast, these higher returns are captured by the world credit risk factor. The world credit risk factor is significantly priced in the cross-section of country equity returns and is robust to the inclusion of alternative factors. Exposure to the world credit risk factor fully explains the positive pricing errors in emerging market equities and country-level characteristics no longer play a role in pricing global equities, suggesting that international equity markets need not be segmented. In fact, we show that emerging markets earn higher returns not because they are classified as emerging or have worse credit ratings, but because they display higher exposure to the world credit risk factor.

In sum, the ability of international models to explain the cross section of country equity returns has been called into question. The higher returns delivered by emerging market countries have been considered anomalous. This paper offers a risk-based explanation. The higher returns earned by emerging markets represent compensation for higher exposure to the world credit risk factor – a premium for bearing systematic risk.

References

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