The Case for Balanced Investing in Emerging Markets

In the mid-1990s, emerging-market investing was still in the nascent stage of maturity. Liquidity was scarce, local markets were difficult to access, and the lack of country-specific data was daunting. The underdeveloped marketplace was associated with extreme volatility, and generally relegated to investors with appetites for high levels of risk. But today, the backdrop for investing in emerging markets has evolved considerably. Developing economies’ share of global GDP—currently at 33%—has nearly doubled since the mid-1990s. Emerging markets accounted for nearly two-thirds of the total growth in global output during the past two years alone, compared to one-third in the 1960s. And they now represent more than 85% of the global population.

But for all this growth and advancement during the past decade and a half, one thing has not changed. The two main investment vehicles in emerging markets—debt and equity—are still viewed by some investors more “independently” from each other than in the developed world. In other words, emerging-market investing is still commonly thought of as either “equity only” or “debt only.” Interestingly, this thinking runs contrary to the findings of an award-winning research paper written nearly 15 years ago, which demonstrated how a balanced approach to emerging-market debt and equity may provide significant advantages over a debt-only or equity-only portfolio, while remaining consistent with the objective of high risk-adjusted total return.

Evidence to support a balanced approach to emerging-market investing

The contention that emerging-market debt and equity investing should be considered more holistically was set forth in an article written in late 1997 and published in the Spring 1998 edition of *The Journal of Portfolio Management*. In the article—titled “The Relationship Between Bonds and Stocks in Emerging Countries”—authors Jonathan Kelly, Luis Martins and John Carlson (“the authors”) showed that the returns to U.S. dollar-based investors from stock and bonds in emerging-market countries were more closely related than in developed-market countries.

The authors presented the argument that the linkage between emerging-market debt and equity was a function of a country’s overall risk profile (fiscal, political, etc.), which could be proxied by its public credit rating. In lower-credit-quality nations, where the potential for investment loss was higher by definition, debt valuations were suppressed. This became a limiting factor for stock performance given the lower position of equity in a country’s collective capital structure (i.e., even higher potential for loss). This relationship can be seen on the left hand side of Exhibit 1 (page 2).
work and particularly during the past decade, the overall credit quality of emerging markets has improved considerably. To this point, the investment-grade component of emerging-market debt has increased from less than 2% in 1994 to 56% in 2011, as measured by the JP Morgan Emerging Market Global Bond Index (EMBIG). Though there have been some deviations along the way, this trend has been fairly consistent throughout the past two decades.

Are 1997’s findings still valid today?
This improvement in credit quality led us to test the support for a balanced approach to emerging-market investing. To accomplish this, we examined two factors. First, we considered how the volatility profile of debt and equity in emerging markets has changed during the past 15 years. Second, we analyzed how well the following thesis has held up over time: that stock and bond returns decouple with improving credit quality. The results of this study showed strong support for balanced emerging-market investing.

Part I: Changing dynamics of emerging-market debt and equity
For this report, we used monthly total return data (through July 2011) for the JP Morgan Emerging Market Global Bond Index and the MSCI Emerging Market Equity (MSCI EME) Index. We gathered data dating back to January 1994, the first month available for EMBIG, and calculated the 24-month rolling standard deviation (i.e. volatility) of monthly returns beginning in December 1995. We ran the same exercise using the Barclays Capital Aggregate Bond Index as a proxy for U.S. dollar-denominated developed-market debt and the S&P 500 Index as the developed-market equity proxy.

We first examined fixed-period return volatility of emerging-market debt and equity to determine any patterns between the two asset classes. In Exhibit 2, it is evident that debt volatility was generally higher than equity volatility in emerging markets during the early years of the measurement period. Importantly, though, it wasn’t long into the early history of the emerging-debt market that we notice the pattern reverse as debt return volatility fell below that of equity in the late 1990s. It has remained consistently below ever since.

As impressive as the decline in emerging-market debt volatility has been, it is likely understated by virtue of the fact that this debt universe now carries an interest rate duration of over seven years, more than 75% longer than in 1997. Since longer-maturity debt is inherently more volatile, a constant emerging-market debt maturity profile would likely have revealed an even more precipitous decline in return volatility.

Exhibit 3 shows the time-series difference between equity and debt volatility for both emerging markets and our developed-market proxy. We note several takeaways. First, unlike in emerging markets, developed-market equities always exhibited higher volatility than developed market debt over the measurement period. Second, over time the pattern of volatility differential...
in both emerging markets and the developed-market proxy has been similar, particularly since the 2008 credit crisis. This comparison serves to further highlight the evolution in the emerging-market debt/equity relationship.

Importantly, we also observe that unlike in the past when economic shocks led to tighter relationships between emerging-market debt and equity, the volatility difference between the two assets classes actually increased further during the 2008 crisis. We attribute this to the fact that the 2008 global credit crunch did not emanate from the emerging world, while the improved fiscal position of emerging-market countries (as shown in the relatively lower volatility of their debt) helped mitigate the impact. This is in contrast to numerous instances during the past several decades when the then-weaker financial position of emerging-market countries initiated and/or exacerbated economic setbacks.

These observations suggest that a balanced approach to emerging-market investing has assumed some of the characteristics of traditional balanced investing in developed markets. That is, the equity portion can provide the potential for capital appreciation, while the fixed-income portion can provide stability through income generation and lower overall return volatility. This is distinctly different from the emerging-market environment described by the authors in 1997 and encapsulates the significance of the change in the relationship between developing-country debt and equity over the past several decades.

**Part II: The source of lower emerging-market debt return volatility**

In sovereign credit analysis, ratings assigned by agencies such as S&P, Moody’s and Fitch are commonly used to measure credit risk. In 1997, the authors used time-weighted average sovereign credit ratings as their measure of sovereign risk. The shorter sample period and relatively consistent ratings trend made this measure an effective quantification of risk at that time.

Our longer sample period, which includes several severe shocks (i.e., Asian financial crisis, 1997; Russian default, 1998; collapse of technology bubble, 2001; South American financial crisis, 2001-2002; global credit contagion, 2008), does not lend itself well to this approach. Country risk profiles have changed substantially over these years, which encouraged us to analyze sovereign risk as a time series. Using a rolling window to assess sovereign risk allowed us to capture the evolution of countries’ risk profiles, instead of assigning a single value to the risk level for the entire analysis period. Additionally, the rapid increase in yield spreads (and, therefore, the market’s perceived sovereign credit risk) due to both endogenous and exogenous shocks (see Russia discussion, next paragraph) was not always captured by ratings changes.

To account for this, we introduced spread change volatility as a gauge of market-determined sovereign risk. We measure this as the standard deviation of monthly spread changes over a rolling 24-month window. To show that spread change volatility captures the fundamental risks reflected in sovereign credit ratings, we calculated the Spearman rank correlation coefficient between the credit ratings and spread change volatility measures over time.7 Exhibit 4 (page 4) shows a very high correlation during the more stable period from 2001 to 2007, with a coefficient above 0.9; and a looser correlation during periods of significant upheaval, such as the 2008 credit crisis. The lower correlation between market sentiment and sovereign quality ratings during periods of market stress...
EXHIBIT 4: Sovereign credit ratings do not always capture market sentiment.

Exhibit 4: Sovereign credit ratings do not always capture market sentiment.

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Exhibit 5: Lower debt yield spread volatility is associated with lower stock-bond covariance.

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quality), we observe generally closer interaction between stocks and bonds in a given country. But as credit quality improves (lower spread change volatility), the link between stock and bond returns decreases. In fact, the highest-quality sovereigns exhibit virtually no link between stock and bond returns.

Covariance of bonds and stocks vs. spread change volatility at the sovereign level

Using monthly return data for equity and debt markets, we calculated the covariance between both time series using a rolling 24-month window over the entire period for which both series exist for a given country. The spread change volatility was calculated using the sovereign spread to U.S. Treasuries for each constituent country debt index. We calculated the month-over-month change in spread and then computed the standard deviation of these changes on a 24-month rolling window so that the y-axis and x-axis data are aligned.

To calculate the return volatilities of each asset class, we used the index level return time series of JPM EMBIG and MSCI EM. Volatility is measured as the standard deviation of monthly returns over a 24-month rolling window.

Sovereign Case Study #1: Brazil

Brazil (Exhibit 6, page 5) is an ideal example of a country transitioning from an emerging market to an emerged market. A decade ago, U.S. dollar-denominated bonds of the Brazilian sovereign traded at 1000 bps over U.S. Treasuries. The South American financial crisis and decreased investor confidence resulted in massive depreciation of the Brazilian real, eventually requiring

exemplifies the importance of employing spread change volatility as a real-time credit quality assessment.

An example of the rationale behind this choice is Russia. After the country’s default in 1998, it was rated B- by Standard & Poor’s and the rolling correlation between the Russian bond and stock markets was relatively high, in the 0.6–0.8 range. Through the early- to mid-2000s, S&P upgraded Russia five times. Concurrent with an investment-grade rating (BBB-) in 2005, the correlation began to decline as bond and stock returns started to decouple. By the first half of 2008, the correlation between bonds and stocks was effectively zero.

The global credit crisis that followed, however, caused a significant increase in sovereign risk perception to which Russia was not immune. While the shock was largely exogenous to emerging markets, the yield spread on Russian sovereign debt increased from below 200 basis points (bps) in the first half of 2008 to more than 900 bps in December 2008. At the same time, the correlation between Russian bonds and stocks jumped above 0.6, a similar level as when the country was emerging from default a decade earlier. Notably, this massive increase in spread was accompanied by only a slight downgrade from BBB+ to its current rating of BBB.

The strength of the relationship between yield spread volatility and the covariance of stock and bond returns is shown in Exhibit 5 (right). With higher spread change volatility (lower perceived credit
EXHIBIT 6: Brazil’s improving credit quality has led to a decoupling of the stock and bond relationship.

![Covariance Between Bond and Stock Returns vs. Spread Change Volatility: Brazil](chart1)


multibillion dollar loans from the International Monetary Fund (IMF) to stabilize the economy. As in other periods of extreme sovereign credit quality uncertainty, the covariance between bond and stock market returns was quite high (0.014) in 2002.

By 2003, one year after the election of President Lula da Silva, the yield spread of Brazilian sovereign debt had declined to 500 bps over U.S. Treasuries. The covariance between debt and equity markets began to decline and the spread change volatility dropped sharply. By 2006, the covariance coefficient dropped below 0.002 and fell further to 0.0006 in early 2008. Incidentally, Brazil received an investment-grade rating from Standard & Poor’s in April 2008.

An analysis of the return volatilities for Brazilian bonds and stocks over time shows a similar improvement in the relationships we have discussed. In 2000, the standard deviation of bond returns was 4% per month and 8% per month for stocks. To date, that measure has declined to 2% per month for bonds, while it remains 8% per month for stocks.

**Sovereign Case Study #2: Hungary**

When Hungary acceded to the European Union in 2004, its sovereign yield spread to U.S. Treasuries was 30 basis points, indicating that investors effectively viewed Hungary as a developed economy. Credit-funded consumption and investment increased rapidly, and the trade balance soon went into deficit. As a result of government spending on social programs, the debt-to-GDP ratio nearly doubled from 79% in 2004 to 150% in 2009. Following a sharp slowdown in global economic activity, the imbalances that had developed over time began to reverse, causing Hungary’s domestic economy to contract. In Q4 2008, the covariance between bonds and stocks went from -0.0004 to 0.002 as spread change volatility went from less than 15 bps per month to greater than 50 bps per month. By 2010, the covariance between bonds and stocks had increased to 0.004, a level indicative of an earlier-stage emerging economy (see Exhibit 7, below).

**The implications for balanced investing in emerging markets**

Our findings both at the aggregate level as well as with individual countries present important takeaways about balanced investing in emerging markets. First, the magnitude of the difference in return volatility between emerging-market debt and equity suggests that the debt can be used as downside protection in a balanced portfolio much in the way it has historically been used in developed-market balanced portfolios. A higher allocation to emerging-market debt during poor equity markets and vice versa could produce more consistent and better risk-adjusted returns over time.

Second, actively monitoring the debt and equity allocation in a given country can be an important driver of total and risk-adjusted return. Continuing the earlier examples, we note that since yield spread volatility of Brazilian debt began to decline precipitously in the middle part of the past decade, the cumulative return of Brazilian equities has far outpaced that of its debt. In contrast, since the deterioration in Hungary’s fiscal position in 2008, debt has proven to be the better performer.

EXHIBIT 7: The deterioration of Hungary’s credit quality led to a recoupling of stock and bond markets.

![Covariance Between Bond and Stock Returns vs. Spread Change Volatility: Hungary](chart2)

Third, while in aggregate the sovereign universe has experienced a broad improvement in credit quality, not all sovereigns have participated equally. Some, such as Argentina and Venezuela, carry lower credit-quality ratings than they did a decade ago, while other new sovereign debt issuers (e.g., Belarus) have entered the debt universe with relatively low credit ratings. These issuers often exhibit relatively higher spread change volatility and are more in keeping with the original profile of emerging-market debt considered by the authors back in 1997. Our theoretical construct would suggest that this factor be considered when including such sovereigns in a balanced portfolio.

Special Exhibit: Greece
In the fall of 2009, the Greek government announced an annual budget deficit far worse than expectations. Since then, other European Union constituents and the U.S. have grappled with deteriorating fiscal conditions. While Greece’s fiscal problems are particularly acute, the issue of burdensome government debt is a factor impacting countries throughout the developed world. Does our theoretical construct offer any insights into the interaction of bonds and stocks under this scenario?

We find that, not surprisingly, Greece follows the same general pattern—covariance of stock and bond returns has markedly increased during the past few years. An important takeaway, though, is that the adjustment can be swift and severe when credit quality declines quickly. In other words, it is the classic “fallen angel” scenario—sovereign credit profiles often fall faster than they rise.

From a higher-level perspective, it is important to consider the potential implications on emerging-market balanced investing should the prospects of developed and emerging sovereigns continue to diverge. While few countries have officially graduated to developed-market status and none have been reclassified as emerging from developed, it will be important to watch for potential changes in the composition of the emerging universe. If, for example, some of the larger, relatively higher-quality emerging-market countries were to transition to developed-market status, this could impact the profile of the debt/equity relationship since the countries remaining would be of lower credit quality. While it remains our expectation that aggregate credit quality of the emerging-market universe will continue to improve over time, any significant deviation from this expectation could have implications for the appropriate debt/equity mix in an emerging-market portfolio.

Conclusion
With the benefit of more than a decade’s worth of additional data and a much larger emerging-market country set, we are able to corroborate the authors’ original thesis that debt and equity returns do diverge as credit quality improves. We note that with the general credit-quality improvement in emerging markets over the past 15 years, debt and equities have developed the more distinct return profiles suggested on the right hand side of Exhibit 1 (page 2).

This leads us to a similar conclusion as Kelly, Martins and Carlson came to in 1997: Balanced investing in emerging markets makes sense. A significant difference, though, is that while the authors suggested some similarities between emerging- and developed-market balanced investing, our work suggests that an emerging-market balanced approach is even more akin to a developed-market balanced strategy than at any time in the past. Most importantly, the higher aggregate credit quality of emerging sovereigns serves as a volatility dampener. Therefore, a balanced approach can provide a combination of upside participation with better downside protection than either debt or equity can offer independently.

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Stock markets are volatile and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments. In general the bond market is volatile, and fixed-income securities carry interest rate risk. As interest rates rise, bond prices usually fall, and vice versa. This effect is usually more pronounced for longer-term securities. Fixed-income securities also carry inflation risk and credit and default risks for both issuers and counterparties. Unlike individual bonds, most bond funds do not have a maturity date, so avoiding losses caused by price volatility by holding them until maturity is not possible.

Interest income generated by Treasury bonds and certain securities issued by U.S. territories, possessions, agencies, and instrumentalities is generally exempt from state income tax but is generally subject to federal income and alternative minimum taxes and may be subject to state alternative minimum taxes.

1 Source of emerging markets economic data: International Monetary Fund.

2 In 1997, Jonathan Kelly, Luis Martins and John Carlson were portfolio managers for Fidelity Investments, and they continue to serve in that capacity as of September 2011.

3 JP Morgan Emerging Market Global Bond Index is a market-capitalization weighted collection of U.S. dollar-denominated emerging-market sovereign and quasi-sovereign debt. MSCI Emerging Market Equity (MSCI EME) Index is an unmanaged index of emerging-market common stocks.

4 The Barclays Capital U.S. Aggregate Index is an unmanaged index of domestic investment-grade bonds, including corporate, government and mortgage-backed securities. The S&P 500®, a market-capitalization-weighted index of common stocks, is a registered service mark of the McGraw-Hill Companies, Inc. and has been licensed for use by Fidelity Distributors Corporation.

5 It is important to note that the composition of the EM debt market in the early years of this study was primarily lower-rated Latin American sovereigns, while the EM equity market was dominated by higher-quality Asian markets. This helps explain the similar volatility profiles.

6 The duration in December 1997 was 4.1 years vs. 7.2 years as of July 2011. While the decline in U.S. interest rates and tightening of yield spreads have contributed to the lengthening of the duration profile, the most significant factor has been the willingness of investors to accept risk and therefore the issuance of longer-dated sovereign debt as risk profiles have declined.

7 Spearman rank correlation coefficient is defined as the Pearson correlation coefficient between ranked variables.

8 We removed two sovereigns from this analysis: Argentina, on account of its sovereign default, which has restricted its access to the international credit markets; and Venezuela, due to the idiosyncratic nature of its equity market.

9 We used five-year Greece CDS in computing yield spread volatility.

10 For inclusion in the JP Morgan Emerging Market Global Bond Index (EMBIG), the country must qualify as low/middle income by The World Bank definition for at least two consecutive years. The World Bank uses a gross national income (GNI) measure to divide countries into one of four income groups. The high-income group is defined as a GNI per capita of $12,276 or greater in 2010. Any country falling below that level satisfies the first condition for index inclusion. As an example, Brazil per capita GNI was approximately $9,400 in 2010, nearly double the 2005 level. All indices are unmanaged. Performance of the indices includes reinvestment of dividends and interest income, unless otherwise noted, and is not illustrative of any particular investment. An investment cannot be made in any index.

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