

**THE EFFICIENCY GAINS
OF LONG-SHORT CREDIT
STRATEGIES**

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FREDERICK E. DOPFEL AND SUNDER R. RAMKUMAR

The potential efficiency gain associated with long-short active strategies compared with long-only active strategies has been known for some time as it applies to equity portfolios. Owing to recent developments in the fixed-income market, long-short strategies can now be used for credit risk selection. This article reviews the framework and assumptions for assessing the potential efficiency gains for long-short investment-grade credit and high-yield credit strategies compared with the efficiency gains for long-short equity. Despite differences in benchmarks and in security-specific risk and portfolio risk characteristics, the expected efficiency gains for long-short credit strategies are demonstrated to be similar in magnitude to those previously found for long-short equity strategies. This has important implications for how investors should structure fixed-income portfolios to exploit these efficiencies.

**THE EFFECT OF CREDIT RATINGS
ON CREDIT DEFAULT SWAP SPREADS
AND CREDIT SPREADS**

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KENNETH N. DANIELS AND MALENE SHIN JENSEN

This article investigates empirically the relationship between credit spreads and credit default swap spreads and how these spreads react to changes in credit ratings. The authors' findings suggest a clear relationship between the two spreads and that credit rating and macroeconomic factors add significant information to this relationship. Furthermore, both spreads react to changes in credit ratings, and in particular to downgrades. The authors discover anticipated and lagged effects of changes in credit rating and differences between investment grades. Interestingly, the CDS market seems to react faster and more significantly than the bond market to changes in credit ratings.

**USING CREDIT DERIVATIVES
TO COMPUTE MARKETWIDE DEFAULT
PROBABILITY TERM STRUCTURES**

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HANS N. E. BYSTRÖM

This article suggests a simple way of backing out marketwide risk-neutral default probability (and default density) distributions from quoted credit default swap (CDS) index spreads. It applies the approach to two marketwide European portfolios represented by two frequently traded *iTraxx* Europe CDS indexes, and the resulting analytical default probability term structures are updated on a daily basis. Such instantaneous default probability term structures should be useful not only for risk managers in commercial banks but also for hedge funds and others involved in speculation and arbitrage, as well as for supervisory authorities such as central banks in their quest for financial stability.

**DO WE NEED TO WORRY
ABOUT CREDIT RISK CORRELATION?**

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ABEL ELIZALDE

Yes we do. This article shows that any firm's credit risk is, to a very large extent, driven by common risk factors affecting all firms. Using a reduced form model and sequential Kalman filtering estimation, we decompose the credit risk of a sample of corporate bonds (14 U.S. firms, 2001–2003) into different unobservable risk factors. A single common factor accounts for more than 50% of all (but two) of the firms' credit risk levels, with an average of 68% across firms. This factor represents the credit risk levels underlying the U.S. economy and is strongly correlated with main U.S. stock indexes.

**CYCLICAL CONSIDERATIONS
IN VALUING EMERGING
MARKETS DEBT**

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ALEXANDER V. KOZHEMIKIN

Recent research suggests that emerging markets (EM) sovereign and high-yield (HY) corporate bonds with the same credit rating have similar creditworthiness in general and similar average default rates in particular. Consequently, all else equal, similarly rated sovereign and corporate bonds should trade at similar spreads over U.S. Treasuries. This article sets out to improve on the intuitive method of relying on ratings-adjusted spread differentials to determine relative value between the two asset classes. It argues that for any given credit rating, annual default rates of EM and HY bonds are closely linked to their respective macroeconomic cycles and thus deviate significantly from their long-term averages. As the EM and HY macro cycles are not necessarily synchronous, there may be situations in which similarly rated EM and HY bonds have different term structures of default and should therefore trade at very different spread levels. Given the recent out-performance of the EM macro cycle, incorporating a cyclical perspective into a relative value framework accentuates even more the persistent undervaluation of EM sovereigns. The lack of sufficient familiarity of most investors with EM most plausibly explains the undervaluation of EM relative to HY. As EM debt matures as an asset class, this lack of knowledge is likely to be rectified.

**A MODEL FOR CONVEXITY-BASED
CROSS-HEDGES WITH TREASURY
FUTURES**

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ANDREW H. CHEN, JOSEPH KANG, AND BAOCHEN YANG

Even when Treasury futures' convexity becomes negative, a convexity-based hedge that does not require an option-theoretic solution is still possible because near the delivery month, a linear, arbitrage-free relationship should hold between Treasury futures and the cheapest-to-deliver (CTD) Treasury. Using this hedging implication and Rendleman's [1999] framework for duration hedge, a model is developed for forward-looking, convexity-based cross-hedges. The numerical analysis of hedge cost performance indicates the following: 1) the forward-looking hedge is cheaper in most scenarios that involve different term structures of interest rates, hedge horizons, pairs of Treasury futures, and duration levels of both bond portfolio and CTD Treasuries, and 2) the cost saving is large when the convexity-based hedge is most needed; that is, when high-duration bonds are hedged, the term structure of interest rates is steep and the CTD pays high coupons.

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