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THE COST OF ACCURACY IN THE LEAST SQUARES MONTE CARLO APPROACH

The article illustrates the benefits of using a Monte Carlo approach to estimate the value of a derivative security. It also discusses the cost of accuracy in the least squares Monte Carlo approach. The article reports that the Monte Carlo approach is more accurate than the least squares Monte Carlo approach. The article also discusses the cost of accuracy in the least squares Monte Carlo approach. The article reports that the Monte Carlo approach is more accurate than the least squares Monte Carlo approach.

■ THE LEAST SQUARES MONTE CARLO (LSMC) APPROACH TO SUMMARY
 The article shows that the Monte Carlo approach is more accurate than the least squares Monte Carlo approach. The article also discusses the cost of accuracy in the least squares Monte Carlo approach. The article reports that the Monte Carlo approach is more accurate than the least squares Monte Carlo approach.

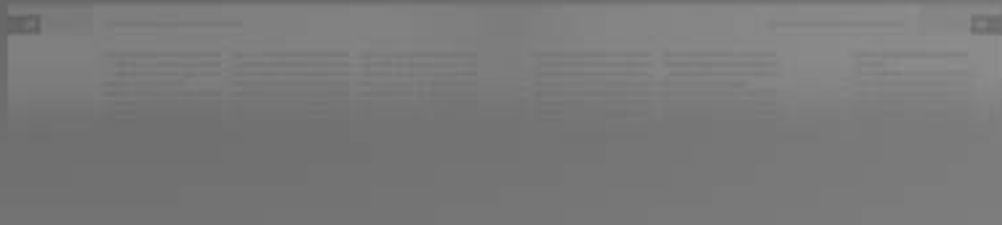
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ABSTRACTS

■ AN EMPIRICAL ANALYSIS OF THE BENEFITS OF INFLATION-LINKED BONDS, REAL ESTATE AND COMMODITIES FOR LONG-TERM INVESTORS WITH INFLATION-LINKED LIABILITIES 4

Lionel MARTELLINI, EDHEC Business School, EDHEC-Risk Institute, Vincent MILHAU, EDHEC-Risk Institute

This paper proposes an empirical analysis of the welfare gains involved in introducing various assets with inflation-hedging properties for long-term investors facing inflation-linked liabilities. Using formal intertemporal spanning tests, we find that interest rate risk dominates inflation risk so dramatically within instantaneous liability risk that introducing inflation-linked bonds, commodities or real estate within the liability-hedging portfolio has relatively little impact on investors' welfare from a short-term perspective. This holds true in spite of the relatively good (in the case of real assets) and even perfect (in the case of inflation-linked bonds) inflation-hedging benefits of these asset classes. On the other hand, substantial welfare gains are obtained as the investment horizon converges towards the liability maturity date. Even more substantial utility gains are obtained if these asset classes are also used in the performance-seeking portfolio, where they provide diversification benefits with respect to bond and equity returns.

JEL Classification: G11, G23

Keywords: inflation, liability-hedging portfolio, performance-seeking portfolio, real assets, utility gains.

■ A REVIEW OF CORPORATE BOND INDICES: ASSESSING FLUCTUATIONS IN RISK EXPOSURES 20

Saad BADAoui, Carlos Heitor CAMPANI, Felix GOLTZ, EDHEC Risk Institute, EDHEC Business School

This paper analyses indices for the US market and euro-denominated corporate bond market. First, we provide a review of the various applications of bond indices and associated challenges. We then analyse the risk-return properties of corporate bond indices, as well as heterogeneity across competing indices covering the same market. The descriptive statistics indicate that the risk-return properties across most indices are relatively similar. Moreover, an analysis of the stability of the indices' exposures to interest rate risk and credit risk reveals unstable risk exposures over time. Such instability is accentuated in indices that designed to be highly liquid and thus draw on a reduced constituent universe: the more investable the index is, the less reliable are its risk exposures. Finally, we find pronounced differences in credit and interest rate risk exposures between US and Euro indices. Overall, such differences in risk exposures, as well as their fluctuation over time, show that bond indices are implicit choices of risk exposures, and investors should consider carefully how such implicit risk choices interact with their explicit asset allocation choices.

JEL Classification: G11

Keywords: corporate bond indices, index construction, investment-grade bonds, risk exposure.

■ MANAGING SOVEREIGN CREDIT RISK EXPOSURE IN A GLOBAL EQUITY PORTFOLIO 34

Felix Goltz, Ashish Lodh, EDHEC Risk Institute, Fahd Rachidy, ERI Scientific Beta

This paper analyses the cross sectional differences in individual stock's exposure to a world sovereign credit risk factor. While sovereign credit risk has been shown to spill over to equity markets at the aggregate level, we examine the sovereign credit risk impact on individual stock returns. In particular, we estimate the beta of a stock's return with respect to a world sovereign credit risk factor using Bayesian estimation techniques. Our sovereign credit risk factor is constructed from market-based information, notably from spreads of sovereign credit default swaps. We then examine the out-of-sample properties of portfolios of stocks sorted on their sovereign betas. We find that low sovereign beta equity portfolios have significantly higher returns than high sovereign beta portfolios in times of high sovereign risk and vice versa, which confirms that our measurement of sovereign risk exposure is robust out of sample. In addition, returns of equity portfolios during periods with high sovereign risk decrease almost monotonically with their estimated sovereign credit risk exposure, i.e. stocks with a higher estimated exposure indeed suffer higher losses from bad news on sovereign risk. Our approach to estimating sovereign risk exposure of stocks thus makes it possible to construct global equity portfolios with limited exposure to sovereign credit risk.

JEL Classification: G11

Keywords: sovereign risk, bayesian beta, stock returns.

■ ASSESSING VOLATILITY INDICATORS: THE BENEFIT OF LOCAL EQUITY VOLATILITY INDICES 50

Lixia LOH, EDHEC Risk Institute-Asia, Lionel MARTELLINI, EDHEC Business School, EDHEC-Risk Institute, Stoyan STOYANOV, EDHEC Business School, EDHEC Risk Institute-Asia

We use three non-parametric volatility estimators – option-implied, realized, and cross-sectional – to test for presence of a local volatility factor in 8 different markets. Through a regression model, we confirm the presence of a strong local volatility factor influencing the local market return detectable with the three estimators. Using a principal component analysis, we demonstrate that the global volatility factor is not the US volatility but a global factor with a dominant non-Asian exposure. An Asian volatility factor appears to be of second-order importance and, finally, a US factor appears only with option-implied volatility and is of third-order importance. From a practical perspective, our analysis suggests that a US volatility indicator cannot be taken as a sufficient risk statistics for regional equity markets. As a consequence, it appears that the development of local volatility indices is needed to contribute to the ability for investors to measure and manage uncertainty about volatility across international equity markets.

JEL Classification: G11, G15

Keywords: volatility indices, volatility derivatives, volatility risk, regional volatility factors, global volatility factor.

■ LIQUIDITY IN EUROPEAN EQUITY ETFs: WHAT REALLY MATTERS? 60

Anna CALAMIA, GREDEG, Laurent DEVILLE, CNRS, EDHEC, Fabrice RIVA, IAE de Lille, LEM

Despite the importance ETFs have recently gained, little is known about their liquidity. The conventional view on ETF liquidity is that what really matters is not the size of the ETF or its trading volume but the liquidity of its benchmark index. We argue that while creation/redemption effectively creates a tight link between the ETF and the index liquidity, other factors are likely to affect the former. The aim of our paper is to provide empirical evidence of the determinants of the spreads in the European equity ETF markets from their inception in 2000 to the end of 2011. We find that, while the liquidity of ETFs effectively depends on the liquidity of their benchmark index, size also matters: larger and more heavily traded ETFs display tighter spreads. We also find that synthetic ETFs exhibit lower spreads than physical ETFs but that this effect becomes insignificant when competition is accounted for. Finally, market fragmentation also affects spreads but does so differently in physical and synthetic ETFs, which may be explained by the degree of fragmentation these ETFs really face.

JEL Classification: D47, G12, G23

Keywords: ETFs, liquidity, bid-ask spread, competition, fragmentation, synthetic replication, physical replication.

■ FOCUS ON... BENEATH THE SOVEREIGN DEBT ICEBERG: AN INSIGHT INTO THE IMPLICIT PUBLIC PENSION LIABILITIES WITHIN EUROPEAN ECONOMIES 74

François COCQUEMAS, EDHEC Business School

Ignoring the explicit and implicit pension liabilities when assessing the solvency of the EU-27 countries gives a distorted view of their relative situations. After a short analysis of the main demographic, economic, and political determinants that could influence pension projections, we perform an estimation exercise analogous to that of Mink (2008). Using several fixed discount rate hypotheses, we compute the net present value of forecasted public pension liabilities for the 27 countries, and compare the relative situation of countries under current arrangements. We then propose a heuristic categorisation of the main risks borne by each country's pensions from their underlying projections. On the basis of this analysis, we recommend that investors be more aware of the risks borne by pension schemes when evaluating the solvency of sovereign debtors. European institutions must keep working towards greater transparency and information regarding public finances, and ultimately consider taking into account explicit and implicit pension commitments in the stability targets. This would allow stakeholders to better apprehend pension risk and to foster coordinated long-run reforms across countries.

JEL Classification: E62, E63, H55

Keywords: public pensions liabilities, sovereign debt, fiscal policy.

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