
PRACTITIONER'S DIGEST

The “Practitioner’s Digest” emphasizes the practical significance of manuscripts featured in the “Insights” and “Articles” sections of the journal. Readers who are interested in extracting the practical value of an article, or who are simply looking for a summary, may look to this section.



STAKEHOLDER PERSPECTIVES ON NORWEGIAN INVESTMENT RESPONSIBILITY

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Sarah Takaki

The Strategy Council for Norway’s Government Pension Fund Global, supported by the Norwegian Ministry of Finance, hosted the Responsible Investment Conference held in Oslo on 20 June 2013. The conference’s goal was to facilitate dialogue with stakeholders on environmental, social, and governance (ESG) issues to inform the Strategy Council’s forthcoming report on the Fund’s responsible investment strategy. The summit was organised into three sessions, each of which focused on one ESG issue and featured speakers from Norwegian and international organisations. Overall, participants commended the Fund’s achievements to date while proposing a variety of new initiatives and highlighting the challenges faced by the Fund.

NORWAY’S SUMMIT ON RESPONSIBLE INVESTING

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Mitch Towner

This is a summary of the issues discussed and presented at the 2013 Investment Strategy Summit for the Norwegian Government Pension Fund Global. The emphasis of the summit was responsible investing with a special emphasis on ways to strengthen the Fund’s work on responsible investment. The summit brought together experts (both practitioners and academics) and discussed ethical issues, financial performance, and activist investors in the context of social, environmental, and governance concerns. These issues are particularly important for large universal owners who own a large cross section of all companies and have the size to directly influence management.

**SOVEREIGN WEALTH AND RISK MANAGEMENT: A FRAMEWORK
FOR OPTIMAL ASSET ALLOCATION OF SOVEREIGN WEALTH****PAGE 45***Zvi Bodie and Marie Briere*

This paper proposes a framework for optimal asset allocation of sovereign wealth, taking explicit account of all sources of risk affecting the sovereign's balance sheet. We consider a central government allocating the wealth of public institutions (SWFs, public pension or social security funds, central banks reserves, etc.), and we provide an approach for a country to perform Asset Liability Management on its overall sovereign balance sheet. The paper works in two steps. It uses the Merton (1974) approach to estimate the process of the country's assets, and then optimizes the balance sheet using the ALM approach (Merton, 1993).

Previous literature typically viewed the management of public institution's wealth separately and independently from sovereign liabilities. But the example of the recent crisis clearly shows that when a government is short of liquidity to meet its debt repayments, all assets become fungible and available to substitute for the resources initially earmarked for this purpose. An innovation of this paper is to consider joint management of all sovereign assets and liabilities. We extend the theory and practice of modern contingent claim analysis (CCA) to risk management for sovereign wealth. The sovereign balance sheet is analyzed to determine the optimal sovereign asset allocation in an integrated ALM framework. We derive analytically the optimal sovereign allocation and show that it should involve a performance-seeking portfolio and three hedging demand terms for the variability of the fiscal surplus and external and domestic debt. To implement this allocation in practice, the central government would have to coordinate sovereign wealth management with fiscal policy, monetary policy and public debt management.

Finally, we provide a real data application for Chile. We show that a substantial portion of the country's asset allocation ought to be dedicated to emerging bonds (which provide relatively good protection for liabilities), as well as to developed and emerging equities. This optimal asset allocation is very different to the one currently implemented by Chile in its SWF and the central bank's reserve management department.

**THE INTEREST RATE SENSITIVITY OF TAX-EXEMPT BONDS UNDER
TAX-NEUTRAL VALUATION****PAGE 62***Andrew Kalotay*

We explore the effect of taxes on the prices of municipal bonds. Although interest is tax-exempt, the gain resulting from purchasing a muni at a deep discount—below the so-called *de minimis* threshold—is subject to severe tax treatment. The gain is taxed as ordinary income at maturity; currently for a typical investor the applicable rate is roughly 40%. Thus, purchasing a bond at 80 would trigger an 8-point tax liability.

The paper develops a rigorous approach to the pricing of munis by incorporating taxes into the industry-standard OAS-based valuation framework. The key concept is 'tax-neutral value', which is simply the fair value that takes into account potential tax payments. Tax-neutral valuation allows us to explore how muni prices respond to changing interest rates. The basic insight is that due to the interaction of the

purchase price and the related tax payment, discount munis are significantly more sensitive to interest rates than taxable bonds. For example, currently the duration of a 10-year taxable bond is roughly 8.5 years, while that of a 10-year muni can exceed 13 years.

Tax-neutral valuation provides the foundation for accurately projecting the prices of munis under various interest rate scenarios. The primary application of this approach is risk management, including hedging. It is also essential for determining the optimum time to recognize a loss in order to maximize after-tax performance.

THE PERFORMANCE OF LEVERAGED AND INVERSE LEVERAGED EXCHANGE-TRADED FUNDS

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Brian J. Henderson and Gerald W. Buetow

ETFs providing investors leveraged, inverse, and leveraged inverse exposures to benchmark indexes have become an important part of the investment landscape. Our study investigates the extent to which these funds achieve their stated return objective. We propose and test a benchmark model of return performance to investigate the determinants of return deviations from the target benchmark return. Our study empirically analyzes a broad cross-section of 98 leveraged, inverse, and inverse leveraged ETFs targeting U.S. equity benchmark indexes.

Our baseline regression model uncovers significant levels of abnormal performance across the universe of funds. The abnormal return performance is a function of the leverage multiple, such that leveraged inverse funds suffer returns below the benchmark model and leveraged funds exhibit positive excess returns. The costs and frictions associated with providing leveraged and inverse leveraged returns likely result from factors specific to each index such as the availability, liquidity, and cost of derivative contracts referencing the target index, coupled with other costs that are systemic such as funding cost and counter-party risk. Through our analysis of “mirror pairs” (defined as two funds providing equal but directionally opposite leveraged exposure to the same benchmark index and having an identical fund sponsor) we find a negative and significant relation between the “bull” fund return deviations and those of the matching “bear” fund. These results are consistent with index-specific replication costs, and may stem from short funds incurring the cost of borrowing to the benefit of long investors. This result suggests the return determinants extend beyond the role LIBOR plays in the swap funding cost, which would constitute a transfer from the leveraged (long) funds to the inverse leveraged (short) funds. Finally, utilizing a model of transactions costs that links the daily portfolio rebalancing needs to the volatility of the underlying index and the symmetry of fund sizes and flows, our analysis of mirror pairs uncovers significant costs to these funds stemming from their utilization of over-the-counter derivatives for provision of their leveraged and inverse leveraged exposures.

Our results are of interest to a wide array of investors, ranging from individual investors to institutional investors. Short-term investors seeking to hedge other portfolio holdings, or speculators seeking the use of leverage to profit from their views, potentially have uses for leveraged and inverse leverage ETFs. Understanding their performance at providing the target exposure and the determinants of return deviations are critical for such investors.