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Alternative investments covers a wide range on nontraditional investments. While hedge funds, managed futures, real estate, and private equity are generally regarded as the primary areas in alternative investments, commodities and energy in particular are also regarded as important alternative investment areas. Certainly, the past year has shown the importance of holding a wide range of alternative investments. During the year, energy investment has shown the ability to perform well as traditional stock equity investments have yet to have a breakout year.

In this issue we concentrate on exploring the performance, strategy and structural characteristics of various energy based investments including weather-based investments.

In the first article of the Energy section, "Modeling Energy Commodity Futures: Is Seasonality Part of It?" Milena Todorova analyzes the price dynamics of two important energy futures prices—crude oil and natural gas. The two-factor model of Schwartz-Smith [2000], which nests other important models developed earlier and includes as factors, a mean-reverting short-term deviation and uncertain equilibrium level to which prices gravitate is subjected to empirical testing. The model parameters of the Schwartz-Smith two-factor model are estimated using traded futures on natural gas and crude oil. Her analysis of the variance structure of natural gas prices suggests the presence of seasonality. She adjusts for seasonality and finds that the seasonally adjusted series produce a better fit to the two-factor model, as indicated by various goodness-of-fit metrics computed. She also develops a three-factor model with a stochastic seasonality component of log spot prices. She finds however that the three-factor model, however, produces less accurate parameter estimates and larger prediction errors than the other models. In the second article, "Active Long-Only Investment in Energy Futures," Georgi Georgiev compares the investment performance and portfolio diversification benefits of passive and active long-only energy futures investment. Applying simple trend capturing rules to dynamically reallocate capital in and out of the market, they find that active long-only investment can considerably reduce the volatility inherent in energy futures and pro-

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vide significant downward protection in periods of extreme negative performance of the underlying energy markets. In the third article, "'Black Gold'—Trading Crude Oil for Greater Portfolio Efficiency: A Comparison with Commodity Indices," Mark Rzepczynski, Cengiz Y. Belentepe, Wei Feng and Philip Lipsky compare the addition of a commodity index to a traditional portfolio of stocks and bonds against the alternative of adding crude oil futures to serve as a commodity diversifier. They find that the value of such a simplification may be significant. By reducing the number of commodities used to gain portfolio diversification, investors may gain liquidity and flexibility. They run a similar test for gold, which has been considered a key commodity diversifier during the inflationary periods of the 1970s and 1980s. In the fourth article, "Balancing Energy Supply and Demand: A Better Approach Than Drilling More Wells!" Iain Smith highlights various ways in which current energy supply can be augmented through alternative and renewable energy sources. He also consider ways in which the growth rate in energy demand can be mitigated by adopting more conservation-minded initiatives, especially in the U.S.

The section on Weather presents articles on weather derivatives, pricing issues of such derivatives as well as the legal framework used to structure weather derivatives. In the first article, "Introduction to Weather Derivative Pricing," Stephen Jewson outlines the methods used in industry for the valuation of weather derivatives while in the second article, "Weather Derivatives: An Attractive Additional Asset Class," David van Lennep, Teddy Oetomo, Maxwell Stevenson and André de Vries demonstrate that companies from a wide-range of industries are able to hedge against the volatility of their revenues more efficiently by resorting to non-standardized weather derivative contracts. In addition, including weather derivatives contracts as an additional asset class produces significant diversification benefits for conventional portfolios. This study proposes that institutional investors write non-standardized contracts for their corporate clients, repackage them and offer them as an additional asset class. The strategy would help to mitigate the lack of liquidity inherent in non-standardized contracts and, simultaneously, provide significant diversification benefits for the conventional portfolio.

In the third article, "The Legal Characterisation of Weather Derivatives," Paul Ali provides an explanation of the legal status of weather derivatives. The article examines the structure of payment obligations under a temperature derivative, the most common type of weather derivative, and the legal requirements for insurance products. The legal consensus to date has been that weather derivatives are not insurance products and that the providers of weather derivatives are not subject to regulation as insurers. That proposition was recently called into question, by the US National Association of Insurance Commissioners in a controversial paper released in late 2003 where it was stated that weather derivatives were, in fact, insurance products. This article argues that weather derivatives are only superficially similar to insurance products but cannot, on a strict legal analysis, be considered insurance products.

The final section presents articles on current issues in Energy investments. In the article, "Capitalizing on Solutions that Can Make Ecological and Economic Sense: The WilderHill Clean Energy Index (ECO)," Robert Wilder outlines an innovative "WilderHill Clean Energy Index" now available with the symbol ECO, describes its origins, and presents the current thinking behind pollution prevention and the precautionary principle. An increasing amount of activity is taking place in the U.K. capital markets with

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respect to wind power financing, coinciding with an expected long-term shift out of growth stocks and into high-income securities. One issue that is of importance to the market is the risk involved in the U.K. regulatory system for wind power. The U.K. system is market-based and is riskier and more complex than the fixed-price tariff regimes found elsewhere in Europe. However, it is also one of the only systems to offer upside potential to investors. Renewable Obligation Certificates (ROCs) are the tradable instruments that sit at the centre of the system. Understanding the mechanics of the U.K. Renewables Obligation and the drivers of ROC prices is fundamental to the valuation and assessment of U.K. wind power investments. In the article, "U.K. Wind Power —Regulatory Issues and the ROC Price Map" John Dunlop introduces the ROC Price Map to simplify analysis and to establish reasonable price bands within which ROCs are likely to trade. In the final article of this issue, "Precipitation Modeling and Contract Valuation: A Frontier in Weather Derivatives," Melanie Cao, Anlong Li and Jason Wei describe the market for precipitation derivatives and provide examples of applications of such contracts. They also propose estimates and compare several models for precipitation. Based on the data for the Chicago Midway Airport (1950-2003), they find that a mixture of exponentials and kernel density provide a better fit than a gamma distribution. A valuation example is also presented.

As pointed out earlier, alternative investments covers a wide range of nontraditional investments. Recent years have also shown the importance of holding a broader range of alternative investments in investor's portfolios. This issue emphasizes 'energy related' investments. Similarly, future issues of the journal will explore a broader range of alternative investment areas. For instance, keeping in the vein of energy related issues, the next issue will include articles summarizing the structure and growth of the natural gas and crude oil markets. In short, in future issues of the Journal, readers can expect to find an increasing array of articles related to a wider range of alternative investment opportunities.

The Journal's aim is to provide a source of academic and practitioner research on a wide range of topics in the alternative investment area. We look forward to your comments as well as your own research submissions.

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