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Feature Articles

This month's focus: **Multi-Factor Models and Valuation**

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| Comparing Multi-Factor Models: Which Model Should We Use to Calculate Cost of Equity? | <i>Hitoshi Takehara</i> | 8 |
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In this research, we review multi-factor asset pricing models developed in recent years and compare them with traditional models including the capital asset pricing model and Fama-French three-factor model by using the Hansen-Jagannathan distance measure. Surprisingly, the results of the generalized method of moments test show that all the candidate models are rejected. Based on Fama-MacBeth regression results and using sub-period data, we further confirm that structural changes exist in those factor models. Therefore, we should avoid the blind acceptance of all factor models developed and used in the United States when financial analysts calculate the cost of equity for Japanese stocks.

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| Multi-Factor Model and Equity Return | <i>Yoshiaki Kusakabe, CMA / Seiichiro Takahashi, CMA</i> | 17 |
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After the introduction of the mean-variance approach by H. Markowitz, various related factors were developed by academics and practitioners along with the development of modern portfolio theory. In this article, we detail a history of these factors and discuss various notions about them. We investigate long-term risk premium of well-known factors and their behavior under different market regimes. We also describe the practical application of factors based on recent investment technology and tools.

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| Observation on Various Risk Premiums Applied in Valuation Practice | <i>Masamichi Akashi</i> | 28 |
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In valuation practice, CAPM is utilized to estimate the cost of equity. In actual application, some modifications are often made to CAPM by considering additional risk premiums. Such additional risk premiums are broadly classified into two categories. One is for the valuation of overseas companies, the other for the valuation of small companies. The latter is classified into size premium and specific risk premium. However, the background to such adjustments is not necessarily correctly understood.

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| Developments in the Multi-Factor Model and Predicted Beta | <i>Naoya Nishimura, CMA / Kazuya Nagasawa, CMA</i> | 36 |
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In this article, we discuss the Barra Equity Model, one of the most commonly used multi-factor models in the financial community, in the context of historical development in factor investing. The Barra Equity Model provides a quantitative framework to relate corporate fundamentals to stock performance, enabling investors to perform factor-based performance attribution analysis, risk decomposition, and stress testing. We also discuss the advantage of predicted beta derived from the Barra Equity Model. The predicted beta, which is also called fundamental beta, can capture the change in a corporate's fundamentals more timely than historical beta and can therefore be a more robust and accurate estimator of future beta.

Special Posting

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| Determinants of Market Reaction to Disclosure of Accounting Misconduct: Evidence from Japan | <i>Norimasa Ozeki</i> | 72 |
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This study examines determinants of stock price reaction to accounting misconduct using disclosed cases in Japan. Prior research showed that the announcement of misconduct involving a larger negative impact on income brought greater negative market reaction. This paper finds other characteristics of misconduct such as fraudulent financial reporting, management fraud, and no investigation by a third-party committee are also significantly associated with negative returns after the announcement of misconduct. These results suggest that if financial statements look suspicious, investors examine a firm's reliability by studying the content of misconduct and transparency of investigation.

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| Innovation and Finance: Role of Financial Market and Shareholders | <i>Daisuke Asaoka</i> | 85 |
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Innovation by firms is innately accompanied by risk, which relates to the degree of tolerance by shareholders supplying capital to them. Firms' activities can be classified into exploration and exploitation, which are respectively an uncertain activity toward innovation and a relatively certain one based on existing assets. The paper shows that pressure from shareholders can inhibit exploration or cause underinvestment by firms. The importance of communication between firms and shareholders and decision processes within firms based on uncertainty is discussed.

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