

Corporate Investment and Expected Stock Returns: Empirical Analysis from the Chinese Stock Market

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Abstract: Enlightened by the recent research that talks about the role of investment in determining the firms' future equity returns, this paper interprets the "investment anomaly" from a perspective of kernel risk factors, contributing to the ongoing debate between the rational interpretations and behavioral explanations. Another contribution of this work is we conduct the analysis in the settings of the Chinese equity market, which has been lack of similar discussions.

Applying the asset growth (denoted by AG) as well as the investment-to-asset ratio (denoted by I/A) as the proxies of corporate investment, I investigate the relation between corporate investment and the subsequent stock returns from both portfolio level and stock level. Characteristic-based sorting reveals a fact that firms with lowest investment level have largest subsequent average returns and firms with highest investment level have smallest returns in the next one to three years, especially among small firms. The cross-sectional regressions of returns over the lagged investment variable also confirm the significant negative relation between corporate investment and subsequent stock returns on stock level.

To interpret the drivers that cause such return patterns, I then construct an investment-based risk factor, Asset Growth Return (denoted by AGR), which is defined as the difference in returns between the low-investment stocks and the high-investment stocks. Empirical results show that the AGR factor has a positive and statistically significant risk premium and can explain the abnormal returns on the portfolio level. Compared with other factor models, including the Fama-French three-factor model as well as CAPM, models that contain AGR factor predict more cross-sectional excess returns. In addition, the AGR factor plays an important role in explaining why the negative investment-return relation among companies with small size and low book-to-market ratios (denoted by B/M) or companies with big size and high B/M is particularly significant. Empirical results show that firms with such characteristics tend to have heavier loadings on the AGR factor, indicating that those firms have significantly larger exposure to the investment risk factor.

Keywords: corporate investment, expected stock returns, common risk factor.

1. Introduction

During the past half-decade, there have been more and more scholars (e.g., Yao et al., 2011), especially in the western world, examining the association between real investment and average expected stock returns employing large firm-level data. Most of them came to find a consistent but abnormal fact that firms' real investments will have a negative effect on their stock returns. Titman, Wei, and Xie (2004) have proved that the investment-return relation is independent of the previously documented long-term reversal and secondary equity issue anomalies. Moreover, evidence from different countries shows that such phenomenon exists in various markets including the USA, Australia, and other developed countries (Cooper, Gulen, & Schill, 2008; Gray & Johnson, among others). In addition, despite the general argument about the negative relation, researchers have disputed a lot over the initial reasons that have caused the investment-return relation. Studies concerning this anomaly are split into two schools, in which one school explains the relation from a traditional risk-based perspective, while the other is based on behavior considerations. Therefore, a more extended as well as deeper investigation on not only the investment-return relation but also its underlying causal factors is quite necessary. Moreover, neither theoretic researchers nor empirical researchers in China have made the relation between investments and expected stock returns the center of systematic empirical investigation. Hence, our research makes efforts to fill this gap by examining whether and why real investment has an effect on expected stock returns using data from the Chinese Stock Market from both the firm level and portfolio level.

However, we should notice that the Chinese stock market, one of the largest emerging markets in the world, has several characteristics that make it different from other developed markets (see, John Fernald and John H. Rogers, 2002). The first one is its short history. China's stock market has experienced tremendous growth and development in the twenty-four years since the inceptions of the Shanghai Stock Exchange (December 19, 1990) and the Shenzhen Stock Exchange (December 1, 1990). The rapid growth also brings uneven and irregular development. The rules and structure of the market can be hardly called comprehensive or well established. Many individual investors, though have little investment knowledge,