Idiosyncratic Volatility Effect and Analyst Recommendations

EXTENDED ABSTRACT

The classic asset pricing theories propound that high stock volatility should attract higher returns (Merton, 1987). The alternate relationship such stocks could achieve is having no association with returns, given that the market is frictionless. However, Ang et al. (2006), in their seminal contribution, documented a negative association between Idiosyncratic Volatility (IVOL) and subsequent returns. This negative relationship is called the Idiosyncratic Volatility (IVOL) effect or the IVOL anomaly. The phenomenon is also referred to as the IVOL puzzle, as the literature has tried to establish the causality of the effect by enumerating factors like investors' preference for lottery-like stocks (Bali et al., 2011), higher retail trading proportions (Han & Kumar, 2013), illiquidity (Bali & Cakici, 2008), and methodological errors (Fu, 2009); however, the effect has only been partially explained (Hou & Loh, 2016). The factor that connects these causes is the problem of information asymmetry (Jiang et al., 2009; Johnson, 2004). The greater the information asymmetry, the slower the speed of price discovery and the more prolonged the period of mispricing (Brennan & Subrahmanyam, 1995). To alleviate such mispricing, informed market intermediaries like analysts are crucial. The expertise and resources allow them to unravel omitted, hard-to-find information about firms and produce efficient output for the investors. Their output significantly impacts stock returns and aids investors in earning superior profits (Womack, 1996). However, the expectation that they are rational information disseminators is contradicted by the evidence of deviations in their forecasts and recommendations caused by cognitive biases, incentive structures, changes in the information environment, and macroeconomic variations (Ramnath et al., 2008). The deviations lead to changes in the fundamental stock prices, as investors act on analysts' output, causing mispricing and anomalies (Engelberg et al., 2020a).

Regarding the IVOL effect, the rational school of thought expects analysts to disseminate information efficiently, thereby weakening anomalous behavior. The findings of George & Hwang (2011) and Gu et al. (2019) align with this school of thought. However, the prevalent information asymmetry may lead to difficult forecasting for high IVOL stocks. The evidence in the literature supports the argument that hard-to-predict stocks invite unwarranted optimism and witness more deviations in analyst output (Grinblatt et al., 2016). The two schools of thought view the relationship between analyst output and the IVOL effect differently. Thus, we conduct the present study to resolve the contradiction by probing the relationship between idiosyncratic volatility and analyst recommendations.

The present study has five-fold objectives. First, we explore whether the analyst coverage significantly changes the negative relationship between IVOL and stock returns. Second, we analyze whether the analyst recommendations prefer stocks with high or low idiosyncratic volatility. If the recommendations show a clear favourite, the analysts' role in attenuating or reinforcing the IVOL anomaly shall be significant. Therefore, third, we check whether the recommendations contribute to the IVOL effect. Fourth, given the difference in firm and market factors, we examine the possibility of change in analyst preferences towards IVOL stocks. Fifth, we investigate whether the time factor changes the relationship between the recommendations and the stocks' idiosyncratic volatility.

We conduct the following analysis to address the objectives of the study. First, we perform a univariate monthly sorting of stocks into portfolios based on idiosyncratic volatility for the stocks covered and not covered by analysts. This analysis helps us to compare the strength of the IVOL effect based on analyst coverage. In addition, it allows us to gauge the pattern of consensus recommendations for the covered stocks. Second, we run a Fama-MacBeth (1973) regression on the highest IVOL portfolio and explore the relationship with the consensus

recommendations. Third, we explore the simultaneous impact of recommendations and IVOL on subsequent stock returns by Fama-MacBeth's (1973) regression analysis. Fourth, we sub-sample the observations based on the firm features like size and institutional ownership. Further, we create sub-samples based on market sentiment. In addition, we double-sort the stocks based on IVOL and consensus recommendations to check the symmetric nature of the relationship and if specific scenarios amplify the analyst recommendations for anomalous behavior. Fifth, we conduct a regression analysis to study the influence of time on the analyst recommendations for IVOL stocks.

The study finds that the stocks followed by analysts experience a more substantial negative IVOL effect than the ones not followed. The CAPM, 3-factor, and 4-factor alphas show a significant difference between the highest and lowest quintile of IVOL portfolios for the stocks covered by the analysts, as opposed to insignificant differences for the uncovered stocks. The analyst recommendations favor the stocks with higher idiosyncratic volatility as their recommendations turn optimistic for such stocks. The favoritism towards high IVOL stocks shows that analyst recommendations may contribute to strengthening the IVOL effect. Combined, the IVOL and consensus recommendations negatively affect the return of the subsequent month. The size of the firm, institutional ownership, and investor sentiment do not significantly impact the analyst reinforcement of the IVOL effect; however, small-sized high IVOL firms attract favorable recommendations. In addition, their optimism does not fade over time as they continue to favor high IVOL stocks after the time factor is incorporated into the analysis.

The study makes significant contributions to the literature. First, the study supplements the literature (George & Hwang, 2011; Gu et al., 2019) by drawing a clear comparison between the IVOL effect of the stocks covered and uncovered by analysts in the U.S. market; thus, the

findings highlight the IVOL effect due to analysts' involvement. Second, the study supports the anomaly literature by underlining the role of analysts' favorable recommendations in amplifying the IVOL anomaly (Hsu et al., 2012; Papakroni, 2018). Third, the study contributes to the body of literature, which examines the trends in analyst output. The present study contradicts the earlier evidence and shows that analyst recommendations remain favorable towards high IVOL stock even after considering the time factor. Thus, it shows that the recommendations are persistently biased, and investors may adopt a cautionary approach while acting on such recommendations.

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