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Do analysts cater to investor beliefs via target prices

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ABSTRACT

This study examines analyst target price bias within the framework of catering theory. Given that analyst catering is more probable when the clients of the analyst forecasts are less sophisticated investors who are less likely detect it, we focus on a unique stock market where individual investors rather than institutions are the predominant group and account for 75% of the total security trading. Our results show that analysts do cater to investors via overshooting actual end-of-forecast-period prices even after controlling market sentiment index, analyst and company characteristics. Furthermore, results show that foreign analysts produced more biased target prices compared to domestic peers.

1. Introduction

Previous research shows that analysts' target prices are consistently biased. Asquith, Mikhail, and Au (2005) report that approximately 54% of analysts' target prices are achieved or exceeded during the year following the publication of an analyst report. Bradshaw, Brown, and Huang (2013) find that 38% of target price forecasts are met at the end of the 12-month period and 64% are met sometime during the period. They attribute their results to the absence of incentives for analysts to make more accurate target price forecasts than earnings forecasts. Analyst earnings forecast accuracy is monitored by the market and it affects analyst compensation. In contrast, target price accuracy is neither subjected to market scrutiny nor is it related to compensation. Bonini, Zanetti, Bianchini, and Salvi (2010) argue that less informed investors tend to incorporate analyst target prices in their investment strategies more frequently than informed investors. If this is so, analysts can transfer their own risk to less informed investors by delivering biased target price on purpose.

Early studies have focused on analysts' earnings forecasts accuracy and documented that the sources of analyst earnings forecast biases are caused by two incentives. One of them is the distorted incentives of analysts. Analysts face conflicting trade-generating incentives and must trade off the short term incentive to optimistically bias forecasts and recommendations with the long term incentive to build their own reputation through accurate forecasts and recommendations (Irvine, 2004 and Jackson, 2005). Hong and Kubik (2003) argue that, since optimistic forecasts relative to the consensus increase the chances of favorable job performance evaluation, analyst forecast optimism bias is likely due to incentives to promote stocks. Cowen, Groysberg, and Healy (2006) find that analyst optimism is, at least, partially driven by trading incentives.

The other source is the distorted incentives of managers in companies covered by analysts. Mittendorf and Zhang (2005) demonstrate that optimal incentive contracts between analysts and companies they cover leads to biased earnings guidance and

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biased analyst forecasts. Baik and Jiang (2006) find that the likelihood of management guidance increases in the optimism of analysts' consensus forecasts before the announcement. Assessed as a whole, the arguments in these papers can be described as pertaining to "supply side" sources of analyst earnings forecast bias.

Understanding the use of *earnings forecast slant* as a measure of analyst performance is important because earnings forecast is often considered as a crucial factor when evaluating corporations. However, understanding analysts' target prices forecasting accuracy is also important for several reasons. First, given that target prices provide an up-front estimate of the potential value of a stock, they may have an influence on investors' investment strategies. Therefore, how accurate these analyst target prices are in predicting future stock prices is important to investors. Second, under the current structure of the investment industry, there is no explicit control on the quality of target prices being enforced by the consumers (investors) of these target prices. This means that analysts may have an incentive to provide biased target prices to less informed investors, since doing so can produce a risk-shifting effect favorable to the provider of the target prices whose company may also have a position in the stock. If consumers of target prices have a better picture of the accuracy or potential biases in analyst target prices, then they can be in a better position to develop strategies to arbitrage away these inefficiencies. Third, understanding analysts' forecasting accuracy of target prices helps to shed light on the question of whether target prices are incrementally informative since the accuracy of target prices may affect the value investors assign to price targets. Fourth, compared to earnings forecasts which cover only quarter by quarter periods and stock recommendations which are discrete (e.g., buy, hold, sell), target price forecasts offer several advantages. They are continuous in nature, have well-defined forecast horizons, and exhibit higher frequency of revision than earnings forecasts. Understanding the forecast accuracy of analysts' target prices is, thus, important for investors and researchers as target prices are potentially useful inputs for firm valuation and indicators of future returns. Finally, by combining analysts' target prices with market prices and forming a ratio of target-to-market prices, a proxy for ex ante expected return can be constructed. Understanding the accuracy of analysts target prices is therefore also important for asset pricing research which often requires a measure of ex ante expected return, since the target price/market price ratio can serve as a check on more commonly used measures of ex ante expected returns generated from asset pricing models such as the CAPM and Fama–French type multi-factor asset price models.

Target prices provide market participants with analysts' most clear and precise statements on the magnitude of the company's expected value (Brav & Lehavy, 2003). Target prices comprise a straightforward measure of the potential change in value of the underlying stock that may have an influence on investors' investment strategies. However, Bradshaw et al. (2013) point out that unlike earnings forecasts, target price forecasts are subject to no market examination and surveillance.[1]

Recently, catering theory argues that analysts' forecast bias might be a result of their catering to "demand side" influence, that is, their clients—the readers of analysts' reports—who are the purported victims of analyst bias (Lai, 2005). Lai (2005) shows that analysts cater to what investors believe when forecasting *EPS*. Hribar and McInnis (2012) find that when investor sentiment is high, analysts' forecasts of one-year-ahead earnings and long-term earnings growth are relatively more optimistic for certain types of companies. Therefore, analysts' forecast bias might be a result of their catering to "demand side" influence, that is, the readers of analysts' reports who are the purported victims of analyst bias.

Bilinski, Cumming, Hass, Stathopoulos, and Walker (2015) discuss incentives which may cause analysts to cater to investor beliefs via target price. They argue that analysts working for brokers who are not affiliated with investment banks have incentives to cater to investor beliefs via target price rather than earnings estimates because the marginal cost of reputation loss from issuing biased target prices is lower for these analysts compared to issuing biased earnings estimates. These brokers, in turn, benefit from issuing biased target prices since retail investors on average fail to see the bias and short-term institutional investors can, thus, take advantage of temporary stock price increases caused by the biased target prices and sell their shares to the retail investors. These same short-term institutional investors can then reward the brokers with analysts engaging in catering via higher future trades channeled through the broker. Bilinski et al. (2015) find empirical evidence supporting this incentive mechanism. Their results show that for stocks with high short-term institutional ownership, analysts strategically bias their target prices, but not their earnings estimates. They also find that the bias in the target prices, when there are short-term institutional investors, concentrates mainly among analysts working for brokers that are not affiliated with investment banks. Also, they find evidence consistent with short-term investors rewarding brokers engaging in catering with higher future trades channeled through the broker.

To explore the source of analyst target price bias, this study investigates whether or not analysts cater to investor beliefs via target prices. Target prices are forecast of future prices that analyst expects will gravitate to fundamentals in the future. But, if the analyst expects prices to deviate from fundamental value, for example, because of speculative fever sweeping the market, he may issue a target price that differs from his target value. This consideration underscores an important point in applying investor sentiment to target price bias.

We use analysts' report data from the Taiwan stock market to analyze analyst behavior and identify whether or not biased target price is caused by investor beliefs. The Taiwan stock market (*TWSE*) provides a unique environment to examine analyst target price bias. Compared to more developed markets such as the United States where institutional investors are the main players, individual investors are the predominant group in the Taiwan stock market in that they account for 75% of the total security trading. Individual investors being less "sophisticated" investors as a whole, tend to rely more on target prices rather than *EPS* forecasts, since they may not have enough computational sophistication to be able to translate an *EPS* forecast into an appropriate target price suitable for their investment purposes. Moreover, the *TWSE* is known as one of the most active exchanges in the

[1] See Stickel (1990, 1992, 1995); Cooper, Day, and Lewis (2001), and Bernhardt, Campello, and Kutsoati (2004).