

OPINION

Kim, Joon Seok

Optimism Bias in Analyst Research

In Korea, the share of “Buy” in sell-side analysts’ recommendations has increased from 67% in the 2000s to 89% in the 2010s, and further to 93% in the 2020s. This upward trend suggests that optimism in analyst research has persisted and become more deeply entrenched over the past two decades, raising serious concerns about the objectivity and credibility of the information provided by analysts. Meanwhile, the number of active sell-side equity analysts has declined by roughly 30% over the past decade, reflecting a contraction in analyst activity both in scope and depth. As a key component of capital market infrastructure, analysts play a vital role in evaluating corporate performance and providing external oversight. The erosion of their credibility and influence could undermine market efficiency and hinder efforts to enhance corporate value. These developments require more effective policy initiatives to mitigate optimism bias and improve the quantity and quality of analyst research.

Over the past decade, the number of securities firms issuing equity research reports on listed companies in Korea has declined from 36 to 30, while the number of sell-side equity analysts has dropped from approximately 600 to around 400. Over the same period, Korea’s stock market has expanded markedly, with total market capitalization increasing by over KRW 900 trillion and more than 700 new firms being listed. What explains this phenomenon? One possible explanation is that the declining profitability of equity research, coupled with greater diversification of securities firms’ revenue sources, has relegated analyst activities to a lower business priority for many securities firms. In addition, the rise of passive investing and broader access to alternative information channels may have reduced investor demand for traditional research. This trend raises significant concerns. Reduced analyst coverage widens information

* All opinions expressed in this paper represent the author’s personal views and thus should not be interpreted as Korea Capital Market Institute’s official position.

* Ph.D., Senior Research Fellow, Capital Markets Department, Tel: 82-2-3771-0828, E-mail: jskim@kcmi.re.kr

gaps and weakens external monitoring of corporate management. In turn, this may exacerbate information asymmetry and increase firms' cost of capital, thereby undermining both market efficiency and corporate valuation. Thus, the contraction of analyst activities should not be viewed merely as the result of evolving investment environment and securities firms' business strategies.

As a core component of capital market infrastructure, the role of analysts as intermediaries between firms and investors hinges on information gathering ability and analytical skills and objectivity and credibility of the information they provide. Erosion of these diminishes their influence on the market. In this context, a particularly persistent and widely cited critique of Korean analysts is their strong tendency to issue overwhelmingly optimistic, buy recommendations.

Optimism bias in analyst recommendations

Between 2020 and 2024, 93.1% of analyst reports in Korea issued either buy or strong buy recommendations, while only 0.1% advised Sell (Table 1). Although such optimism bias is observed in many countries, the skew in the Korean market has been particularly extreme in recent years. Notably, recommendation revisions are rare. Empirical evidence shows that changes in recommendations are considered more informative than ratings themselves, but only 2.5% of recommendations were revised during this period. This raises the question of whether analysts intentionally select both timing and stocks to maintain a favorable stance. However, an analysis of listed companies for which securities firms have consistently issued recommendations—at least four times annually over the past decade—reveals that buy recommendations are more pronounced and the frequency of revisions is even lower. This pattern suggests that selection bias alone does not fully account for the observed skew. If analysts issue overwhelmingly positive recommendations and rarely revise them, the information value of their reports is understandably called into question.

Table 1. Investment recommendations and recommendation revisions

	Investment recommendation	2000-2009	2010-2019	2020-2024
Investment recommendation	Sell	1.6%	0.1%	0.1%
	Hold	31.1%	10.3%	6.8%
	Buy	66.6%	88.8%	92.9%
	Strong buy	0.7%	0.8%	0.2%
Recommendation revision	Downgrade	3.0%	1.6%	1.3%
	No change	94.4%	97.0%	97.5%
	Upgrade	2.6%	1.4%	1.2%

Source: DataGuide, Korea Capital Market Institute

The prevailing explanation for this optimism is a potential conflict of interest. As employees of securities firms, analysts face pressure to contribute to profit generation. Issuing negative views on listed companies who are current or potential clients of their employer's investment banking division, or on stocks held by institutional investors who are key brokerage clients entails reputational and commercial risks. Additionally, analysts may be incentivized to encourage portfolio rebalancing by issuing Buy recommendations. Their reliance on access to information sources—corporate management—further discourages negative assessments.

In Korea, brokerage business-related conflicts appear particularly influential. Analyst compensation is largely tied to brokerage operations serving institutional clients, with analyst research fees effectively bundled into brokerage commissions paid by institutional investors. Activities such as seminars for institutional investors are factored into analyst performance evaluations, and career advancement often depends on external rankings like “Best Analyst,” which are primarily based on institutional client feedback. Given that analyst research functions as a supplementary service to brokerage operations, this structure reinforces optimism bias.

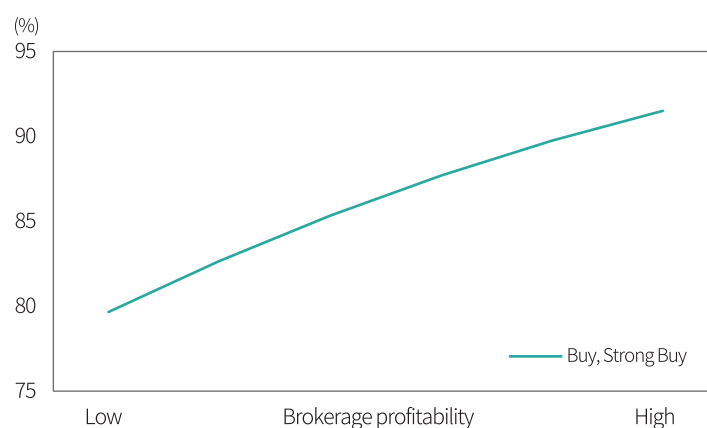
Figure 1 illustrates the relationship between brokerage profitability¹⁾ and the probability of buy (including Strong Buy) recommendations, based on all recommendations issued over the past 25 years. Controlling for other factors,²⁾ the data show that higher brokerage profitability significantly increases the likelihood of issuing buy ratings. This finding suggests that analyst recommendations may be influenced by the brokerage business of securities firms, indicating a

1) It is measured as brokerage revenue divided by total equity.

2) The regression analysis controls for firm size, growth potential, industry, recent stock returns, return volatility, turnover ratio, and timing of the analyst report.

potential conflict of interest.

Figure 1. Brokerage profitability and share of buy recommendations



Optimism bias is also evident in analysts' target prices. Table 2 presents the implied return derived from analyst target prices³⁾ and the forecast error, defined as the difference between implied and realized returns. Since target prices generally represent an analyst's one-year forward estimate of fair value, the evaluation period for returns is set to one year. For target prices issued after 2020, the average implied return stood at 36.1%, and the average forecast error reached 24.5%. In other words, despite actual realized return averaging just 11.5%, analysts predicted returns of 36.1%, suggesting a tendency toward overly optimistic target prices. When excluding 2020, a year marked by sharp price increases due to the COVID-19 pandemic, the average realized return fell to -2.9%, and the forecast error soared to 39.7%.

Table 2. Implied returns and forecast errors for target prices

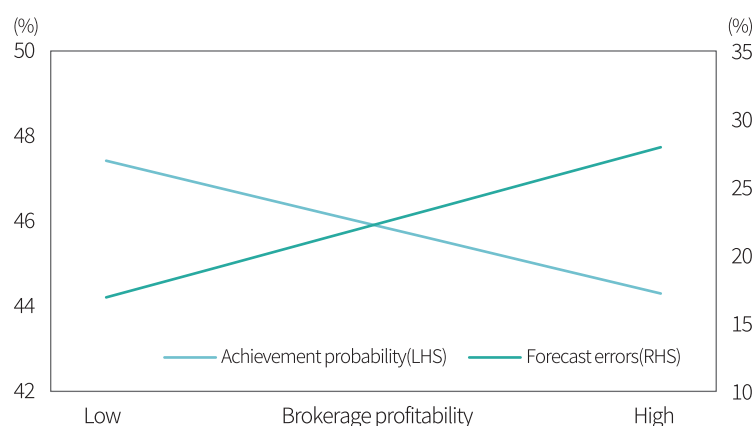
	2000-2009	2010-2019	2020-2023 (2021-2023)
Implied returns	27.7%	31.9%	36.1% (36.8%)
Forecast errors	6.8%	29.7%	24.5% (39.7%)

Source: Korea Capital Market Institute

3) The implied return is calculated as the target price divided by the closing price two trading days prior to the publication date, minus one. The pre-report closing price is used to eliminate the effect of price movements induced by the publication of the analyst report.

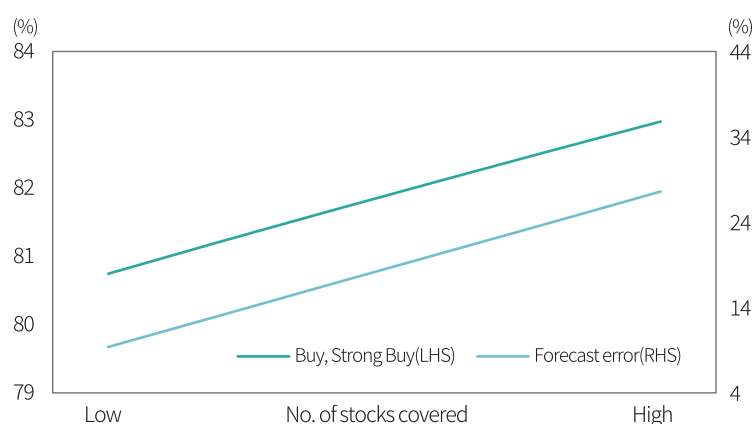
Conflicts of interest also appear to affect target prices. Figure 2 presents the relationship between brokerage profitability and both the target price achievement rate and the level of forecast errors, based on 25 years of data. Target price achievement refers to whether a stock has reached its target price at least once within the one-year horizon. After controlling for other factors, the data reveal that higher brokerage profitability is associated with lower target price achievement rates and greater forecast errors. Consistent with earlier findings, this suggests that conflicts of interest may contribute to optimism bias in analysts' target prices.

Figure 2. Brokerage profitability, target price achievement rate, and forecast errors



Beyond conflicts of interest, other factors may also drive optimism bias. Figure 3 examines the relationship between optimism bias and the number of companies covered by each analyst. As an analyst's coverage increases, the likelihood of issuing a buy recommendation rises, and forecast errors in target prices become larger.⁴⁾ Since negative recommendations typically require more rigorous analysis and stronger justification, analysts with heavier coverage loads may lean toward optimistic assessments. Given the ongoing decline in the number of active analysts, this finding carries important implications.

4) The effect of analyst experience is controlled for in this analysis.

Figure 3. Analyst workload and optimism bias

Strengthening the role of analysts

It is necessary to examine measures aimed at restoring the objectivity and credibility of analysts and enhancing their economic function. Policy efforts should focus on two primary objectives: improving the quality of information by mitigating conflicts of interest, and increasing the quantity of information by overcoming challenges posed by changes in securities firms' business environments and shifts in the broader investment landscape. One proposed approach is the unbundling of brokerage and research fees, separating research costs from brokerage commissions. The goal is to decouple analyst research from brokerage business, thereby reducing conflicts of interest and improving research quality.

The EU introduced this unbundling policy under MiFID II in 2018. Studies assessing its impact suggest that the quality of analyst research improved, while its quantity declined.⁵⁾ Faced with separate pricing for research services, institutional investors curtailed their reliance on sell-side analyst reports and shifted toward internal research to reduce costs. To justify separate payments, sell-side analysts concentrated coverage on firms with greater marginal value and provided more in-depth analysis. This adjustment led to improved forecast accuracy and increased the market impact of analyst reports, albeit with reduced coverage and lower forecast frequency. The effect of unbundling on optimism bias remains ambiguous. Although analysts became less dependent on brokerage operations, the growing importance of

5) Fang, B., Hope, O. K., Huang, Z., Moldovan, R., 2020, The effects of MiFID II on sell-side analysts, buy-side analysts, and firms, *Review of Accounting Studies* 25(3), 855-902; Guo, Y., Mota, L., 2021, Should information be sold separately? Evidence from MiFID II, *Journal of Financial Economics* 142(1), 97-126; Lang, M., Pinto, J., Sul, E., 2024, MiFID II unbundling and sell-side analyst research, *Journal of Accounting and Economics* 77(1), 101617.

maintaining access to corporate information—essential for producing high-quality analysis—may have introduced pressures that induce optimistic assessments.

Beyond fee unbundling, the formal introduction of independent research firms has been frequently proposed as an alternative mechanism to insulate analysts from other business lines within securities firms. While conceptually appealing, there is little empirical evidence that independent analysts are less optimistic or more accurate than their counterparts at traditional securities firms. This may reflect the resource advantages of traditional securities firms, including superior talent, domain expertise, and abundant data and networks, as well as the persistent need even among independent firms to maintain close relationships with the firms they cover. Nevertheless, the entry of independent research providers appears to generate positive effects on the sector, intensifying competition among incumbent analysts and contributing to improved forecast accuracy.⁶⁾

Another potential solution lies in the wider use of AI in analyst research. Recent studies⁷⁾ show that increased AI utilization by analysts leads to broader firm coverage, more frequent forecasting, and improved forecast accuracy, validating AI's contribution to analyst research. This empirical evidence aligns with findings in other fields that demonstrate AI's potential to enhance efficiency. What is particularly encouraging is that AI holds the potential to enhance both the quantity and quality of analyst output. Notably, two key caveats warrant a careful approach. First, the impact of AI depends on how it is integrated into analyst research. When AI fully replaces human analysts, optimism bias tends to decline. However, when used as a supporting tool for human analysts, it may reinforce such bias. Faced with employment instability driven by AI adoption, analysts are more likely to pursue revenue-driven activities, which could worsen conflicts of interest. Second, it is worth noting the performance gap between AI and human analysts. For firms with low market capitalization, limited liquidity, insufficient corporate disclosure, or sizable intangible assets, human analysts tend to outperform AI models. In cases where high information asymmetry requires qualitative judgment, human knowledge and experience appear to play a pivotal role. These findings

6) Gu, Z., Xue, J., 2008, The superiority and disciplining role of independent analysts, *Journal of Accounting and Economics* 45(2-3), 289-316.

7) Coleman, B., Merkley, K., Pacelli, J., 2022, Human versus machine: A comparison of robo-analyst and traditional research analyst investment recommendations, *The Accounting Review* 97(5), 221-244; Shanthikumar, D. M., Yoo, I. S., 2024, Artificial intelligence and analyst productivity, Working paper; Cao, S., Jiang, W., Wang, J., Yang, B., 2024, From man vs. machine to man+ machine: The art and AI of stock analyses, *Journal of Financial Economics* 160, 103910.

suggest that while AI holds significant promise for enhancing both the scope and quality of analyst research, realizing this potential will hinge on how it is integrated into the research process.

Future challenges

The share of buy recommendations (including Strong Buy) has increased from 67% in the early 2000s to 89% in the 2010s, reaching approximately 93% in the 2020s. Excluding the exceptional period of the COVID-19 pandemic, a similar pattern of optimism bias is observed in target price forecast errors. Over the past two decades, analysts' optimism bias has not only been persistent but has also become structurally entrenched, raising significant concerns about the objectivity and credibility of sell-side analyst research. In response, efforts have been made to address this issue. Regulatory authorities and self-regulatory bodies have introduced various policy initiatives, including the 2002 amendment to the Regulation on Supervision of Securities Business, the 2016 adoption of the Code of Conduct for IR and Research Activities, and the 2017 initiative to reform research practices at Korean securities firms. Although these measures were intended to secure analyst independence and objectivity and prevent conflicts of interest in research output, their impact has fallen short of transforming existing practices. A comprehensive reassessment of their effectiveness is required, along with the development of more robust policy alternatives.