

# Internal control of financial firms and analyst attention

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**Abstract:** Taking A-share listed financial companies in China from 2007 to 2021 as samples, this study empirically tested the influence of analyst attention on internal control of financial firms. The results show that the increase of analyst attention has a positive impact on the internal control effect of financial firms. Further examination shows that, compared with non-state-owned enterprises, analyst attention has a more significant impact on the internal control effect of state-owned financial enterprises. In addition, analysts are concerned that the internal control effect of financial enterprises with a high proportion of cash flow has improved more significantly.

**Keywords:** analyst attention; Internal control; Financial enterprises

## 1. Introduction

China maintains a high economic growth rate, which provides broad development opportunities for financial enterprises. With the continuous development of the national economy, financial needs are becoming more diversified and complex, and financial enterprises are constantly improving their service level and innovation ability to meet the needs of various customers. The government attaches great importance to the healthy development of the financial system and has introduced a series of policies and measures, including financial market opening, financial regulatory reform, and financial innovation support, to provide a favorable policy environment and development space for financial enterprises. With the easing of market access conditions, the number and scale of financial institutions have been expanding.

Internal control of financial enterprises refers to a series of systems, policies, procedures and measures established by financial institutions to protect corporate interests, prevent risks and ensure compliant operations. Internal control can help enterprises identify, assess and manage various risks, and also ensure that enterprises can take appropriate measures to reduce losses and adverse effects when faced with risks. By establishing auditing, auditing and internal supervision mechanisms, it ensures that the assets and resources of the enterprise are properly managed and used, protects the interests of the enterprise, and prevents acts such as fraud, corruption and abuse of power by internal or external personnel. Good internal control can improve the operational efficiency and benefits of enterprises, ensure the normalization and standardization of business processes, reduce repetitive labor and waste of resources, and improve the accuracy and timeliness of information. Therefore, the internal control of financial enterprises is very important for the healthy development and stable operation of financial enterprises.

As an important part of the economy, the operating status and performance of financial enterprises can reflect the health of the overall economy, so it is bound to attract high attention from analysts. In order to understand the trend of the overall economy, analysts first pay attention to the economic indicators of financial enterprises, such as profit, balance sheet, cash flow, etc., to evaluate their valuation level, profitability, growth potential, as well as their competitiveness and sustainable development ability in the industry. In addition, financial enterprises are faced with various risks, and analysts will also pay attention to the risk management ability of financial enterprises, including asset quality, risk guarantee, risk diversification, etc., to evaluate their ability to resist risks, analyze their investment value and predict future returns.

As a kind of external supervision force, whether analysts' attention can sound the alarm for financial enterprises and improve their internal control effect is worthy of further study. Using A sample of A-

share listed financial firms in China from 2007 to 2021, this paper empirically examines the impact of analyst attention on the internal control of financial firms.

## 2. Literature review

### 2.1. Internal control

Domestic research on internal management control theory started relatively late, and it was not until 2008 that the Ministry of Finance successively promulgated the "Basic Norms for Internal Control of Enterprises", "Norms for Internal Control of Small Enterprises (Trial)" and other norms and guidelines. The promulgation of these documents further improved the theoretical system of internal control in China, and provided an internal control framework suitable for large, medium and small enterprises. These frameworks have the characteristics of informatization and comprehensiveness, which can help enterprises establish a complete internal control system and ensure the effectiveness and compliance of enterprise management. At the same time, these frameworks can also guide enterprises to find and correct problems in daily operation and management, improve the risk prevention ability of enterprises, and protect the safety and interests of enterprises' assets. In essence, scholars generally believe that internal control is a kind of management activity, and checks and balances and supervision determine the structure of internal control (Xie, 2009).<sup>[1]</sup> However, Yang (2011)<sup>[2]</sup> believed that internal control is a systematic system with multiple disciplines and specialties. Internal control is not necessarily a management function, but an integral part of the management system, and its essence lies in coping with risks (Feng, 2018).<sup>[3]</sup> In addition, some experts and scholars have analyzed internal control from the perspective of human beings, among which Wang (2010)<sup>[4]</sup> put forward a new dualism of internal control elements based on the hypothesis of human nature and other theories, emphasizing the structural characteristics of internal control system. Ma (2021)<sup>[5]</sup> believes that the essence of traditional internal control lies in the hard management and control strategy dominated by events, which needs to be improved and promoted by humanization. Shang (2020)<sup>[6]</sup> used cost-benefit analysis to conduct systematic analysis and found that internal control was an incomplete contract and rights protection mechanism led by the management.

### 2.2. Analyst attention

Analyst attention refers to the report on future earnings forecast or investment grade evaluation of enterprises after field visits and data collection. However, China's stock market is dominated by retail investors, and ordinary investors often lack specialized investment skills and experience, so the content provided by analysts and the market information generated under the background may be biased due to environmental factors and personal subjective mentality (Xie et al., 2014)<sup>[7]</sup>. Therefore, in China's realistic context, the role of analysts is mainly closely related to the pressure of performance. According to the performance pressure hypothesis, analysts' reports and forecasts tend to cover only one fiscal year, which makes managers prone to short-term behavior. From the perspective of earnings management, Zhang (2018)<sup>[8]</sup> found that analysts can effectively inhibit the tendency of earnings management by adjusting their rating behavior, thus significantly increasing the information transparency of the market to the enterprise, especially the influence of well-known analysts. Yi et al. (2019)<sup>[9]</sup> evaluated the information quality of listed companies in A-share market from 2009 to 2015 based on machine learning, and found that the richer the information of company characteristics contained in analyst reports, the higher the attention of investors, and the lower the company's stock price synchronism. Based on mispricing in the capital market, Yuan et al. (2019)<sup>[10]</sup> found that there is a highly positive correlation between analyst attention and pricing effectiveness in the capital market. Specifically, scholars believe that with deep professional knowledge and excellent business ability, analysts can accurately convey the information required by different levels of investment groups, thus meeting their needs for understanding complex information of the company; In addition, analysts also play an important role in mitigating the information asymmetry that is prevalent in the market. With the increase in the number of analysts, the market information asymmetry is reduced, and the pricing performance of capital market is significantly improved.

### 2.3. Literature review

By reviewing the literature, it can be seen that the existing scholars have made a comprehensive and profound study on the internal control of enterprises and analyst attention. The research on internal control evaluation system is mainly from the aspects of internal control evaluation indicators, methods

and procedures. The research on analyst attention mainly focuses on the influence of analyst attention and the factors that cause analyst attention. However, most of the existing studies come to conclusions through empirical analysis of general enterprises, and general enterprises and financial enterprises operate in different ways. As the booster of the real economy and the vane of the market, the importance of the healthy development of financial enterprises is particularly prominent. Therefore, the development of financial enterprises has attracted more attention from analysts. The effect of internal control of financial enterprises directly affects the development of financial enterprises, which is also the focus of analysts' attention.

### 3. Identification of financial risks

Due to their professional ability to interpret and analyze financial data, analysts will respond to the information environment of listed companies and find possible risk signals in the information (Hong et al., 2014)<sup>[11]</sup>, which alleviates the information asymmetry between corporate management and external stakeholders. Therefore, the behavior of the management will be constrained due to the increase of external attention, which will increase the authenticity of information disclosure and reduce the level of corporate financial constraints (Zhang et al., 2007).<sup>[12]</sup> Inside the enterprise, the management will improve the quality of internal control, so as to ensure the authenticity and reliability of the disclosed positive information (Fan et al., 2019)<sup>[13]</sup>, so as to standardize the internal governance of the company. When internal control is perfect, all kinds of transactions and events of the enterprise are confirmed, measured, reported and disclosed according to the norms of internal control to ensure the quality of external information disclosure.

On the other hand, analyst attention can improve the information transparency of listed companies (Cao et al., 2015)<sup>[14]</sup>, and listed companies attach great importance to the construction of internal control and the assurance of information disclosure quality, especially when they are concerned by external analysts (Wang et al., 2019)<sup>[15]</sup>. If the company's internal control is perfect, then managers will voluntarily convey positive information to the outside world, enhance market confidence, and attract more investors to participate. However, if there are significant defects in the company's internal control, analysts will identify and communicate these problems, which may cause investors to lose confidence and affect the company's operation and management. Therefore, the company's management will be motivated to strengthen the construction of internal control, improve the level of corporate governance, ensure the quality of information disclosure, so as to enhance investors' confidence.

Based on this, this paper puts forward the following hypothesis:

H1: Analyst attention can significantly improve the internal control effect of financial firms.

## 4. Research design

### 4.1. Research data and samples

In this paper, A-share listed financial companies from 2007 to 2021 are selected as the primary sample, and the data are processed as follows according to the existing literature: (1) eliminating the sample data with incomplete or missing data; (2) The data of ST and \*ST companies are excluded. In order to alleviate the adverse impact of the existence of extreme values, this paper winsorizes the data at the level of 1%. The sample data were collected from the CSMAR database and analyzed by STATA17.0 software.

### 4.2. Model construction and variable selection

Product design should be in line with customers' risk tolerance. When designing financial products, financial institutions should fully consider customers' risk tolerance and avoid selling high-risk products to customers with low risk tolerance, so as to reduce risks.

In order to study the impact of analyst attention on the internal control effect of financial enterprises, this paper constructs the following model:

$$Inc_{i,t} = \beta_0 + \beta_1 Att_{i,t} + \beta_2 Controls + \varepsilon$$

Explained variable: analyst attention. Analysts' attention to real enterprises is mainly reflected in writing analysis reports through site visits and data collection. How many analysts (teams) have tracked and analyzed the company within a year. The number of a team is 1, and its members are not listed

separately to calculate the number.

Explanatory variables: Referring to the research of Li et al. (2020)<sup>[16]</sup>, this paper constructs the following internal control (Inc): if the internal control of the enterprise is effective, it is 1, otherwise it is 0. Specifically, when a company has one of the following circumstances, it is considered to have internal control problems: (1) disclosure of major defects in internal control; (2) the audit opinion is a non-standard unqualified opinion; (3) there are financial restatements or violations of laws and regulations; (4) divide DiBo's internal control evaluation index into four equal points, which are located at the lowest one point and disclose important defects.

Control variables: enterprise scale, enterprise net cash flow, asset-liability ratio, return on total assets, property right nature.

## 5. Analysis of empirical results

### 5.1. Descriptive statistics

According to the results of descriptive statistical analysis (Table 1), the average value of inc is 0.8574, the minimum value is 0, and the maximum value is 1, which indicates that China's financial enterprises have the problem of insufficient effectiveness of internal control. The minimum value and maximum value of att are 0 and 59, respectively, with a high standard deviation, which indicates that the analyst attention varies greatly among different firms.

Table 1 Descriptive statistics of main variables

Variable	N	Mean	SD	Min	p25	p50	p75	Max
inc	1,171	0.8574	0.3498	0.0000	1.0000	1.0000	1.0000	1.0000
att	1,171	13.7447	14.5336	0.0000	1.0000	8.0000	23.0000	59.0000
fcf	1,171	0.0099	0.1174	-0.4380	-0.0301	0.0171	0.0605	0.4091
roa	1,171	0.0212	0.0412	-0.1652	0.0084	0.0139	0.0272	0.2247
lev	1,171	0.7098	0.2237	0.0837	0.5720	0.7574	0.9179	1.0006
size	1,171	25.1842	2.8463	19.5873	22.6918	25.1441	27.3207	30.8450

### 5.2. Benchmark regression

Table 2 Benchmark regression

VARIABLES	(1)	(2)
	m1 inc	m2 inc
att	0.0019 (1.3097)	0.0024* (1.8513)
fcf		-0.0722 (-1.2016)
roa		-0.3430 (-1.4325)
lev		-0.1792 (-1.1899)
size		-0.0033 (-0.1660)
soe		-0.0673 (-0.6383)
Constant	0.0836** (2.1886)	0.3486 (0.8329)
Observations	1,171	1,171
Number of stkcd	122	122
Adjusted R-squared	0.557	0.561
Year FE	YES	YES

Robust t-statistics in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression results are shown in Table 2. Column (1) only controls the influence of enterprise individual and time for full-sample regression, and Column (2) adds control variables for full-sample regression. With the addition of control variables, the model is gradually optimized, and the regression results show that att estimated coefficient is 0.0024. The regression coefficient is significantly positive at the level of 10%, which indicates that with the increase of analyst attention, the internal control effect of financial enterprises improves. This finding corroborates hypothesis H1.

### 5.3. Heterogeneity analysis

#### 5.3.1. Cash flow

As the cornerstone of the survival and development of financial enterprises, cash flow can reflect the short-term solvency of enterprises and reduce the risk of possible capital shortage. Since most investors are risk-averse, according to the signal transmission theory, financial enterprises with high cash flow ratio are more favored by investors because of their low risk. An important way for investors to obtain financial market information is analyst reports, so financial companies with high cash flow ratio will attract more attention from analysts. For financial enterprises themselves, it is particularly important to maintain the competitiveness of the industry under the condition of receiving more and more attention from analysts. In China, with perfect security measures and no external infringement such as theft and robbery, corruption within financial enterprises has become the most important cause of lightning. In order to prevent the occurrence of corruption, financial enterprises must strengthen internal control under the attention of many analysts. Based on Model (1), this paper uses the group regression method, and divides the samples into two groups according to the median of cash flow every year. If analyst attention improves the internal control effect of enterprises, the influence of analyst attention on internal control of enterprises with large cash flow is more obvious, then att coefficient should be significantly positive; On the contrary, the att coefficient of low cash flow group should be significantly positive and less than the former or the coefficient is not significant.

Table 3 Heterogeneity test of cash flow

VARIABLES	(1) inc	(2) inc
att	0.0031** (2.1839)	0.0021 (1.3024)
fcf	-0.1571 (-0.8936)	-0.3172** (-2.3127)
roa	-0.5848 (-1.5379)	-0.1118 (-0.4236)
lev	-0.0225 (-0.1712)	-0.1233 (-1.3408)
size	-0.0441** (-2.3845)	0.0241 (1.5987)
soe	-0.0368 (-0.5987)	-0.0343 (-0.4536)
Observations	588	583
Number of stkcd	111	117
Adjusted R-squared	0.474	0.487

t-statistics in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Columns (1) and (2) of Table 3 report the regression results, in which column (1) is for the group with high cash flow ratio, and column (2) is for the group with low cash flow ratio. Consistent with the above analysis, the att coefficient of the high cash flow group is significantly positive at the level of 5%, while the att coefficient of the low cash flow group is not significant, indicating that the promotion effect of analyst attention on the internal control of financial firms is more significant in the financial firms with large cash flow.

#### 5.3.2. Nature of property rights

The operating conditions and development prospects of state-owned financial enterprises are closely related to the national economic development. As systemically important financial institutions, state-owned banks have an important impact on financial stability. Their financial health status and risk management ability are of great significance to the stability of the whole financial system and the ability

to resist financial risks. Analysts usually pay close attention to the operations of state-owned financial enterprises to assess the health of the country's economy and the government's financial policies. The leaders of state-owned enterprises have higher social status and more power, are subject to relatively little supervision and restrictions, and there are certain technical barriers in the financial industry, so internal problems are not easy to detect. Under the attention of analysts, the abnormal information of financial enterprises is easier to be found, so it is the key to strengthen internal control and eliminate the problem fundamentally. This paper divides the samples into state-owned enterprises and non-state-owned enterprises according to the nature of ownership. If analyst attention improves the effect of internal control, then the influence of analyst attention on internal control of state-owned enterprises is more obvious, and the att coefficient should be significantly positive. On the contrary, the att coefficient of non-state-owned enterprises should be significantly positive and less than the former or the coefficient is not significant.

*Table 4 Heterogeneity test of property rights*

VARIABLES	(1) inc	(2) inc
att	0.0032*** (2.6208)	-0.0002 (-0.1495)
fcf	-0.2089** (-2.3131)	0.0876 (0.9085)
roa	-0.4595 (-1.4238)	-0.2680 (-1.0231)
lev	0.3114*** (2.8586)	-0.5711*** (-6.0964)
size	-0.0214 (-1.5578)	0.0315* (1.7889)
Observations	777	394
Number of stkcd	85	48
Adjusted R-squared	0.526	0.524

t-statistics in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 4 reports the regression results by group, in which column (1) is for soes and Column (2) is for non-soes. Consistent with the above analysis, the att coefficient of state-owned enterprises is significantly positive at the level of 1%, while the att coefficient of non-state-owned enterprises is not significant, indicating that the promotion effect of analyst attention on the internal control of financial enterprises is more significant in state-owned financial enterprises.

## 6. Conclusions

This study empirically examines the impact of analyst attention on the internal control of financial firms. The increase of analyst attention has a positive impact on the internal control effect of financial firms. Further tests show that, compared with non-state-owned enterprises, the impact of analyst attention on the internal control effect of state-owned financial enterprises is more significant, and the improvement of the internal control effect of financial enterprises with higher proportion of cash flow is more obvious.

Analyst reports usually evaluate and analyze the operating conditions, financial performance and prospects of financial enterprises. Financial enterprises can read analyst reports to understand the market's evaluation and feedback, and then make an assessment of their own operating conditions and risks. This helps enterprises to have a more comprehensive understanding of their own strengths and weaknesses, and provides reference for the improvement of internal control. Financial enterprises can also learn about the latest developments, innovative practices and regulatory requirements in the industry through analysts, so as to adjust their internal control strategies and measures in a timely manner to adapt to market changes and enhance competitiveness. Provide investors and stakeholders with information on the operating conditions, risks and internal control of enterprises. By disclosing relevant information in a timely, accurate and transparent manner, it can enhance the trust and understanding of investors and stakeholders in its internal control and build a good corporate image and reputation.

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