ATLANTIS PRESS
*Advances in Social Science, Education and Humanities Research (ASSEHR), volume 314*
4th International Conference on Social Sciences and Economic Development (ICSSED 2019)

# Media attention, debt financing level and corporate value

Wang Li[1, a], Wu Xiumin[2, b, *]

[1]Business School of Sichuan Agricultural university, Chengdu, Sichuan, China

[2]Business School of Sichuan Agricultural university, Chengdu, Sichuan, China

[a]1176107092@qq.com, [b]727398989@qq.com

*Wu Xiumin

**Keywords:** media attention, debt financing level, Private listed company, corporate value

**Abstracts.** In order to solve the problem of media attention and private enterprises debt financing level and corporate value, we conducted research on 1306 A-share private listed companies in Shanghai and Shenzhen stock markets from 2014 to 2016.The research results show that the higher the level of media attention, the higher the debt financing level of private listed companies. In addition, although the media attention is beneficial to the improvement of the debt financing level of private listed companies, the loan effect brought by the media attention has a negative effect on the corporate value. These findings show that private enterprises need to strengthen their internal governance and external image building, fully recognize the importance and necessity of media reporting work, and publicize the company's positive reports to investors through the media.

## 1. Introduction

The trade-off theory shows that maintaining an appropriate debt ratio helps companies maximize the value of the company. Since interest expenditure are pre-tax items, debt financing can generate tax shield effects and achieve tax-saving purposes. In the Countries of Economic Transition, The way private enterprises obtain external financing is divided into direct financing and indirect financing. Private enterprises are divided into direct financing and indirect financing. At present, private enterprises have great difficulties in direct financing, and indirect financing is mainly carried out through financial institutions such as banks (Bai Zhongen,2005).However, in contrast to the trend of a gradual increase in the proportion of the private economy in the entire national economy, the policy of tilting the banking system with state-owned banks as a main body to state-owned enterprises and discriminating treatment for private enterprises has made it difficult for private enterprises to borrow. In this situation, private enterprises may not be able to achieve optimal debt financing due to insufficient financing funds, and the company's maximum value will not be realized.

The availability of external financing of private enterprises usually depends on the legal and judicial efficiency, property rights protection and other institutional factors in their countries or regions (Yu Minggui,2008). However, in many developing countries, these institution are quite lacking, which seriously hinders the development of private enterprises and economic growth. Research shows that when the institutional constraints are insufficient, the new mechanism outside the research system has important theoretical reference value and practical significance (Li Peigong,2010). Among these new mechanisms, the media attention has become a hot topic in academic research at home and abroad in the near future with an important external corporate governance approach (Yu Zhongbo,2011).The existing research has proved the corporate governance role of media attention in terms of affecting auditor behavior, reducing private benefits of control, reducing corporate infringement of external investors, and improving government efficiency, (Dyck & Zingales,2004； Miller,2006; Joe et al., 2009). Debt financing is an important aspect of corporate governance, In the financing process of listed companies, As the main body of information disclosure, media attention will play an important role in the information interaction between investors and companies (Pollock,2003). On the one hand, media attention can ease the information asymmetry through the interest transmission mechanism; On the other hand, The media

attention can build a credit guarantee for capital lending between investors and lenders through a reputation mechanism (Li Changqing,2012).

Debt financing has different financing costs and debt maturity structure as well as debt financing levels. The existing research mainly focuses on the media attention research on financing costs and debt maturity structure (Wang Jiuhong,2002; Lin Lingfa,2014;Lu Wenbin,2014), while few literature analysis media attention focus on the impact of debt financing levels. According to the trade-off theory, When the marginal tax shield income is exactly equal to the marginal financial distress cost, the company's value is the largest, and the debt ratio at this time is the company's optimal debt level (Robichek,1967). Therefore, in the context of the close relationship between debt financing levels and corporate value, Since media attention directly affects investor behavior, and investor behavior determines corporate debt financing, corporate debt financing will inevitably be affected by media attention. Therefore, it is necessary to explore the relationship between media attention and debt financing levels and whether the changes in debt financing caused by media attention affect the value of the company. The possible research contributions of this paper are as follows. First, expand and deepen the research literature on media attention affecting corporate debt financing. This paper introduces media attention into the research of debt financing level, and reveals the mechanism of media attention to the debt financing level of private listed companies. This provides a new perspective for studying the level of debt financing, and enriches the relevant literature on the factors affecting debt financing level; Second, it enriches the current research literature on the impact of media attention on corporate governance. By analyzing the analysis of media attention—the level of debt financing—the relationship between corporate values, it highlights the understanding of the mechanism of media attention.

## 2. Literature review, theoretical analysis and research hypothesis

Since the reform and opening up, China’s private economy has rapidly developed into an important part of the national economy, However, under the various imperfect market conditions, private enterprises are subject to more institutional discrimination in financing channels and financing methods (Sun Wei et al.,2006; Zhou Guoliang,2007). This kind of institutional discrimination is fundamentally derived from the financial support of state-owned financial systems to state-owned enterprises. This kind of institutional discrimination is fundamentally derived from the financial support of state-owned financial systems to state-owned enterprises and the rigid dependence of state-owned enterprises on such support and the resulting credit capitalization (Zhang jie,1998a).The emergence of the securities market is shaped by the country’s consideration of risk diversification. For private enterprises, stock financing is discouraged because of its different agency costs than state-owned enterprises, Only so-called private enterprises with special backgrounds and special capital structures will enter the securities market for equity financing (Zhang jie,1998).Even though private enterprises face many inconveniences in financing, from the perspective of their continuous improvement in China's economic development and status, it means that private enterprises have formed a mechanism to overcome their own unfavorable development. Deng Jianping & Zeng Yong (2011) find that banking can help private enterprises and banks and other financial institutions to establish a network of relationships, provide guarantees and reputation for enterprises, and use the financial skills of bank staff to create financing solutions for private enterprises to help private enterprises obtain loan financing. Bai Chongen et al. (2005) and Yu Minggui et al. (2008) further show that enterprises with political connections will be protected by government officials in the event of economic disputes, which can avoid or reduce the property rights of enterprises from being infringed by the government and officials, and reduce the business risks of enterprises; and easier access to bank loans by means of politicians’ influence on state-owned banks.

As an economic entity, financial institutions such as banks are also pursuing the maximization of economic interests, and they hope to obtain profits through successful lending, but financial institutions such as banks face a dilemma between controlling risks and actively operating (Chen Xiaohong,2004). Information risk and moral hazard are important issues that banks and other

financial institutions face in credit. On the one hand, as a basic feature of the market economy, information asymmetry can only be alleviated and cannot be eliminated. Therefore, Financial institutions such as banks that are lenders cannot grasp the full extent of the risk level and willingness to repay the borrower's fund project. When banks and other financial institutions know less about the borrower's information, the less they are willing to lend money as a lender. On the other hand, It is difficult for banks and other financial institutions to supervise the use of loans by borrowers after lending funds. If the borrower deliberately conceals its operating status and profitability, or changes the borrowing use in violation of the loan contract, it will increase the risk of the financial institutions such as banks recovering the principal and interest, thereby affecting their interests. Therefore, moral hazard is common in the relationship between funds and loans.

Under the catalysis of the information age, media attention has an increasingly important impact on economic activity. Studies have found that the media attention pays attention to the dual role of corporate governance and information dissemination (Lu Wenbin,2014). First of all, as a new mechanism outside the system, media attention plays a crucial role in governance. Specifically, The media attention is focused on two ways. First, through the reputation mechanism, Dyck et al. (2008) pointed out that under the conditions of private property rights and mature managerial market, The media is paying more attention to companies that may make decisions that infringe on the rights of external investors. By influencing the reputation of managers, they effectively encourage these companies to correct these decisions. Fama (1980) and Fama & Jensen(1983)show that managers often value their reputation for consideration of future employment opportunities and compensation, Because negative concerns can damage the reputation of managers, they usually respond positively to reports. Luo Jinhui (2012) further points out that based on the interaction between media attention and agency costs, if the company's agency cost is higher, it will receive more media attention, and this higher media attention can effectively supervise and constrain the opportunistic behavior of business managers, then reducing the various agency costs that investors may bear, thereby reducing the business risks faced by investors. Second, with the help of administrative structive, Li Peigong (2010) finds that by initiating the attention of the administrative agencies, the administrative costs of the violating companies have been raised, which has prompted the company to correct the violations that infringe on the interests of investors, which in turn can reduce the business risks faced by investors. Second, the media attention pays attention to the role of information dissemination. Media attention as an important information dissemination carrier can alleviate the information asymmetry between investors and financiers. Dyck & Zingales (2002) and Miller (2006) find that the media can reduce the search cost and processing cost of information, so investors will draw on the media's attention when laying out the portfolio.

Fang & Peress (2009) research show that compared with more stocks that the media pays more attention to, stocks that are not concerned by the media or pay less attention are less transparent, and Investors face stronger information asymmetry, which requires a higher risk premium to compensate, and the media attention to relevant reports on private listed companies has become an important channel for investors to analyze and evaluate the company's investment value and investment risk. In other words, the frequent attention of the media attention to listed companies is conducive to reducing the degree of information asymmetry faced by investors and reducing the information risks they bear (Luo Jinhui,2012). In summary, Through the corporate governance role, the media can reduce the commercial risks faced by financial institutions such as banks and play the role of information intermediary to improve the information environment and reduce the information risks faced by financial institutions such as banks. Financial institutions such as banks can achieve the goal of reducing risks and improving operational efficiency by lending to private listed companies frequently reported by the media. financial institutions such as banks can achieve a win-win situation by lending to private listed companies frequently reported by the media to achieve the goal of reducing risks and improving operational efficiency. Therefore, financial institutions such as banks are more likely to issue loans to the private enterprises with higher media attention. Based on the above discussion, put forward hypothesis 1:

There is a positive correlation between the level of financing of private enterprises and media

attention. That is, the higher the level of media attention, the higher the level of financing of private listed companies.

The financing structure of private listed companies is characterized by low debt financing. Through simple data to explain the current situation of financing of private enterprises in China, the state-owned departments that contribute less than 30% of industrial value added have used more than 70% of credits of financial institutions such as banks. In contrast, 60% of the new GDP is derived from the contribution of the private economy, but it only receives 30% financial support (Wen Jianmin,2012). According to the trade-off theory, when the company's debt ratio is low, the tax shield income of the debt will increase the company's value.

Therefore, in the case of a low debt ratio of private enterprises, according to the above analysis, media attention helps private enterprises to obtain bank loans, that is, the higher the level of attention of the media, the higher the level of financing of private listed companies, which in turn can generate tax shield effects and thus increase the value of the company. Based on the above discussion, put forward hypothesis 1:

The loan effect of media attention can increase the value of private listed companies.

## 3. Research design

### 3.1 Sample selection and data source

The research object of this paper divides listed companies according to the nature of property rights, and selects China's A-share private listed companies from 2014 to 2016. The listed private enterprises selected in this paper draw on the standards of CSMAR China's private listed companies database. Refer to this standard to remove financial listed companies, except for listed companies with transaction status ST and *ST in the current year. After removing the samples with missing financial data, the remaining research samples are 1,306. The number of samples is sufficient to ensure the universality of the study. And the media attention data comes from CNKI China's important newspaper full-text database. The data processing and statistical analysis software used in this paper is EXCEL and STATA12.0.

### 3.2 Variable definitions

*3.2.1 Explained variables*

This paper draws on the research of Su Qilin, Zhu Wen (2003), Wang Hui (2003) and Xia Lijun (2005), and selects Tobin Q as the explained variable of corporate value. This variable reflects the ratio of the corporate market value to the corporate replacement cost. Since the replacement cost is difficult to obtain, the total assets at the end of the year are selected instead. Market value is the sum of the market value of the corporate debt capital and the market value of equity capital. Thus, the formula for calculating the corporate value is: Tobin Q = market value / replacement cost = (price per share × number of shares outstanding + net assets per share × number of non-tradable shares + book value of liabilities) / total assets. In addition, this paper uses the asset-liability ratio (Loan = total liabilities at the end of the year / total assets at the end of the year) as the explanatory variable of the debt financing level of listed companies.

*3.2.2 Explanatory Variables*

The explanatory variables of this paper is media attention, the metrics of media attention refer to the practices of Fang & Peress (2009), Li Peigong & Shen Yifeng (2010).The media attention data comes from CNKI China's important newspaper full-text database, and selected 8 of the most influential national financial newspapers as the source of the reports, namely China Securities Journal, Securities Daily, Securities Times, Shanghai Securities Newspaper, China Business Journal, Economic Observer, 21st Century Business Herald and China Business News. In order to reduce the possibility of data omission, use the "topic query" and "title query" to search the full name and abbreviation of the sample company at that time. In the process of collecting data, it has filtered out public company announcements, reports published by analysts in the media, buying and selling, and reports on multiple listed companies in the same report. Finally, we obtained the total amount of

media attention of the sample companies through statistics, and calculated them according to the method of Dyck & Zingales, using Ln (1 + the number of reports of the media in the current year).

*3.2.3 Control variables*

Previous studies have shown that company size, profitability, growth, and flow ratio all affect corporate debt financing levels and company value.

Table 1. Variables definition and description

| Variables | Variables description |
|---|---|
| Explained variables: | |
| Tobin Q | corporate value, market value / replacement cost |
| Loan | asset-liability ratio， total liabilities at the end of the year / total assets at the end of the year |
| Explanatory Variables: | |
| Media | Media attention，Ln（1 +the number of media attention in the current year） |
| Control variables: | |
| Size | company size，natural logarithm of total assets |
| Profit | net profit at the end of the year / net assets at the end of the year |
| Growth | Growth ability, (major business income of the year - major business income of the previous year) / major business income of the previous year |
| FR | flow ratio, flow assets at the end of the year / flow liabilities at the end of the year |

*3.2.4 Regression model*

The model used in this paper is as follows

$$Loan_{it} = \beta_0 + \beta_1 * Media_{it} + \beta_2 * Control_{it} + \varepsilon_{it} \quad (1)$$

$$TobinQ_{it} = \beta_0 + \beta_1 * Media_{it} + \beta_2 * Loan_{it} + \beta_3 * Loan_{it} * Media_{it} + \beta_4 * Control_{it} + \varepsilon_{it} \quad (2)$$

Model (1) is used to test the impact of media attention on the debt financing level of private listed companies; Model (2) is used to test the impact of the media attention in the loan effect on the value of private listed companies.

## 4. The discussion of the results of empirical results

### 4.1 Descriptive statistical analysis

Table 2 reports descriptive statistics for the main variables. From the descriptive statistics, the average value of the sample company's asset-liability ratio Loan is 0.3781, which indicates that the ratio of the total debt of the sample enterprises to the total assets is not very high, which shows that the debt financing of private enterprises is limited. The standard deviation is 0.1945, which means that there is a certain degree of difference in the scale of borrowings of different enterprises. The maximum and minimum values of debt financing are 0.9947 and 0.0140, respectively, indicating that there is a large difference in debt financing ability among private enterprises. The average value of media attention is 0.9747, the maximum value is 4.9904, and the minimum value is 0, which indicates that most private enterprises will receive media attention, but at the same time, the media attention is different, and not the entire private enterprises will receive media attention. In addition, the company's average size is 21.8476, the average profitability is 0.0438, the average growth rate is 0.9052, and the average of the flow ratio is 2.8383. Through the above data analysis, it is found that most private enterprises have passed the guided period, and the management status has gradually stabilized. The minimum value of growth ability is negative, indicating that the growth capacity of this part of the enterprise is declining. From the perspective of the size of private enterprises, the difference between the maximum value and the minimum value is small. From the perspective of the mean value, the number of small and medium-sized private enterprises still occupies the majority. In addition, in order to ensure the robustness of the conclusion, this paper also examines the VIF value of the main explanatory variables. It is found that the maximum value of VIF is 1.140 and the minimum value is 1.0063, which is much less than 10, Therefore, the model does not have serious collinearity problems, and further regression analysis can be performed.

Table 2. Descriptive statistics of main variables

| variables | Minimum | maximum | Mean | Standard deviation |
|---|---|---|---|---|
| Loan | 0.0140 | 0.9947 | 0.3781 | 0.1945 |
| Media | 0.0000 | 4.9904 | 0.9747 | 0.9140 |
| Size | 17.64 | 26.24 | 21.8476 | 1.0603 |
| Profit | 0.6464 | 0.4819 | 0.0438 | 0.0533 |
| Growth | -4.0420 | 434.5934 | 0.9052 | 9.6791 |
| FR | 0.09 | 78.41 | 2.8383 | 3.6633 |

### 4.2 The Empirical Study on the Level of Media attention and Corporate Debt Financing

It can be seen from Table 3 that the debt financing level of the explanatory variables is significantly positively correlated with the explanatory variable media attention at the level of 1%, and the correlation coefficient is 0.014.It can be seen that the higher the level of media attention, the higher the level of financing, which proves that the research hypothesis 1 of this paper is established. In terms of control variables, there is a significant positive correlation between company size and financing level. From the perspective of information asymmetry, compared with small-scale enterprises, people know more about large-scale enterprises, and the degree of information asymmetry is lower. At the same time, the larger the scale of the company, the easier it is to implement diversified operations and the stronger the ability to resist risks. Therefore, the size of the company should be positively related to the debt level. There is a significant negative correlation between profitability and debt financing level, indicating that the better the profitability of listed companies and the stronger the solvency, and the lower the debt financing level of private listed companies. Although there is a positive correlation between growth ability and debt financing level, the coefficient is not significant. This may be because although the growth-producing enterprises need a large amount of capital, long-term financing is more restricted, so they often borrow short-term debt. Financing, which has a positive impact on the debt ratio, but most of the high-growth enterprises are emerging industries, which are not mature in technology and management, and have high operational risks, which in turn will have a negative impact on the debt ratio. Probably because although the companies with good growth need a large amount of capital, but long-term financing is more limited, they often use short-term debt to finance, which has a positive impact on the debt ratio, However, most of the high-growth enterprises are emerging industries, which are not mature in technology and management, and have high operational risks, which in turn will have a negative impact on the debt ratio. Therefore, the roles of these two aspects cancel each other out, resulting in a lack of correlation between growth and debt ratio (Feng Genfu, 2000).There is a significant negative correlation between the current ratio and the debt financing level. This shows that the higher the flow ratio, the better the solvency of the enterprise. When this capability can meet the current capital needs of enterprises, enterprises can avoid relatively high-risk, high-cost debt financing, so the company's asset-liability ratio will be reduced.

Table 3. Media attention and corporate debt financing level

| Variables | Model 1 |
|---|---|
| Media | 0.014*** |
| Size | 0.066*** |
| profit | -0.893*** |
| Growth | 0.0001 |
| FR | -0.020*** |
| N | 3918 |
| Adj- $R^2$ | 0.462 |
| F | 616.098 |

Note: ***, **, and * indicate significant levels at 1%, 5%, and 10%, respectively.

### 4.3 Media attention, debt financing and company value

Table 4 shows the impact of the loan effect by the media attention on the value of the company. From the empirical results of the sample, the coefficient of media attention and debt financing level are positive at the level of significance of 1%, which indicates that the media attention and debt financing level of private enterprises in China can promote the value of the company. However, considering the loan effect of the media attention, the results show that the Loan*Media coefficient is negative and significant at the 1% level, which indicates that the loan effect of media attention does not improve the company's value, but reduces the company's value. The above conclusion is contrary to Hypothesis 2, that is, the empirical conclusion does not support Hypothesis 2.In order to test the robustness of the results, since the debt financing of private enterprises mainly comes from loans from financial institutions such as banks, therefore, referring to the methods of Yu Minggui and Pan Hongbo, the debt financing level is defined as the bank loan rate (C/A), which is the percentage of total bank loans (including short-term loans and long-term loans) and total assets instead of the asset-liability ratio. The conclusion is consistent with the previous. The reason may be that the media attention received by private enterprises is negative report on them, and these negative reports will increase the investment risks faced by banks and other financial institutions, thereby reducing the confidence of banks and other financial institutions in the successful operation of the company, As a result, its investment in private enterprises has decreased, and private enterprises are less likely to raise debt financing from financial institutions such as banks and financial institutions, thereby damaging corporate value.

Table 4. Media attention, debt financing and corporate value

| variables | Model 2 |
|---|---|
| Loan | 3.9750*** |
| Media | 1.0706*** |
| Loan*media | -1.0734*** |
| Size | -2.2101*** |
| Profit | 11.6680*** |
| Growth | 0.0066 |
| FR | 0.0833*** |
| N | 3584 |
| Adj- $R^2$ | 0.2618*** |
| F | 182.5731*** |

Note: ***, **, and * indicate significant levels at 1%, 5%, and 10%, respectively.

## 5. Conclusion

The literature research on the factors affecting the debt financing level mainly focuses on the level of corporate governance, the characteristics of the company's management and the external environment. Few literatures can study the impact of the media attention on the debt financing level from this particular perspective. As an important non-institutional mechanism, media attention has a significant influence on the business activities of enterprises. This paper takes the 2014-2016 China A-share private listed company as the research object, and empirically analyzes the media attention about the debt financing of private listed companies and its impact on the company's value. The empirical results show that there is a significant positive correlation between media attention and the financing level of listed companies, but the loan effect brought by media attention is negatively correlated with corporate value. The enlightenment of this paper is: First, as a new mechanism outside the system, media attention can facilitate enterprises to obtain debt financing through the role of corporate governance and information dissemination. The media supervision department should actively guide the media to conduct real news reports on enterprises and promote the media to play its role in economic activities; Second, private enterprises need to strengthen their internal governance and external image shaping, fully recognize the importance and necessity of media reporting work, and use the media to inform investors more positive reports of the company.

This paper mainly discusses the media attention about the debt financing of listed companies in private enterprises and its impact on the corporate value, and has achieved certain results. However, there are still two shortcomings in this paper, which need to be further studied. the media attention data in this article comes from the traditional media of newspapers, and the line of sight is increasingly attracted by new media such as the Internet, but this paper does not incorporate new media data into the analysis framework. Future research can explore new networks and so on. The impact of the media attention on corporate debt financing levels and corporate value can be compared to traditional media.

## References

[1] Bai Zhongen, Lu Jiangyong, and Tao Zhigang, Experience Research on Bank Loans of Private Enterprises in China, *Economics (Quarterly)*, No. 02, pp. 605-622, 2005.

[2] Li Peigong and Shen Yifeng, Corporate Governance of the Media: Empirical Evidence from China, *Economic Research*, Vol. 04, pp. 14-27, 2010.

[3] Yu Zhongbo, Tian Gaoliang, Qi Baolei, and Zhang Wei, Corporate Governance Mechanisms of Media Concern——Based on the Perspective of Earnings Management, *Management World*, No. 09, pp. 127-140, 2011.

[4] He Jing, Credit Rationing, Liquidity Shocks and Cash Holdings of Private Enterprises, *Southern Economy*, No. 09, 2011, pp. 57-72.

[5] Zhang Jie, Financial Dilemma and Financing Order of Private Economy, *Economic Research*, No. 04, pp. 3-10, 2000.

[6] Deng Jianping and Zeng Yong, Financial Ecology Environment, Banking and Debt Financing--An Empirical Study Based on Private Enterprises in China, *Accounting Research*, No. 12, pp. 33-40,2011.

[7] Lu Wenbin, Guan Feng, Zhang Peipei, and Deng Yujie, Media Exposure, Information Disclosure Environment and Equity Capital Costs, *Accounting Research*, No. 12, pp. 66-71, 2014.

[8] Luo Jinhui, Corporate Governance in Media Reporting – Perspective of Dual Agency Costs, *Financial Research*, No. 10, pp. 153-166,2012.

[9] Wen Jianmin, Analysis of the Status Quo and Countermeasures of Private Enterprise Financing, *Contemporary Economy*, No. 01, pp. 7-8, 2012.