Supply-side Reform, the Choice of Deleveraging Strategy and Analysts' Earnings Forecast Optimism

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Abstract: Based on the institutional background of high-quality economic development and supply-side structural reform, this paper mainly examines the impact of deleveraging strategy on analysts' earnings forecast optimism. The study found that, compared with the "empowerment" strategy, the adoption of "debt reduction" strategy to deleverage significantly increased analysts' earnings forecast optimism. Further analysis shows that the positive correlation between "debt reduction" strategy deleveraging and analysts' earnings forecast optimism is more significant in state-owned enterprises, listed companies with low internal control quality and low institutional shareholding. The research in this paper is not only of practical significance to understand the choice of corporate deleveraging strategy under the supply-side structural reform in China and to explore the factors that affect analysts' earnings forecast optimism, but also provides a theoretical basis for promoting government departments to implement a proactive and prudent corporate deleveraging policy.

1. Introduction.

In December 2016, the central government clearly proposed that one of the important tasks of supply side structural reform is "deleveraging" in order to promote high-quality economic development in China. In recent years, the overall leverage ratio of China's economy has continued to rise, and the leverage ratio of non-financial enterprises (the ratio of non-financial enterprise debt to nominal GDP) reached a peak of 157.6% in 2016. This not only increases the risk of enterprise bankruptcy and raises the financing cost of enterprises [1], but also restricts the long-term and stable development of China's economy [2-4]. Therefore, as the core task of supply side structural reform, "deleveraging" is conducive to promoting economic transformation and upgrading and guiding resources to more efficient enterprises.

The issue of "deleveraging" has become a hot topic in the current academic and practical circles. However, the existing research mainly focuses on two aspects: first, the reasons for deleveraging, such as the single financing method [5], tax burden and soft budget constraint incentive mechanism [6]; Second, it affects the results. To a certain extent, enterprise deleveraging will promote economic recovery and growth [2]. There are few literature studies on the strategic choice and micro effects of deleveraging. Therefore, this paper attempts to analyze the impact of deleveraging

strategy choice on the capital market, in order to interpret the role of deleveraging policy on micro enterprise behavior from a new perspective.

As an important part of the capital market, analysts issue profit forecasts after fully collecting and analyzing company information, which becomes an information bridge between investors and listed companies. The existing literature mainly discusses the influencing factors of analysts' earnings forecast optimism from information disclosure [7], management relationship maintenance [8], brokerage business [9], analysts' cognitive bias [10], company characteristics [11], management characteristics [7] and other aspects, ignoring the impact of enterprises' deleveraging strategy selection on analysts' earnings forecast optimism. Enterprise deleveraging strategies can be divided into two ways: "debt reduction" and "empowerment". This paper deeply studies the impact mechanism of deleveraging strategies on analysts' earnings forecast optimism.

This paper takes the listed companies from 2007 to 2019 as the research sample, constructs "debt reduction" strategy variable indicators, and tries to open the "black box" of the optimistic behavior of analysts' earnings forecast caused by the deleveraging of micro enterprises' "debt reduction" strategy. The research found that, compared with the strategy of "increasing rights", the securities analysts of the deleveraged enterprises with the strategy of "reducing debt" had a higher degree of optimism in their earnings forecasts. Further research shows that the above phenomenon is strengthened in the case of state-owned enterprises, low quality of internal control and low proportion of institutional shareholding. Finally, in the robustness test, this paper examines the effect path of the enterprise's "debt reduction" strategy on the analysts' earnings forecast optimism, and finds that the financial risk, operational risk and information opacity of the listed companies that use the "debt reduction" strategy to deleverage significantly increase, which increases the analysts' access cost to public information. For the purpose of catering to the management to obtain private information, analysts' earnings forecast optimism is improved.

The research contributions of this paper are mainly reflected in the following three aspects: First, this paper enriches the research on the micro effects of corporate deleveraging strategy selection. Most of the previous literature discussed the causes and effects of enterprise deleveraging, but the research on the choice of enterprise deleveraging strategy was relatively lacking. This paper discussed the impact of deleveraging strategy choice on the optimism of analysts' earnings forecast at the micro level, enriching the relevant literature on the micro effects of deleveraging strategy choice. Second, this paper expands the literature on the influencing factors of analysts' earnings forecast optimism. The study found that enterprises use the "debt reduction" strategy to deleverage to improve analysts' earnings forecast optimism, which provides new empirical evidence for analysts to pay more attention to deleveraging enterprises with the "debt reduction" strategy. Third, the research in this paper is helpful for enterprises to choose appropriate deleveraging strategies, optimize the capital structure of enterprises, and provide reference for the further development of the government's supply side reform and deleveraging.

2. Literature Review

(1) The strategy of deleveraging.

High leverage has become a major hidden danger that affects the stable development of China's economy, and deleveraging has attracted special attention from domestic and foreign academic circles. The existing literature mainly discusses the problem of deleveraging from three aspects: the reasons, effects and strategies of deleveraging. On the level of reasons for deleveraging, the uncertainty of economic policies [12], the imperfect financial system, the single financing method, the excessive reliance on indirect financing [5], the decline in the marginal effectiveness of real GDP growth and inflation growth brought about by debt expansion [13], information and

transaction costs, tax burden and soft budget constraint incentive mechanism [6] have caused the phenomenon of high leverage in China. On the impact level of deleveraging, enterprise deleveraging can significantly improve enterprise performance, reduce debt financing costs [1,14], and to some extent, promote economic recovery and growth [2]; The increase of leverage will weaken the return on assets [15], increase the level of systemic risk [16], inhibit economic growth, and even trigger a financial crisis [3]. In terms of deleveraging strategies, deleveraging strategies can be divided into "debt reduction" and "empowerment". The former deleveraging through reducing the scale of debt or controlling the growth of debt will lead to asset reduction and decline in production and operation capacity, which is not conducive to stable growth. The latter deleveraging through introducing new equity investment is conducive to improving the production and operation capacity of enterprises and reducing enterprise risks, It is a relatively more "active" way of deleveraging [17, 18].

Through combing relevant literature, it can be found that scholars at home and abroad have made rich achievements in the research on the causes and effects of deleveraging, but the research on the choice of corporate deleveraging strategy is not deep enough, lacking empirical research on the impact of deleveraging strategy choice on enterprises. Based on the background of China's supply side structural reform, how to solve the problem of excessive leverage and whether the deleveraging strategy chosen by enterprises is useful need to be studied and answered by the academic community.

(2) Optimism of Analysts' Earnings Forecast.

Securities analysts are important information intermediaries in the capital market. However, in the practice of the securities market, the forecasting behavior of securities analysts will be subject to multiple pressures. A large number of literatures at home and abroad show that securities analysts have an optimistic tendency in earnings forecasting [19,20]. In terms of influencing factors of analysts' earnings forecast optimism, the existing domestic and foreign literature has conducted in-depth discussion from both the enterprise and the analyst. At the enterprise level, the ability of managers helps to reduce the optimism of analysts [7]; The company's institutional shareholding ratio has a supervisory effect, which significantly reduces the analyst's earnings forecast optimism [21,22]; When the enterprise has internal control defects, the analyst's profit forecast is more inaccurate and optimistic [11]; The quality of information disclosure and transparency of information of listed companies can, to a certain extent, inhibit analysts' optimism in earnings forecasts [7,23]. At the analyst level, analysts intend to issue optimistic research reports in order to maintain a good relationship with the company's management and obtain more private information [8]; Analysts form an optimistic tendency in order to increase trading volume and create profits for securities companies, thereby increasing brokerage income [9]; The professional development of analysts depends more on earnings forecast optimism than accuracy [24], and there is a positive correlation between the forecast optimism of analysts in underwriting relationship and the salary paid to them by financial institutions [20]; Analysts often have certain cognitive biases when analyzing information, prompting them to issue optimistic earnings forecasts [10]; The compliance culture of securities enterprises is positively affecting the quality of analysts' earnings forecasting behavior [25].

By reviewing the existing literature on the optimistic tendency of analysts' earnings forecasts, we can find that there is no literature to analyze the impact of the implementation of the deleveraging policy on the optimism of analysts' earnings forecasts. This paper studies the relationship between deleveraging policy and micro enterprise behavior, and tries to clarify how the choice of enterprise deleveraging strategy affects analysts' earnings forecast optimism, which has certain theoretical and practical significance.

3. Institutional Background and Research Hypothesis

The en terprise's d eleveraging s trategy can be divided i nto " increasing r ights" s trategy and "reducing d ebt" s trategy. T he f ormer m ainly i ncreases p aid i n cap ital o r cap ital r eserve t hrough shareholder capital injection, while reducing cash dividend payment, thereby reducing cash outflow. The latter refers to reducing the scale of debt or controlling debt growth [18,26]. When an enterprise adopts t he s trategy of "increasing rights" t o de leverage, i t c an reduce its de pendence on de bt financing, i mprove c orporate governance a nd enhance enterprise v alue [17]. C ompared w ith t he deleveraging s trategy o f "increasing p ower", the d eleveraging s trategy o f "reducing d ebt" can b e divided i nto t he f ollowing t wo s ituations: f irst, when t he enterprise ha s s ufficient cash flow, t he enterprise will choose to reduce expenditure and save some funds to pay off debts, but the reduction of funds used by the enterprise for investment will further reduce the enterprise's investment level and corporate performance, restricting the long-term sustainable development of the enterprise [27]. Second, when the self owned funds are insufficient, the enterprise repays its debts by selling assets, which has great limitations and uncertainties. This will reduce the enterprise's asset scale and cash flow, r educe i ts future pr oduction a nd ope ration c apacity [18], a nd i ncrease t he e nterprise's operational risk; Prepayment of debts increases the risk of credit default and financing constraints of enterprises, and the de terioration of d ebt financing conditions increases the cost o f c apital use and financial risk of enterprises; W ith the increase of operational risk and financial risk, the enterprise performance d ecreases, the m anagement m anipulates ear nings for i ts o wn b enefit, w hitewashes financial statements, and the risk of information disclosure increases [28].

It can b e s een t hat when a n enterprise a dopts t he "debt r eduction" s trategy, f inancial risk, operational r isk a nd i nformation di sclosure r isk i ncrease, a nd i t i s m ore di fficult f or a nalysts t o obtain information through open channels, making analysts more dependent on internal information obtained f rom m anagement. In or der t o c ontinuously obt ain m ore i nternal i nformation of l isted companies, a nalysts n eed t o m aintain a good a nd s table r elationship w ith t he c ompany's management. T hey te nd to g ive mo re o ptimistic e arnings f orecasts to p lease th e c ompany's management, s o as t o obtain m ore i nside i nformation t o i ncrease t he a ccuracy of s ubsequent earnings f orecasts [8]. T herefore, an alysts' earnings forecasts ar e m ore optimistic. T o s um up, w e propose the first hypothesis:

Hypothesis 1: When enterprises use "debt reduction" strategy instead of "empowerment" strategy to deleverage, analysts' earnings forecast optimism improves.

4. Sample Data and Research Design

(1) Sample selection and data sources.

Based on t he r esearch of Z hou Q ian[18], t his pa per s elects C hina's non -financial lis ted companies from 2007 t o 2019 as research samples to explore the impact of corporate d eleveraging strategy s election on a nalysts' e arnings forecast opt imism. T his pa per s tudies t he c orporate deleveraging strategy, and therefore excludes the sample that the leverage ratio of the current year is greater than that of the previous year, i.e. only the companies that have been deleveraged during the sample period are retained as the observed value.

(2) The definition of variables and model research.

1) Interpretative variables

The explanatory variable in this paper is the deleveraging strategy, which includes two measures, namely "Debt r eduction" s trategy (Debt) a nd "Equity" s trategy (Equity) de leveraging. U sing t he research r esults o f Zhou Q ian [18] f or r eference, this p aper u ses the c hange r ate o f d ebt (△Debt) and the change r ate o f o wner's equity (△Equity) to m easure the d egree of d eleveraging b y "debt

reduction" and "empowerment" respectively. Among them, the change rate of liabilities = (total liabilities at the end of the current period–total liabilities at the end of the previous period)/total liabilities at the end of the previous period. The lower the value is, the more the enterprise uses "debt reduction" to deleverage; The change rate of owner's equity = (owner's equity at the end of the current period–owner's equity at the end of the previous period)/owner's equity at the end of the previous period, which is positive and larger, indicates that the enterprise uses "empowerment" to deleverage more. This paper mainly studies the listed companies which use more "Debt reduction" strategy and less "empowerment" strategy to deleverage, therefore, the above-mentioned debt change rate and Equity change rate are measured by the opposite number of "debt reduction" strategy (Debt) and "empowerment" strategy (Equity) .

2) Interpreted variables

The explained variable in this paper is the analyst's earnings forecast optimism. Based on the research of Li Xiaoxi[3], and Chu Jian[23], this paper uses the forecast optimism index of analysts' earnings (Fepspost) to measure analysts' optimism.

$$\text{Fepspost}_{i,t}=[\text{Mean}(\text{Feps}_{i,t})-\text{Meps}_{i,t}]/\text{Price}_{i,t-1} \tag{1}$$

Among them, Mean ($\text{Feps}_{i,t}$) is the most recent earnings forecast average of all analysts tracking Company i in the t period; $\text{Meps}_{i,t}$ is the actual earnings per share for the period of T; $\text{Price}_{i,t-1}$ is the closing price of Company i at the end of the t-1 Period.

Table 1: Meaning and Measurement of Control Variables

Variable Symbol	Variable Definition
Panel A: interpreted variable	
Fepspost	The optimistic deviation of earnings forecast is calculated according to formula (1)
Panel B: explanatory variables	
Debt	The "debt reduction" strategy is the opposite of the rate of change in debt.
Equity	The "empowerment" strategy is equal to the inverse of the rate of change in equity.
Panel C: control variables	
Size	The size of the enterprise is equal to the logarithm of the total assets at the end of the period
Age	The age of the enterprise is equal to the logarithm of the establishment period of the enterprise
TobinQ	Corporate growth equals (market value of shareholders' equity+carrying value of liabilities)/carrying value of total assets at the end of the period
BoardSize	Board size
Independence	Proportion of independent directors
Big4	If it is four, it is 1, otherwise it is 0
envir	Marketization index

3) Control variables

In terms of controlling variables, the paper controls several variables at the level of corporate characteristics and corporate governance. Among them, the variables at the enterprise characteristic level include enterprise Size, Age, TobinQ, ROA, Lev, and net operating cash flow (Cashflow); Variables at the corporate governance level include BoardSize and Independence. The paper also controls the fixed effects of Year and industry. The specific variable definitions and measures are shown in Table 1.

4) Research model

For hypothesis 1, this paper constructs model (2) to test. β1 reflects the impact of corporate deleveraging strategy on analysts' earnings forecast optimism. The expected coefficient β1 in this paper is significantly positive:

$$\text{Fepspost}_{i,t}=\alpha+\beta_1\text{Debt/Equity}+\beta_2\text{Controls}+\sum\text{Industry}+\sum\text{Year}+\varepsilon \tag{2}$$

5. Empirical Analysis

(1) Descriptive statistics.

Table 2 reports d escriptive s tatistical r esults f or th e k ey variables. A mong th em, th e average values o f co rporate d eleveraging s trategy i ndicators D ebt and E quity ar e -0.048 a nd -0.501 respectively, which indicates that among all the deleveraging enterprises, there are great differences in th e s election o f d eleveraging s trategy among d ifferent e nterprises. The s tatistical r esults o f analysts' e arnings forecast optimism and other c ontrol v ariables ar e b asically cl ose t o th e ex isting relevant literature, which will not be repeated here.

Table 2: Descriptive Statistics

variable	N	mean	p50	max	min	sd
Fepspost	10020	0.008	0.005	0.950	-0.256	0.022
Debt	10020	-0.048	0.014	0.870	-143.112	2.070
Equity	10020	-0.501	-0.136	30.239	-624.375	8.937
Size	10020	22.362	22.180	28.520	19.194	1.297
Age	10020	2.700	2.773	3.951	0.693	0.396
TobinQ	10020	2.097	1.699	31.400	0.153	1.393
BoardSize	10020	2.159	2.197	2.996	1.386	0.199
Independence	10020	0.372	0.333	0.800	0.143	0.055
Big4	10020	0.072	0.000	1.000	0.000	0.258
envir	10020	8.483	8.640	12.795	-0.230	2.049

(2) Analysis of regression results.

Table 3: deleveraging strategies and analysts' earnings forecast optimism

variable	(1) Fepspost	(2) Fepspost
Debt	0.028**	
	(2.45)	
Equity		0.005***
		(3.05)
Size	-0.000*	-0.000**
	(-1.95)	(-2.01)
Age	-0.001**	-0.001**
	(-2.03)	(-2.04)
TobinQ	-0.001***	-0.001***
	(-6.60)	(-6.57)
BoardSize	-0.002	-0.002
	(-1.59)	(-1.55)
Independence	-0.007	-0.007
	(-1.52)	(-1.51)
Big4	-0.000	-0.000
	(-0.07)	(-0.07)
envir	-0.000	-0.000
	(-1.36)	(-1.36)
Constant	0.020***	0.020***
	(3.28)	(3.31)
Industry	control	control
Year	control	control
NO.	10,020	10,020
Adj-R2	0.043	0.043

Note: The value in brackets is T value; * * *, * * and * represent statistically significant at 1%, 5% and 10% respectively.

Table 3 reports t he r egression r esults of non -financial enterprises' d ifferent d eleveraging

strategies affecting analysts' forecast optimism. The results show that the Debt coefficient is 0.028, which is significantly positive at the level of 5%. The coefficient of Equity is 0.005, which is significantly positive at the level of 1%. This indicates that the analysts' earnings forecasts of the companies that use the "debt reduction" strategy to deleverage are more optimistic than those that use the "empowerment" strategy to deleverage. The reason is that when enterprises use "debt reduction" strategy to deleverage, the operational risk and financial risk increase, the quality of information disclosure decreases, and analysts rely more on managers to obtain information. Therefore, the optimistic tendency increases, which verifies the hypothesis 1 in this paper. The regression results of other variables are basically consistent with the existing literature .

6. Conclusions

High leverage has become an important risk factor facing China's economy. How to effectively control and reduce the leverage level of Chinese enterprises has become an important problem to be solved in China's economic development. Under the background of deepening the supply side structural reform and promoting deleveraging in economic stability, this paper takes the selection of deleveraging strategies as the starting point, discusses the relationship between deleveraging of the "debt reduction" strategy and the optimism of analysts' earnings forecasts, and constructs a logical framework for the role of the "debt reduction" strategy in the optimism of analysts' earnings forecasts through three paths: financial risk, operational risk and information disclosure risk. This paper selects China's non-financial listed companies that have deleveraged from 2007 to 2019 as the research sample, and constructs the measurement indicators of the enterprise's "debt reduction" deleveraging strategy. The study finds that compared with the "empowerment" strategy, deleveraging using the "debt reduction" strategy has significantly increased analysts' earnings forecast optimism.

References

[1] Qi Haodong, Liu Hao, Zhu Wei. Research on the "deleveraging" performance of over indebted enterprises [J]. Accounting Research, 2018 (12): 3-11.

[2] Chen Ying, Miao Haibin. Will reducing leverage inhibit economic growth—— International Empirical and China Observation [J]. International Financial Research, 2018 (08): 3-12.

[3] Liu Xiaoguang, Zhang Jieping. The paradox of China's leverage ratio -- and a discussion on the dilemma between "stabilizing growth" and "reducing leverage" of monetary policy [J]. Finance and Trade Economics, 2016 (08): 5-19

[4] Elekdag S, Wu Y. Rapid Credit Growth; Boon or Boom-Bust? [J]. Imf Working Papers, 2011.

[5] Lu Minfeng, Ge Heping. Research on the causes of high leverage and deleveraging methods of Chinese enterprises [J]. Research on Financial Supervision, 2016 (12): 63-73.

[6] Ji Min, Yan Baoyu, Li Hongjin. Leverage ratio structure, level and financial stability -- theoretical analysis framework and Chinese experience [J]. Financial Research, 2017 (02): 11-25.

[7] Zheng Shanshan. Deviation between managers' ability and analysts' optimism [J]. Modern Finance and Economics (Journal of Tianjin University of Finance and Economics), 2019, 39 (12): 97-110.

[8] Zhao Liangyu, Li Zengquan, Liu Junxia. Management Preference, Investment Rating Optimism and Access to Private Information [J]. Management World, 2013 (04): 33-45+47+46+187-188.

[9] Boris G., Healy P. M., Maber D. A. What Drives Sell-Side Analyst Compensation at High-Status Investment Banks? [J]. Journalof Accounting Research, 2011, 49(4): 969-1000.

[10] Zhou Donghua, Zhao Yujie. Optimistic Tendency of Securities Analysts' Earnings Forecast: Benefit Association or Heuristic Cognitive Bias? [J] Management Review, 2016, 28 (01): 205-218.

[11] Xu L, Tang A P. Internal Quality material weakness, Analysts' accuracy and bias, and brokerage reputation [J]. Review of Quantitative Finance & Accounting, 2012, 39(1): 27-53.

[12] Wang Chaoyang, Zhang Xuelan, Bao Huina. Uncertainty of Economic Policy and Dynamic Adjustment of Enterprise Capital Structure and Stable Leverage [J]. China Industrial Economy, 2018 (12): 134-151.

[13] Zhang Bin, He Xiaobei, Deng Huan. Different levers -- the phenomenon, reason and impact of rising leverage from an international comparison [J]. Financial Research, 2018 (02): 15-29.

[14] Margaritis D, Psillaki M. Capital structure, equity ownership and firm performance [J]. Journal of Banking & Finance, 2010, 34(3):621-632.

[15] Cai Zhen, Luan Shi. Why is the corporate return declining and the leverage still rising—— Also on the deviation of macro and micro leverage [J]. Financial Review, 2017, 9 (04): 62-77+125.

[16] Gou Wenjun, Yuan Ying, Qi Xin. Debt leverage and systemic risk contagion mechanism - analysis based on CCA model [J]. Financial Research, 2016 (03): 74-91.

[17] Mao Zhenhua, Chen Jing. Strategic Transformation of China's Enterprises' De leveraging Path [J]. New Finance, 2019 (09): 9-16.

[18] Zhou Qian, Xu Xiaofang, Lu Zhengfei. Who is more active and stable in deleveraging? [J]. Management World, 2020, 36 (08): 127-148.

[19] Zhu Weidong, Wang Lina, Shen Jie. Research on the Optimistic Tendency of Securities Analysts under the Pressure of Institutional Investors' Shareholding [J]. China Management Science, 2016, 24 (08): 45-52.

[20] Dechow P M, Hutton A P, Sloan R G. The Relation between Analysts' Forecasts of Long-Term Earnings Growth and Stock Price Performance Following Equity Offerings [J]. Contemporary Accounting Research, 2000, 17(1):33-39.

[21] Kong Dongmin, Wang Qiyao. Buyer pressure, institutional shareholding and analyst forecast deviation [J]. Securities Market Guide, 2017 (10): 4-11+18.

[22] Chung R, M Firth, and J B Kim. Institutional Monitoring and Opportunistic Earnings Management. Journal of Corporate Finance, 2002, 8 (1): 29-48.

[23] Chu Jian, Qin Xuan, Fang Junxiong. The institutional arrangement of Chinese margin trading and securities lending deviates from the optimistic earnings forecast of analysts Management World, 2019, 35 (01): 151-166+228.

[24] Hong H., and J. Kubik, Analyzing the Analysts: Career Concerns and Biased Earnings Forecasts [J]. Journal of Finance, 2003, (58): 313-351.

[25] Niu Haixin. Compliance Culture, Cost Stickiness and Analyst Earnings Forecast of Securities Enterprises [J]. Accounting Communication, 2020 (01): 46-50.

[26] Xu Xiaofang, Lu Zhengfei. Motivation, means and potential impact of leverage manipulation in Chinese enterprises [J]. Accounting Research, 2020 (01): 92-99.

[27] Liu Haiming, Li Mingming. Retesting the economic effect of monetary policy on micro enterprises -- a study based on the perspective of loan term structure [J]. Economic Research, 2020, 55 (02): 117-132.

[28] Quan Xiaofeng, Wu Shinong. CEO Power Intensity, Quality of Information Disclosure and Volatility of Corporate Performance -- An Empirical Study Based on Listed Companies in Shenzhen Stock Exchange [J]. Nankai Management Review, 2010, 13 (04): 142-153.