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A research on surplus information applied to enterprises' core competition

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ABSTRACT

Surplus is operating results formed by the enterprise in a certain period, are often used to measure the performance of the enterprise, is the core part of the financial report of listed enterprises' surplus. China's market-oriented reform has not really completed. Some industries and market fields have barriers to entry, especially for some non-state-owned enterprises, which have no access to these industries that lead to serious monopoly behavior and weak competition. In this background, this paper began to research for the influence of the product market competition on the quality of the surplus information system. Existing studies have confirmed that the surplus information quality closely related to the company's accounting institutional design, microscopic governance structure and external governance environment. This study tried to further deepen the explanation of surplus information quality for enterprises. When the level of competition is in a low degree, the company may hide profitable business division or take surplus management or other technical means, to create an opaque information environment hidden the real financial performance from competitors and the public. This paper hoped to design a study model, and to conclude two dimensions of product market competition, which are industry concentration and industry homogeneity through literature review. Then further research impacts on the core competition for enterprises.

KEYWORDS

INTRODUCTION

The accounting information users often use surplus as the information resources of the most basic judgment when making decisions. Therefore, there is necessary to study the surplus more deeply, especially in a Chinese context. Related studies show that investors have more dependence of surplus information than other performance indicators. Managers also see it as the core of value assessment indicators by investors and analysts. Accounting surplus usually caused the change of the company's stock price changes in the capital market, which affected the shareholder return on investment. As a result, the surplus information quality is a very important part of c core competition for enterprises.

Although some research of western industrial organization theory shows that the corporate disclosure strategy depends on the competitive position of its product market competition. However, compared with relatively mature western competition market, China's competitive mechanism has not yet fully formed and disproportionate. This study tried to expand the enterprises' financial theory field to the accounting information theory from the subject basis of the industrial organization theory, further deepening the explanation of surplus information quality. We hope to design a study model, and to conclude two dimensions of core competition, which are industry concentration and industry homogeneity through literature review. Then further research impacts on dependent variable of earnings quality. This paper added several control variables to confirm the determination of relationship between independent variables and dependent variable. This paper hopes to further reveal the deep relationship between the two dimensions and the earnings information quality of the core competition for enterprises.

LITERATURE REVIEW

Surplus information is an important part of accounting information, reflects the enterprise's operating results. It can be used to predict future performance, evaluate enterprise value, is a major decision-making basis of stakeholders such as creditors and investors, and as an important symbol of management performance. At the same time, surplus information also as the monitoring and evaluation index of enterprise operating performance by regulators. Because of such an important role the surplus information plays in the accounting information, that surplus information quality received special attention. It is well known that when agents' types are correlated, the mechanism designer can extract the entire surplus. This creates an incentive for agents to acquire information about other agents' types. Robust lotteries (are payment schemes that) support full extraction and partially robust lotteries support efficient implementation in the presence of information acquisition opportunities[9]. By considering a relaxed problem, we provide an upper bound on revenue extraction that explicitly builds on the richness of the information structure. We provide a condition under which this upper bound is achieved and describe an optimal mechanism. With the FASB (Financial Accounting Standards Board, USA) and IASC(International Accounting Standards Committee)decision-making useful idea as the foundation, the surplus quality decision-making useful concept gradually become the mainstream of the research content, mainly focused on decision-making useful information and useful measurement two aspects. It has been shown that the shape of the production function depends on biological parameters such as natural mortality, growth, and the stock–recruitment relationship. It also depends on the age-specific selectivity of the fishery[1].

Enterprises enjoy the excess profits also face higher the possibility of the public and political punishment, so managers like to use free accrued items to reduce surplus[7]. Excess profits of the enterprise is more likely to cause the attention of the media and the public, reduce the regulators of degree of information asymmetry originally in a information disadvantage, increased the probability of administrative intervention and regulation efficiency. Wang HuaCheng and Tong Yan(2006) found that equity concentration, the nature of the enterprise, is negatively related to the surplus reflection coefficient, and the reflection coefficient is positively related to equity balance degree and surplus. Yi-ming hu, song-lian tang (2008) study found that proportion of outside directors with financial background in the board of directors and surplus information quality has significant positive correlation, the participant number have significant negative correlation with surplus information quality, but have not found the independent directors have a significant relationship between compensation and corporate surplus information quality. Bi Xiaofang, Han Chuanmo (2012) found that the companies with low surplus quality are more likely to reward managers more equity, and listed company surplus quality dropped significantly after the implementation of equity incentive.

THEORY BASEMENT

Industry concentration degree is aimed for a particular market or industry concentration and often used to measure market competition. Enterprises in the industrial organization theory suggests that the market concentration degree decides the structure of the market of the most basic and the most important factor, embody a concentrated reflection of market competition and monopoly. In the case of other conditions unchanged, the higher the concentration of the industry, the less competitive. On the other hand, the industry concentration degree is lower, the greater the competition. The basic logic is that higher concentration showed more sales is controlled by a small number of enterprises or other economic activities, so this part of the enterprise has a considerable market power so that the market competitive is low; At the same time, in the market

of focus between enterprises is more likely to form the collusion behavior to reduce the degree of the core competition for enterprises.

Compared with firms in the heterogeneous industry, shareholders of the homogeneous industry are easier to extract information from the market interaction. The known interaction to get outside investors to understand the real business environment, and provides a possible chance for them to take action to punish insider according to the information, reducing the cost of the supervision of the shareholders of the core competition for enterprises.

Industry homogeneity play to enhance the effect of information by relative performance evaluation more effectively, the correlation output between competing enterprises weakens environmental uncertainty caused by the managers' information advantage, which makes it easier for owner to identify the managers' effort. At the same time, the competition promotes manager efforts and correlation between t its pay and reputation will reduce the degree of the manager's laziness.

Industry homogeneity embodied in: the market participants have full understand of the market information, including competitor information and All impact to the cost of the industry, technology, etc. will affect all parts of the industry at the same time. Compared with heterogeneous firms in the industry, The shareholders of a company in homogeneous industry are easier to extract information from the market interaction, the known interaction to get outside investors to understand the real business environment, for them to provide a possible chance to take action to punish insider according to the information, reducing the cost of the supervision of the shareholders of a company. Industry homogeneity enhances the effect of information more effectively by relative performance evaluation, the positive correlation between output of competitive enterprises weakens environmental uncertainty caused by the managers' information advantage, makes it easier to identify the owner manager's efforts; At the same time, competition promote manager's efforts and the strong correlation between its pay and reputation will reduce the degree of the manager's laziness.

STUDY DESIGN

The definition and measure of the variables

Based on the realistic background and existing literatures in our country, then refer to many models of accounting surplus information quality at home and abroad. This paper uses Dechow(1995) modified Jones model calculation of discretionary accruals instead of surplus information quality from the perspective of accrual quality to measure the quality of the accounting surplus.

The greater the absolute value of discretionary accruals, the lower the surplus information quality. Firstly, according to the adjusted Jones model divisions by CSRC industry classification standard in all the years in the same company as sample, then do regression analysis for divisions, points the annual corresponding regression coefficients. Secondly, we isolated the discretionary accruals and nondiscretionary accruals according to the different companies.

Control variables

According to Dechow and Dichev (2002), Francis et al (2005) study, the impact factors of surplus quality economic include the volatility of company size, cash flow from operating activities, operating income volatility, business cycles, frequency loss-making companies, financial than the book value and market leverage, these factors as control variables in this study. In addition, in order to control the influence of unobserved factors in a particular year or a specific industry, we set up dummy variables of industry and year.

The scale of the company (LNSIZE), measured by the natural logarithm of total assets of the company. Generally speaking, the greater the size of the company, the construction of rules and regulations of enterprise is more perfect, the standardization degree operation is also better, higher levels of corporate governance and quality of accounting surplus information. At the same time, the greater the size of the enterprise, more attention paid by the government, regulators and investors supervision and surplus management limitation is relatively more. Large enterprises especially listing Corporation have high cost of illegal financial accounting information fraud, once the fraud happens, that will be punished severely. So the quality of accounting information is high. Therefore this paper inferred that the larger scale of the company, the quality of accounting information is better, coefficient of enterprise scale variables predict negative.

The volatility of cash flows from operating activities (σ(CFO)), measured the cash flow from the operational activities of standard deviation over the past 5 years. Operating cash flow information compared to the accounting surplus information, the management level operation difficulty, can confirm the authenticity of accounting surplus information. The volatility of cash flows from operating activities is smaller, that the business activities of enterprises cash flow is more stable, the top of management surplus management motivation is not strong, therefore the higher the quality of accounting surplus information. Therefore this paper inferred, operating cash flow volatility is smaller, the better the quality of accounting surplus information, business activity coefficient of expected cash flow volatility is positive.

Revenue volatility (σ(SALES)), is measured by the standard deviation of operating income over the past 5 years. Similarly, volatility income is smaller, indicating that the company's sales situation is more stable from the respective of volatility of the operating cash flow. To a certain extent, also shows that the operation of the company management layer is relatively stable, generally will not take the initiative to manipulate accounting surplus information. Therefore, the volatility

of the expected revenue of more smaller, the surplus information quality is better, the expected revenue volatility coefficient is positive.

Operating cycle (LNOPCUCLE), to measure to the natural logarithm of the company's business cycle. Among them, the business cycle is equal to 360/ (operating income / ((at the beginning of the period accounts receivable + final accounts receivable) /2)) +360/ (operating income / ((the beginning inventory + ending inventory) /2)). Generally, the business cycle is longer, the accruals quality is poorer, and surplus information quality is poorer, so we expect the coefficient is positive surplus cycle.

Company loss frequency (NEGEARN), measured by the ratio of loss in the past 3 years. The number year of losses of the company, that has a direct impact on surplus management motivation, so we take it as one of the control variables.

Financial leverage (LEVEGARE), measured by the total liabilities divided by total assets amount of company. The high rate of assets and liabilities of the company, in order to cope with the investors, creditors and other financial information demander, possibly make the harmful decision to the company's management, which may take a variety of means of surplus information management, and reduce the quality of surplus information. The net profit rate of total assets (ROA), calculated with the listing Corporation net profit divided by the average total assets. Assets net interest rate is important to the enterprise profit index, as an important basis for management performance evaluation, so management has motive to raise the profit. Generally speaking, there are signs of surplus management significantly more than the industry average net interest rate of the total assets of the company, the poor quality of accounting surplus. Therefore, this paper inferred that the rate of return on total assets increases, the poor quality of accounting surplus expectations, coefficient of total assets net interest rate variable is positive. Inventory ratio (INVENTORY), the final total assets accounted for by listing Corporation ending inventory amount measure of proportion. Similarly, and the business cycle is generally believed that stock accounted for more, accruals quality is poorer, the surplus information quality is poorer, so we expect the ratio coefficient accounted for positive inventory.

THE RESULTS ANALYSIS

Descriptive statistical analysis

The largest sample size (1628) for the year is 2012, the minimum sample (1219) for the year is 2008. 15.89% sample firms from machinery, equipment, instrumentation industry (C7), 10.77% of the sample firms from the oil, chemical, plastic, plastic industry (C4), the other 8.75%, 6.80% and 6.57% respectively of the sample firms from metal and nonmetal industry (C6), pharmaceutical and biological products industry (C8) and wholesale and retail trade (H). The top 5 industries accounted for the sample constitutes about half the total sample.

Simple financial data analysis

In order to make the results more robust, the company tested according to the scale of grouping regression. The total assets of the overall rate of return of the Sample Firms (ROA) is low, an average of 3.64%, median 3.27%, the description of China's A share of the assets of the listing Corporation profitability is not high. The sample firms' surplus per share (EPS) is an average of 0.2873 and a median of 0.2000, also reflects the characteristics of the company average profitability is not strong enough to a certain extent. Book to market value ratio (MB) is an average of 0.6045 and a median of 0.5851. Financial leverage (LEVERAGE) and the average value was 0.5273, the median was 0.5304, that of sample firms debt to asset ratio has reached 50% on average, at a higher level.

Descriptive statistics analysis of the main variables

TABLE 2 is mainly involved descriptive statistics of variables in this paper. The proxy variables of surplus information quality for EQ1 and EQ2, the mean value respectively were 0.0929, 0.0903, and 0.0555, 0.0530 respectively for the median. Median and mean values of industry concentration (HI_CENSUS), were respectively 0.0692 and 0.0462.

As mentioned above, the value range of the index was 1/n to 1 (n is the number of firms in the industry), the value of 1 indicates that a monopoly status. The mean and median value of industry concentration (HI_CENSUS) shows that the sample firms are relatively competitive industry. The proxy variable mean value of industry homogeneity (HOMOGENEITY) of the sample was 0.2294, the median value was 0.3092, the minimum value is 0.0029, and the maximum value is 0.5682. Industry homogeneity (HOMOGENEITY) is average value of partial correlation coefficient between return average stock yields and the industry rate of return under the condition of certain market rate. The value range of the variable is -1 to 1, so the value of 0.2294 indicates that in the sample industries, stock returns and the industry rate of return exists a certain correlation level (weak), which deduce homogeneity of China's companies is not very strong. As for control variables in this article, the company scale (LISIZE)'s average value is 21.87, the of the average value volatility of cash flows from operating activities (sigma(CFO)) is 0.2943, the average value of business income volatility (sigma (SALES)) is 1.0399, the business cycle (LNOPCUCLE) of the average value is 5.0303, the loss ratio (NEGEARN), the mean value is 0.1121, the financial leverage (LEVERAGE) averaged 0.5273, book to market value ratio (MB) of the average value is 0.6054, the inventory proportion (INVENTORY) of the average value is 0.1850, the rate of return on total assets (ROA) of the average value is 0.0364.

TABLE 1: The descriptive statistics of main variables

Variables	Sample size	Average	Standard deviation	Minimum	The 25% percentile	Median	The75% percentile	Maximum
EQ1	7017	0.0929	0.1312	0.0011	0.0246	0.0555	0.1055	0.8665
EQ2	7017	0.0903	0.1303	0.0008	0.0235	0.0530	0.1025	0.8658
HI_CENSUS	7017	0.0692	0.0638	0.0217	0.0337	0.0462	0.0759	0.3445
HOMOGENEITY	7017	0.2294	0.1225	0.0029	0.1325	0.3092	0.3039	0.5682
LNSIZE	7017	21.87	1.28	19.06	20.98	21.75	22.64	25.67
σ(CFO)	7017	0.2943	0.6313	0.0039	0.0392	0.0908	0.2356	4.3539
σ(SALES)	7017	1.0399	2.6311	0.0062	0.0936	0.2463	0.6862	18.0766
LNOPCUCLE	7017	5.0303	2.3688	2.4276	4.3140	4.9649	5.6260	8.4113
NEGEARN	7017	0.1121	0.2128	0	0	0	0	1
LEVERAGE	7017	0.5273	0.2216	0.0774	0.3753	0.5304	0.6713	1.3738
MB	7017	0.6054	0.2734	0.0993	0.3901	0.5851	0.8077	1.2472
INVENTORY	7017	0.1850	0.1681	0.0007	0.0715	0.1403	0.2358	0.7743
ROA	7017	0.0364	0.0665	-0.2299	0.0103	0.0327	0.0639	0.2411

　　　　This paper has also carried on the Pearson to test the correlation between variables involved in the regression model, the results show that the model variables are not serious multicollinearity problems. Based on the consideration of the space, this paper only lists the key variables of the Pearson correlation coefficient table. Two proxy variables EQ1 and EQ2 correlation coefficients of the surplus information quality is 0.9952 (P = <0.0001), show that the revised Jones model is adjusted with the modified Jones model and the performance measure of the absolute value of the difference of the discretionary accruals.

　　　　Variables of two dimensions to measure the degree of product market competition -- the industry concentration (HI _CENSUS) and industry homogeneity (HOMOGENEITY) have a weak positive correlation between them (0.0654, P =0.1201). This relationship is not significant in economics and statistics, indicating that these two variables to measure different aspects of product market competition. On the relationship between product market competition and the surplus information quality, we found industry concentration(HI_CENSUS) and surplus information quality these two proxy variables (EQ1 and EQ2) were significantly positive correlated, the correlation coefficients were 0.2402 (P = =0.0008) and 0.2375 (P = =0.0017). This indicates a positive relationship between the higher degree of industry concentration, accruals quality is low, the surplus information quality is poorer, and the results are consistent with the hypothesis of 1. Industry homogeneity (HOMOGENEITY) and surplus information quality (EQ1 and EQ2) two proxy variables were significantly negatively correlated, the correlation coefficients were -0.1389 (P value =0.0011) and -0.1411 (P =0.0006). The negative correlation shows that, the higher the degree of similar enterprises in the industry, accruals quality is higher, so the surplus information quality is better.

TABLE 2 : The Person correlation coefficient of key variables

	EQ1	EQ2	HI_CENSUS	HOMOGENEITY
EQ1	1.0000			
EQ2	0.9952*** (0.0000)	1.0000		
HI_CENSUS	0.2402*** (0.0008)	0.2375*** (0.0017)	1.0000	
HOMOGENEITY	-0.1389*** (0.0011)	-0.1411*** (0.0006)	0.0654 (0.1201)	1.0000

Note: () for the Sig value, *, * *, * * *respectively for 10%, 5% and 1% significance level (two tailed).

CONCLUSIONS

　　　　Concentration degree ranking according to industry concentration mean arranged from low to high, the higher ranking, show that the concentration degree is low, and the competition more intense. The top, such as chemical, plastic,

plastic industry, machinery, equipment, instrumentation industry, textile, clothing, fur industry, pharmaceutical and biological products industry, wholesale and retail trade industry, market concentration is low, that competition is more intense. Almost in a monopoly position and have been criticized in the industry, such as mining industry (including oil and gas industry etc.), transportation and warehousing industry (including railway transport industry), information technology industry (including communication service), market concentration is high, that the market competition strength is weak. The third industry relative to other industry as a whole has a higher market concentration, has some monopoly power. For example, communication services with national industry restrictions, has high industry concentration, the intensity of competition is relatively low, and professional services, scientific research industry due to technical barriers has high also has a larger market power, industry competition is weak. When calculating the concentration index in the computing industry, on account of division of the industry is not detailed enough, so there may be some deviation in the measurement of the core competition for enterprises.

Industry homogeneous ranked from high to low according to the average of industry homogeneity, the higher the rank, the more homogeneous the industry. Industry homogeneity is in the control of the market rate of return under the condition of average stock yields and the industry rate of return between the partial correlation coefficient. It is based on an assumption: if the enterprises in the industry to adopt similar products technology, competition in the similar products market, or technology impact and changes of economic situation will affect their cash flow in a similar way, thereby affecting their stock prices. As you can see, in the control of the market yield condition, mining industry, communication and cultural industries, the real estate industry, medicine, bio products industry, transportation, warehousing, business of electric power, gas and water production and supply industry and other industries in the stock return and the industry rate of return correlation is stronger, its industry homogeneity is higher, consistent with the basic. Although there are difference with the industry division, but similar with the results obtained in a certain extent of the core competition for enterprises.

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