

The Effect of Regulatory Changes for Business Combinations in Japan

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Abstract

The purpose of this paper is to examine the effect on financial performance of regulatory changes for business combinations in Japan. The examination is focused on research in which 76.3 % of M&A (here referring to merger and acquisition which is roughly equivalent to business combinations) companies answered the motivation to develop their core business. This paper also verifies the difference between two management behaviors: expanding core business and separating non-core business. As a general view, it is noted that the regulatory changes in 2001, the revision of Commercial Law and the establishment of Corporate Reorganization Taxation, all contribute to Japanese firms' ability to more easily carry out M&A. I hypothesize about the effect of the deregulations on ROE and DE ratio of 69 transportation equipment companies (mainly related to automobiles), and the difference between companies to strengthen core business (called core companies) and companies to weaken or maintain core business (called non-core companies) after deregulations have been effected. The results indicate that ROE and DE improved after several regulatory changes, and core companies are able to improve ROE and DE in comparison with non-core companies.

Keywords: M&A, Regulatory change, Return on Equity, D/E ratio, Core business

I. Introduction

The purpose of this paper is to examine the effect of deregulations for business combinations on the financial performance of transportation equipment companies (mainly related to automobiles) in Japan, and to verify the comparison by different management behaviors to strengthen core business or to separate other weak business. Since the 1990s, corporate activities have willingly engaged in M&A¹ (merger and acquisition) as a means of the development of core business. These activities required the revision and establishment of legal regulations. An interesting result of this research² indicates that 76.3 % of M&A

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¹ M&A in this paper means roughly the same as *business combinations*. The concept of *business combination* refers to the concept in accounting standards in Japan (see next chapter).

² This result is based on a research for M&A companies by RECOF that is a corporation of the research and proposal for M&A. Refer to *Economist Weekly* 81-56, p.165, 2003, the business magazine by Mainichi Newspapers in Japan.

companies confirmed that the purpose of these activities is the growth of core business. The Japan Fair Trade Commission³, JFTC (2004) showed that the number increases annually, remarkable in manufacturing industries. Several firms might choose spin-off to sell non-core or weak business and the establishment of joint venture that utilizes management resource of competitors efficiently.

In this way, business combinations are made by decisions for business efficiency and earning power, and such combinations are called business restructuring or reorganization in Japan. At present, business efficiency is the most important subject for Japanese firms. There are three reasons for this concern: deflation, financing, and reliability. Deflation has continued over ten years in Japan. Companies must make an effort to create goods and service with high value. According to the government, the Japanese economy has moderately recovered when compared to last year. Japanese companies needed to change financing from creditors to investors. Large amounts of debts made their financial condition worse. This is also due to the poor performance of the financial sector. The typical example is the merger of Tokyo Mitsubishi Financial Group and UFJ holdings. Finally, foreign stockholders evaluated financial statements presented by Japanese companies not to be reliable, and believed accounting standards in Japan to be far toward International Accounting Standards/ International Financial Reporting Standards (IAS/IFRS). The views of foreign stockholders have not changed, though the new standards settled in 2003, because pooling of interests is admitted only in limited cases. In any event, Japanese companies have to attract internal and external stockholders by raising corporate value with sound financial performance through their own efforts.

II. Regulatory Changes and Business Combinations

Regulatory Changes

Several regulations have changed to follow business activities after 1980s. TABLE 1 shows the change of legal regulations in Japan. It is noted that government has responded to business environment that is surrounding Japanese companies in recent years. For example, in 1997, the revision of the Antitrust Law was to allow the establishment of a holding company that had been prohibited since the World War II. After that, the changes in 2001 contributed greatly to business activities. In the year 2001, two legal regulations had been prepared: Commercial Law and Corporate Reorganization Taxation. The Commercial Law deregulated

³ The JFTC is in charge of the implementation of the Antimonopoly Act, and actively submits its views and opinions on other government agencies' regulations that fall under the jurisdiction of such agencies. Refer to <http://www.jftc.go.jp/e-page/aboutjftc/role/q-2.htm>.

the share exchange for M&A. On the other hand, the Corporate Reorganization Taxation deals with transactions involving entities or operations of entities under common control and joint ventures. Both helped to make a more simple and flexible M&A, particularly when a company wants to reform the structure of a corporate group. In addition, M&A is sometimes one of the methods to obtain funds for management, which in effect means managers make decision about how a company should develop core business.

TABLE 1 LEGAL REGULATIONS FOR BUSINESS COMBINATIONS IN JAPAN

| Date of Enforcement | Law | Classification | Main Contents |
|---------------------|-----------------------------------|----------------|---|
| Dec-97 | Anti-trust Law | Revised | Permitted holding companies. |
| Oct-99 | Commercial Law | Revised | Simplified procedure of stock swap and stock transfer. |
| Apr-00 | Civil Revitalization Law | Established | Simplified procedure for court-led civil revitalization. |
| Apr-01 | Commercial Law | Revised | Established rules for split-off. |
| Apr-01 | Corporate Reorganization Taxation | Established | Established tax rules for business reorganization. |
| Apr-03 | Commercial Law | Revised | Permitted various classified stock. |
| Apr-03 | Corporate Reorganization Law | Revised | Permitted quick procedure of reorganization. |
| Apr-03 | Industrial Revitalization Law | Revised | Corresponded to various business plans such as joint venture. |

Source: Ministry of Economy, Trade and Industry; National Tax Agency; Ministry of Justice, Japan

Business Combinations in Accounting Standards

The development of business activities needed accounting standards as well as laws. On October 31, 2003, accounting standards for business combinations had been prepared. The Accounting Standards Board of Japan (ASBJ) states that the accounting standards were lagging in both corporate activities and legal systems, though companies combine to respond to the structural change of external environment. On the other hand, the International Accounting Standards Board (IASB) has established International Financial Reporting Standard 3 (IFRS 3) on March 31, 2004. In U.S., the Financial Accounting Standards Board (FASB) announced Statement of Financial Accounting Standards No.141 (SFAS 141) in 2002.

The definitions of *business combination* are different. For example, one definition is when an entity acquires net assets that constitute a business or acquires equity interest of one or more other entities, and obtains control over that entity or entities (SFAS 141, para.9). Additionally, in IFRS 3, the definition is the bringing together of a separate enterprise into economic entity as a result of one enterprise uniting with or obtaining control over the net assets and operations of another enterprise (IFRS 3, para.8). *Business combination* in Japan is defined as an entity or business that is composed of an entity and another entity or business that is composed of an entity which is combined into a reporting unit (para.2-1). It is remarkable that the new Standards prepared last year address a formation of a joint venture and business combination involving entities or operations of entities under common control in comparison with IFRS 3 and SFAS 141 not treat joint venture. This is one of the characteristics in the Japanese standards that targeted transactions that are wide-ranging.

Nowadays, there are collaborative projects for convergence in the world which started in September 18, 2002. On that day the IASB and the FASB jointly agreed to the project for convergence (following, convergence project) in Norwalk, US. The two standard setters already finished discussing the difference between IFRS 3 and SFAS 141, and published the exposure draft for amendment of IFRS 3 (ED IFRS 3) and a replacement of SFAS 141 (ED SFAS 141) in June 2005. The new definition of *business combination* is now “a transaction or other event in which an acquirer obtains control of one or more businesses” (ED SFAS 141, para.3e; ED IFRS 3, para.3e). Those new definitions are the same, and the original difference was lost. The Japanese standard setter, ASBJ has reached the agreement for convergence in January 2005 and a second meeting was held in September 2005. However, in overseas countries, Japanese accounting standards have continued to concern the difference between IAS/IFRS and accounting standards in Japan for convergence. One of the reasons for this is that pooling of interests was admitted in the new standards in 2003, even though it was limited. Pooling is positioned in the serious issues for the difference between IAS/IFRS. The ASBJ and the IASB have not been discussed to this point yet. The schedule for the future is not clear.

Automobile Market

I would take an example of development of core business by automobile companies below. The automobile industry in Japan is located at a higher position for investment and classified into the transportation equipment industry. It directs developing the new technology for environmental protection. Toyota is one of the most attractive companies for investors. It is possible to state that the attractiveness depends on the scale of the company and the position over the industry. The restructurings of the industry after the 1990s were urged to include the maturation of the automobile market surrounding Japan, the U.S. and Europe. The motions

including a merger of Daimler-Chrysler also reached our country, and major automakers, such as Mitsubishi, Nissan, and Mazda, were successfully stored under the group influence of foreign stockholders. Their aim was and remains to widen the sales network expansion in the Japanese market. According to the period which ended March 2003, Toyota has described those activities as follows.

“The reasons for these consolidation transactions vary, but include responses to global overcapacity in the production of automobiles, the need to reduce costs and create efficiencies by increasing the number of automobiles produced using common vehicle platforms and by sharing research and development expenses for environmental and other technology, the desire to expand a company’s global presence through increased size and the desire to expand into particular segments or geographic markets.” (Toyota Form 20-F FY2002, p.9)⁴

III. Previous Research

Meaning of Financial Ratio

Mainly, this paper treats two financial ratios, ROE and D/E ratio (DE). The reason is explained as follows. ROE is the indicator of how a company utilizes a stockholder’s equity efficiently. It is useful to perform corporate evaluation from the aspect of profitability, especially where or when it shows the possibility of a stockholder return. It is not long before it has been set as a target by Japanese management. They used not to pay attention to ROE, because they depended on debt. This characteristic is different from foreign companies where capital markets have already developed, but that condition has changed. Long recession and lower position of financial sector due to bad debt refined corporate financing. The Japan External Trade Organization, JETRO (2003) showed that amounts of debt proportion declined, while stockholder’s equity increased from FY1999 to FY2002 over the industry.

TABLE 2 below shows the highest figure of transportation equipment industry in FY2002. The figure is 11.2 percent, which exceeds over 8.9 percent from two years earlier. Generally speaking, the higher ROE a company achieves, the more attractive the company is for investors. Why did they reach ROE to the highest level? To answer the question, it would be useful for us to understand the trend of all the companies and to study the association with D/E ratio. The number of ROE in FY2002 has already proved that they develop their business efficiently, compared with companies in other sectors. However, that of FY2000 was only 3.8 percent, as TABLE 2 illustrates. The JFTC reported various cases of business combination in this industry. Therefore, it is assumed that the factor of the higher ROE is associated with the regulatory changes for business combination since April 2001.

⁴ Refer to <http://www.sec.gov/Archives/edgar/data/1094517/000119312503027032/d20f.htm>, in the EDGAR System of SEC in the U.S.

TABLE 2 CHANGE OF ROE BY INDUSTRY IN JAPAN

(%)

| Industry | FY2002 | FY2001 | FY2000 | Number of Companies |
|---------------------------|--------|--------|--------|---------------------|
| All Industry | 3.3 | -1.2 | 1.5 | 1088 |
| Manufacturing Industries | 4.3 | 0.0 | 4.6 | 731 |
| Foods | 3.6 | 1.6 | 0.6 | 61 |
| Textiles | -0.5 | -0.9 | 0.2 | 41 |
| Paper & Pulp | 0.3 | -1.8 | -0.6 | 13 |
| Printing | 3.4 | 2.6 | 2.9 | 4 |
| Chemicals | 5.9 | 5.2 | 6.1 | 93 |
| Petroleum | 4.0 | 2.6 | 3.7 | 4 |
| Rubber Products | 6.2 | 2.0 | 2.2 | 17 |
| Stone, Clay & Glass Pds. | 2.3 | 0.3 | 5.1 | 31 |
| Iron & Steel | -2.1 | -8.4 | 4.2 | 35 |
| Nonferrous Metals | -7.8 | -3.7 | 9.7 | 25 |
| Fabricated Metal Products | 2.3 | -0.1 | 0.7 | 32 |
| Machinery | 1.6 | -1.7 | 4.4 | 100 |
| Electric Equipment | 1.4 | -7.6 | 6.1 | 138 |
| Transportation Equipment | 11.2 | 8.5 | 3.8 | 74 |
| Precision Instruments | 5.8 | -3.8 | 3.0 | 21 |
| Plastic Products | 4.0 | -2.8 | -0.2 | 19 |
| Misc. Manufacturing | 5.3 | 3.8 | 4.8 | 23 |
| Non Manufacturing | 0.6 | -4.7 | 4.1 | 357 |

Notes: Financial and insurance industries are excluded.

Source: "Handbook of Industrial Financial Data" edited by Development Bank of Japan

Previous Research

This conversion for equity finance needs the growth of ROE for Japanese management. As mentioned above, ROE is the important determinant for investors to make decisions. The power of ROE has been verified by much previous research. For example, Beaver (1970) proved that stock price (P) is sensitive for ROE and the correlation is positive. Baginski et al (2003) proves that the shareholder's equity to unusual profits is set to Abnormal ROE and a corporate value is associated positively with market risk⁵. In addition, Halsey (2001) explains

⁵ Baginski et al (2003) indicates that Abnormal ROE showed certain investment risk.

about the importance of ROE, using Residual-Income Stock Price Valuation Model, which is the total of shareholder's equity, stock price, P_t increases when the expected value of ROE is higher than the rate of interest. To study the change of ROE as a management target both before and after regulations is relevant to confirm the effect. This is the reason to choose ROE as the second variable.

Yasuda et al (2001) explains three factors for development as a company group, M&A, financing, and incentive. These points show us the importance of DE. DE increases when higher debt or lower equity, while it does down when debt is lower or equity is higher. I argue that DE tends to decrease after law amendment for business combinations. If group management develops more through the deregulations, their financing would be different from before. Given the fiscal year t , it is supposed that recent changes of financing make DE decrease. It is important for us to check the change of financing, because that is the purpose to form a group company by various business combinations among companies under common control. This study is based on several previous studies such as Schipper and Thompson (1983) and Banker et al (1995)) who have examined the growth of regulatory changes on shareholder wealth using the event study methodology. I develop their research, especially the association with regulation and financial ratio information.

Components of ROE

A model utilized in this study is based on the ROE equation. According to the traditional ratio analysis, ROE is composed of net profit margin on sales (NPM), total assets turnover (TAT), and financial leverage (FLEV) as follows.

$$ROE = NPM \times TAT \times FLEV \quad (1)$$

where

$$NPM = \text{Net Profit Margin} / \text{Sales}$$

$$TAT = \text{Sales} / \text{Average Total Assets}$$

$$FLEV = \text{Average Total Assets} / \text{Average Book Value of Stockholders Equity}$$

In the following equation (1) called DuPont type, equation (2) is given by two variables, return on assets (ROA) and FLEV, because ROA is multiplied NPM by TAT.

$$ROE = ROA \times FLEV \quad (2)$$

where

$$ROA = \text{Net Income} / \text{Average Total Assets}$$

Moreover, ROE is calculated by the other equation. Suppose total debts is D , stockholders equity is E , and tax is τ , ROE denotes following equation (3).

$$ROE = ROA_{int} + (ROA_{int} - I_{AT}) \times \frac{D}{E} \quad (3)$$

where

$$ROA_{int} = EBIT / \text{Average Total Assets}$$

$$EBIT = \text{Net Income} + \text{Interest Expense} (1 - \tau)$$

$$I_{AT} = (\text{Interest Expense} / \text{Liabilities}) \times (1 - \tau)$$

$$DE = \text{Total Debts} / \text{Stockholder's Equity}$$

In the above equation (3), it is seen that DE and ROA_{int} are determinants of ROE. ROA_{int} has a double effect for ROE, which is that ROE is calculated by ROA and added ROA multiplied by DE . That means ROE has a very high correlation with ROA_{int} ⁶. However, we should not neglect the effect of DE , leverage for ROE. Leverage makes a negative impact on ROE as well as ROA_{int} . That is shown by equation (2), likewise. It is important for us to look at DE and the effect of ROE.

Definition of DE ratio

I should make the definition of D/E ratio more clear here. DE is a measure of financial leverage calculated by dividing debt by shareholders equity. The ratio indicates the balance between total equity ownership and the amount due to creditors. Generally, the greater number means that a company has been aggressive in financing its growth with debt. Put simply, the company is more leveraged. As for debts, interest-bearing debts⁷ are used, because it can result in volatile earnings as result of the additional interest expense. Beaver (1970) and Banker et al (1995) point out this negative impact for earnings. Taking into consideration the recent M&A increase, the change of DE would be seen after regulation, if the success of group management depends on financing. The above definition is helpful for this assumption. I use equation (3) and study sample data comparable before and after regulation. But I do not treat ROA_{int} , because of too much correlation.

Sales of Core Business

Here is the result of research for M&A firms in the previous chapter which shows that

⁶ Supposed that corporate tax rate (t) is 40%, interest expenses I and depreciation expense DA do not cash out by $(I+DA) \times (1-0.4)$. Those have the effect of internal reserves.

⁷ Interest bearing debts are the debts needed expenditure of interest for borrowing or bonds.

management makes a decision of M&A to develop existing business. Of course, the existing business includes core business. It is reasonable to suppose that management behavior of M&A would extend core business. In this paper, I use sales of core business (called SLS_{core}) as a measure of growth. SLS_{core} denotes sales of core business proportioned into total sales. In this study, SLS_{core} is used to classify companies into core or non-core by the difference of management behavior.

IV. Sample Data and Hypotheses

Sample Data

This paper uses data of ROE, D/E, and SLS_{core} on transportation equipment companies. The data is collected by Nikkei-zaimu data from the annual reports of companies listed on the first and second sections of the Tokyo, Osaka and Nagoya stock exchanges. As of March 2003, consolidated accounting data is for 69 companies with the exception of 4 companies because of their incompleteness by business combination. Basically, accounting fiscal year, FY is from April 1 of the current year to March 31 of the next year. FY2001 is regarded as t and FY2000 $t-1$ as well as FY2002 $t+1$. Data of the best and worst companies are excluded as outlier. T denotes a year when two important regulations for business combination among group companies changed.

Classification into Core or Non-Core Companies

In this paper, it is supposed that there are some effects due to the change of regulations. One of them is for management behavior to develop core business. Thus, on the boundary t , companies that make an increase SLS_{core} are defined as core companies. Companies that make a decrease or keep SLS_{core} are non-core companies. It is helpful for us to check the

TABLE 3 STATISTICS OF FINANCIAL RATIO

| Statistics | FY($t-1$) | | | FY($t+1$) | | |
|-----------------------|-------------|----------|---------|-------------|---------|---------|
| | ROE | DE | SLScore | ROE | DE | SLScore |
| Mean | -3.622 | 147.335 | .669 | 4.595 | 114.358 | .696 |
| Standard Error | 2.915 | 25.360 | 2.714 | 1.207 | 17.842 | 2.661 |
| Median | 3.140 | 73.221 | .670 | 5.710 | 60.144 | .730 |
| Standard Deviation | 23.505 | 204.460 | 21.882 | 9.732 | 143.852 | 21.453 |
| Minimum | -95.270 | 0.661 | .270 | -35.480 | .387 | .220 |
| Maximum | 29.380 | 1079.380 | 1.000 | 26.820 | 765.704 | 1.000 |
| Number of Observation | 65 | 65 | 65 | 65 | 65 | 65 |

difference between core and non-core companies by the effect on regulatory changes. Actually, the figures of $SLS_{\text{core}(t+1)}$ increase and you can find it visually in TABLE 3.

Hypotheses

TABLE 3 shows several implications for my hypotheses. According to TABLE 3, $ROE_{(t+1)}$ and $DE_{(t+1)}$ improve clearly before $t-1$. The mean of $ROE_{(t+1)}$ is 4.595 higher than -3.622 at $t-1$, while that of $DE_{(t+1)}$ is 114.358 better than 147.335 at $t-1$. Then, as for standard deviation, $ROE_{(t+1)}$ and $DE_{(t+1)}$ are lower, 9.732 and 143.852 than 23.505 and 204.460. Based on the result shown in Table 3, two hypotheses were stated in this paper below. The first one is for change of ROE. Given the amendment and establishment of the associated laws for business combination at t , how much impact did they have on financial performance change? That is expressed by the increase of $ROE_{(t+1)}$, because of the characteristic for earning power. Likewise, I suppose that the correlation is different from before deregulations. In general, ROE has negative correlation with DE. If financing of sample firms is transferred into equity from debts, the explanation power of DE would change, which means the decrease of DE. Accordingly, the first hypothesis is

H_1 : *The power of $DE_{(t+1)}$ for $ROE_{(t+1)}$ is weaker than $DE_{(t-1)}$ for $ROE_{(t-1)}$.*

To test this, the following regression model is used:

$$ROE_t = \alpha_0 + \beta_1 DE_t + \varepsilon_t$$

where

$$DE = D / E \text{ ratio}$$

This is the model simplified ROE equation (1) or (3) and this paper uses this to examine the effect of DE on ROE, excluding the effect of ROA. The reason is that ROA is too highly correlated with ROE. Fitted sample data into a multiple regression model composed with two independent variables, ROA and DE, the adjusted R^2 would be high by too much effect of ROA. This means that DE effect is raised by ROA, if so. Thus, I use a simple regression model with independent variable DE, dependent variable ROE. ROA is regarded as intercept.

The second hypothesis is for the difference between core and non-core companies. If management makes decisions to develop core business successfully after deregulations, called a core company, the financial numbers improve more than those of non-core companies. That is

H_2 : Core companies improve ROE and DE better than non-core companies.

V. Results

TABLE 4 is the result to examine Hypothesis 1. It is obvious that the power of DE for ROE changes from $t-1$ to $t+1$. The change is explained by adjusted R^2 .3596 to .0062. Especially, these figures give us two points. One is that DE is the important determinant of ROE at $t-1$. At $t+1$ after some regulations, DE loses the power for ROE. From these implications, it is appropriate to consider that regulation changes for business combinations make financing converted. That mean they make a selection from debts to equity. Thus, the decrease of debts contributes to higher ROE. The lower relationship at $t+1$ indicates DE has a slight effect on ROE. TABLE 4 also shows that the t-value of intercept did not change. On the opposite side, impact of ROA for ROE is not affected by some regulatory changes in different from DE. There are some positive effects of deregulation by Hypothesis 1 proven above. The secondary assumption involves a question whether there is a difference of DE power between core companies and non-core companies. The fitness of this model using data set of each DE and ROE is useful to explain the difference. As the conclusion, Hypothesis 2 is also proved on TABLE 5.

TABLE 5 gives some implications. Pay attention to core companies, adjusted R^2 $t-1$, $t+1$ are .548, .149, higher than those of non-core companies. Given that DE shows whether a company depends on debts or not, I can interpret the change as a measure of corporate financing. If so, it is found that this fitness .548 to .149 is equivalent to the decrease of DE impact for ROE. Core companies improved earnings to develop core business by various business combinations after several regulations. DE contributed to their success for higher ROE. There are two methods to decrease DE. One is to decline debts, and the other is to

TABLE 4 IMPACT OF DE FOR ROE

| FY | $t-1$ | $t+1$ |
|-----------------------|-----------------------|----------------------|
| Intercept | 6.6746 (2.3147)** | 6.7448 (4.5039)** |
| DE | -0.0698 (6.0770)** | -0.0187 (2.2956)* |
| Adj. R^2 | 0.3596 | 0.0062 |
| F-statistics | 36.9301*** | 5.2697* |
| Number of Observation | 65 | 65 |

Statistical significant at the 0.05 level '*', the 0.01 level '**', the 0.001 level '***'.

TABLE 5 DE DIFFERENCE BETWEEN CORE AND NON-CORE COMPANIES

| FY | Intercept | DE | Adj . R ² | F-statistics | Number of Observation |
|--------------------|---------------------|----------------------|----------------------|--------------|-----------------------|
| Core Companies | | | | | |
| <i>t-1</i> | 8.494 (3.484)*** | -.064 (-6.767)*** | .548 | 45.797*** | 38 |
| <i>t+1</i> | 9.364 (4.476)*** | -.0352 (-2.739)** | .149 | 7.503*** | 38 |
| Non-Core Companies | | | | | |
| <i>t-1</i> | 4.174 (.716) | -.080 (-3.330)** | .279 | 11.092*** | 27 |
| <i>t+1</i> | 4.771 (2.111)** | -.010 (-.888) | .008 | .789 | 27 |

Statistical significant at the 0.05 level ‘*’, the 0.01 level ‘**’, the 0.001 level ‘***’.

increase stockholders equity, that is, their financing shift to equity is successful. As a result, ROE reaches a high level. $DE_{(t+1)}$ which explains that financing in core companies has developed more than before, and plays a part for the increase of ROE, from adjusted R^2 .149. Core companies had large amount of debts for main business at *t-1* and it is short time that they decrease the amounts drastically.

On the other hand, non-core companies are not fitted with this condition. Naturally, they have a set of debts divided by each business. They cannot decrease the amounts collectively like core companies and convert financing easily. Thus, the degree of DE raising ROE is lower than core companies. TABLE 5 shows the difference, especially by $DE_{(t+1)}$ -.010 of non-core companies. $DE_{(t+1)}$ of core companies has impact of ROE continuously. Anyway, financial performance of transportation equipment companies changed their financial ratios after deregulations.

VI. Conclusion

This study considers how some regulations for business combinations in 2001 have significantly contributed to a change in the financial performance on transportation equipment companies. I examined the difference between core companies and non-core companies that are divided by management behaviors which strengthen or weaken (or keep) core business on the boundary on FY2001 when two important regulations were prepared. They are the Commercial Law and Business Reorganization Taxation. The characteristic is to treat business combination involving entities or operations of entities under common control. The

purpose of their preparation is the ease for companies to make business combination and to form a group company. In other words, the significance is helpful for companies to improve the financial performance by using business combination. Based on two hypotheses, the results are as follows.

The first hypothesis is for the change of two financial ratios, ROE and DE after regulations. The deregulations give some positive effect on those ratios. Actually, $ROE_{(t+1)}$ and $DE_{(t+1)}$ developed more than two years before, $t-1$. From this point, it is found that Japanese companies transferred equity from debts in financing. Financing is closely concerned with the formation of a group company. Generally, the decrease of debts is one purpose of business combinations inside consolidation for whether management makes decisions or not. Thus, I emphasize that lower DE shows the effect of regulatory change, at least in this industry. The other implication is given for us about what impact of DE decrease for ROE. That is clear by TABLE 4.

As for the second hypothesis, this study verified what the difference is with core companies and non-core companies for DE power. I considered one assumption; management behavior for the reinforcement of core business would increase after some deregulations. Core companies and non-core companies are categorized by different management behavior for core business. Obviously, the higher $ROE_{(t+1)}$ of core companies depends on lower DE, while that of non-core companies does not. This indicates each characteristic of both groups. It is only a period of two years that core companies can realize amount of debts at a low level, because of debts for core business. It is possible for core companies to decrease their debts drastically by a shift in equity and higher ROE depends on the effect.

On the other hand, it is not easy for non-core companies to change like core companies because of debts for various segments. The difference of DE power for ROE between core companies and non-core companies is examined by the result shown by the regression model. It is shown that some regulatory changes for business combinations affect financial performance, ROE, DE, and SLS in this study. Taking into consideration their management power, I assume that the outstanding ROE on transportation equipment industry indicates a dependence on another powerful factor such as deregulations different from the associated factor with management. Certainly, this paper treats only transportation equipment companies with the highest ROE in Japan. This trend would show some implications not only for other Japanese management which has already set a target ROE or try to accomplish but also for investors who are preferable to pure players. A pure player is an enterprise to concentrate on core business.

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