Graduate School of
Business Administration

KOBE UNIVERSITY

ROKKO KOBE JAPAN

2010-28

Post-stock Performance of Bailout Acquisitions in Japan: A One Decade Experience

Tadanori Yosano
Yoshinori Shimada

Discussion Paper Series

Post-stock Performance of Bailout Acquisitions in Japan:

A One Decade Experience

Tadanori Yosano

Graduate School of Business Administration of Kobe University, 2-1, Rokko-dai cho,

Nada-ku, Kobe, 657-8501, Japan

Yoshinori Shimada

Graduate School of Business Administration of Kobe University, 2-1, Rokko-dai cho,

Nada-ku, Kobe, 657-8501, Japan

Post-stock Performance of Bailout Acquisitions in Japan:

A One Decade Experience

Abstract:

In this paper, we found a strong positive post-rescue performance for acquiring firms. Furthermore, we observed even more dramatic recovery effects when we focused on accounting accrual components, such as the credit sale increases or reduction of PPE depreciation value.

We found that investors have been dubious with the solvency of the troubled firms at least one year before the announcement date of their acquisition. As a result, they sold the troubled firms' stocks heavily leading to sluggish sales that hover at a considerably low level during a one year period. However, once they are rescued by an acquiring firm, the target firm's business recovers dramatically.

Focusing on accounting accrual components (changes in ratio of receivables to total assets for one year preceding the rescue), we found a 35.92% average difference for three-year CARs between the highest and lowest ranked firms (reversed out into the acquiring firm's stock appreciation). We also found a 35.29% average difference for three year CARs between high vs. low firm ratio changes of depreciation costs against total assets for the year preceding the announcement.

Finally, we found the reversal effect on troubled firms who underwent a large stock sell-off, and found that a greater stock sell-off is strongly correlated to a more drastic reversal for the acquiring firm's stock appreciation after buyout.

[JEL Classification] G34, M41

[Key Words] Accounting accruals, Rescued M&A, Accruals reversals

1. Introduction

(1) Purpose

In the ten years before 2005, the Japanese economy was in the most severe and prolonged recession since World War II, and experienced a lot of bailout acquisitions during this period. If we focus on bailout acquisitions where both acquirer and target firms are listed, there are 97 cases from 1996 to 2004.

This paper focuses exclusively on rescue acquisitions from 1996 to 2004. We investigated the financial attributes of troubled firms that resulted in successful recoveries. First, we analyzed the representative components of accounting accruals used frequently by the troubled firm to boost their earning numbers in order to go unnoticed by investors who are trying to predict future economic trouble. Accounting accruals, which are at the company's discretion to some extent, help to determine the earning's bottom line, and will help us to predict future economic trouble with detailed knowledge about the accounting accruals. Second, we analyzed the financial attributes that can explain the company's dire economic situation and poor fiscal health. The financial metrics of the former include inventory accumulation and/or gross income loss combined with decreasing sales and/or net incomes. The financial metrics of the latter

involve over-leverage and a lack of liquidity.

We hypothesize that there is a positive inverse effect between acquiring firms after the rescue of troubled firms, because we believe that investors have taken into account the possibility of bankruptcy and sold heavily stocks of insolvent firms in advance. We also hypothesize that the more depreciation of a troubled firm's stock prices, the more dramatic the post-rescue reversals for the acquiring firms.

In general, bailouts are caused by many reasons and defined in different ways, which makes it difficult to identify bailout cases precisely. Therefore, we used specific criteria in order to obtain our data sample. We defined rescue acquisitions according to the following four types of discounted acquisitions:

(a) A company filed bankruptcy or experienced negative earnings over consecutive quarters that built up to an overall negative capital.

(b) Large shareholders sold their shares to outside business interests at reduced prices.

(c) Private placement of a large amount of new shares at a discounted price in external business interests.

(d) Discounted tender offer bids.

(2) Composition

The composition of this paper is as follows: Section 2 provides an overview of previous research and develops our hypotheses. Section 3 is a general outline of our data sample and data characteristics. Section 4 delineates our methodologies for identifying the cumulative abnormal returns (CARs) of the acquiring and target firms. Section 5 presents the results of our investigation with consideration to our hypotheses, and the subsequent cross-sectional stock returns using univariate tests. Section 6 review our main conclusions and future research goals.

2. Developments of Our Hypotheses

There are two distinct types management behaviors when using discretionary accounting accruals. Beaver (2003) introduced them as following: First, is an "opportunistic" discretion behavior which results in an adverse selection or moral hazard for the management. The second typology is in regards to management "signaling" and naturally involves management motivation in the discretion of accounting accruals revealing parts of private information to investors.

Dechow et al. (1996) found that firms who faced the risk of bankruptcy especially

manipulated the reported earning numbers by using accounting accruals from the previous two fiscal years. This was uncovered after SEC allegations, and enforcement actions were taken by SEC in the U.S.

Scott (2006) also introduced in his accounting theory text book that the components of accounting accruals play a great role in the manipulation schemes of firm managers. He identified the four components to be at the considerable discretion of the manager controlling the reported earnings number. First is the accounts receivables, second is the PPE depreciation, third are the inventories, and the fourth includes accounting payables.

Previous research focuses on the components of accounting accruals as follows: Callen et al. (2004) provided empirical findings that internet companies, which have experienced a string of past and future losses, are greatly motivated to overestimate revenues and accounting receivables. Marquardt and Wiedman (2004) also provided empirical findings showing that firms, who issue equity, appear to prefer managing account earnings upward by accelerating revenue recognition. They also found that managing earnings by accelerating recognition of revenues and account receivables is preferred by the managers compared to the earning management which defers the recognition of expenses.

The literature review paper of Healy and Wahlen (1998) also introduces the PPE depreciation and increase of inventories as the greatest portion of accounting accruals components. For example, Petty and Williams (1994), whose sample is comprised of preceding management buyout offer cases, provides evidence that PPE depreciation is the most easily manipulated component of accounting accruals.

Finally, the fundamentals textbook by Friedlob and Schleifer (2002) also introduces the account receivables and inventories as the most controllable components. For example, a company may increase sale revenues by lowering their credit requirement standards and granting credit to less creditworthy customers. The firm's inventory can grow and expensed by delaying the transfer of inventory costs from the account to the cost of goods sold.

Therefore, we can hypothesize that detailed knowledge about accounting accruals can help to predict future economic troubles causing a positive inverse effect between the subsequent stock performance of acquiring firms and the magnitude of accounting accruals in saved troubled firms. Highly sophisticated investors have noticed the opportunistic behavior of accounting accruals within troubled firm managements, and have incorporated the risk of bankruptcy in the troubled firm's stock price. Therefore,

once the troubled firm is rescued by an acquiring firm, the bankruptcy risk lapse will already be reflected within the acquiring subsequent stock price as a counteracting effect. Henceforth, we can propose the following hypothesis:

> H1: There will be a positive inverse effect between the subsequent stock performance of acquiring firms and the magnitude of accounting accruals for saved firms. The greater the magnitude of accounting accruals and/or accounting accruals components of the troubled firm, the greater the subsequent stock performance of the acquiring firms.

Shumway (2001) found that investors actually notice a firm's bankruptcy risk (in this context, accounting accruals are one of the indicators for bankruptcy risk), and the firm’s preceding negative stock performance has a significant power to predict a firm’s risk of bankruptcy. Therefore, we can propose the following hypothesis:

> H2: There will be a positive inverse effect between the subsequent stock performance of acquiring firms and the magnitude of selling-off of the flailing firm’s stocks immediately preceding the acquisition. The greater the magnitude

of the close-out stock sale for the troubled firm, the better the subsequent stock performance of the acquiring firm.

We also analyze the financial attributes that can help explain the company's dire economic situation and poor fiscal health. The financial metrics of the former include a consecutive decrease in sales and/or the EBIT number. The financial metrics of the latter involve over-leveraging and a lack of liquidity.

If the troubled firm is only saved because of its poor fiscal health rather than ineffective business practices, then the business will recover dramatically after the bail-out rescue that naturally settles financial issues externally. Henceforth, we can hypothesize the following:

H3: The greater the magnitude of the rescued firm's health condition represented through poor liquidity and/or high leverage, the greater the subsequent stock performance of the acquiring firms, if the rescued firms sales and/or EBIT numbers are still going well.

Lastly, we developed a hypothesis with consideration to the synergy effect in

M&As. Megginson et al.(2000) provided empirical evidence, using a sample of non-diversified firms from 1977-1996, that firms in the U.S. have succeeded in merger activities. Non-diversification M&A one year CARs were on average 2.30%, however, diversified M&A one year CARs was on average -10.20%. Therefore, we hypothesize that companies in dire economic situations can only recover when they are bailed out by a company within the same industry or has similar business interests. We reasoned that if the acquiring company is in the same line of business, it is capable of making and easier, better judgment about the business potential and merits of a troubled company through their investments. We continue to hypothesize that a fiscally troubled company is more likely to recover after a bailout, because its business operations were efficient and not likely the source of bankruptcy. Hence, we can propose the following:

H4: If a rescued firms sector is in the same line of business, the subsequent stock performance of the acquiring firm is generally higher compared to the diversified rescue of M&A.

3. Data and Sample

(1) Data and sample

We identified troubled firms according to the following four types: filed bankruptcy (4 firms), large shareholders resale stocks at reduced prices (4 firms), private issuance of a large amount of stock at a discounted price (7 firms), and discounted tender offer bids (82 firms), respectively. Our sample period is from January 1996 to December 2004, and consists of 46 firms listed in mature markets (Section 1 and 2 of Tokyo Stock Exchange), and 51 firms listed in emerging markets, such as the Nagoya stock exchange, Fukuoka stock exchange, Sapporo stock exchange, JASDAQ, MOTHERS in the Tokyo stock exchange, and HERCULES in the Osaka Stock Exchange. All firms included in our sample satisfied the following criteria:

(a) Both acquiring firms and troubled firms are listed in the stock exchange in order to exclude small cases.

(b) Neither the acquiring firms and troubled firms are financial institutions.

(c) Type of bailout and/or negative premium is identifiable in the Nikkei Telecom 21 of the Nikkei Newspaper digital Ltd.

(d) The stock price and financial data of both acquiring and troubled firms are available from the Nikkei NEEDS-Financial QUEST by Nikkei Media

Marketing, Inc.

(e) Post-bailout monthly returns are made available to the acquiring firms for at least thirty-six months in order to analyze long-term performance.

(f) Finally, if firms announced a bailout and/or negative premium involving several independent firms on the same day, they are regarded as one transaction when we analyzed the long-term performance of the acquiring firms.

(2) Sample characteristics

Table 1 shows the sample characteristics for four types of companies at risk according to year (1996-2004), mature markets, emerging markets, non-diversified, and diversified categories, respectively. We also show the bankruptcy firm characteristics separately. At-risk companies experience, in general, included low profitability, fiscal hardship, and deflated stock prices. The mean values of ROA, debt to equity ratio, cash ratio, and current ratio of mature markets (emerging markets) are 1.9892% (0.9510%), 7.4049 (3.6555), 9.1631% (10.6630%), and 129.75% (190.48%), respectively. On the other hand, these numbers of all listed firms are 4.8430%, 5.3639, 13.0425%, and 200.51%, respectively. The mean values of the previous three-year CARs for troubled

firms is -15.9242% (-19.9819%).

We also specifically show sample characteristics of the bankruptcy four firms, separately in the next to the most right column of Panel A in Table 1. Figures for bankruptcy firms were much more severe than for troubled firms. Mean values of ROA, debt to equity ratio, cash ratio, and current ratio are -1.8143%, 5.6628, 4.4907%, and 48.65%, respectively. Mean value of previous three-year CAR for bankruptcy firms was tremendously low level of -107.0965%.

4. Methodology

In order to measure the long-term stock performance of acquiring firms, we identified a standard for comparison: the reference portfolio. The difference between the acquiring firm's stock performance and the reference portfolio is considered an abnormal return. The reference portfolio is based on risk factors shared with our stock samples. The two major risk factors utilized in this study are the book-to-market ratio and firm size. The procedures employed in the construction of the reference portfolio are as follows:

First, we identified all stocks listed during the same month that each

bailout occurred. We divided these stocks into five groups according to firm size to define the cut-off points of each quintile.

Within each quintile, we further sorted the stocks into five groups using the book-to-market ratios as the limits. The individual stocks were ultimately sorted into one of twenty-five cells arranged in a five by five table.

In order to compare the long-term stock performance of acquiring firms to their reference portfolios, we first identified the appropriate cell for each acquiring firm with respect to size and the book-to-market ratio. Once the proper cell is identified, we calculated the average raw return of the stocks in that cell (excluding the sample firm). The abnormal return for each acquiring firm was then calculated by taking the difference of the acquiring firm's stock return from the average raw return of stocks in its corresponding cell (reference portfolio).

Barber and Lyon (1997) and Kothari and Warner (1997) indicated that cumulative abnormal returns (CAR) may cause misspecification when compared against the market performance. This problem implies that the null hypothesis where the abnormal return equals zero is rejected more frequently than just by chance alone. In Japan, previous research also indicates that abnormal returns (AR), with the TOPIX as a benchmark, often has a similar bias. Therefore, we calculated AR against the reference portfolio

return marker.

5. Results

In Table 2, we report one, two, and three-year acquiring firm CARs against the reference portfolio for the rescue M&A cases. We were able to find a statistically positive effect from the M&A rescue, which is consistent with our prediction of a positive recovery effect. We found excess returns of 6.98%, 14.14%, and 26.38% (10%, 1%, and 1% significant levels) in one, two, and three-year periods, respectively, for acquiring firms. Consistent with our predictions, this implies that investors have taken into account the possibility of bankruptcy, and sold the troubled firm's stocks heavily in advance. Therefore, stock prices which had depreciated with the troubled firm's hardships experience a recovery period after the acquiring firm's financial rescue.

(1) Accounting accruals

We analyzed four distinct accounting accruals components as well as the total accruals: (a) the increase in the ratio of receivables against total assets, (b) the

decreased ratio of depreciation costs against the total assets, (c) the increase in the inventories against total assets ratio, and (d) the decreased ratio of accounting payables against total assets, which are generally believed that to be predictive of future economic distress. The total accruals are calculated following Dechow et al. (1995) and Sloan (1996):

Total Accruals = (ΔCA - ΔCash) - (ΔCL - ΔSTD - ΔTP) - Dep

where ΔCA = change in current assets
ΔCash = change in cash / cash equivalents
ΔCL = change in current liabilities
ΔSTD = change in debt included in current liabilities
ΔTP = change in income taxes payable
Dep = depreciation expense

Table 3 shows the magnitude of the accounting accruals components compared to the total accruals according to the preceding fiscal year prior to the rescue M&A. The depreciation has the greatest magnitude, at 235.94%, compared to the total accruals, and the account receivables have the second largest magnitude at 149.83%. Meanwhile, inventories have a slight magnitude, with an average of -5.28%. This implies that rescued firms try to boost their earning numbers especially through the accounting components of the depreciation and accounts receivable, which is introduced in detail in Friedlob and Schleifer's (2002) fundamentals textbook.

The post-acquisition results for the acquiring firm performance according to the

accruals components and total accruals are shown in Panel A in Table 4. Panel A in Table 4 shows the difference between the high accruals components group (High accruals) and the low accruals components group (Low accruals), in addition to the difference between the high total accruals group (High accruals) and the low total accruals group (Low accruals). All of our samples are divided into three groups in accordance to their accounting accruals components and total accruals.

We found a significant difference amongst CARs between the low and high ranked firms with accruals components, especially for the depreciation and the account receivable characteristics, in line with the magnitude of the accruals components to the total accruals shown in Table 3. We also found that the one, two, and three-year CARs, 17.66%, 20.96%, and 42.71%, of firms in the greatest increase in the accounting receivables group for the year preceding the rescue are higher than the CARs, -4.20%, 2.08%, and 6.79%, of firms in lowest increase in the accounting receivables group, respectively (1%, 10%, and 10% significant level, one-tailed *z*-statistics). We cannot find any significant differences in CARs for inventories and account payables, except for one year acquiring firms who have a 16.98% difference between high and low accrual groups. Meanwhile, with regards to the total accruals, we only find a significant difference in two year CARs, although we find the opposite differential sign (not

significant) for three year CARs.

In Figure 1, we show the acquirer’s three year post-rescue performance for the three following groups: 1) the troubled firms whose preceding year's increase in account receivables are greatest, 2) the troubled firms whose preceding year's increase in account receivables are a medium amount, and 3) the troubled firms whose preceding year's increase in account receivables are least of all.

In Figure 2, we show the acquirer’s three year post-rescue performance for the three following groups: 1) the troubled firms whose preceding year's decrease of depreciation are greatest, 2) the troubled firms whose preceding year's decrease of depreciation are a medium amount, and 3) the troubled firms whose preceding year's decrease of depreciation are least of all.

In Figure 3, we show target firms with a previous-rescue of high, middle, and low ranked performance of ratio increases for receivables against total assets one year prior to the rescue, respectively. In Figure 4, we also show target firms with a previous-rescue of high, middle, and low ranked performance ratios of decreasing depreciation costs against total assets for one year preceding the rescue, respectively.

(2) Reversal effect of the acquiring firms post close-out stock sale of rescued firms

Panel B in Table 4 show the reversal effect of the acquiring firms after the close-out stock sale of rescued firms in detail. The more stock prices of troubled firms that had depreciated, the more dramatic the post-rescue reversals for the acquiring firms are. We divide acquiring firms into three groups in accordance with the preceding target one to three-year CARs.

The one, two, and three-year acquiring firms that rescued firms whose stock are most aggressively sold off in the previous year have higher CARs, 13.78%, 28.13%, and 45.57%, compared to acquiring firms that rescued firms whose stock were least sold in the previous year resulting in lower CARs, -4.60%, 0.65%, and 10.91%, respectively (5% significant levels of *z*-statistics, one-tailed).

In Figure 5, we show the acquirer's three year post-rescue performance for the three following groups: 1) the troubled firms whose stocks are most aggressively sold off, 2) the troubled firms who has a medium amount of stocks sold, and 3) the troubled firms whose stocks were sold least of all.

(3) Fiscally Troubled

We hypothesize that a fiscally troubled company is more likely to recover after a bailout, because we assume that its business practices worked well and were not the source of bankruptcy. We constructed nine partition cells with breakpoints based on the tertile points of all listed firms. The upper section of Panel B in Table 5 is based on a three-year average sales growth, or EBIT growth, and the current ratio of rescued firms. The bottom section of Panel B in Table 5 is based on a three-year average sales growth, or EBIT growth and the debt-to-equity ratio of rescued firms. Panel A in Table 5 shows the average values of sales growth, EBIT growth, the current ratio, and the debt-to-equity ratio, for the bottom, middle, and upper tertiles.

Panel B in Table 5 shows the results of the two-way ANOVA analysis. We find a statistically significant difference for the nine sales growth and debt-to-equity ratio partition cells over one, two, and three year acquiring firm CARs. In regards to acquiring firm two year CARs, the performance at 42.461% for the highest sales growth and highest debt to equity ratio is greater than the performance at 7.060% for the lowest sales growth and lowest debt to equity ratio. We also find a statistically significant difference for the nine EBIT growth and debt-to-equity ratio partition cells over two and three-year acquiring firm CARs. In regards to acquiring firm two year CARs, the performance at 46.849% for the highest EBIT growth and highest debt to equity ratio is

greater than the performance at -10.096% for the lowest EBIT growth and lowest debt to equity ratio.

However, we could not find any significant signs for the current ratio, except for two year CARs for acquiring firms. The performance rating, 43.062%, for the highest EBIT growth and current ratio is significantly greater than the performance rating, -14.451%, for firms with the lowest EBIT growth and current ratio. Especially in M&A rescue cases, the heavy debt places a great burden on rescued firms, but once this fiscal barrier is removed business should recover dramatically.

(4) The profitability of vertical integration

We hypothesize that companies in troublesome situations can recover remarkably when bailed out by a company in the same industry or with similar business interests. Table 6 provides the post-rescue CARs of all acquiring firms who rescued, respectively targets in both the same industry and diversified industries. However, we cannot find any significant differences between vertically integrated bailouts and diversified or horizontally integrated bailouts. Our results imply that acquiring firms observe their targets thoroughly, and are able to obtain in-depth information about them even when

they acquired businesses in less familiar industries.

6. Concluding remarks

In our paper, we found a strong positive post-rescue performance for acquiring firms. Furthermore, we observed even more dramatic recovery effects when we focused on accounting accruals components, such as the credit sale increases or reduction of PPE depreciation value. We found that investors have been dubious with the solvency of the troubled firms at least one year before the announcement date of their acquisition. As a result, they sold the troubled firms' stocks heavily leading to sluggish sales that hover at a considerably low level during a one year period. However, once they are rescued by an acquiring firm, the target firm's business recovers dramatically. Focusing on accruals components (changes in ratio of receivables to total assets for one year preceding the rescue), we found a 35.92% average difference for three-year CARs between the highest and lowest ranked firms (reversed out into the acquiring firm's stock appreciation). We also found a 35.29% average difference for three year CARs between high vs. low firm ratio changes of depreciation costs against total assets for the year preceding the announcement. Finally, we found the reversal effect on troubled

firms who underwent a large stock sell-off, and found that a greater stock sell-off is strongly correlated to a more drastic reversal for the acquiring firm's stock appreciation after buyout.

The implications of our findings are distinct and straight forward. Investors are able to gain from the reversal effect, even if they do not analyze the accruals arbitrarily generated by the target firms. However, if they carefully interpret accounting accruals and construct trading strategies based on the magnitude of discretionary accruals numbers published by the firm's management, investors can enjoy long-term gains rather than the reversal effect.

Observing manager's discretional motivation and understanding the base accounting figures utilized in bottom-line earnings is still an extremely interesting research topic for the present and future.

[2010.4.12 978]

References

Barber, B. M. and J. D. Lyon (1997) "Detecting Long-run Abnormal Stock Returns: The Empirical Power and Specification of Test Statistics," *Journal of Financial Economics*, Vol. 43, pp. 341-372.

Beaver, W. H. (1997) *Financial Reporting: An Accounting Revolution* 3rd edition, Prentice Hall.

Callen, J. L., S. W. G. Robb, and D. Segal (2004) "Revenue Manipulation and Restatements by Loss Firms," *Working Paper*, University of Toronto.

Dechow, P. M., R G. Sloan and A. P. Sweeney (1995) "Detecting Earnings Management," *Accounting Review*, Vol. 70, No. 2, pp. 193-225.

————, (1996) "Cause and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by SEC," *Contemporary Accounting Research*, Vol. 13, No. 1, pp. 1-36.

Friedlob, G. T. and L L. F. Schleifer (2002) *Essential of Financial Analysis*, John Wiley & Sons.

Healy, P. M. and J. M. Wahlen (1999) "A Review of the Earnings Management Literature and its Implications for Standard Setting," *Working Paper*, Indiana University.

Kothari, S. P. and J. B. Warner (1997) "Measuring Long-horizon Security Price Performance," *Journal of Financial Economics*, Vol. 43, pp. 301-340.

Marquardt, C. A. and C. Wiedman (2004) "How Are Earnings Managed? An Examination of Specific Accruals," *Contemporary Accounting Research*, Vol. 21, No. 2, pp. 461-496.

Megginson, W. L., A. Morgan and L. Nail (2000) "Changes in Corporate Focus, Ownership Structure, and Long-Run Merger Returns," *Working Paper*, University of Alabama.

Perry, S. E. and T. H. Williams (1994) "Earnings Management preceding Management Buyout Offers," *Journal of Accounting and Economics*, Vol. 18, pp. 157-179.

Scott, W (2009) *Financial Accounting Theory* 5th edition, Prentice Hall.

Shumway, T. (2001) "Forecasting Bankruptcy More Accurately: A Simple Hazard Model," Journal of Business, Vol. 74, No. 1, pp. 101-124.

Sloan, R. G. (1996) "Do Stock Prices Fully Reflect Information in Accruals and Cash Flows About Future Earnings?" *Accounting Review*, Vol. 71, No. 3, pp. 289-315.

Table 1 Descriptive Statistics

Panel A: Sample firms

(mean)
(median)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	emerging market	mature market	non-diversification	diversification	bankruptcy	Total
N	1	6	12	18	15	11	17	13	4	51	46	37	60	4	97
Acquirer Size	574,302	61,196	1,382,041	572,909	554,107	257,331	110,956	218,468	297,446	250,933	697,807	392,350	506,329	233,527	462,853
(¥mln)	574,302	13,933	139,958	116,569	133,907	98,770	32,524	114,931	206,701	38,078	186,313	133,907	73,581	65,288	98,770
Target Size	233,615	5,171	38,411	81,010	15,068	17,997	7,302	21,995	5,397	7,949	57,261	19,382	38,704	261	31,334
(¥mln)	233,615	3,605	11,702	9,486	9,934	4,577	3,444	5,938	3,130	4,577	13,836	6,520	5,653	40	5,700
Acquirer	1.589%	10.088%	1.504%	3.447%	-11.086%	-1.543%	-18.329%	-1.194%	-54.811%	-6.890%	-5.130%	-5.711%	-6.268%	12.874%	-6.056%
ROE	1.589%	8.359%	3.552%	2.254%	1.001%	2.909%	0.309%	6.201%	5.601%	4.028%	2.297%	1.202%	3.944%	13.068%	2.845%
Target	2.853%	-15.042%	2.750%	0.378%	-1.658%	-7.900%	13.350%	-0.999%	-23.562%	-5.507%	5.244%	-5.199%	2.545%	-34.171%	-0.409%
ROE	2.853%	-2.065%	2.373%	1.309%	2.093%	0.560%	3.821%	-2.167%	1.494%	0.578%	2.085%	0.956%	1.508%	-47.247%	1.354%
Acquirer	3.548%	7.655%	4.167%	3.981%	2.408%	5.734%	2.809%	3.284%	3.437%	4.433%	3.227%	3.514%	4.075%	4.633%	3.861%
ROA	3.548%	6.846%	3.327%	2.317%	2.472%	5.000%	2.972%	3.969%	3.001%	3.747%	2.804%	2.479%	3.942%	4.541%	3.533%
Target	2.802%	-2.700%	2.537%	2.225%	2.240%	0.484%	2.473%	0.072%	0.249%	0.951%	1.989%	1.656%	1.312%	-1.814%	1.443%
ROA	2.802%	-0.489%	2.517%	2.540%	2.270%	1.039%	1.902%	0.544%	1.707%	1.092%	2.213%	1.294%	2.266%	-0.816%	1.807%
Acquirer Debt	2.8609	2.8924	3.2994	3.8402	14.2786	3.0142	8.4305	4.5082	7.8040	6.7378	3.2297	7.9016	3.3306	4.4725	5.0742
to Equity Ratio	2.8609	2.7240	2.8366	3.6441	2.9473	2.1919	3.6240	4.3221	6.5971	2.6527	4.4478	2.9791	3.4720	4.6003	3.1175
Target Debt	5.9150	2.4674	5.7024	6.3843	4.2248	4.0994	6.3523	6.7232	4.7829	3.6555	7.4049	4.7661	5.8451	5.6628	5.4335
to Equity Ratio	5.9150	2.4762	3.6940	2.1726	2.6166	2.1232	4.0917	3.2973	4.4221	2.4707	4.1067	2.4818	3.2058	10.2642	2.9169
Acquirer Book-to-	0.5977	0.7560	1.2751	1.1322	0.7224	1.2140	1.5574	0.8995	0.9156	1.1253	1.0749	1.0499	1.1332	0.8406	1.1014
Market Ratio	0.5977	0.6360	0.9155	0.8855	0.6414	0.7640	1.0978	0.9377	0.9577	0.8063	0.8422	0.8466	0.8249	0.5831	0.8377
Target Book-to-	0.4067	0.9354	1.4553	1.0184	1.1450	12.3825	-5.1858	7.1968	1.3695	0.7099	3.6928	1.5168	2.4992	15.7378	2.1245
Market Ratio	0.4067	1.0830	1.2731	0.8106	0.9948	1.7775	1.7134	1.6942	1.3832	1.4853	1.0738	1.2949	1.1678	60.4472	1.2474
Acquirer	4.0307%	10.3366%	9.3947%	9.3600%	10.4345%	10.9899%	8.7477%	10.2542%	5.6814%	11.4354%	7.5263%	9.0232%	9.9259%	11.6034%	9.5816%
Cash Ratio	4.0307%	6.5986%	8.1577%	7.3793%	8.1139%	10.1300%	7.3248%	7.7157%	5.8379%	10.1300%	6.6129%	7.7157%	6.8059%	10.2363%	7.3248%
Target	2.0711%	10.1527%	6.3810%	11.2729%	9.1851%	13.6548%	10.8912%	9.5933%	6.2496%	10.6630%	9.1631%	11.0761%	9.2583%	4.4907%	9.9517%
Cash Ratio	2.0711%	8.1732%	5.2118%	10.9274%	8.6772%	5.9053%	8.5609%	5.8078%	5.8281%	7.9799%	6.9534%	6.6490%	7.6586%	4.2550%	7.3373%
Acquirer	83.58%	151.70%	166.48%	157.20%	147.26%	128.26%	136.03%	115.75%	122.13%	150.63%	131.84%	138.83%	143.50%	74.71%	141.72%
Current Ratio	83.58%	119.99%	124.53%	123.49%	135.70%	140.64%	102.44%	106.07%	133.19%	123.48%	117.74%	128.92%	107.15%	79.28%	119.30%
Target	59.16%	197.73%	132.20%	183.00%	134.17%	315.47%	103.39%	148.88%	95.34%	190.48%	129.75%	199.05%	138.64%	48.65%	161.68%
Current Ratio	59.16%	116.86%	103.43%	135.13%	126.98%	164.00%	94.71%	105.52%	92.65%	109.95%	106.11%	126.98%	103.07%	36.24%	107.04%
Premium	-4.7472%	-17.7600%	-30.1727%	-14.9827%	-24.3782%	-18.3901%	-9.8304%	-15.4329%	-25.7278%	-21.0157%	-15.5537%	-17.1709%	-19.1683%	-7.0426%	-18.3985%
	-4.7472%	-15.2142%	-27.5150%	-12.3903%	-13.9636%	-14.0909%	-8.3205%	-8.8383%	-28.2181%	-18.1042%	-10.2966%	-13.4108%	-13.1893%	-5.2852%	-13.3721%

Panel A in Table 1 shows the sample characteristics for four types of companies at risk according to year (1996-2004), mature markets, emerging markets, non-diversified, and diversified categories, respectively.

Table 1 (*Continued*)

Panel B: Descriptive Statistics: All listed firms

	1996	1997	1998	1999	2000	2001	2002	2003	2004	(mean) (median) Total
N	3,640	3,765	3,897	3,999	4,120	4,245	4,322	4,321	4,259	4,063
Size (¥mln)	178,261 27,022	174,750 16,646	180,408 11,272	198,003 12,823	198,371 11,262	169,602 10,160	142,295 8,631	126,894 9,153	153,632 13,870	168,157 12,736
ROE	-0.0201% 4.8611%	1.2129% 4.8062%	4.5988% 3.8918%	0.4424% 3.0437%	5.1142% 4.1013%	35.5062% 4.0271%	-1.4783% 2.9652%	5.2629% 4.0984%	5.9721% 5.9367%	6.4820% 4.2090%
ROA	4.5716% 3.8959%	5.1055% 4.2003%	4.6064% 3.6892%	4.0660% 3.2642%	5.0981% 3.9727%	4.9566% 4.1961%	3.8317% 3.1181%	5.0395% 3.9481%	6.2176% 4.6526%	4.8430% 3.9189%
Debt to Equity ratio	4.5185 2.7149	4.5020 2.6801	6.9432 2.6432	6.0965 2.6295	6.3934 2.5551	5.4621 2.6054	4.7769 2.5093	5.1706 2.4863	4.5177 2.4212	5.3639 2.5723
Book-to-Market Ratio	-1.6814 0.5214	0.3136 0.7580	0.5756 1.0751	0.8105 0.9615	1.2299 1.0899	1.3463 1.1602	1.4604 1.2869	1.4490 1.1670	1.0238 0.8766	0.8204 0.9516
Cash Ratio	11.5595% 9.4365%	11.1788% 8.9831%	11.2373% 9.0583%	12.3085% 9.8833%	13.2907% 10.5903%	13.1753% 10.1285%	13.9389% 10.6307%	14.1970% 11.1490%	14.9654% 11.4692%	13.0425% 10.1875%
Current Ratio	158.39% 126.14%	159.95% 124.59%	168.11% 124.63%	175.10% 128.51%	278.40% 132.38%	192.02% 131.11%	217.62% 134.24%	223.99% 136.89%	217.80% 142.39%	200.51% 130.75%

Table 2 Acquiring firm CARs against the reference portfolio for M&A rescue cases

	(N = 97)	
One year CARs	6.982%	*
Two year CARs	14.138%	***
Three year CARs	26.378%	***

Table 2 reports one, two, and three-year acquiring firm CARs against the reference portfolio for the rescue M&A cases. We were able to find a statistically positive effect from the M&A rescue, which is consistent with our prediction of a positive recovery effect.

Table 3 Magnitude of accounting accruals components compared to total accruals

Increase of Accounitng Receivables / Assets (one year preceding the rescue)	235.94%
Decrease of Depreciations / Assets (one year preceding the rescue)	149.83%
Increase of Inventories / Assets (one year preceding the rescue)	-5.28%
Decrease of Accounting Payables / Assets (one year preceding the rescue)	105.14%

Table 3 shows the magnitude of the accounting accruals components compared to the total accruals according to the preceding fiscal year prior to the rescue M&A.

Table 4 The post-acquisition acquiring firm performance results in terms of total accruals, accruals components, and the rescued firm's stock sale magnitude

Panel A

	High accruals	Middle accruals	Low Accruals	Difference	*t*-value	*p*-value		*z*-value	*p*-value	
Increase of Total Accruals / Assets (one year preceding the rescue)	0.047	-0.032	-0.113	0.160	7.201	0.000‡	***	6.245	0.000‡	***
One year CARs	8.31%	7.76%	5.25%	3.06%	0.331	0.629		0.272	0.393	
Two year CARs	27.35%	23.85%	3.45%	23.90%	1.143	0.129		1.489	0.068	*
Three year CARs	5.25%	21.12%	19.73%	-14.48%	0.563	0.712		-0.528	0.701	
	High accruals	Middle accruals	Low accruals	Difference	*t*-value	*p*-value		z-value	*p*-value	
Increase of Accounting Receivables / Assets (one year preceding the rescue)	0.053	-0.003	-0.044	0.097	5.438	0.000‡	***	6.595	0.000‡	***
One year CARs	17.66%	7.21%	-4.20%	21.86%	2.271	0.014	**	2.547	0.005	***
Two year CARs	20.96%	18.85%	2.08%	18.88%	1.259	0.107		1.440	0.075	*
Three year CARs	42.71%	28.44%	6.79%	35.92%	2.039	0.023	**	1.471	0.071	*
	High accruals	Middle accruals	Low accruals	Difference	*t*-value	*p*-value		z-value	*p*-value	
Decrease of Depreciations / Assets (one year preceding the rescue)	0.054	0.024	0.008	-0.121	-14.274	0.000‡	***	-5.815	0.000‡	***
One year CARs	24.57%	-4.69%	7.03%	17.54%	1.409	0.088	*	1.300	0.097	*
Two year CARs	50.46%	-7.51%	13.82%	36.64%	2.697	0.006	***	2.533	0.006	***
Three year CARs	63.25%	-2.86%	27.96%	35.29%	1.521	0.074	*	1.246	0.106	
	High accruals	Middle accruals	Low accruals	Difference	*t*-value	*p*-value		z-value	*p*-value	
Increase of Inventories / Assets (one year preceding the rescue)	0.027	-0.002	-0.031	0.057	9.171	0.000‡	***	6.949	0.000‡	***
One year CARs	7.03%	10.06%	3.99%	3.04%	0.307	0.380		0.538	0.295	
Two year CARs	13.85%	26.78%	3.40%	10.45%	0.768	0.223		0.775	0.219	
Three year CARs	23.73%	39.09%	18.64%	5.09%	0.291	0.386		0.846	0.199	
	High accruals	Middle accruals	Low accruals	Difference	*t*-value	*p*-value		z-value	*p*-value	
Decrease of Accounting Payables / Assets (one year preceding the rescue)	-0.033	-0.002	0.045	-0.078	-6.194	0.000‡	***	-7.088	0.000‡	***
One year CARs	7.62%	23.74%	-9.37%	16.98%	2.203	0.016	**	2.325	0.100	*
Two year CARs	15.54%	38.14%	55.22%	-39.68%	-2.189	0.984		-2.146	0.135	
Three year CARs	-9.37%	-9.02%	3.61%	-12.98%	-1.408	0.918		-1.109	0.152	

Table 4 shows the difference between the high accrual components group (High accruals) and the low accrual components group (Low accruals), in addition to the difference between the high total accruals group (High accruals) and the low total accruals group (Low accruals). All of our samples are divided into three groups in accordance to their accounting accruals components and total accruals. Statistical significance is tested by using both *t*-test and Mann-Whitney's rank-sum test. ***, **, * denote that the difference in mean values is significant at the 1%, 5% and 10% level, respectively. ‡ denotes that *p*-value is two-tailed.

Table 4 (*Continued*)

Panel B

	Most aggressively sold off	Middle	Least sold	Difference	*t*-value	*p*-value		z-value	*p*-value	
Target's Previous CAR (1yr)	-42.64%	6.92%	50.36%	-93.01%	-10.1314	0.000‡	***	-6.455	0.000‡	***
One year CARs	13.78%	4.17%	-4.60%	18.38%	2.197	0.016	**	1.943	0.026	**
Two year CARs	28.13%	1.48%	0.65%	27.49%	1.995	0.026	**	1.930	0.027	**
Three year CARs	45.57%	5.09%	10.91%	34.66%	2.303	0.013	**	1.956	0.025	**

	Most aggressively sold off	Middle	Least sold	Difference	*t*-value	*p*-value		z-value	*p*-value	
Target's Previous CAR (2yrs)	-52.68%	-0.73%	54.11%	-106.79%	-9.632	0.000‡	***	-6.511	0.000‡	***
One year CARs	18.21%	0.18%	-8.55%	26.76%	2.897	0.003	***	2.741	0.003	***
Two year CARs	28.58%	5.33%	-4.40%	32.99%	2.437	0.009	***	2.423	0.008	***
Three year CARs	41.88%	17.14%	4.44%	37.45%	2.419	0.009	***	1.732	0.042	**

	Most aggressively sold off	Middle	Least sold	Difference	*t*-value	*p*-value		z-value	*p*-value	
Target's Previous CAR (3yrs)	-62.67%	-5.56%	50.99%	-1.137	-9.501	0.000‡	***	-6.457	0.000‡	***
One year CARs	18.56%	-2.88%	-2.11%	20.67%	2.308	0.013	**	2.258	0.012	**
Two year CARs	30.02%	7.13%	-5.62%	35.64%	2.761	0.004	***	2.601	0.005	***
Three year CARs	42.60%	23.55%	-0.97%	43.57%	2.921	0.002	***	2.139	0.016	**

Panel B in Table 4 show the reversal effect of the acquiring firms after the close-out stock sale of rescued firms in detail. All of our samples are divided into three groups in accordance to their preceding CARs. Statistical significance is tested by using both *t*-test and Mann-Whitney's rank-sum test. ***, **, * denote that the difference in mean values is significant at the 1%, 5% and 10% level, respectively. ‡ denotes that *p*-value is two-tailed.

Table 5 Two-way ANOVA analysis of the rescued firm's business practices and fiscal health

Panel A

	Rank1	Rank2	Rank3	Total
Sales Growth	0.2141	0.0008	-0.1144	0.0208
EBIT	0.1751	0.0991	0.0413	0.1203
Current Ratio	3.5789	1.3581	0.7496	1.6168
Debt to Equity Ratio	-0.1385	1.4677	9.0734	4.4253

Panel A in Table 5 shows the average values of sales growth, EBIT, the current ratio, and the debt-to-equity ratio, for the bottom, middle, and upper tertiles.

Table 5 (*Continued*)

Panel B

One year CARs	*F*-value / *p*-value	1.59 (0.1848)	Current ratio Rank1	Rank2	Rank3	Total
Sales Growth		Rank1	19.799%	11.474%	12.317%	19.680%
		Rank2	-3.861%	19.773%	-8.920%	-9.985%
		Rank3	7.922%	-16.091%	2.932%	6.359%
		Total	0.819%	5.842%	10.654%	6.982%

One year CARs	*F*-value / *p*-value	0.94 (0.4462)	Current ratio Rank1	Rank2	Rank3	Total
EBIT		Rank1	11.934%	17.118%	21.800%	17.420%
		Rank2	-5.943%	-13.322%	17.103%	2.744%
		Rank3	0.923%	16.469%	3.770%	5.241%
		Total	0.819%	5.842%	10.654%	6.982%

Two Years CARs	*F*-value / *p*-value	1.24 (0.2982)	Current ratio Rank1	Rank2	Rank3	Total
Sales Growth		Rank1	32.081%	11.580%	5.230%	29.356%
		Rank2	6.520%	48.104%	-20.010%	-9.358%
		Rank3	23.494%	-22.579%	20.931%	16.955%
		Total	0.158%	10.565%	23.381%	14.138%

Two Years CARs	*F*-value / *p*-value	3.36 ** (0.0129)	Current ratio Rank1	Rank2	Rank3	Total
EBIT		Rank1	39.015%	45.759%	43.062%	21.965%
		Rank2	-10.008%	-24.286%	25.118%	2.497%
		Rank3	-14.451%	15.200%	16.584%	9.863%
		Total	0.158%	10.565%	23.381%	14.138%

Three Years CARs	*F*-value / *p*-value	1.43 (0.2302)	Current ratio Rank1	Rank2	Rank3	Total
Sales Growth		Rank1	42.307%	11.924%	4.541%	41.031%
		Rank2	12.196%	79.049%	-14.341%	5.727%
		Rank3	41.141%	21.888%	48.395%	26.403%
		Total	11.022%	29.897%	32.508%	26.378%

Three Years CARs	*F*-value / *p*-value	1.64 (0.1702)	Current ratio Rank1	Rank2	Rank3	Total
EBIT		Rank1	53.520%	35.414%	0.621%	50.757%
		Rank2	-6.210%	7.261%	26.990%	12.147%
		Rank3	1.835%	50.250%	26.803%	25.394%
		Total	11.022%	29.897%	32.508%	26.378%

One year CARs	*F*-value / *p*-value	3.48 ** (0.0108)	Debt to Equity ratio Rank1	Rank2	Rank3	Total
Sales Growth		Rank1	17.030%	12.620%	24.135%	19.680%
		Rank2	-8.404%	-23.229%	-3.313%	-9.985%
		Rank3	13.197%	-1.196%	5.316%	6.359%
		Total	7.204%	-1.274%	12.421%	6.982%

One year CARs	*F*-value / *p*-value	0.98 (0.4209)	Debt to Equity ratio Rank1	Rank2	Rank3	Total
EBIT		Rank1	14.044%	14.558%	20.396%	17.420%
		Rank2	-3.317%	-3.867%	12.532%	2.744%
		Rank3	12.201%	-1.470%	7.962%	5.241%
		Total	7.204%	-1.274%	12.421%	6.982%

Two Years CARs	*F*-value / *p*-value	5.17 *** (0.0008)	Debt to Equity ratio Rank1	Rank2	Rank3	Total
Sales Growth		Rank1	35.933%	0.750%	42.461%	29.356%
		Rank2	-9.815%	-36.030%	6.505%	-9.358%
		Rank3	7.060%	4.897%	41.103%	16.955%
		Total	8.590%	-6.555%	31.319%	14.138%

Two Years CARs	*F*-value / *p*-value	4.33 *** (0.0030)	Debt to Equity ratio Rank1	Rank2	Rank3	Total
EBIT		Rank1	40.321%	30.496%	46.849%	21.965%
		Rank2	-3.006%	-5.599%	13.158%	2.497%
		Rank3	-10.096%	-11.843%	36.546%	9.863%
		Total	8.590%	-6.555%	31.319%	14.138%

Three Years CARs	*F*-value / *p*-value	2.45 * (0.0515)	Debt to Equity ratio Rank1	Rank2	Rank3	Total
Sales Growth		Rank1	37.678%	29.347%	48.109%	41.031%
		Rank2	7.670%	-19.510%	19.152%	5.727%
		Rank3	12.664%	8.641%	61.055%	26.403%
		Total	17.069%	9.700%	43.039%	26.378%

Three Years CARs	*F*-value / *p*-value	2.26 * (0.0681)	Debt to Equity ratio Rank1	Rank2	Rank3	Total
EBIT		Rank1	47.816%	26.676%	57.274%	50.757%
		Rank2	3.079%	-2.556%	30.866%	12.147%
		Rank3	2.061%	16.004%	43.127%	25.394%
		Total	17.069%	9.700%	43.039%	26.378%

Panel B in Table 5 shows the results of the two-way ANOVA analysis. We constructed nine partition cells with breakpoints based on the tertile points in all listed firms: the upper section of Panel B in Table 5 is based on a three-year average sales growth, or EBIT growth and the current ratio of rescued firms. The bottom section of Panel B in Table 5 is based on a three-year average sales growth, or EBIT growth and the debt-to-equity ratio of rescued firms.***, **, * denote that the difference in mean values is significant at the 1%, 5% and 10% level, respectively.

Table 6 Acquirer's one to three year post-rescue performance: non-diversified versus diversified

	Non-diversification (N = 30)	Diversification (N = 67)	Difference	t-value	p-value	z-value	p-value
CAR12	6.548%	7.249%	0.701%	0.091	0.928	0.004	0.997
CAR24	10.670%	16.276%	5.606%	0.512	0.610	0.546	0.585
CAR36	26.460%	26.328%	-0.132%	-0.010	0.992	-0.182	0.856

Table 6 provides the post-rescue CARs of all acquiring firms who rescued, respectively ,targets in both the same industry and diversified industries.

Figure 1 Acquirer's three year post-rescue performance (ranked according to the rescued firm's account receivables increase in preceding years)

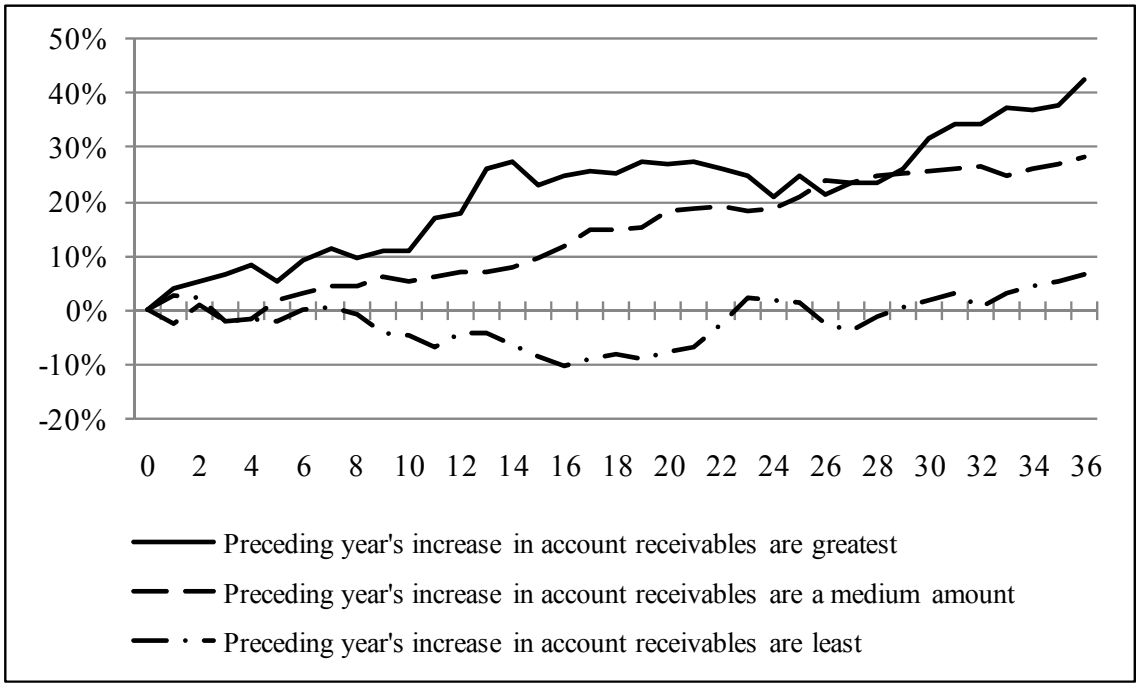

Figure 1 shows the acquirer's three year post-rescue performance for the three following groups: 1) the troubled firms whose preceding year's increase in account receivables are greatest, 2) the troubled firms whose preceding year's increase in account receivables are a medium amount, and 3) the troubled firms whose preceding year's increase in account receivables are least of all.

Figure 2 Acquirer's three year post-rescue performance (ranked according to the rescued firm's preceding year's depreciation decrease)

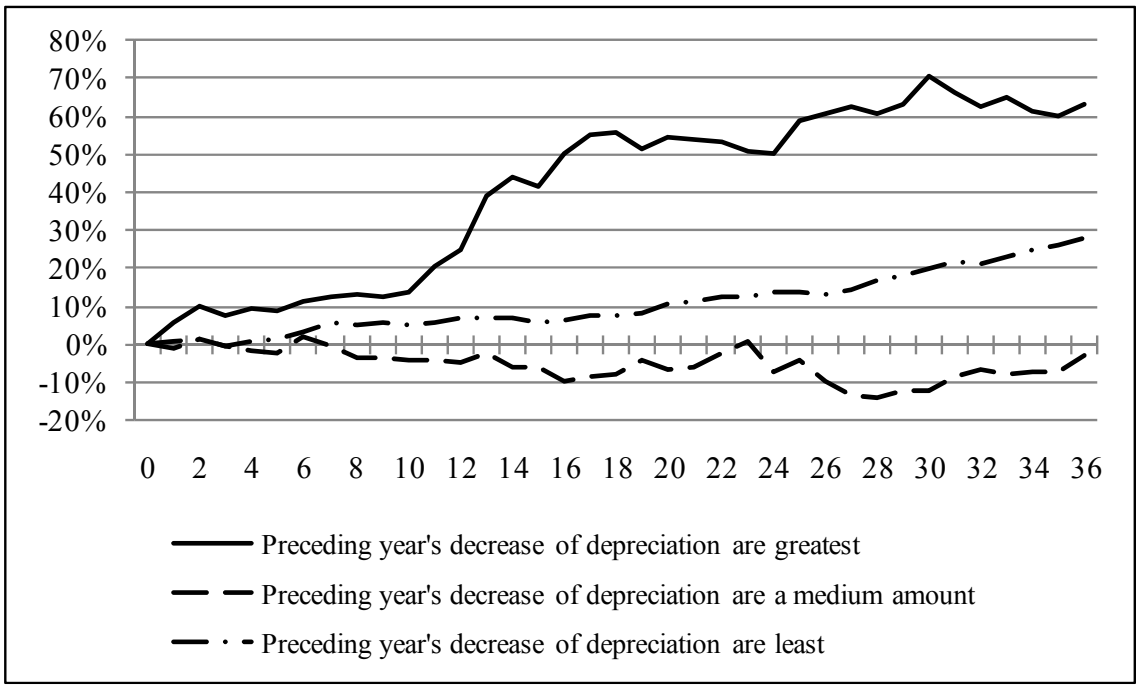

Figure 2 shows the acquirer's three year post-rescue performance for the three following groups: 1) the troubled firms whose preceding year's decrease of depreciation are greatest, 2) the troubled firms whose preceding year's decrease of depreciation are a medium amount, and 3) the troubled firms whose preceding year's decrease of depreciation are least of all.

Figure 3 Rescued firm's preceding three year performance (ranked according to the rescued firm's preceding year's increase in account receivables)

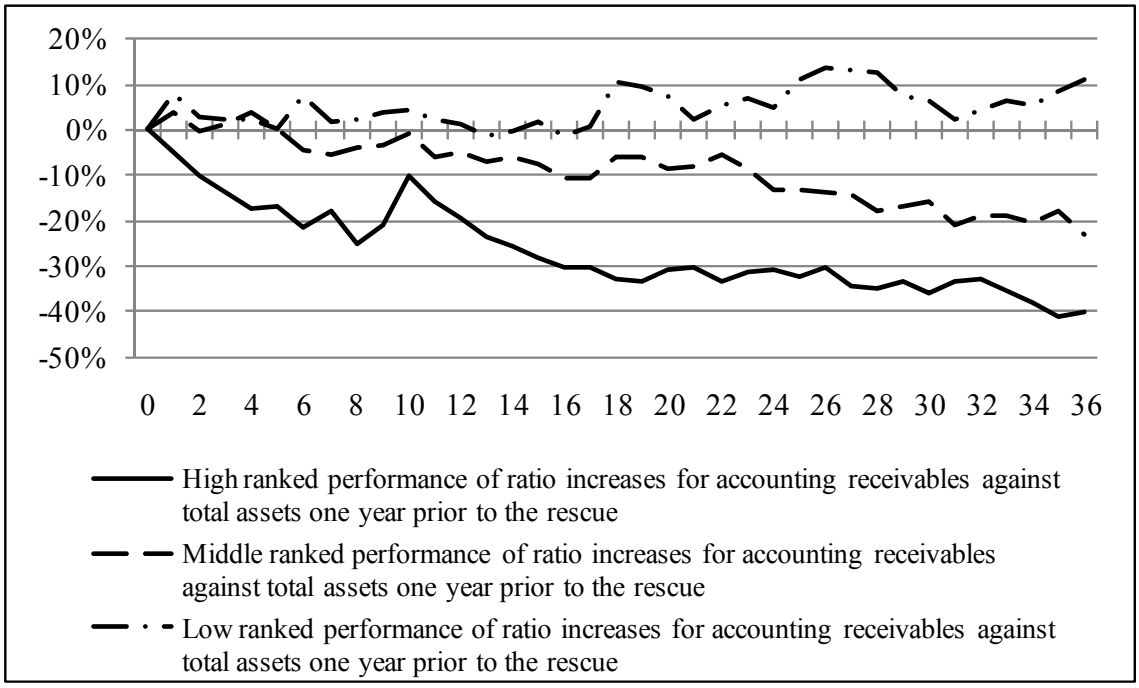

Figure 3 shows target firms with a previous-rescue of high, middle, and low ranked performance of ratio increases for receivables against total assets one year prior to the rescue, respectively.

Figure 4 Rescued firm's preceding three year performance (ranked according to the rescued firm's preceding year's depreciation decrease)

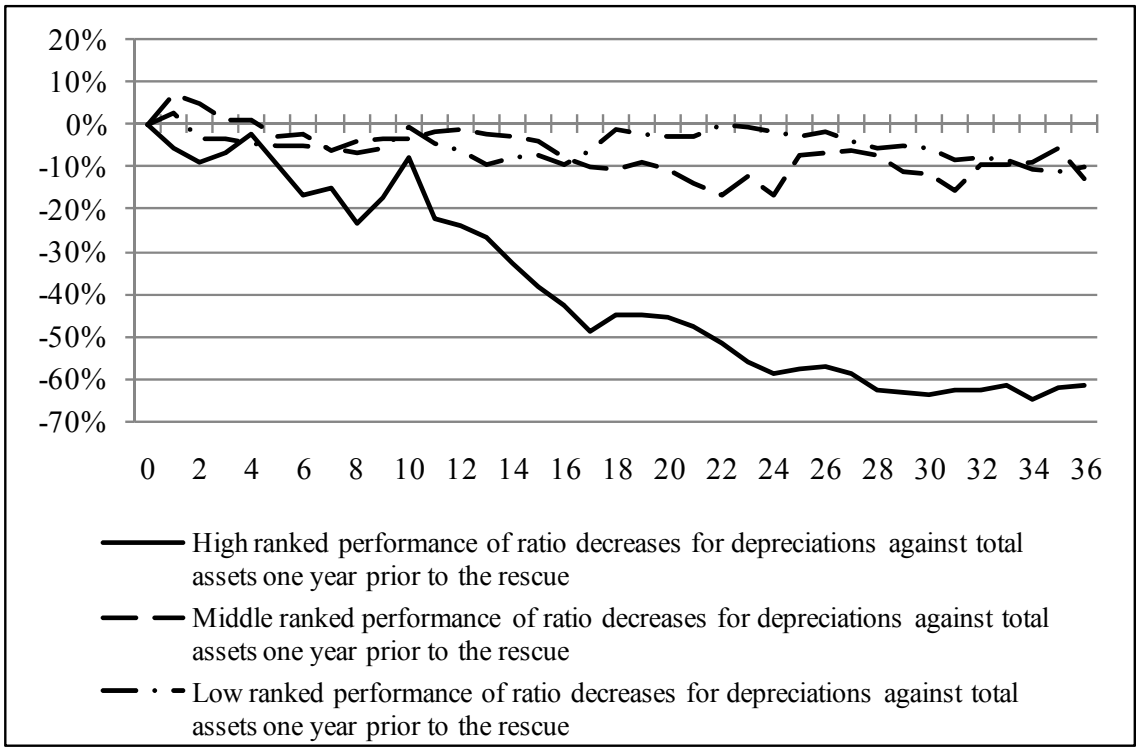

Figure 4 shows target firms with a previous-rescue of high, middle, and low ranked performance ratios of decreasing depreciation costs against total assets for one year preceding the rescue, respectively.

Figure 5 Acquirer's three year post-rescue performance (ranked according to the rescued firm's stock return magnitude in the previous 3-years)

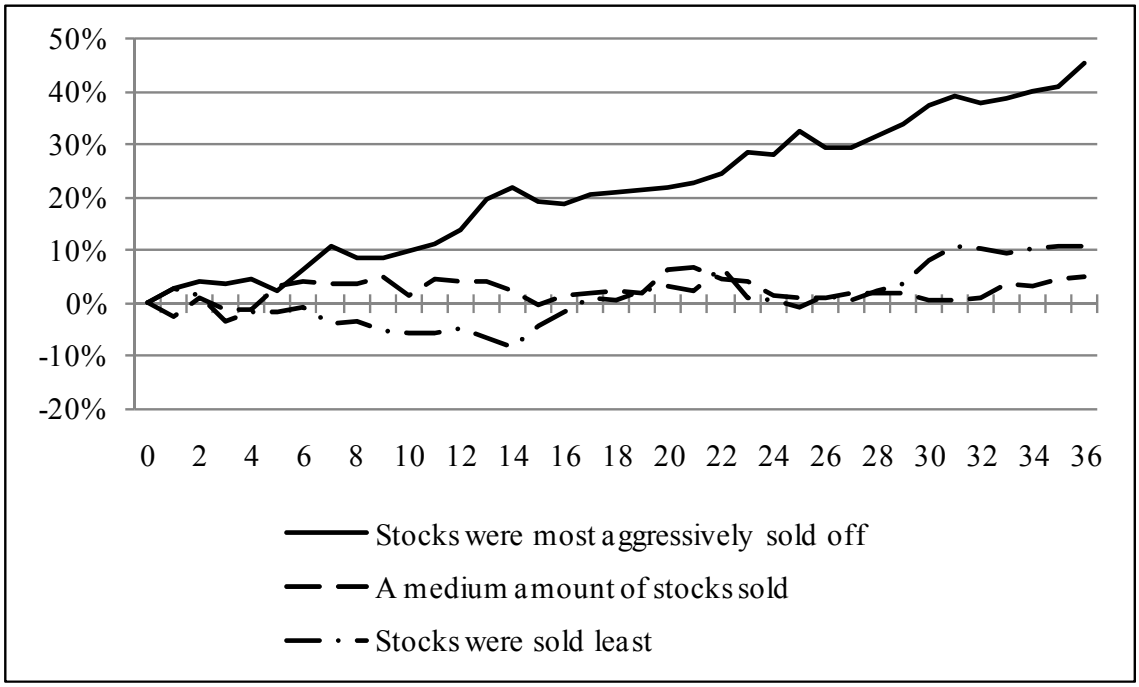

Figure 5 shows the acquirer's three year post-rescue performance for the three following groups: 1) the troubled firms whose stocks were most aggressively sold off, 2) the troubled firms who has a medium amount of stocks sold, and 3) the troubled firms whose stocks were sold least of all.