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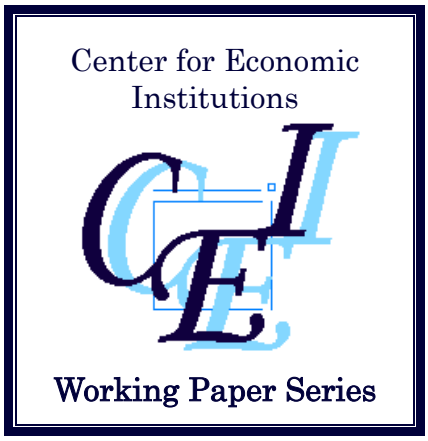

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Does Restructuring Pay in Japan?

Evidence Following the Lost Decade

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Abstract

After over a decade of sluggish economic growth accompanied by massive fiscal stimulus and government handouts (not unlike the response to the current global crisis) in the 1990s, it remains an open question whether and how Japanese firms have restructured their operations, and whether these efforts have borne any fruit. The popular consensus is that Japanese companies did start to implement tough restructuring measures at the start of the 21st century, but there is little evidence describing the scope and ultimate efficacy of such measures. Using a randomly selected sample of 300 firms from the Tokyo Stock Exchange, we collect all restructuring announcement made in the aftermath of the so-called lost decade, specifically in the 2000-2001 period. Our results are striking in that while we find that firms engaging in restructuring of various sorts display improved earnings in the period following the restructuring announcement, shareholders do not appear to benefit at the time of the restructuring announcements. Our results are consistent with a model of corporate governance whereby the benefits of restructuring accrue to fixed as opposed to residual claimants, sometimes referred to as a creditor-centric corporate governance system.

I. Introduction

In this paper we find widespread evidence of restructuring among a randomly selected group of 300 Japanese firms during our sample period of 2000-2001, a period of significant prudential and accounting policy change. We choose this period because it follows the slow growth 'lost decade' of the 1990's in Japan, a period of major financial sector crisis resulting from failures in prudential policy (much like the current American financial crisis), which gave rise to strong incentives for Japanese firms to undertake restructuring measures. We find significant improvements in firm performance using accounting measures of profitability following restructuring announcements. While we do not find any significant stock returns surrounding restructuring announcements, cumulative abnormal returns (CAR's) at lower frequencies show statistically significant, albeit economically small, improvements. Our results are consistent with a model of corporate governance where the primary beneficiary of restructuring announcements are fixed claimants, such as creditors, and where residual claimants remain skeptical whether they will materially benefit from such restructuring efforts.

Distinctive contributions of this study include our choice of sample period at the heels of a decade long economic slump in Japan, and an explicit recognition of the sample selection bias associated with focusing on firms that choose to announce restructuring measures. Indeed, an issue with empirical studies on corporate restructuring has been the tendency to draw causal inferences from a sample of firms that chose to make restructuring announcements. Second, while not the main focus of this paper, we believe that our study offers useful insights into potential pitfalls of the present U.S. administration approach to addressing the current financial crisis. Specifically, after a decade of financial window dressing and Keynesian-style economic stimulus in Japan, meaningful restructuring announcements from firms essentially came only after the Japanese government eased off on

showering firms with bailouts and push them toward greater transparency (Patterson and Beason, 2001). Our study suggests that government infatuation with macroeconomic stimulus measures may actually deter and delay meaningful changes at the firm level.

Corporate restructurings have been studied extensively in other locales. The literature on corporate performance and restructurings in the U.S. deals with capital expansions (McConnell and Muscarella 1985), asset disposal (John and Ofek, 1995), internal reorganization (Brickley and Van Drunen, 1990), plant closings (Blackwell, et al, 1990), and layoffs (Chen et al, 2001). Kang and Shivdasani (1997) consider restructuring and corporate performance in Japan during the bubble period of 1986-1989. The results of this literature are mixed. Sometimes restructuring measures appear to enhance shareholder returns or performance, and sometimes they do not. If one wanted to make a broad generalization about state of the literature, however, it would be to suggest that restructuring announcements generally produce small but significant increases in returns, at least in the US market. On the other hand, some types of announcements, such as layoffs, seem to generate negative returns. This is likely due to the mixed information contained in the announcement, noise, test power and issues of timing.

We believe ours is the first study to examine the behavior of firms following a prolonged period of sluggish growth in a country not known for corporate restructuring. As opposed to affecting a few firms (as in the Kang and Shivdasani, 1997, sample) this decade long slowdown in the 1990s affected, to varying degrees, all firms in Japan. This gives us a natural benchmark for comparison purposes – roughly 30% of our sample of 300 randomly-selected firms made some sort of restructuring announcement during 2000-2001. The non-announcing firms provide a natural benchmark against which to judge the efficacy of these restructuring efforts.

We categorize restructuring announcements into six broad categories. These include contraction-type actions (such as divestitures and consolidations), employment changes (including workforce reductions), expansion-type actions (e.g., setting up production facilities in lower-cost countries), internal reorganizations (such as streamlining production costs), changes in internal control (e.g. CEO turnovers) and financial restructurings. Contraction-type actions, employment changes and internal reorganizations involve retrenchments, and represent approximately two-thirds of all restructuring announcements. Financial restructurings and changes in internal control are relatively rarer events, representing 6% of all announcements.

Our main results are that firms announcing restructuring programs experience an improvement in operating earnings in the following year (as well as in the second year following the announcement). More specifically, retrenchment actions are followed by improvements in operating performance, while expansion actions are not. Financial restructurings also result in performance improvements. These results are robust to outliers and industry adjustments. When we control for other firm characteristics, as well as for the performance change for non-announcing firms, the results for employment changes and internal reorganizations remain significant, although the performance improvement for contraction-type reorganizations are no longer significant.

We recognize that firms in our sample are not randomly assigned to the announcing and non-announcing groups, and therefore the performance improvements associated with the former may well be endogenous to the decision to embark on such restructuring programs. We use a two-stage least squares (2-SLS) model to address this issue. We first model the decision to announce as a function of foreign ownership under the assumption that foreigners (mostly U.S. institutions) have generally been more active in pressuring management than their Japanese counterparts. We then use the predicted value of the announcing probabilities

as a regressor in the second stage performance regressions. Our main results are robust to this endogeneity correction. We note that prior studies on performance surrounding restructuring announcements have not controlled for such endogeneity, leaving open the question of proper identification of the second stage structural equation.

We repeat the tests for operating performance using announcement period stock returns to examine whether market participants are able to anticipate the gains from restructuring announcements for our sample of firms. Overall, these results are not significant. It appears that shareholders in Japan are skeptical of the restructuring moves announced by firms, perhaps on account of a decade long wait during which firms did little to address the sluggish growth environment they faced. An alternative possibility is that the performance improvements we document were indeed perceived as real and anticipated as such, but shareholders remained doubtful if these gains would ever flow through to them as residual claimants.

In the next section we describe in more detail the events of the 1990s that provide the backdrop for the spate of restructuring announcements in 2000-2001. In section III, we describe the sample selection process and our data sources. In section IV and section V, we present the results on operating performance and stock returns. Section VI concludes this paper.

II. Background on the 1990s – the "Lost Decade" in Japan

The 1990s represent a unique period in post-war Japan. For the first time in post-war history, Japanese managers experienced a prolonged period of slow to negative growth, and, unlike their Western counterparts, had little experience in dealing with such contractions, especially after participating in the fast-paced growth of the 1980s. The asset pricing bubble

of the late 1980s resulted in further dislocations in the 1990s, especially the non-performing loan banking crisis (with striking parallels to the global banking crises of the last two years), and was followed by dramatically slower economic growth for the remainder of the decade. Japanese firms were slow to respond to the crisis, waiting for improved economic growth and government assistance rather than undertaking much needed restructuring.

By the mid-1990's, however, it became clear that 'growing out of the crisis' was no longer an option, and an increasing number of firms did begin to restructure, and a number of very large firms went bankrupt. During the decade after the stock market crash the Japanese economy and firms underwent significant transition. Foreign ownership quadrupled from under 5% in 1990 to the end of our sample period in 2002 (Miyajima and Kuroki, 2006). Finally from the mid 1990's and into the first years of this century a number of restructuring friendly measures were passed into law, and genuine restructuring on a broad scale finally began. Since such changes form the basis of the motivation for this study, it is worth considering them in some detail.[1]

Between 1993 and 1997 a number of major financial institutions experienced financial difficulty, and the Ministry of Finance essentially admitted that it had been allowing financial institutions to avoid reporting losses on real estate investments on the assumption that the real estate market would recover. The lack of transparency and uncertainty regarding the magnitude of the financial crisis resulted in the 'Japan premium'[2] reaching almost 1% in 1997 (see Peek and Rosengren, 2000).

By 1997 a number of prudential and accounting reforms were initiated that would help promote corporate restructuring (or at least make monitoring of restructuring efforts by

[1] See, for example 'New Japan Part I,' Warburg Dillon Read (Now UBS), 4 January 2000 for an extensive list of restructuring announcements and accounting/prudential policy changes.
[2] The term 'Japan Premium' as used in the business press typically referred to the premium on offshore interbank overnight borrowing by Japanese banks of a certain risk class relative to foreign banks of a similar risk class.

shareholders simpler), improve the stability of the banking system through improved prudential policy, and ultimately allow for improvements in corporate performance. Significant changes in bank prudential policy began in 1995, spearheaded by the newly created Financial Supervisory Agency (FSA). In 1997 the government formally recognized that Japan's bank centered financial system gave dominance to creditors over shareholders in terms of monitoring, and that the Ministry of Finance's (MOF) implicit guarantees that large institutions would not fail exacerbated the moral hazard inherent in such a system. These implicit guarantees were formally ended in 1997, and major accounting and prudential policy changes were initiated. New accounting standards were announced between 1997 and 2000 to bring Japanese practices in line with international norms, with full implementation by 2000. The major changes in the accounting standards relate to rules and reporting with respect to consolidation, fair value definitions and accounting for pension liabilities and expense.

Taken together, the accounting reforms initially caused the measured performance of parent firms to decline, putting pressure on many of the largest companies to restructure. Specifically, by 2000 the combined impact of the accounting changes was to cause an increase in shareholder equity (especially the accounting of cross shareholdings), leading to a decline in (already pitiful) measures such as return on equity and return on assets (ROA). At the same time, holdings by foreign institutional investors had been steadily rising throughout the 1990's, and these investors, unlike domestic institutions, were particularly concerned with performance measures. Japanese companies that had been accustomed to just giving foreign investors a tour of the factory floor became increasingly concerned with ways to increase performance measures.

At the same time that prudential policy and accounting standards were upgraded, other 'shareholder friendly' measures were introduced. Share buybacks were allowed since 1996, and steadily increased since then to our sample period. Corporate income taxes were steadily

slashed during the period up to 2000, by which time they had fallen from among the highest in the world to equivalent to those paid by firms in California. The decades old ban on holding companies, introduced by General MacArthur, was finally repealed in 1997. While this at first sight might appear benign or negative, it is actually an important ingredient in Japanese restructuring. For the non-financial sector it provides a vehicle for parent firms to hold subsidiaries and affiliates in a more arms-length relationship, adding them or shedding them as the need arises, rather than the messy and difficult to sever cross shareholding mechanism. For financial firms, it allowed for the necessary mechanism to enable mergers, and also for parent firms to enter other business lines without necessarily straying from their core competency.

While conventional wisdom maintains that Japanese firms are seriously constrained from undertaking significant restructuring due to rigid labor practices, such as the difficulty of large firms to layoff or fire workers (except in cases of financial exigency), some progress has been made in that area. The easiest way for large firms to shed labor is to rely more heavily on 'part time' employees, whose hours can be reduced or eliminated easily. 'Part time' in large Japanese firms is often very close to full time, the major distinction simply being classified as such (Beason, 1992).

It is against this background that we have chosen the period spanning 2000 and 2001 for our observations.

III. Sample and Restructuring Announcement Characteristics

We randomly selected 300 TSE1 firms from a current total of 1743 TSE1 firms. We exclude consideration of firms in the financial sector due to the incomparability of performance data for such firms relative to the rest of the sample. There are other reasons for

excluding financial sector firms, including the fact that restructuring measures in that sector are often quite different from other sectors, and have often included radical transformations including de-listing of the original entity. Firms from all other industry groupings in the TSE are represented. For our sample period of 2000-2001, some of the selected firms had to be eliminated either because they were newly listed during or after our sample period, or were not traded for significant periods. After such eliminations, 289 firms remained from our original sample of 300. Among these firms, 90 made restructuring announcements during the sample period for a total of 836 such announcements.

Restructuring announcements were found by searching for all newspaper articles and announcements for the sample of 300 firms in the *Nihon Keizai Shinbum*, Japan's major business and financial daily. This was accomplished by using the 'C-brain' online search and research service from the same source. We then grouped these into 45 restructuring announcement types within 6 major categories. We have used all announcements during the period, rather than selecting only certain types of announcements as is typically the case in this literature.

While we included every type of restructuring announcement made by our sample of firms during FY2000-2001, we have categorized them in a fashion that makes comparison with previous studies possible. In particular, we were able to group announcement types into categories that are comparable to those of Kang and Shivdasani (1997), a study that examined restructuring during the bubble period of the late 1980s. While comparison of our results with those of Kang and Shivdasani is interesting, it should be noted that their 1980s bubble period is very different from our sample period for a number of important reasons. As noted earlier, accounting standards and transparency were radically different, and economic conditions were much stronger with fewer firms subject to financial fragility. Furthermore, Japan in the late

1980's was at the zenith of its bank centered financial system, and restructurings were largely undertaken at the behest of creditors, rather than being management driven.[3]

The full list of announcement types and frequencies studied is presented in **Table 1**. We consider six major categories of announcement types: contraction actions, employment changes, expansion actions, internal reorganization actions, changes in internal control and financial restructuring. We further consider breakdowns within each of these categories for a total of 45 detailed restructuring action announcement types. Our list of categories is among the most comprehensive in the literature.

Among the six major types of restructuring announcements, contraction measures, employment changes and internal organization measures can generally be viewed as cost reduction or cost control measures. Internal control and financial restructurings are typically governance related changes, though they may have cost and other performance implications as well. Expansion measures include foreign expansions that may result in production cost reduction, and also includes expansion of marketing networks that may result in increased sales revenue or improved sales turnover. Generally, other studies have found that restructuring announcements yield small positive response in returns, though with limited or no response in firm performance after such announcements (Brickley and Van Drunen, 1990). The exception to this finding seems to be in the case of layoffs in the U.S., where Chen, et al (2001) find a negative impact of such announcements on returns, presumably due to signaling issues discussed earlier.

[3] For example, after the first oil shock in the mid-1970's, Mazda's main bank (Sumitomo Bank) carried out a full-scale restructuring of the firm, including replacement of top management. In the mid-1990's, after the main bank system began to crumble and the large Japanese banks found themselves in trouble, other shareholding groups began to flex their muscle. In the Mazda case, Ford Motor Co. became the de-facto monitor of the company and initiated radical restructuring. More generally, see Aoki, Patrick and Sheard (1994).

IV. Restructuring Announcements and Operating Performance

Naturally, we would like to test whether the observed list of announcements from our sample of firms has had a positive impact on firm performance and returns. A casual reading of the business press would suggest that market participants in Japan during our sample period were highly skeptical and weary.[4] For most of the first decade following the collapse of the bubble economy in Japan, Japanese firms were very leery of making restructuring announcements. Stakeholder rights rather than shareholder rights were paramount, and managers of large firms were protected from takeover by cross-shareholdings. Restructuring was associated with layoffs and considered 'un-Japanese.' Case law in Japan effectively prevented layoffs in large firms except in the case of financial exigency.[5] Government, for its part, tried to convince the populace and market participants that economic recovery was on its way. Given this history, one can understand that there might have been skepticism on the part of shareholders as to whether restructuring announcements would actually pay off in terms of firm performance. We can model the tests of these hypotheses a number of ways. We are concerned with the potential impact of restructuring announcements on firm performance and returns, so we must define two basic 'models' of such impacts and define our performance measures.

Our first measure of performance is ROA, defined as operating income scaled by book assets. ROA captures two key component ratios of performance, sales turnover and margin,

[4] See, for e.g., 'Corporate Japan's Stealth Makeover,' Businessweek, September 29 2003; and 'Barbarians at the gate, vultures overhead,' Asia Times Online, September 23 2003.

[5] Contrary to popular belief, layoffs and dismissals are not illegal in Japan, but a long history of case law, together with specificity of human capital, has made them costly. Generally speaking, firms with more than 10 employees are expected to avoid layoffs through reduction of hours for non-tenured employees (Beason, 1992). This has been reaffirmed in several court rulings, including the Shuhoku Bus Case (1968), the Toyo Sanso Co. Case (1979) and the SAS case (1995).

as shown in the decomposition below (where EBIT refers to Earnings Before Interest and Taxes, or operating income):

$$ROA = \frac{EBIT}{Sales} \times \frac{Sales}{Assets} \tag{1}$$

ROA is not influenced by extraordinary items and financing charges, and represents asset efficiency and profitability. Since we are concerned with how restructuring affects performance, and we focus on the change in ROA over a one (as well as two) year horizon after the restructuring announcement (vis-à-vis a year before the announcement).

Specifically, we estimate the following equation where the ***R*** terms represent the six restructuring announcement categories, and the ***I*** terms correspond to two-digit industry codes. The *C* terms represent control variables such as foreign ownership. On the basis of this mapping, we hypothesize the following baseline model for our statistical analysis.

$$\Delta ROA_i = \alpha + \sum_{r=1}^{6} \gamma_r R_r + \sum_{k=1}^{7} \varphi_k I_k + \lambda_c C_c + \varepsilon_i \tag{2}$$

In (2), ΔROA is measured as the one or two year change in ROA. The one (two) year change is the change in ROA from one (two) year before the announcement until one year after. The announcements will be considered on the basis of the individual announcement types and a single variable capturing all announcements. Industry dummies are the seven non-financial four-digit ticker codes in the TSE1. The model for performance is essentially an event-type analysis on whether the defined performance variable for the announcing firms responds to an announcement of restructuring in period 0. The null hypothesis for equation (2) is that the coefficients on announcements are individually equal to zero (we can remain agnostic with respect to the sum of coefficients).

Of course, it may take the firm many periods to respond positively or negatively to an announced restructuring measure. We have found that the results are robust to lag structure, and we have reported the one year change measure. The results in terms of restructuring announcements and performance are quite ubiquitous; firms in Japan for the period under analysis seem to deliver on restructuring announcements. We can see this in stylized fashion in **Table 2**, where announcement types and changes in industry adjusted ROA are presented. Contractions, employment changes, internal reorganizations and financial restructuring type announcements are positively related with improvements in ROA. Category 'ALL' here is a simple dummy variable representing whether firms made any of the six categories of announcements. The significance of this variable for industry adjusted mean and median ROA is not as large, since it includes the impact of expansion and internal control type restructuring announcements as well. Apparently expansion activities and internal control changes during this period were not positively correlated with higher industry adjusted performance.

With 90 firms out of the random sample of 300 firms making over 800 restructuring announcements, it is obvious that firms are announcing and undertaking multiple restructuring actions. In **Table 3** we present the correlation coefficients between the six major announcement types. Perhaps not surprisingly, categories which are individually positively correlated with improvements in ROA tend to be positively and significantly correlated with each other. Categories which appear to be uncorrelated with improvements in ROA (categories Expansion and Internal Control Changes) tend to be negatively correlated or uncorrelated to all other restructuring announcements with the exception of expansions, which are positively correlated to internal reorganizations. Overall, announcements of the type that are found to be positively correlated with performance improvements are correlated with each other. Managers seem to try several types of actions in an effort to improve firm performance.

In **Table 4** we present our findings with respect to a specification of model (2). We model changes in ROA as a function of the six categories of announcement type, the seven industry/ticker categories, and percent of foreign ownership. Foreign ownership is included under the assumption that firms with greater foreign ownership are more likely to introduce performance enhancing measures.

We have estimated (2) using both one and two period changes in ROA for robustness, although we only discuss and tabulate the one-period change in ROA to conserve space. As in the univariate correlations, employment reductions and cost reducing internal organizational changes contribute to improvement in both one and two-period changes in ROA. Category 1 contraction-type actions and category 6 financial restructuring do not have a statistically significant impact on changes in ROA in the multivariate analysis. A possible explanation for this comes from the results in Table 3: there is a significant degree of correlation between these two announcement types. This collinearity will bias against finding a statistically significant impact of announcements on improvements in ROA. Our attempts to deal with this issue do not conflict with the results of Table 4, except to enhance the impact of category 2 announcements, employment changes.

The inclusion of foreign ownership in Table 4 was an indirect way of dealing with an inherent issue of endogeneity. That is, our results are for firms that have made restructuring announcements, meaning that they are conditional on the decision to make such announcements. While this is precisely the issue we are concerned with, whether the decision to make such an announcement positively affects performance, we must attempt to deal with this potential endogeneity issue as a robustness check. Failure to do so may simply reflect that announcing firms are simply better firms, and better firms are more likely to make restructuring announcements. To address this issue, we use a 2SLS approach with the decision to announce is modeled as a function of observable variables, then using fitted values

from the first stage as explanatory variables in the regression on performance. Specifically, the 2SLS model we employ is:

$$\hat{C}_i = a + b.FOREIGN_i + c.\Delta ROA_{t-1,i} \quad (3)$$

$$\Delta ROA = d + e.\hat{C} + f.IND \quad (4)$$

In (3), the first stage of the 2SLS model, we model the decision to announce, $\hat{C}$, as a function of the percentage of foreign ownership and pre-announcement change in ROA. The logic here is that the percentage of foreign ownership is an observable (to the econometrician) proxy for outsider pressure (pro-shareholder), and pre-announcement change in ROA represents both market and insider pressures for enhanced performance. In the second stage, the fitted values for the announcement decision from (3) are used as the primary explanatory variable for changes in ROA subsequent to the announcement, with industry or ticker categories used as control variables. This model allows us to avoid the endogeneity issue that announcing firms may simply be 'better firms' by conditioning on governance and past performance. While the endogeneity issue could also be dealt with via a 'Heckman' type correction, econometricians (e.g., Johnston and DiNardo, 1997) have largely abandoned this approach due to sensitivity of results with respect to specification which bias toward favoring the null hypothesis. The results of the first and second stage regressions represented in (3) and (4) are presented in Table 5.

The results of the 2SLS analysis are consistent with the unconditional results presented earlier. From the second stage, improvements in ROA are enhanced by announcement decisions. From the first stage, the decision to announce is positively related to the observable governance variable (percentage of foreign ownership) and inversely related to past performance (ROA in the fiscal year prior to the restructuring announcement). These

results support our earlier conclusions that restructuring announcements are indeed positively related to improvement in corporate performance.

V. Restructuring Announcements and Returns

As discussed at the outset of this paper, we are also interested in the question of whether restructuring announcements by firms have a significant impact on returns. The question is of interest in terms of international comparisons, but there are important market specific reasons for examining the issue in the Japanese context. Generally speaking, restructuring announcements have small, short-term positive impact on returns in the context of the U.S. market. There are exceptions, and some announcements tend to give mixed signals, such as layoff announcements (see Chen, et al, 2001). The general finding of small positive impact on returns gives rise to the question of whether firms might consider making restructuring announcements that are pure window dressing, simply for the sake of boosting short-term returns.

This question is particularly interesting in the Japanese context, and is an issue often raised by market participants. That is, given the lengthy period of poor economic performance, and poor performance by most firms in Japan specifically, might firms in that context consider making restructuring announcements in order to help boost returns, having observed the U.S. experience? While the Japanese context is not so simple, in that restructuring announcements were initially avoided by firms for a very long period after the market and economic collapse began in late 1989, it is certainly plausible that managers in Japan might be tempted to follow such a course. Such policies may not have the desired effect, however, for two reasons. First, shareholders may be skeptical about the sincerity of the measures, or they might believe that they will not be the beneficiaries. That is, the

restructuring process will stop at a stage that benefits only the fixed claimants, essentially shutting the residual claimants out. Such a finding would be consistent with the creditor-centric corporate governance view of Japan (Morck and Nakamura, 1999).

In this paper, we have already addressed the issue of substance: for our sample and period of analysis, restructuring announcements as a whole do boost firm performance. Furthermore, specific types of restructuring announcements, especially those related to cost control, do positively affect firm performance as measured by improvements in ROA in a statistically significant fashion. For our purposes here, therefore, the only question which remains is whether in fact our skeptical market participants are willing to pay for such announcements. Specifically, do restructuring announcements in Japan for the period of analysis boost returns in a statistically significant fashion?

In **Table 6** we consider the relation between the six major restructuring categories, as well as the overall announcement dummy variable, and three returns measures. In this table, the interval [-1, +2] indicates returns measured from one day prior to an announcement to two days after the announcement, and so forth. The results are generally not significant, with only expansion activity announcements (category 3) showing even modest positive impact at the usual levels of significance across all time periods. On the basis of these univariate results, it does not appear that the market is generally prepared to reward firms for making restructuring announcements. Indeed, if anything, market participants are more prepared to reward growth related announcements than typical restructuring announcements.

We must consider a fully controlled model for returns and restructuring announcements before we can formally conclude that the market is unwilling to pay for restructuring announcements. Our basic model here assumes a mapping between restructuring announcements and returns. The logic is just the extension of the relationship

between restructuring announcements and performance outlined in equations (1)-(3). If restructuring enhances performance, then we hypothesize that restructuring announcements should enhance returns. The model to be tested is presented in equation (5), with the null hypothesis that the coefficients on restructuring announcements should be statistically insignificant.

$$RET_i = \alpha + \beta.MKT_i + \sum_{r=1}^{6} \gamma_r R_r + \sum_{k=1}^{7} \varphi_k I_k + \lambda_c C_c + \varepsilon_i \qquad (5)$$

Results of estimating (5), using both market-adjusted returns (based on the TOPIX Index) and raw returns with the TOPIX Index return as an explanatory variable, are presented in Table 7. None of the announcement categories appear to enhance returns. Despite the previous evidence presented, that restructuring announcements do indeed appear to enhance performance, we cannot generally reject the null hypothesis that such announcements do not positively impact returns. While we present only the 2-day announcement return regressions in Table 7, the results were robust with respect to other returns windows. The relation between expansion measures and returns disappears in the multivariate analysis, suggesting a spurious correlation. Unlike their counterparts elsewhere, market participants in the Japanese market are not typically willing to ante up for restructuring announcements, despite evidence that such activities positively affect firm performance. Despite meaningful reforms in terms of accounting practices and transparency, market participants in the immediate post-reform and post-tech bubble period appear to be skeptical about restructuring announcements by Japanese firms.

We can think of a number of reasons why short-term returns in an event study framework may fail to respond to restructuring announcements. Turning the issue on its head, one may argue that short-term returns in the event framework typically do respond in the US

context because credibility and an active takeover mechanism in that context generally leads management to make good on such announcements. As outlined in the introduction, the role of insiders and the sluggish pace of restructuring in the 1990's, combined with poor prudential policy could have conditioned agents (outsiders) to be skeptical of such announcements. If this leads agents to adopt a 'wait and see' attitude, the response in returns in a short-term event framework might be negligible, whereas longer window cumulative returns might improve as measures are actually implemented and performance improves.

Naturally, given our findings that some restructuring measures do indeed enhance performance, we need to examine whether longer-window returns improve. In Table 8 we present the univariate correlations between restructuring announcements and CAR's measured at the 12 month, 24 month and 36 month windows. Given the Bank of Japan's zero interest rate or near zero interest rate policy that prevailed during this period, we are not overly concerned with issues of discounting, so the CAR measures used are raw undiscounted data. As can be seen, the shorter window is not consistent with improved returns in response to the restructuring announcements. This is hardly surprising, if the environment is indeed one of 'wait and see,' since improvements in performance take time to gel. We believe 24 months is a reasonable period for all of the implementation and performance delays to work through, and this is consistent with our performance findings. Longer windows, such as 36 months, are generally consistent with the 24 month window.

In broad brush, the 24 and 36 month CAR results are consistent with those for performance: restructuring announcements are positively correlated with improvement in performance and improvement in CAR's. By contrast, performance improves in response to contraction announcements and changes in employment policy as well as internal reorganization announcements in the simple correlations, and in response to employment

changes and internal reorganization in the OLS framework, but 24 month CAR's respond to employment changes, internal control changes and financial restructuring.

We repeated the CAR analysis in a multivariate framework. However the coefficients on restructuring announcements were not statistically significant, and are not reported here. We believe the insignificant results are due to significant collinearity among the announcement variables. We were not successful in rectifying the problem using standard corrections for multicollinearity. Overall, we are not confident that the univariate results for CAR's and announcements are robust, and that evidence linking restructuring and returns appears weak.

VII. Conclusions

In this paper we considered restructuring announcements in the Japanese business press for 300 randomly selected firms from the first section of the Tokyo Stock Exchange. We found that 90 firms from that sample made over 800 restructuring announcements. We grouped these announcements into six major categories, namely contraction events, employment changes, expansion actions, internal reorganizations, internal control changes and financial restructurings. We first considered the issue of whether firms that made such announcements had improvements in performance as measured by ROA. We found that restructuring plans involving cutting back production or employment, internal reorganization (often with similar motives), and financial restructurings were associated with positive and significant improvements in ROA. This finding was robust to lag structure.

We also considered the relationship between restructuring announcements and returns. We found no evidence for a positive relationship between announcements of restructuring activities and returns. This finding was in stark contrast to the results found for restructuring

and performance. Despite significant improvements in governance and accounting regulations after 2000, it appears that market participants remain skeptical of firm-level efforts to generate meaningful reforms.

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Table 1

Restructuring announcements made by a random sample of 300 firms listed on the first tier of the Tokyo Stock Exchange in 2000-2001. A total of 90 firms made 836 announcements over this time period.

1. Contraction Actions:	**236**
Asset sales (sales of subsidiary shares/operation units/real estate) - Divestitures	60
Spinoff unit - Divestitures	16
Cut/postpone capital expenditures (infrastructure/equipment investments)	5
Withdraw from line of production/business operation	29
Cut production/production capacity (mostly domestic)	25
Suspend production operations (mostly domestic)	6
Consolidate subsidiaries/production plants/operation units/offices/branches	64
Close domestic production plants/operation units/offices/branches	22
Close oversea production plants/operation units/offices/branches	9
2. Employment Changes:	**123**
Domestic layoffs	20
Oversea layoffs	13
Temporary layoffs (mostly domestic)	8
Employee transfer / secondment (to different subsidiaries/plants/operation units)	33
Reduce director/executive salary/bonus	7
Reduce manager salary/bonus	5
Reduce employee salary/bonus	4
Performance-based salary/bonus/pension for managers/employees	8
Recruit for voluntary early retirement / offer early retirement incentives	25
3. Expansion Actions:	**250**
Increase domestic production	4
Increase overseas production	47
Expand distribution channels	10
Setup new plants/operation units/distribution channels or start new line of production/business operation	40
Establish subsidiary	13
Increase capital expenditures	30
Joint venture or strategic alliance / business and capital tie-up	70
M&A (Merger via increased cross holdings and acquisitions	29
Partial acquisition (acquisition of units/divisions)	7
4. Internal Reorganization Actions:	**173**
Cut production/operating costs	75
Modernize/improve production techniques/equipments/facilities	8
Lower inventory	8
Shift/change product line	6
Reorganize existing production process/operation units	42
Improve product distribution efficiency	22
Outsource part of production/operation	9
Change pricing policy (increase product price)	3
5. Changes in Internal Control:	**26**
External directors/supervisors	6
Appointed executives	5
Turnover of CEO (resignation, reduction in number of CEO, new appointment)	6
Improve governance (more frequent management meetings, setup of supervisory board, increase accounting transparency)	9
6. Financial Restructurings:	**28**
Reduce/terminate cross holdings	4
Main banks grant write-offs of company loans	3
Bond issue	3
Write off of non-performing assets (loans to subsidiaries)	2
Receive financial support from main banks	1
Report special loss arising from restructuring costs	15

Table 2

Industry adjusted mean and median one period change in Return on Assets (ROA)

ROA is calculated as Earnings Before Interest and Taxes divided by Total Assets. Change in ROA is calculated as the difference between ROA at the end of the first fiscal year following the restructuring announcement and the ROA at the end of the fiscal year preceding the announcement. Industry adjusted ROA is calculated as ROA for the firm less the median ROA for all firms belonging to the same two-digit industry code matched by fiscal year. A total of 836 restructuring plans, classified into six broad categories, were announced by 90 firms from a randomly selected sample of 300 firms over the 2000-2001 period. P-values are provided in parentheses.

Restructuring Action	Mean	Median
Contraction	0.0096	0.0036
	(0.001)	(0.001)
Employment changes	0.0123	0.0036
	(0.0004)	(0.001)
Expansion	-0.0031	-0.0014
	(0.29)	(0.33)
Internal Reorganization	0.0095	0.0036
	(0.0003)	(0.0006)
Changes to Internal control	-0.0021	0.0000
	(0.73)	(0.62)
Financial restructuring	0.0225	0.0205
	(0.0008)	(0.0001)
ALL	0.0042	0.0011
	(0.012)	(0.005)

Table 3

Pair-wise correlations for restructuring announcements

Pair-wise correlation coefficients for restructuring announcements made by a random sample of 300 firms listed on the Tokyo Stock Exchange over the 2000-2001 period. A total of 836 announcements of various types were made by 90 firms from the sample of 300 firms over this period. The restructuring announcements are classified into six types. C1 refers to Contraction type events. C2 refers to employment changes. C3 refers to expansion actions. C4 refers to internal reorganizations. C5 refers to internal control changes. C6 refers to financial restructurings. P-values are provided in parentheses.

	C1	*C2*	*C3*	*C4*	*C5*	*C6*
C1	1.0	.233	-.117	.23	-.046	.101
		(.0001)	(.0039)	(.0001)	(.254)	(.013)
C2	.233	1.0	-.15	.163	-.031	.217
	(.0001)		(.0002)	(.0001)	(.4429)	(.0001)
C3	-.117	-.151	1.0	.114	-.08	-.119
	(.0039)	(.0002)		(.005)	(.049)	(.0033)
C4	.23	.163	.114	1.0	-.015	-.02
	(.0001)	(.0001)	(.005)		(.71)	(.621)
C5	-.046	-.031	-.08	-.015	1.0	-.041
	(.254)	(.443)	(.049)	(.71)		(.315)
C6	.101	.217	-.119	-.02	-.041	1.0
	(.013)	(.0001)	(.0033)	(.621)	(.315)	

Table 4

Restructuring announcements and changes in ROA: OLS regression estimates

Regression of change (one and two period) in ROA on restructuring announcements, industry dummy variables and foreign ownership. One (two) period ROA changes are measured as the ROA at the end of the first (second) fiscal year following the restructuring less the ROA from one fiscal year prior to the restructuring announcement. C1 refers to Contraction type events. C2 refers to employment changes. C3 refers to expansion actions. C4 refers to internal reorganizations. C5 refers to internal control changes. C6 refers to financial restructurings. P-values are provided in parentheses.

Dependent Variable	One period change in ROA		Two-period change in ROA	
Constant	-0.009	(0.13)	0.0093	(0.15)
C1	0.006	(0.16)	-0.0013	(0.85)
C2	0.009	(0.07)	0.014	(0.03)
C3	0.0007	(0.87)	-0.0013	(0.81)
C4	0.015	(0.002)	0.015	(0.01)
C5	-0.002	(0.73)	-0.013	(0.32)
C6	0.002	(0.79)	-0.002	(0.78)
% Foreign	0.037	(0.07)	0.0022	(0.95)
Industry Dummies	YES		YES	
Adj. R-sq	0.172		0.144	
F-stat	3.070		2.680	

Table 5

Change in ROA following restructuring announcements:
2-stage least squares regression estimates

Panel A presents OLS estimates of the decision to announce a restructuring plan. Fitted values of the decision to announce (C_hat) are used as explanatory variables in the second stage OLS regression of the change in ROA following the restructuring announcement. A total of 836 restructuring plans were announced by 90 firms from a randomly selected sample of 300 firms over the 2000-2001 period.

Panel A: First stage OLS estimates of the decision to announce as a function of foreign ownership and pre-announcement ROA measured at the end of the last full fiscal year preceding the restructuring announcement. Foreign Ownership is fraction of equity held by non-Japanese institutions. Individual ownership is domestic holdings by individuals (not cross-held). P-values in parentheses.

Constant	0.81136	(0.0001)
Foreign Ownership	4.76098	(0.0001)
Individual Ownership	-2.40590	(0.0001)
Pre-Restructuring ROA	-4.03748	(0.0001)
Adj. R-sq	0.3522	
F-statistic	87.63	

Panel B: Second stage OLS estimates: Post announcement change in ROA as a function of fitted value of the decision to announce (C_hat) and industry category. ROA change is measured as the difference in the ROA at the end of the first (second) fiscal year following the restructuring and the ROA from one fiscal year prior to the restructuring announcement. P-values in parentheses.

One Period Change in ROA			Two Period Change in ROA
Constant	-0.0165	(0.0001)	-0.00555 (0.315)
C_hat	0.03073	(0.0001)	0.0210 (0.0001)
Industry Dummies	YES		YES
Adj R-sq	0.1552		0.109
F-statistic	11.98		8.33

Table 6

Restructuring announcements and stock returns

Announcement dates are based on reports in the *Nihon Keizai Shinbum.* A total of 836 restructuring plans were announced by 90 firms from a randomly selected sample of 300 firms over the 2000-2001 period. All returns are adjusted for market using the TOPIX Index. P-values are provided in parentheses.

Event type	Day [-1,2]	Day [-1,1]	Day [-1,0]
Contractions	-0.0089	-0.0045	0.002
	(0.4)	(0.56)	(0.71)
Employment Changes	-0.046	-0.027	-0.011
	(0.08)	(0.2)	(0.48)
Expansions	0.019	0.017	0.015
	(0.08)	(0.05)	(0.09)
Internal Reorganizations	-0.008	-0.007	0.004
	(0.68)	(0.67)	(0.68)
Internal Control Changes	0.019	0.012	0.01
	(0.47)	(0.45)	(0.49)
Financial Restructurings	0.0067	0.01	0.008
	(0.59)	(0.24)	(0.36)
ALL	-0.0067	-0.0019	0.003
	(0.49)	(0.81)	(0.59)

Table 7

Restructuring announcements and returns: OLS Regression Estimates

Market-adjusted as well as raw returns are measured over three days centered on the restructuring announcement date. Market-adjusted returns are calculated by subtracting the return on the TOPIX Index. %Foreign refers to equity ownership by foreign institutions. Industry fixed Effects are based on two-digit industry classifications. P-values are presented in parentheses.

Dependent variable	Market-adjusted Return		Raw Return	
Constant	-0.016	(0.51)	-0.016	(0.53)
TOPIX Return			0.87	(0.05)
%Foreign	0.05	(0.44)	0.048	(0.47)
Contraction-type Events	0.016	(0.24)	0.016	(0.25)
Employment Changes	-0.018	(0.23)	-0.019	(0.22)
Expansion Events	0.022	(0.15)	0.022	(0.15)
Internal Reorganizations	0.0004	(0.77)	0.004	(0.77)
Internal Control Changes	0.008	(0.73)	0.007	(0.76)
Financial Restructurings	0.017	(0.52)	0.019	(0.49)
Industry Fixed Effects	YES		YES	
Adj. R-sq	-0.034		0.019	
F-stat	0.81		1.11	

Table 8

Restructuring announcements and CAR's

Announcement dates are based on reports in the *Nihon Keizai Shinbum.* A total of 836 restructuring plans were announced by 90 firms from a randomly selected sample of 300 firms over the 2000-2001 period. CARs represent market-adjusted cumulative returns using the TOPIX Index. Time in brackets is measured in months [from, to]. P-values are provided in parentheses.

Event type	Period [0,12]	Period [0,24]	Period [0,36]
Contractions	.109	0.324	0.408
	(0.08)	(0.000)	(0.000)
Employment Changes	-0.046	0.301	0.232
	(0.66)	(0.000)	(0.028)
Expansions	-.026	0.175	0.247
	(0.69)	(0.11)	(0.05)
Internal Reorganizations	-0.160	-0.177	-0.167
	(0.35)	(0.41)	(0.47)
Internal Control Changes	0.126	0.314	0.394
	(0.16)	(0.004)	(0.001)
Financial Restructurings	0.010	0.226	0.468
	(0.97)	(0.000)	(0.13)
ALL	.044	0.226	0.298
	(0.35)	(0.000)	(0.000)