Re-entering the Workforce after the Collapse of a Securities Firm: The Role that Age and Skill Play

Hisakazu Matsushige

Professor, Osaka School of International Public Policy, Osaka University Akito Fukuda MA in International Public Policy

1. Introduction

This article focuses on the bankruptcy of a large securities company which received special attention, and analyzes the re-employment of its employees, making use of employment data. Although commercial bankruptcies and business closures are notable economic phenomena, few have been analyzed, partly because relevant statistics are not readily available. In particular, little research has been done concerning the re-employment of workers who must give up their jobs because their company declared bankruptcy.

There are several reasons to observe the process workers go through to seek re-employment following the bankruptcy of the company they once worked for. The first is the importance of gauging the magnitude of the economic burden on the workers involved. Some critics claim that bankruptcies are not necessarily negative, but are a prerequisite to regenerate industries. In fact, if the workers in question are able to swiftly find a new job which provides better working conditions and matches their qualifications, bankruptcies are not necessarily all that bad. However, if the difficulty involved in reemployment is substantial, the bankruptcies will cause a great burden both on the individual and society.

Secondly, most information is gleaned only from companies that are still operating. This tends to distort the information and should be corrected. Normally, companies which have left the market step out of view, and one cannot adequately recognize the difficulties, problems and other negative aspects these companies underwent. As a result, people tend to have over-optimistic expectations towards business openings and growth among existing companies. To correct such expectations, it is necessary to understand that a given company may leave the market due to bankruptcy or business closure, and the burdens that are involved in this.

Third, it is necessary to statistically distinguish between job losses due to bankruptcy and those stemming from other causes. Traditionally, Japanese statistics have not distinguished between the two, and the assumption has been that job quits are all at the convenience of the company. As Gibbons and Katz (1991) have noted, however, there is a different quality between workers who have lost their jobs due to bankruptcy or those out of work because of corporate measures such as employment adjustment and dismissal. While dismissal is intended for an individual who is picked out for reasons reflecting the company's convenience, bankruptcies let all employees go, whether of high or low quality.

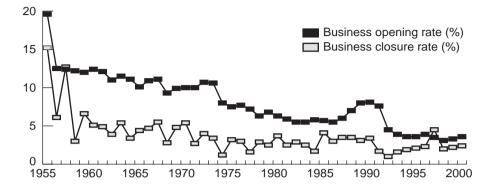
Future employers may be concerned that an applicant had problems at his/her previous work location,¹ and their job-hunting activities might reflect the fact that they were made redundant in their previous job. For example, if a middle-aged or elderly worker finds it difficult to become reemployed, the difficulty may in part be attributable simply to age. At the same time, those who have left a job at such an age are likely to have low competency and ability, which may be another reason they are have difficulty. Either way, the currently available data does not indicate which is the actual reason.

On the other hand, if a company goes bankrupt, employees lose their jobs regardless of their ability. In general, prospective employers can expect former workers of bankrupt companies to be of average ability. Thus, if a middle-aged or elderly former employee of a bankrupt company is of average ability, he/she is likely to have an easier time job-searching

Acknowledgement: This article owes much to the unstinting cooperation of the personnel departments of the firms concerned, and of many others. We appreciate the many valuable comments made by former employees, their families, and others responsible for the procedures after the voluntary business closure, although there was no space to discuss them all here. We only hope that this article will repay their efforts by contributing in some way at least to society as a whole.

¹ Akerlof (1970) writes about this problem.

Figure 1. Trends in Business Openings and Closures



Source: 2002 White Paper on Small and Medium Enterprises in Japan, Small and Medium Enterprise Agency (Figure 2-1-22).

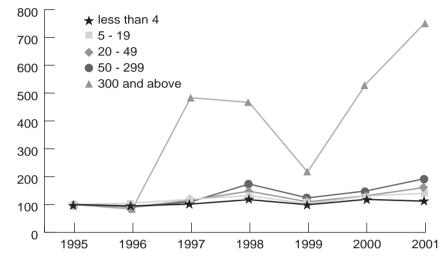
http://www.chusho.meti.go.jp/hakusyo/h14/index.html

Data: Annual Statistics for Civil Affairs, Litigation and Human Rights, Ministry of Justice, and Annual Reports of National Tax Agency, National Tax Agency.

than other job-seekers in the same age group. In other words, it acts as a kind of social experiment to see which workers are more likely to be absorbed by other companies in the event of an indiscriminate release of workers onto the labor market due to bankruptcy.

This article deals with the bankruptcy of a large company. A distinctive feature of bankruptcies in recent years is that large companies, too, can go bankrupt. Although bankruptcies and business closures have been drawing more attention under the prolonged recession, the actual rate of business closures and the number of bankruptcies have not necessarily increased lately. As shown in Figure 1, the rate of business closures has been in a downward trend in a long run, although there have been some, not so large, upturns in the past several years. However, as indicated in Figure 2 which traces the trend in the number of bankruptcies in terms of company size (i.e., the number of employees), among larger companies the number of bankruptcies is increasing. Taking the number of bankruptcies in 1995 as 100, in six years the number increased 1.12 times among firms with less than five employees, 1.92 times among those with 50 to 299 employees; and 7.5 times among those with 300 or more employees.

Figure 2. Trends in the Number of Bankruptcies, by Company Size (number of employees)



Source: Economic Research Office, Tokyo Shoko Research, Ltd., 2000.

A greater number of smaller companies declear bankrupty or close; in 2001, companies with less than five employees accounted for 50 percent of all such companies, and those with less than 10 employees accounted for 74.4 percent of the whole. The number of firms with 300 or more employees that went bankrupt was only 45, accounting for a mere 0.2 percent of all bankruptcies. However, despite the small number, the impact of large-scale bankruptcies on the labor market is substantial. The bankruptcy of a single firm with 300 or more employees will generate at least 60 times as many jobless people as the bankruptcy of a firm with less than five employees.

The bankruptcy of a large firm has a considerable impact in terms of quality in that it implies that firms which have provided relatively sound workplaces are retreating from a certain region, and that workers who have been employed there are losing their jobs. Bankruptcies of large firms present new issues concerning how relatively high-quality workers become reemployed and how they take advantage of their abilities at their new workplace.

These are the issues this article pays special attention to. Section 2

reviews previous studies, clarifies the position of this paper in the context of similar studies, and explains clearly the focus of research subjects. Section 3 explains the data to be used. Section 4 observes tendencies in terms of re-employment on the basis of the basic analysis, followed by confirmation of the tendencies using more precise analytical methods. The final section offers some conclusions.

2. Previous Studies and the Focus of This Paper

In recent years, job switching has attracted attention as a reflection of the Japanese economic situation. In general, the difficulty middle-aged and elderly workers have in becoming re-employed is acknowledged as a problem. At the same time, many academic studies have begun to shed light on job switching.² In particular, Yugami (2002) shows that the reason why people switch jobs has a great impact on tendencies in re-employment. Ohashi and Nakamura (2002), on the other hand, point out that the type of job one was engaged in impacts strongly on the results of job-searching. From the results of these two studies, it seems the results of finding a new job tend to differ between those who switched jobs because their former company went bankrupt and those who switch jobs for other reasons. Moreover, when employees with various qualities simultaneously and indifferently flow into the labor market, it appears that the probability of such workers being re-employed by other firms varies in accordance with their profession.

Nevertheless, there are only a limited number of practical analyses available which study job switching due to bankruptcies from the viewpoint of economics. Existing studies aim primarily at gaining a picture of job loss due to business closures and their nature. Genda (1998) analyzed these issues in Japan based on the analysis of job creation and destruction developed by Davis and Haltiwanger (1992). Then Teruyama and Genda (2002) studied the overall creation and destruction of employment by dividing them into cases in which businesses survived and those where businesses started up or shut down. Ohta and Genda (1999) noticed that the "closure of a business establishment, bankruptcy, or closure of self-owned business" has been specified as a reason for job loss in the *Survey on the Actual Situation of Job Searching*, and reveal that this reason accounts for roughly 10 percent of all reasons for being unemployed, highlighting the enormity of the problem.

Matsushige (2002) analyzed the factors that firms take into consideration when deciding whether they should continue to operate or close, and the extent of job destruction due to business closures. Observing job creation and destruction in terms of gender and employment patterns clarifies what types of employees are more likely to loose their job. However, the paper confines itself to an analysis of very small companies, leaving aside the issue of re-employment arising from bankruptcies of large firms.

3. Data and Basic Analysis

The data used here concerns companies where former employees of a securities firm which declared bankruptcy in 1997 (voluntary closure)³ were re-employed. The bankrupt company was a major company not only in the industry but among Japanese firms as a whole, with a history of 100 years, with some 8,000 employees and more than a 100 branches across the country. A list of the firms where the former employees were re-employed was drawn up nearly one and a half years after the bankruptcy, so it is likely to reflect the results, to some extent, of the job-searching activities of the workers in question in the period directly after bankruptcy.⁴

The types of businesses the ex-employees went into are known in fair detail, but the raw data do not give a good statistical picture of general trends among the new employers. Here, therefore, the industries of the ex-

² A representative paper dealing with the degree of satisfaction and changes in wage levels due to job switching is Akerlof, Rose and Yellen (1988). As for studies on Japan, Kurosawa (2002) is considered a major paper among recent studies.

³ Strictly speaking, bankruptcies differ from voluntary business closures. However, the focus of this article is to explore general tendencies concerning re-employment after job loss due to such events, and in this sense, the difference between them is unlikely to pose a serious problem. In what follows, the term "bankruptcy" will be used.

⁴ According to information obtained directly and indirectly, a certain proportion of people continued to change jobs after bankruptcy. Unfortunately, the data here does not include such information.

Table 1. Breakdown of Employees by Age and Gender

			(70)
	Males	Females	Total
20s	9.0	26.6	35.6
30s	23.2	11.5	34.7
40s	12.2	2.7	14.9
50s and above	13.2	1.6	14.8
Total	57.6	42.4	100.0

employees' new employers are categorized into six groups: a U.S. capital securities firm, other foreign and Japanese securities firms, other financial firms, the service and manufacturing sector, unknown, and those who are still unemployed.

(%)

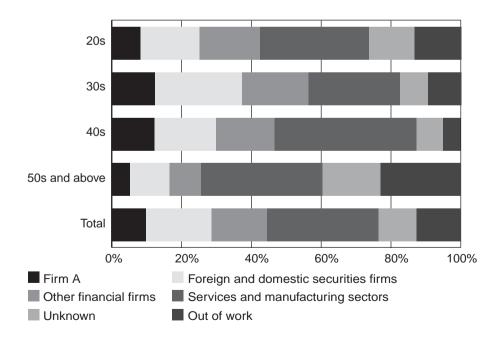
As for age group, the workers in question are divided by decade, between their 20s to 60s. As shown in Table 1, the majority of the employees are in their 20s and 30s. Those in their 60s account for only a small percentage of the whole; in cases where statistical analyses fail to treat the group as an independent variable, this age group is combined with people in their 50s.

A profile was drawn up in terms of workers based at headquarters and those from branches, the former accounting for 32.4 percent and the latter 67.6 percent. Information as to which department workers were assigned to in headquarters at the time of the bankruptcy is available, making it possible to shed light on the relation between the workers' characteristics such as their department and the nature of their jobs on the one hand, and the nature of their new jobs on the other. Also, since the headquarters was located in Tokyo and some of its functions dispersed to Osaka and Nagoya, it is possible to consider these large urban centers as the labor market for the workers based at headquarters.

On the other hand, the 121 branches are treated together as business branches. Although detailed job descriptions are not known, it seems that the nature of the jobs was not extremely different among branches because they existed largely to promote business. Hence, it is possible to measure the impact of other factors such as age, as long as the nature of the duties can be specified. However, opportunities for re-employment are likely to vary depending on the characteristics of individual regions. Fortunately, information is available about the prefectures where the branches were located, so differentials among regions can be controlled, one defect being that the data do not include information about gender.

The company was partially taken over immediately after bankruptcy by a U.S. securities firm, Firm A, and several local branches continued operations under the new management. Firm A aimed to expand its business network within Japan by this acquisition. Since it already had its own headquarters in Japan, it did not take over the headquarters of the bankrupt firm. Therefore, the re-employment process is substantially different between those who worked at headquarters and those assigned to the branches. In the following sections, the headquarters and branches are analyzed separately.

Figure 3. The Type of Company that Hired Employees from the Head Office, by Age



4. Results of Analysis

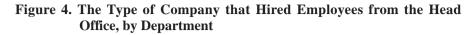
This section aims to concretely grasp the re-employment situation. The first half focuses on the workers who were based in the head office, observing their basic characteristics, then analyzing them in detail. The latter half deals with workers in the branches in the same manner.

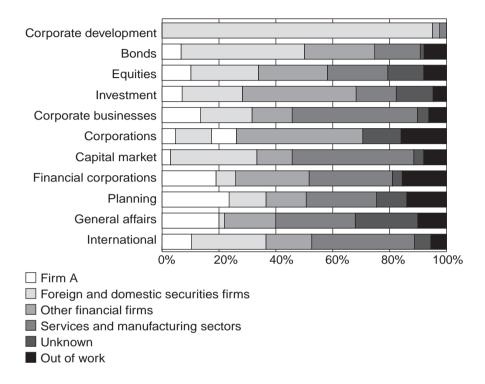
4.1 Workers Assigned to Headquarters

Now let us begin with an analysis of the re-employment of workers from the head office. Figure 3 shows by age group the various new job opportunities opened to the workers since bankruptcy. It shows that 76.7 percent of all workers had succeeded in finding jobs one and a half years after bankruptcy. With the exception of a low success rate, 60.2 percent, among those aged 50 and above, the rate increases in tandem with age: 73.5 percent for those in their 20s, 82.4 percent for those in their 30s, and 87.4 percent for those in their 40s. When one takes into account the fact that some who fall in the "unknown" category may have already found a new job or may have given up job searching and left the labor market, and that some of the workers falling in the "remain unemployed" category may have left the labor market, the proportion of those who wish to be reemployed but have not succeeded will become much smaller.

The data also shows that there is quite a lot of job switching to the financial industry. If the workers who have been taken on by the U.S. securities Firm A are included, 44.7 percent of all workers, including those categorized as "unknown" or "remain unemployed," have found jobs in the financial industry. By age, 42.4 percent, 56.2 percent, 46.6 percent, and 25.5 percent of workers in their 20s, 30s, 40s, and 50s and above, respectively, were working in the financial sector. It is likely that workers up to their 40s have accumulated skills which can be taken advantage of in the financial sector. Also, switching to a Japanese or foreign securities company is quite common among those in their 40s and younger.

As for the re-employment of workers in terms of the department they worked in at headquarters, the primary point of interest is whether there is any difference among the type of job. Some departments had only a small number of employees, and sometimes different departments engaged in



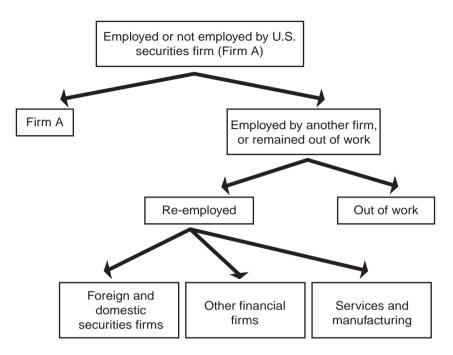


similar duties. Thus, the departments are sorted into several categories, and an analysis will be made of categories whose duties can be easily envisaged. The categories to be covered are corporate development (40 employees); bonds (150 employees); equities (198 employees); capital market (201 employees); corporate businesses (177 employees); corporations (126 employees); investment (85 employees); financial corporations (58 employees); planning (85 employees); general affairs (100 employees); and international (279 employees).⁵

As clearly seen in Figure 4, both the success rate of finding a new job and the type of new employer vary considerably among the departments. All employees from the department of corporate development which handled M&As were re-employed, with most finding work at domestic or foreign securities firms.

⁵ Classification of the departments was carried out by someone who had worked for the securities firm in question for many years.

Figure 5. Structure of Re-employment



Workers from the bonds, equities or investment departments, where specialized financial knowledge is required, moved to companies in the financial sector. On the other hand, those from the corporate businesses, corporations or capital market departments, where business dealings with other companies accounted for a relatively high proportion compared to other departments, were now working at non-financial companies. Incidentally, many workers from the corporations department fell in the "unknown" or "remain unemployed" categories, whereas a relatively large number of those from the capital market department found jobs at domestic or foreign securities companies. Those who were in the department of financial corporations were more likely — compared to those from the departments of corporate businesses, corporations or capital market — to find re-employment at non-securities financial companies. On the other hand, many staff members from the departments of planning and general affairs, that is back

 Table 2. Factors Determining If One Was Re-employed or Remained Out of Work (employees based at headquarters)

Employment	Coefficient	P-value	
Employment=1, Out of work=0			
dummy variable for females	-0.763	0.000	
30s	-0.221	0.035	
40s	-0.123	0.399	
50s and above	-0.663	0.000	
Department of corporate development	7.158	0.000	
Department of bonds	0.421	0.004	
Department of equities	0.512	0.003	
Department of investment	0.502	0.021	
Department of corporate businesses	0.390	0.016	
Department of corporations	0.133	0.514	
Department of capital market	0.633	0.000	
Department of financial corporations	0.273	0.165	
Department of planning	-0.253	0.189	
Department of general affairs	-0.111	0.579	
International department	0.504	0.000	
Dummy variable for Osaka	0.099	0.375	
Dummy variable for Nagoya	0.073	0.795	
Constant term	0.996	0.000	
Selection	Coefficient	P-value	
US securities firm =0, others =1,			
dummy variable for females	-0.202	0.063	
30s	-0.316	0.010	
40s	-0.279	0.070	
50s and above	-0.127	0.451	
60s	-0.984	0.023	
Department of bonds	0.344	0.047	
Department of equities	0.269	0.151	
Department of investment	0.203	0.337	
Department of corporate businesses	-0.070	0.614	
Department of corporations	0.217	0.433	
Department of capital market	0.708	0.000	
Department of financial corporations	0.138	0.568	
Department of planning	-0.585	0.001	
Department of general affairs	-0.673	0.000	
International department	0.081	0.513	
Constant term	2.530	0.000	
atanh	1.640	0.000	
	0.922	0.015	
Wald test ($= 0$):chi2(1)	5.96		
$\frac{1}{2} \text{Prob} > \text{chi2}$	0.0147		
Wald chi2(17)	7815.59		
$\frac{1}{2}$ Prob > chi2	0.000		
Log likelihood	-1219.475		
N	1913		
	mber of censored observations 206		
Number of uncensored observations	1707		

office, were taken on by the U.S. capital securities company which took over the business. As a whole, workers who were formerly in the departments requiring specialized knowledge, such as M&As, finance, command of foreign languages, and so on were highly successful in finding new jobs.

The above basic analysis explains the employment situation of the former employees of the bankrupt securities firm simply in terms of age group or department (job types). However, it is still necessary to make sure if a multivariate analysis would yield the same results as described above.

The procedures of the estimation are presented in Figure 5. As stated earlier, after the firm decided to close down voluntarily, Firm A, the U.S. securities firm, took over the local branches of the company. Thus the employees should be divided into two groups: those who worked in the branches or departments subject to the takeover and thus would remain in the same post under new management, and those who would not be taken on by Firm A. Since the decision as to who would be taken on strongly reflects the strategy of the U.S. securities firm, the conditions for reemployment were quite different from those required in the usual labor market. At the same time, the workers to be analyzed here were — excluding those who did not wish to join Firm A and started to look for other jobs — those who failed to be taken on at the first stage. It should be borne in mind that they had already experienced, and failed, in their first recruitment possibility.

The next issue is whether or not these workers were able to find a new job. At this stage, it is possible to classify them into three groups: found a job, remain unemployed, and unknown. "Unknown" is in fact likely to include all possibilities, but data showing the breakdown is unavailable, so the analysis will exclude such "unknown" workers.⁶

Table 2 shows the results of the analysis up to this stage. At the bottom half of the table, those who "did not move to the U.S. securities firm" are set at 1, and those who "moved" at 0. The top half of the table, on the other hand, deals with the workers who "did not move," setting those who "succeeded in getting another job" at 1, and those who "remain unemployed" at 0 as the explained variables. Then, a Probit analysis is conducted bearing in mind the selection presented in the bottom half.

Table 3. Re-employed in the Same Business Sector (employees based at headquarters)

		(I)	(1	I)
	Coefficier	nt P-value	Coefficie	ent P-value
Dummy variable for females	0.373	0.330	0.427	0.001
30s	0.313	0.032	0.327	0.000
40s	-0.003	0.981		
50s and above	0.254	0.459	0.305	0.022
Department of corporate development	1.804	0.004	1.727	0.000
Department of bonds	0.598	0.009	0.578	0.000
Department of equities	0.140	0.611		
Department of investment	0.168	0.517		
Department of corporate businesses	-0.088	0.698		
Department of corporations	-0.001	0.996		
Department of capital market	-0.035	0.907		
Department of financial corporations	0.247	0.272		
Department of planning	0.382	0.128	0.409	0.036
Department of general affairs	-0.058	0.751		
International department	0.048	0.850		
Dummy variable for Osaka	-0.389	0.002	-0.414	0.000
Dummy variable for Nagoya	0.019	0.923		
Reversed mills ratio of employment function	-1.365	0.233	-1.545	0.000
c1	-0.255	-0.303		
c2	0.437	0.388		
N	1449	1449		
Log likelihood	-1426.39	3	-1429.18	35
Wald chi2(18)	176.51	167.59		
Prob > chi2	0.000	0.000		
Pseudo R2	0.068	0.066		
AIC	2890.785	2876.370)	

⁶ The results do not substantially alter the major points if they are included in the analyses.

Now, let us take a closer look at the findings found at the bottom half of the table. Groups where a majority of workers moved to the U.S. securities firm show a negative coefficient at a significant level. More females were taken on than male workers. An analysis of an age dummy variable setting those in their 20s as the standard gives negative coefficients for those in their 30s and 40s, implying that the probability that they were employed by the U.S. securities firm is higher than the probability for workers in their 20s. The group of workers in their 60s also shows a negative coefficient at a significant level.⁷ As for the results of analysis in terms of department, the coefficients of the departments of bonds and capital market are positive at a significant level. On the other hand, the departments of planning and general affairs, among others, show negative coefficients at a significant level because Firm A took over these back offices from the bankrupt firm. It seems that it was necessary for Firm A to keep on such workers to manage newly acquired workers in local branches.

Where the determining factors of re-employment are concerned, since those who "were re-employed" are set at 1, variables with positive coefficients at a significant level indicate factors which have an impact on reemployment. The results are substantially different from those found at the bottom half of the table. Females show a negative coefficient here. Those who have not found a job include both those who are looking for work but have not found one, and those who have given up job searching and left the labor market. It is likely that most of the female workers who have not been taken on by the U.S. securities firm have left the labor market, but unfortunately data are not detailed enough to confirm this. As for age group, the coefficients for those in their 30s and 50s and above are found to be negative at a significant level, whereas the coefficient for those in their 40s is negative but not at a significant level. This implies that older workers did not necessarily suffer disadvantages concerning re-employment. As for the analysis in terms of department, the results seem to be different from those for the bottom half of the table, showing that it was advantageous to have worked in departments that had business dealings with other companies — such as the departments of corporate development, bonds, equities,

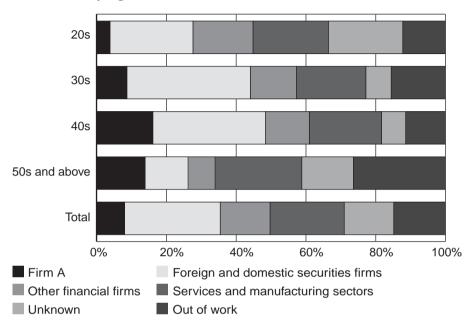


Figure 6. Where Employees from the Branch Offices Found Employment, by Age

investment, corporate businesses and capital market. Those who worked in the international department also had an advantage in finding a new job.

Looking at the factors which had an impact on the industries where the workers in question took refuge after the bankruptcy, it seems likely they can take more advantage of their accumulated skills and ability if they are re-employed in securities firms or similar industries. Data on the companies the workers joined after bankruptcy are sorted into three groups: domestic or foreign securities firms apart from Firm A, other financial companies, and non-financial industries. An Ordered Probit analysis is applied to the data on the assumption that the degree of affinity in the nature of the jobs is higher in the three groups in the order given.⁸ However, because of the presence of workers who were employed in the U.S. securities Firm A and those who were not taken on by Firm A and remained out of work, an analysis of workers who simply found new work

⁷ In other analyses, workers in their 60s are incorporated into the group of those aged 50 and above. They can be treated as an independent variable only in this analysis.

⁸ A multinominal logit analysis including those who remain unemployed was also carried out. The coefficients obtained give more or less the same results, although they fail to satisfy the independence of irrelevant alternatives (IIA).

Table 4. Factors Determining If an Employee Was Re-employed or Remained Out of Work (branch employees)

Employment	Coefficient	P-value
Employment	COEIIICIEIII	r-value
Employment=1, Out of work=0	0.000	0.040
Branch size (number of employees)	0.000	0.918
30s	-0.208	0.000
40s	0.042	0.638
50s and above	-0.126	0.297
Dummy variable for prefectures		
Constant term	0.128	0.665
Selection	Coefficient	P-value
US securities firm =0, others =1,		
Branch size (number of employees)	-0.003	0.025
30s	-0.245	0.000
40s	-0.186	0.003
50s	0.520	0.000
60s	4.494	0.000
Dummy variable for prefectures		
Constant term	0.660	0.015
atanh	1.017	0.014
	0.769	
Wald test $(= 0)$:chi2(1)	6.02	
Prob > chi2	0.0142	
Log likelihood	-4272.13	
N	4436	
Number of censored observations	1417	
Number of uncensored observations	3019	
	00.0	

alone will create a problem of sample selection bias. Hence, the reversed mills ratio is calculated based on the results of the analysis shown in Table 2, which will be used for modification to avoid that problem.⁹

The results of the estimations are shown in Table 3. Column I shows the results of an analysis which makes use of all the variables of the departments as used in the previous analyses, whereas Column II shows the results of an analysis using only selected variables based on the AIC. The findings in Column II show that re-employment in the same industry was advantageous to females. In terms of age group, the fact that the group of those in their 30s shows a positive coefficient at a significant level proves a high possibility of re-employment in the same industry. The coefficient for

Table 5. Employees in Branch Offices Who Were Re-employed in the Same Business Sector

	Coef.	P> z
30s	0.108	0.109
40s	0.479	0.000
50s and above	0.245	0.006
Dummy variable for prefectures		
Reversed mills ratio of employment function	0.775	0.000
c1	0.728	
c2	1.697	
Ν	2254	
Log likelihood	-2254.485	
Wald chi2(18)	123.9	
Prob > chi2	0.000	
Pseudo R2	0.0265	

Note: Estimation was conducted excluding the variables for a number of employees in branches and insignificant dummy variables for prefectures, and including the active job opening ratio as an explanatory variable. Either way, significant results could not be obtained.

workers in their 40s is negative but not significant, so it cannot be statistically concluded that there is any difference between them and those in their 20s in terms of new workplaces. The coefficient turns positive at a significant level for those aged 50 and above. Thus, it does not seem that age is a great obstacle in acquiring a job when there is an opportunity to take advantage of skills and ability.

Where the variables of departments are concerned, the coefficients for corporate development, bonds, and planning are positive at a significant level. It is likely that workers in the department of corporate development who have special skills and knowledge about, for example, M&As, and those in the department of bonds who had business relationships with other securities companies would find jobs in similar business sectors.

4.2 Business Branches

In this section, the series of analyses conducted on the data for those

⁹ The random term of the estimated formula will involve the problem of heteroscedasticity when taking the sample selection into account. In view of this, Huber/White/sandwich variance estimates were used for estimation (White, 1980).

employed at the head office will be applied to the data for those who worked in the branches. Figure 6 shows in what proportion the types of companies, in terms of age group, the former employees joined. Clearly, those in their 30s and 40s are not necessarily at a disadvantage compared to those in their 20s in finding jobs, particularly in other securities firms or companies in the financial sector. On the other hand, it is obvious that the proportion of those who remain out of work is high among those in their 50s and above, and that the proportion of those who found jobs in securities firms is low.

Let us confirm these findings by more precise analyses. Table 4 shows, as in the case of those who worked in the head office, the results of an analysis concerning whether the workers in question succeeded in finding new jobs after being rejected by the U.S. security firm, i.e., Firm A. Judging from the results shown in the bottom half of the table, workers in their 30s and 40s were more likely to be taken on by Firm A, compared to those in their 20s. However, those in their 50s and 60s were at a disadvantage compared to those in other age groups in being picked up by Firm A.

As for the state of re-employment presented in the top half of the table, which sets those in their 20s as the benchmark, those in their 30s have an edge over those in their 20s, but those in their 40s do not. The coefficient for those in their 50s and above shows a negative figure, though not at a significant level. In other words, it cannot be concluded that older generations found it more difficult to become re-employed. However, since the data do not provide a breakdown in terms of gender, it is likely, if there are a large number of females in their 20s, that the re-employment rate among workers in their 20s as a whole would be lowered by a group of females in their 20s who left the labor market.

On the other hand, the tendency to become re-employed in the same business sector was analyzed with an Ordered Probit analysis. The result is shown in Table 5.¹⁰ One finding that is noticeable is that those in their 20s were least likely to find a job in the same business sector. The fact that the coefficient for those in their 40s is larger than that for those in their 30s may suggest that the former age group was likely to go for business sectors where they could take more advantage of their experience. The coefficient for those in their 50s is smaller than that for those in their 40s, but still larger than that for those in their 30s.

These findings show, contrary to what is generally believed, that middle-aged and elderly workers do not necessarily find it difficult to become re-employed. Traditional studies on job switching did not distinguish between those who left their job because of bankruptcies from those who had given up their jobs for other reasons. Middle-aged and elderly workers who have given up their jobs due to labor shedding or other reasons have a certain characteristic which makes it difficult for them to find new work, in that they experienced a kind of screening at the time when they left their companies. Or possibly the fact that they have given up their jobs at the request of their employers weighs against their job searching activities.

5. Conclusions

This article has observed the re-employment activities of workers who lost their jobs due to the bankruptcy of their employer. They lost their jobs although they were capable of continuing working at the same company and had no wish to switch their job. For this reason, the article highlights the possibility that their performance in job seeking may be somewhat different from the activities of other job seekers. We have dealt with a case of bankruptcy affecting one of the giant postwar securities firms, taking into account that in recent years the increase in the number of massive bankruptcies and problems inherent in the financial sector are partly attributable to the current economic recession.

The analysis was conducted by dividing the workers into two groups those employed at the head office and those who worked in branch offices — to be able to consider the circumstances in which they found themselves after bankruptcy. The information reveals that age does not have a strong impact on re-employment activities as far as age groups up to the 40s are concerned; if anything, those in their 40s were at an advantage in becoming re-employed compared to other age groups. Next, it has been found that tendencies in re-employment vary substantially among different departments and job types. Those who had worked in departments that had busi-

¹⁰ For multinominal logit analysis, the same method used for those employed at the head office was applied. Also, Huber/White/sandwich variance estimates were used for estimation.

ness with other firms or required special knowledge succeeded in finding new jobs relatively easily. These findings imply that it is more essential for job seekers to have skills and ability required in the labor market, rather than age being a factor. In particular, the conclusion that age does not matter when looking for a new job is different from the findings of existing studies on job switching, and thus seems to be significant when investigating the capacity of the labor market to absorb workers.

What is more, the results of previous research and this article together suggest that the possibility of becoming re-employed varies to a large extent on the nature of the job, and the skills and ability the workers in question have acquired. In the future, it will be necessary to conduct an analysis of re-employment or job switching with a more detailed grasp of the nature of the previous jobs which the job seekers in question held.

Nevertheless, this article has some limitations. First, it deals with only one firm. The findings obtained may be phenomena observable only in the firm in question, in this particular industry, and under the economic circumstances of the time. As stated in the introduction, it is quite difficult to come by quality data which permit accurate investigation of bankruptcies and business closures; above all, it is impossible to extract data on job quitting for these reasons from official labor and employment statistics. It is urgently needed to improve statistics in this field.

Secondly, the data used here fail to provide certain information. A representative example is the lack of information about wages. Some jobless employees might be re-employed if they had accepted a large drop in pay. Others might have been obliged to take an unsatisfactory job somewhat reluctantly if they had had a family to care for and needed to raise money. To shed light on these problems requires more information about wage levels and the system of promotion at bankrupt companies, together with information at the new workplaces and household finances. These points need to be clarified in the future.

References

Akerlof, G. A. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics*, Vol.84, No.3, pp. 488-500, 1970.

- Akerlof, G. A., A. K. Rose and J. L. Yellen. "Job Switching and Job Satisfaction in the U.S Labor Market," *Brookings Papers on Economic Activity*, 2, pp. 495-582, 1988.
- Davis, S. J. and J. Haltiwanger. "Gross Job Creation, Job Destruction, and Employment Reallocation," *Quarterly Journal of Economics*, Vol. 152, No. 3, pp. 819-863, 1992.
- Economic Research Office, Tokyo Shoko Research, Ltd. *Monthly Business Failure News*, September issue, p. 56, Tokyo Shoko Research, Ltd., 2002.
- Genda, Y. "Job Creation and Destruction in Japan, 1991-1995," *Journal of the Japanese and International Economics*, Vol.12, pp.1-23, 1998.
- Gibbons, R. and L. F. Katz. "Layoffs and Lemons," *Journal of Labor Economics*, Vol.9, pp.351-380, 1991.
- Kurosawa, M. "Labour Market Matching in Mid-career Employment Degree of Satisfaction, Wages, Training and Productivity" in *Monthly Journal of the Japan Institute of Labour*, No. 499, pp. 71-85, 2002.
- Matsushige, H. "Business Start-ups, Growth, Business Closures, and Job Creation" in An Economic Analysis of Micro-businesses — Actual Situation of Small and Medium-sized Entrepreneurs and Job Creation. Eds. Mitani and Wakisaka, chapter 2, pp. 21-40, Tokyo University Press, 2002.
- Ohashi, I. and J. Nakamura. "The Mechanism of Job-switching and Its Effects" in *Restructuring Measures and the Mechanism of Job-switching The Economics of Labour Mobility*. Eds. Genda and Nakata. Chap. 7, pp. 145-173, Toyo Keizai Shimpo-sha, 2002.
- Ohta, S. and Y. Genda. "Employment and Unemployment The Relationship and a New Viewpoint" in *Monthly Journal of the Japan Institute of Labour*, No. 466, pp. 2-13, 1999.
- Teruyama, H. and Y. Genda. "Dynamics of the Creation and Destruction of Employment Opportunities — An Analysis of the Mechanism of Job Switching and Its Effects Based on the Surveys on Employment Trends between 1986 and 1998" in Monthly Journal of the Japan Institute of Labour, No. 499, pp. 86-100, 2002.
- White, H. "A Heteroscedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroscedasticity." *Econometorica*, Vol. 48, pp. 817-838, 1980.
- Yugami, K. "Evaluation of Skills at the Time of Job-switching Work Experience in the Past and Wage Levels after Job Switching" in *The Economics of Job Switching* — *The Selection of the Right Jobs and Human Resource Development*. Ed Inoki and Rengo Research Institute for Advancement of Living Standards, Chapter 2, pp. 93-113, Toyo Keizai Shimpo-sha, 2002.