

December 1, 2003

Report on the 2003 Corporate Governance Index Survey
Appendix
Analyses Based on industry-standardized data

Japan Corporate Governance Research Institute (JCGR)

<http://www.jcgr.org/>

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In the main report, we presented analyses of financial data for high and low JCGIndex firms. In this supplementary report, we report analyses of data that have been adjusted for industry. The results were generally similar to those for the unadjusted data.

1. JCGIndex and firm characteristics: Adjusted for industry

Even after standardizing for industry, we found that the clear differences in firm characteristics and performance between the high and low JCGIndex groups remained.

(1) How we standardized for industry

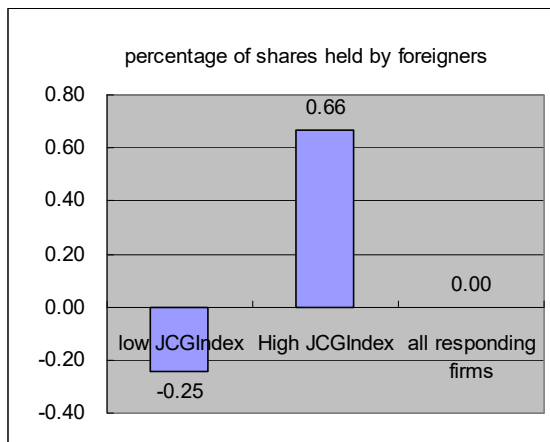
Because there were major differences in financial results between industries, it is necessary to demonstrate that these differences between high and low JCGIndex groups were not being driven by industry differences. Therefore, we redid the analyses presented on the previous pages, this time, standardizing assets, sales, employees, ROA and ROE by industry.

To create the standardized data, we subtracted from the firm data (for example, firm ROA) the result for that firm's industry (for example, mean industry ROA), and divided this by the standard deviation for the industry (for example, standard deviation of industry ROA).

The means for the responding firms across all measures were greater than 0, indicating that measures for the responding firms were higher than for their industries as a whole.

(2) JCGIndex and firm characteristics

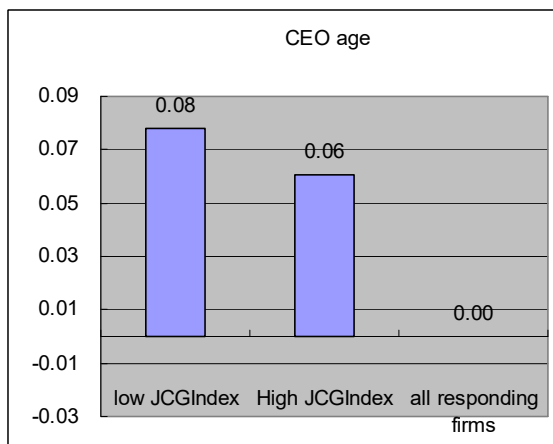
a. Rate of foreign ownership



The high JCGIndex group was significantly higher (1% level) than the low JCGIndex group.

All responding firms	183
High JCGIndex group	30
Low JCGIndex group	22

b. CEO age



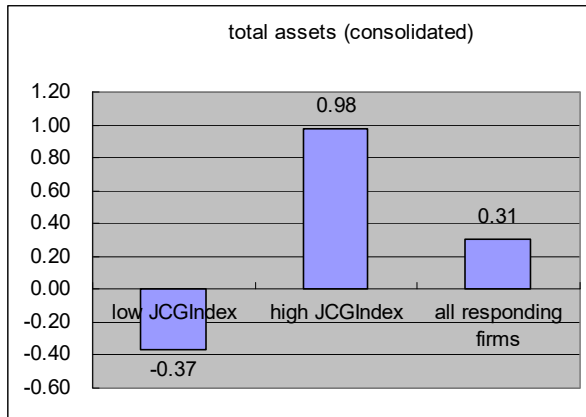
CEOs of the high JCGIndex group were younger than those of the low JCGIndex group, but this difference was not statistically significant (at the 10% level)

All responding firms	183
High JCGIndex group	29
Low JCGIndex group	23

(3) JCGIndex and firm size

We compared the size of firms in the high and low JCGIndex groups, measured by total assets, sales, and number of employees, averaged over the previous 3 years. High JCGIndex firms were larger than low JCGIndex firms and larger than the average for all responding firms, and these differences were statistically significant in all cases.

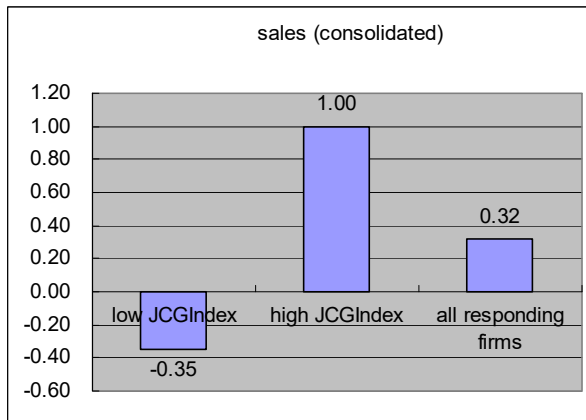
a. total assets (consolidated, 3 year average)



The high JCGIndex group was significantly higher (1% level) than the low JCGIndex group.

All responding firms	179
High JCGIndex group	28
Low JCGIndex group	21

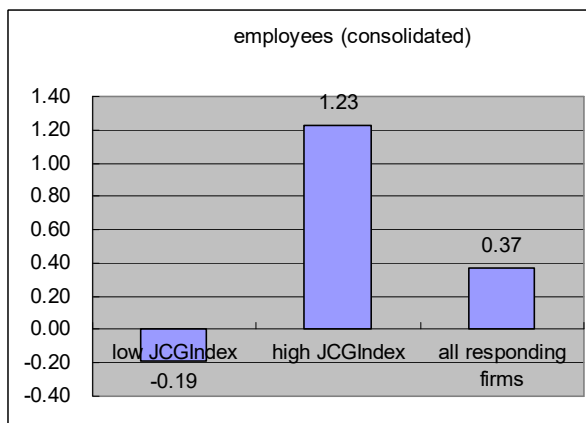
b. sales



The high JCGIndex group was significantly higher (1% level) than the low JCGIndex group.

All responding firms	179
High JCGIndex group	28
Low JCGIndex group	21

c. number of employees

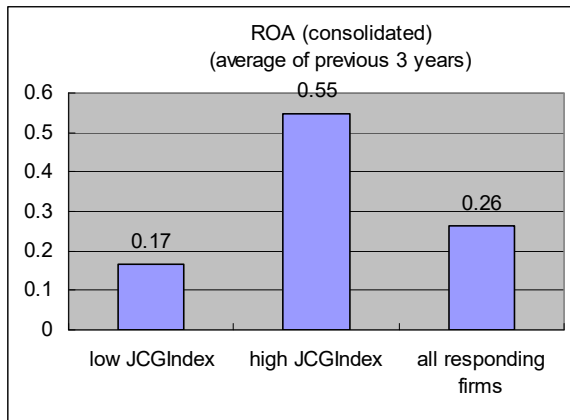


The high JCGIndex group was significantly higher (1% level) than the low JCGIndex group.

All responding firms	179
High JCGIndex group	28
Low JCGIndex group	21

(4) JCGIndex and firm performance

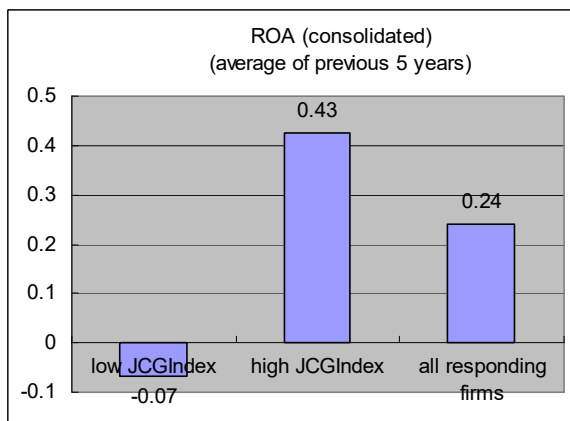
a. ROA (consolidated, 3 and 5 year average)



Consolidated, 3 year average

The high JCGIndex group was higher than the low JCGIndex group, but this difference was not statistically significant (at the 10 % level).

All responding firms	175
High JCGIndex group	25
Low JCGIndex group	21

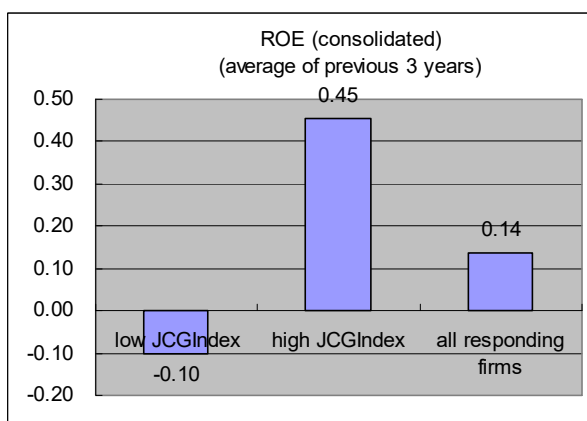


Consolidated, 5 year average

The high JCGIndex group was significantly higher (10% level) than the low JCGIndex group.

All responding firms	156
High JCGIndex group	25
Low JCGIndex group	17

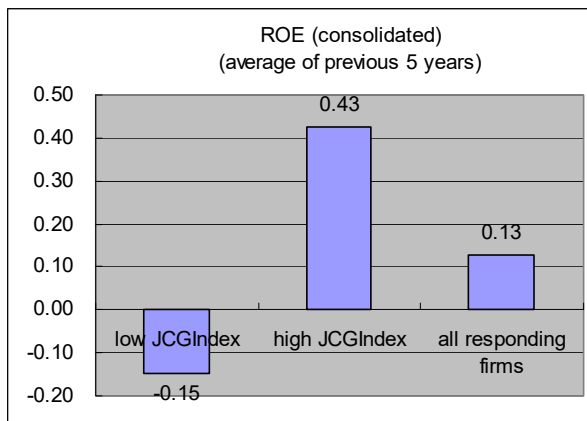
b. ROE (consolidated, 3 and 5 year average)



Consolidated, 3 year average

The high JCGIndex group was significantly higher (5% level) than the low JCGIndex group.

All responding firms	174
High JCGIndex group	25
Low JCGIndex group	21

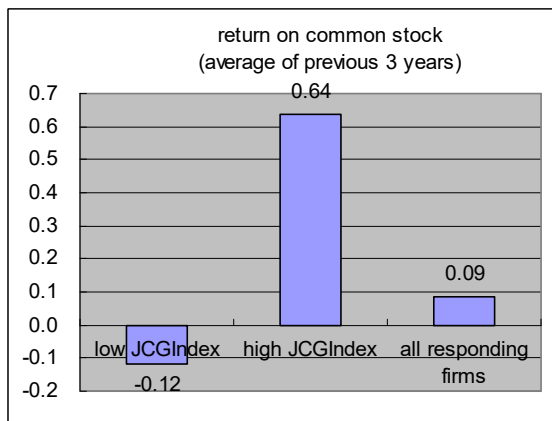


Consolidated, 5 year average

The high JCGIndex group was significantly higher (5% level) than the low JCGIndex group.

All responding firms	156
High JCGIndex group	25
Low JCGIndex group	17

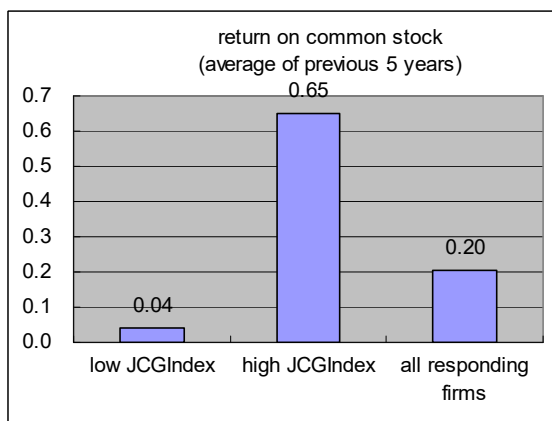
(5) JCGIndex and stock return



3 year

The high JCGIndex group was significantly higher (5% level) than the low JCGIndex group.

All responding firms	166
High JCGIndex group	26
Low JCGIndex group	23

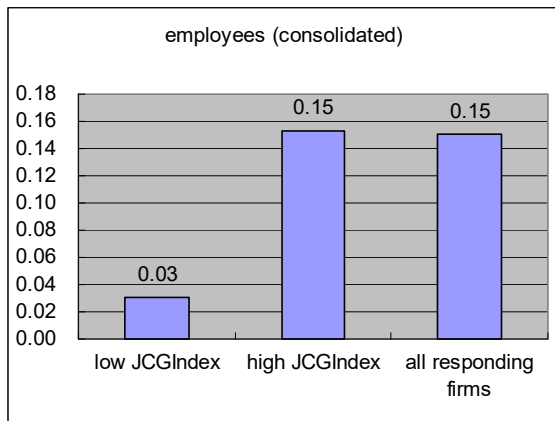


5 year

The high JCGIndex group was higher than the low JCGIndex group, through the difference was not statistically significant (at the 10% level).

All responding firms	161
High JCGIndex group	24
Low JCGIndex group	23

(6) JCGIndex and employment growth (consolidated, 3 year average)



The high JCGIndex group was higher than the low JCGIndex group, but this difference was not statistically significant (at the 10 % significance level).

All responding firms	181
High JCGIndex group	28
Low JCGIndex group	22

(Table 1) Summary of results for high and low JCGIndex groups, standardized by industry

item	Comparison of high and low JCGIndex groups (significance levels)	Comparison of high JCGIndex group and all responding firms (significance levels)
Rate of foreign ownership	1%	1%
CEO age	X	X
Total assets (3 year average)	1%	5%
Sales (3 years)	1%	1%
Number of employees (3 years)	1%	1%
ROA (3 years)	X	X
ROA (5 years)	10%	X
ROE (3 years)	1%	5%
ROE (5 years)	5%	10%
Stock return (3 years)	1%	1%
Stock return (5 years)	5%	5%
Employment growth (3 years)	X	X

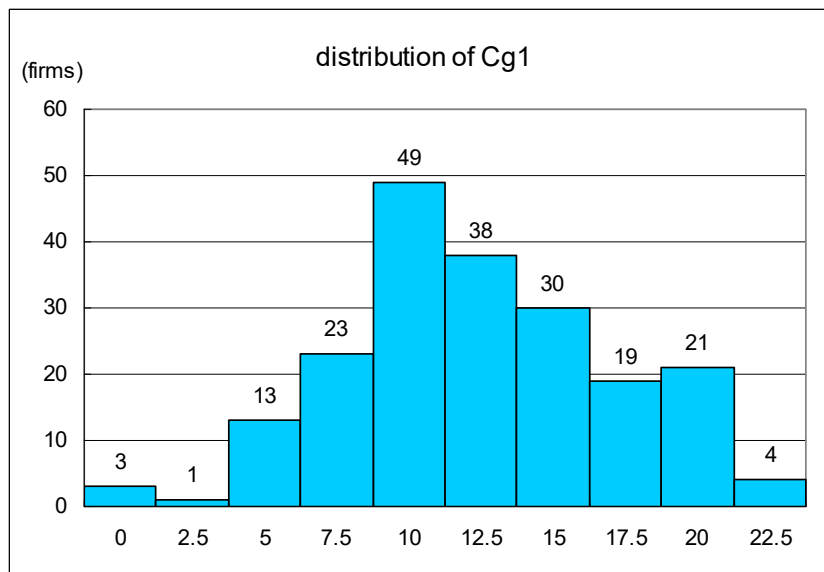
An X means not statistically significant at the 10% level.

2. Relationship between JCGIndex and firm performance by sub-category

The following analyses compare firm characteristics and performance in high and low groups, for each category. The industry-standardized results show the same pattern as the unstandardized analyses.

A. Category I (Corporate objectives and CEO responsibility)

(1) The definition of high and low Cg1 groups



Distribution of Cg1

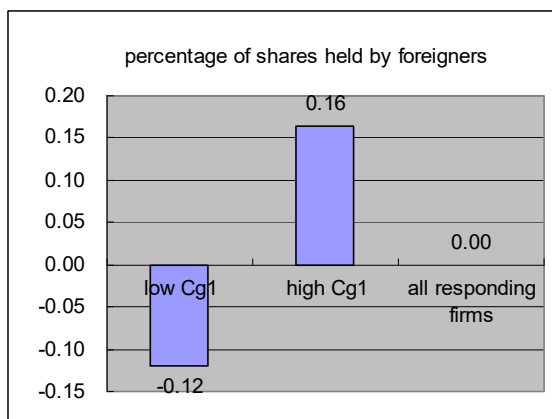
Mean: 12.3 Standard deviation: 4.7 Maximum: 23 Minimum 0

High Cg1 group: 42 firms above 17

Low Cg1 group: 23 firms below 7.6

(2) Cg1 and firm characteristics

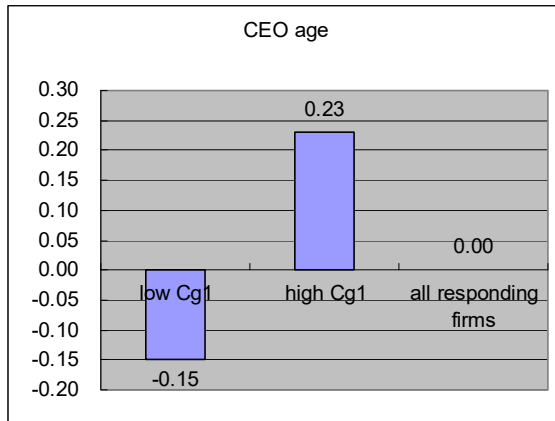
a. Cg1 and rate of foreign ownership



The rate of foreign ownership was higher in the high Cg1 group, though this difference was not statistically significant (at the 10% level).

All responding firms	183
High Cg1 group	42
Low Cg1 group	23

b. Cg1 and CEO age

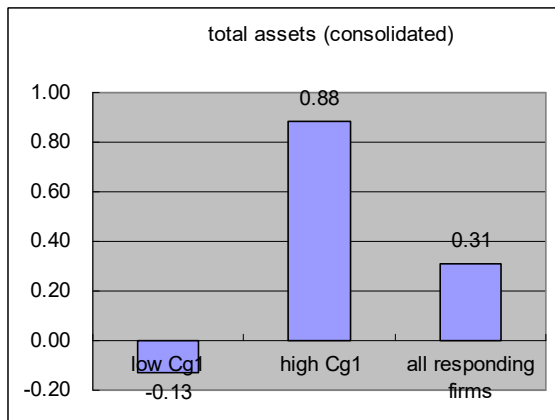


CEO age was higher in the high Cg1 group than in the low Cg1 group, though the difference was not statistically significant (at the 10% level).

All responding firms	183
High Cg1 group	41
Low Cg1 group	23

(3) Cg1 and firm size

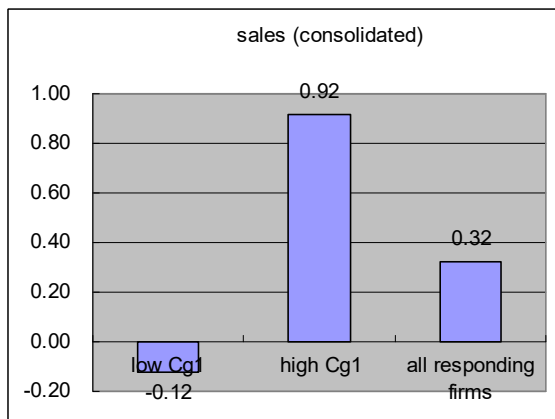
a. Cg1 and total assets (consolidated, 3 year average)



The high Cg1 group was significantly higher (1% level) than the low Cg1 group.

All responding firms	179
High Cg1 group	38
Low Cg1 group	23

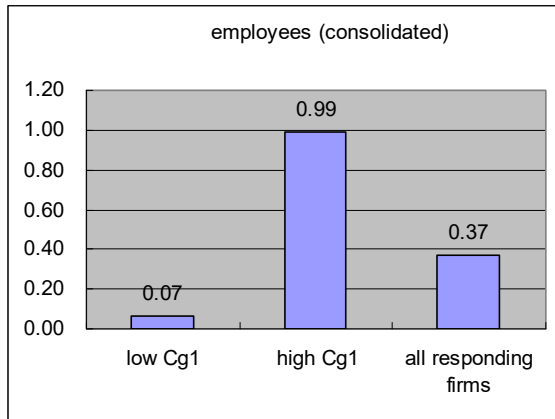
b. Cg1 and sales (consolidated, 3 year average)



The high Cg1 group was significantly higher (1% level) than the low Cg1 group.

All responding firms	179
High Cg1 group	38
Low Cg1 group	23

c. Cg1 and number of employees (consolidated, 3 year average)



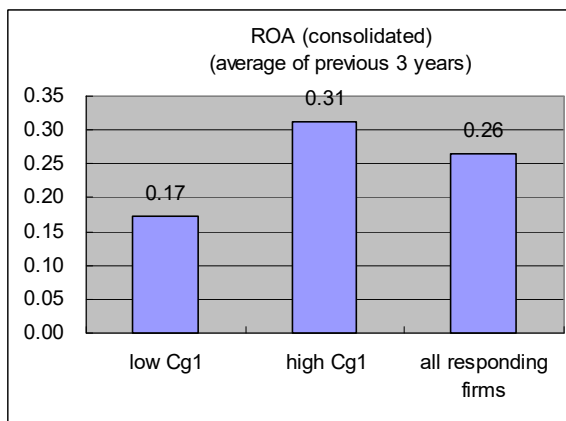
The high Cg1 group was significantly higher (1% level) higher than the low Cg1 group.

All responding firms	179
High Cg1 group	38
Low Cg1 group	23

(4) Cg1 and industry-standardized firm performance

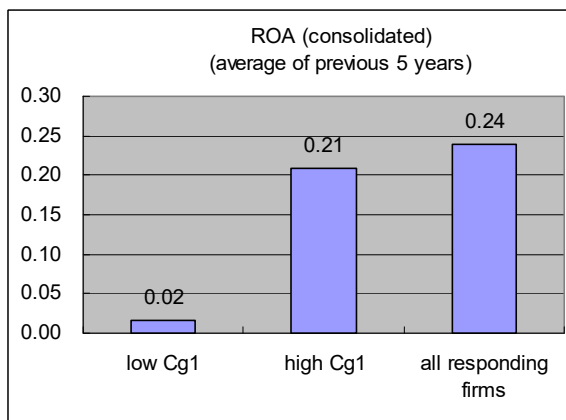
a. Cg1 and ROA (consolidated, 3 and 5 year average)

The high Cg1 group was higher than the low Cg1 group, though this difference was not statistically significant (at the 10% level).



3 year

All responding firms	175
High Cg1 group	36
Low Cg1 group	23

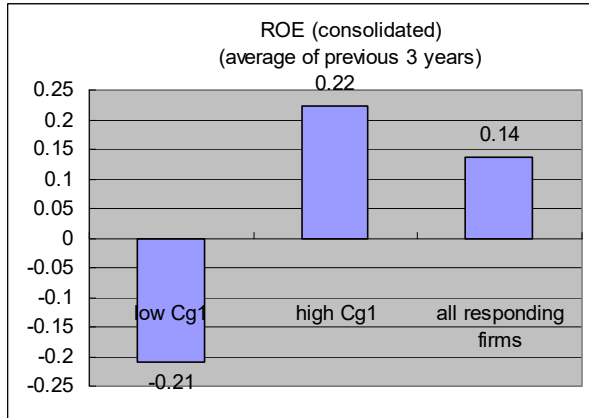


5 year

All responding firms	156
High Cg1 group	36
Low Cg1 group	21

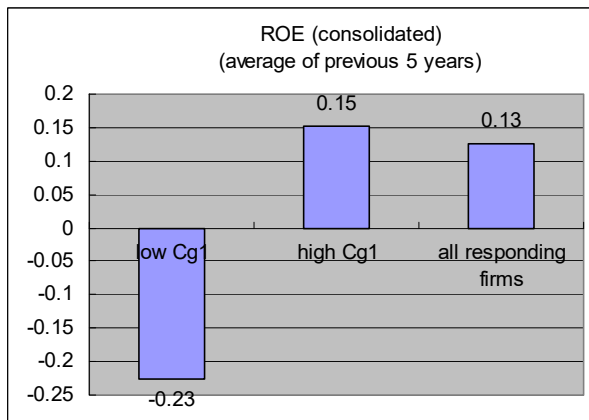
b. Cg1 and ROE (consolidated, 3 and 5 year average)

The high Cg1 group was higher than the low Cg1 group, though this difference was not statistically significant (at the level of 10%).



3 year

All responding firms	174
High Cg1 group	36
Low Cg1 group	23

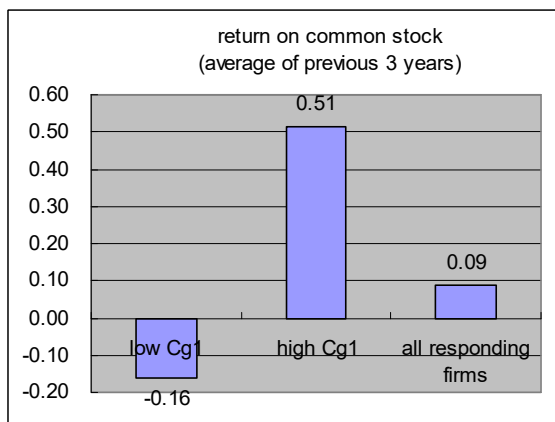


5 year

All responding firms	156
High Cg1 group	36
Low Cg1 group	21

(5) Cg1 and stock returns (3 and 5 year)

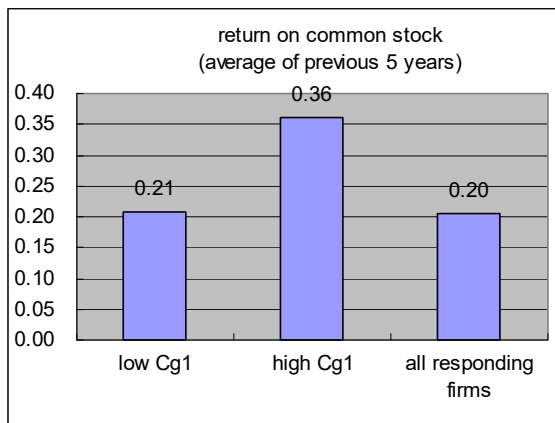
Because we adjusted for risk by standardizing by industry, we did not calculate beta's.



3 year

The high Cg1 group was significantly higher (1% level) than the low Cg1 group.

All responding firms	166
High Cg1 group	37
Low Cg1 group	22

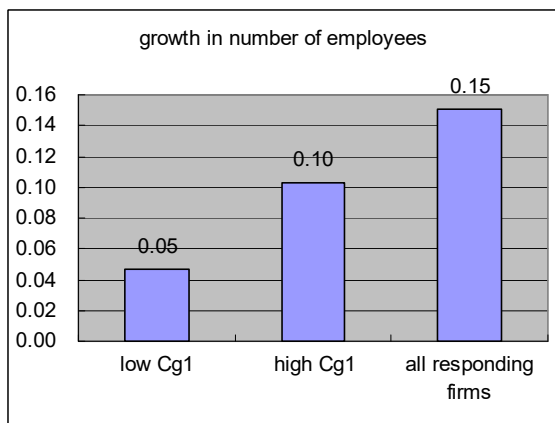


5 year

The high Cg1 group was higher than the low Cg1 group, though this difference was not statistically significant (at the 10% level).

All responding firms	161
High Cg1 group	35
Low Cg1 group	22

(6) CG1 and employment growth (consolidated, 3 years)



The high Cg1 group was higher than the low Cg1 group, though this difference was not statistically significant (at the 10% level).

All responding firms	181
High Cg1 group	38
Low Cg1 group	23

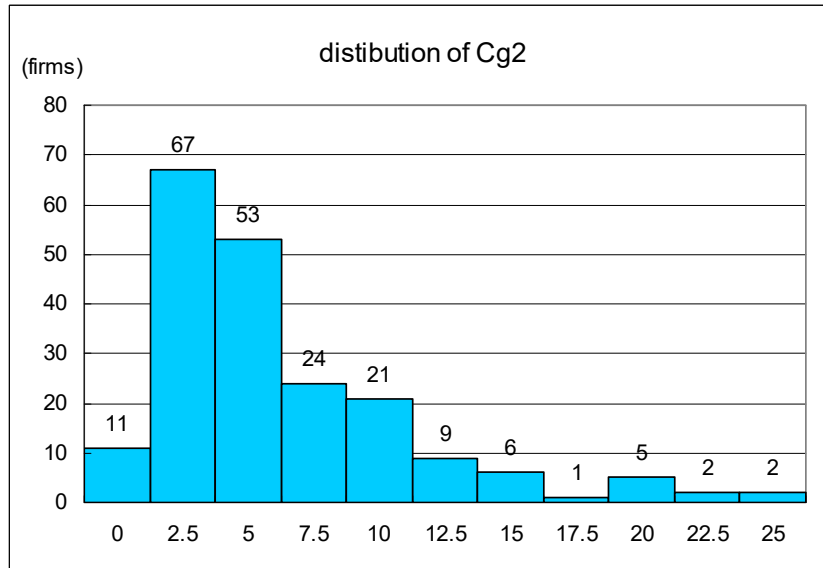
(Table A2-1) Summary of results for high and low Cg1 groups, standardized by industry

item	Comparison of high and low Cg1 groups (significance levels)	Comparison of high Cg1 group and all responding firms (significance levels)
Rate of foreign ownership	X	X
CEO age	10%	10%
Total assets (3 year average)	1%	5%
Sales (3 years)	1%	5%
Number of employees (3 years)	1%	5%
ROA (3 years)	X	X
ROA (5 years)	X	X
ROE (3 years)	10%	X
ROE (5 years)	X	X
Stock return (3 years)	1%	1%
Stock return (5 years)	X	X
Employment growth (3 years)	X	X

An X means not statistically significant at the 10% level.

B. Category II (Structure and function of board of directors)

(1) The definition of high and low Cg2 groups



Distribution of Cg2

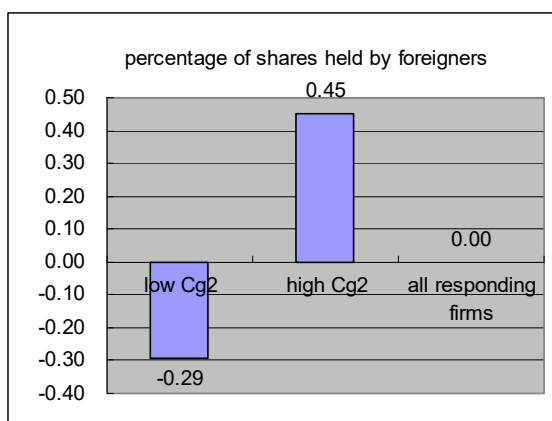
Mean: 6.1 Standard deviation: 4.9 Maximum: 25 Minimum 0

High Cg2 group: 30 firms above 11

Low Cg2 group: 11 firms below 1.2

(2) Cg2 and firm characteristics

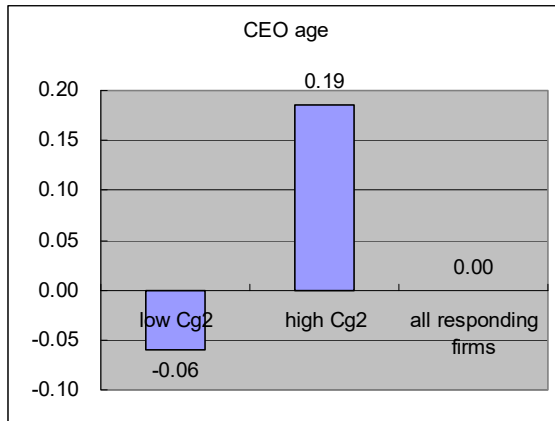
a. Cg2 and rate of foreign ownership



The high C2 group was significantly higher (1% level) than the low C2 group.

All responding firms	183
High Cg2 group	30
Low Cg2 group	11

b. Cg2 and CEO age

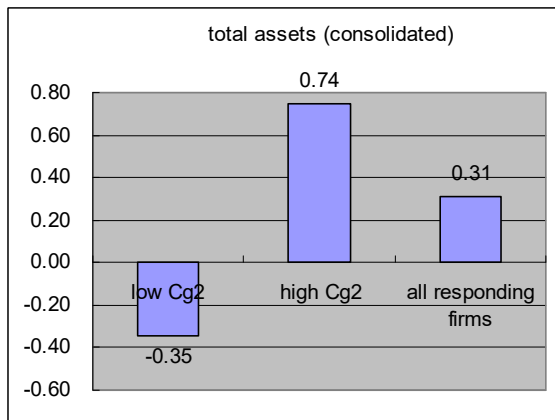


While CEO age in the Cg2 group was higher than the low Cg2 group, this difference was not statistically significant (at the 10% level).

All responding firms	183
High Cg2 group	28
Low Cg2 group	10

(3) C2 and firm size

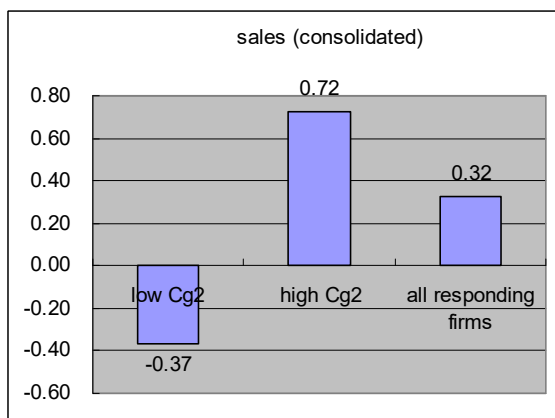
a. Cg2 and total assets (consolidated, 3 year average)



The high Cg2 group was significantly higher (1% level) than the low Cg2 group.

All responding firms	179
High Cg2 group	26
Low Cg2 group	10

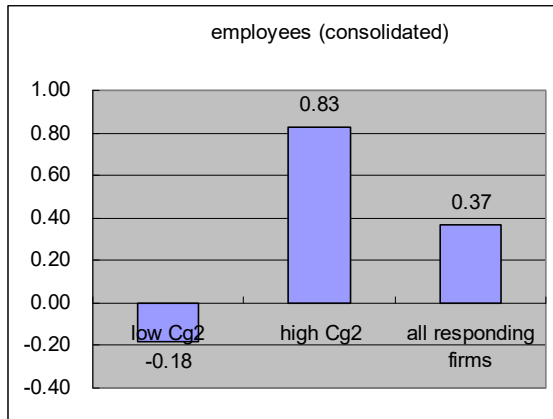
b. Cg2 and sales (consolidated, 3 year average)



The high Cg2 group was significantly higher (1% level) than the low Cg2 group.

All responding firms	179
High Cg2 group	26
Low Cg2 group	10

c. Cg2 and number of employees (consolidated, 3 year average)

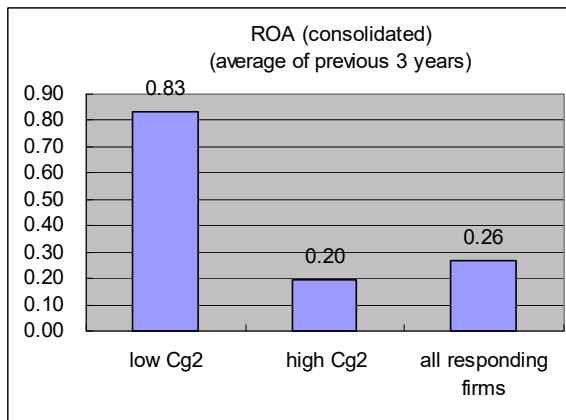


The high Cg2 group was significantly higher (1% level) than the low Cg2 group.

All responding firms	179
High Cg2 group	26
Low Cg2 group	10

(4) Cg2 and ROA and ROE

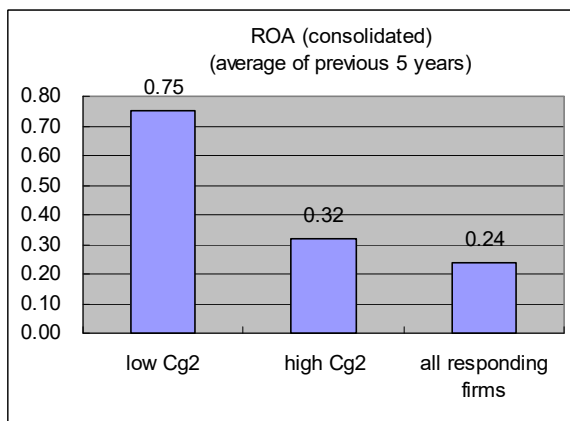
a. Cg2 and ROA (consolidated, 3 and 5 year average)



3 year

The low Cg2 group was significantly higher (10% level) than the high Cg2 group.

All responding firms	175
High Cg2 group	25
Low Cg2 group	10



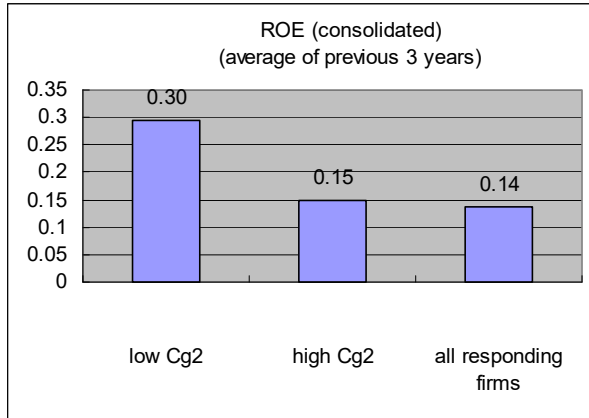
5 year

The low Cg2 group was higher than the high Cg2 group, though this difference was not statistically significant (at the 10% level).

All responding firms	156
High Cg2 group	25
Low Cg2 group	8

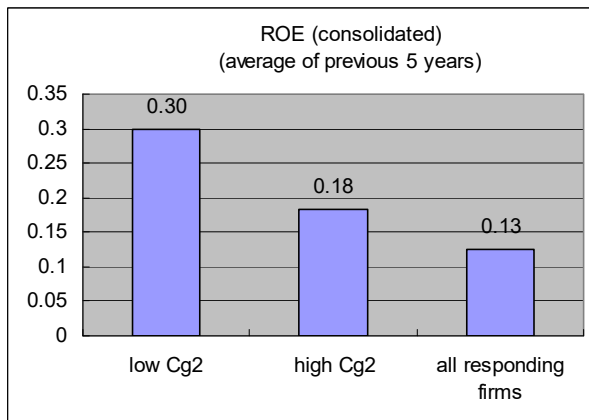
b. Cg2 and ROE (consolidated, 3 and 5 year average)

ROE was actually higher in the low Cg2 group for the 3 and 5 year data, though this difference was not statistically significant (at the 10% level).



3 year

All responding firms	174
High Cg2 group	25
Low Cg2 group	10

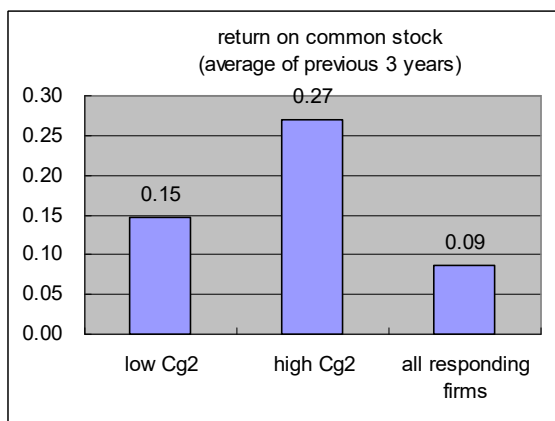


5 year

All responding firms	156
High Cg2 group	25
Low Cg2 group	8

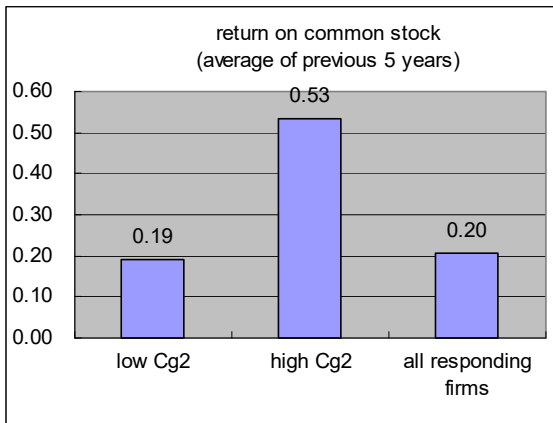
(5) Cg2 and stock returns (3 and 5 year)

The high Cg2 group was higher than the low Cg2 group, though this difference was not statistically significant (at the 10% level). Because we adjusted for risk by standardizing the data by industry, we did not calculate beta's.



3 year

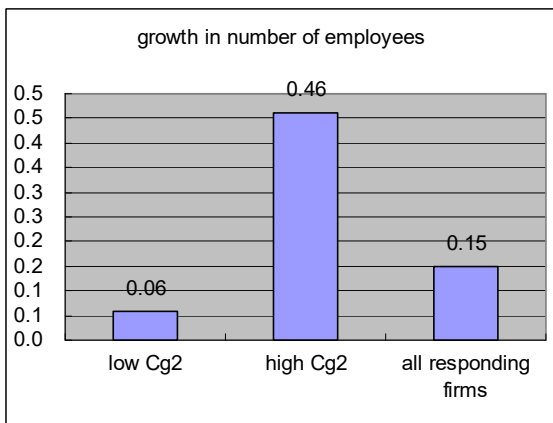
All responding firms	166
High Cg2 group	26
Low Cg2 group	6



5 year

All responding firms	161
High Cg2 group	23
Low Cg2 group	6

(6) Cg2 and growth in number of employees



The high Cg2 group was higher than the low Cg2 group, though this difference was not statistically significant (at the 10% level).

All responding firms	181
High Cg2 group	26
Low Cg2 group	10

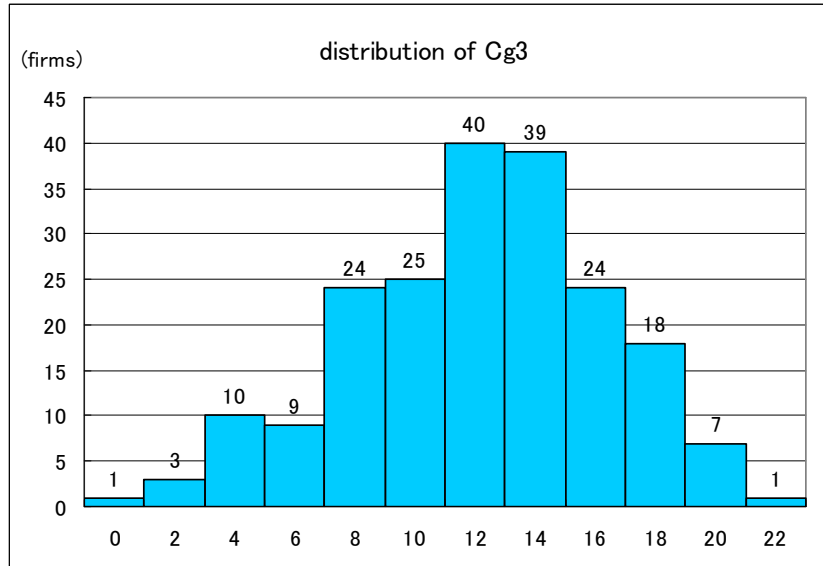
(Table A2-2) Summary of results for high and low Cg2 groups, standardized by industry

item	Comparison of high and low Cg2 group (significance levels)	Comparison of high Cg2 group and all responding firms (significance levels)
Rate of foreign ownership	1%	1%
CEO age	X	X
Total assets (3 year average)	1%	10%
Sales (3 years)	1%	10%
Number of employees (3 years)	1%	10%
ROA (3 years)	10%	X
ROA (5 years)	X	X
ROE (3 years)	X	X
ROE (5 years)	X	X
Stock return (3 years)	X	X
Stock return (5 years)	X	1%
Employment growth (3 years)	X	10%

An X means not statistically significant at the 10% level.

C. Category III (Management system)

(1) The definition of high and low Cg3 groups



Distribution of Cg3

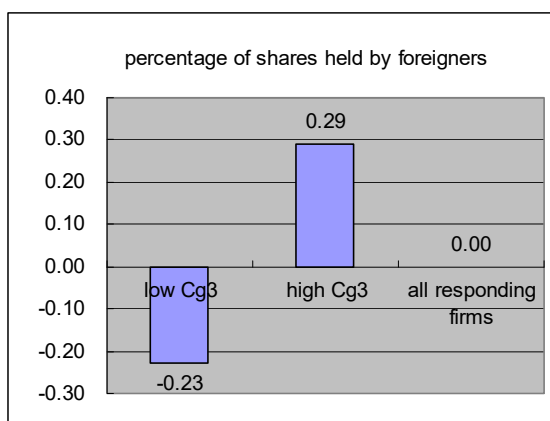
Mean: 11.6 Standard deviation: 4.4 Maximum: 21 Minimum 0

High Cg3 group: 38 firms above 16

Low Cg3 group: 32 firms below 7.3

(2) Cg3 and firm characteristics

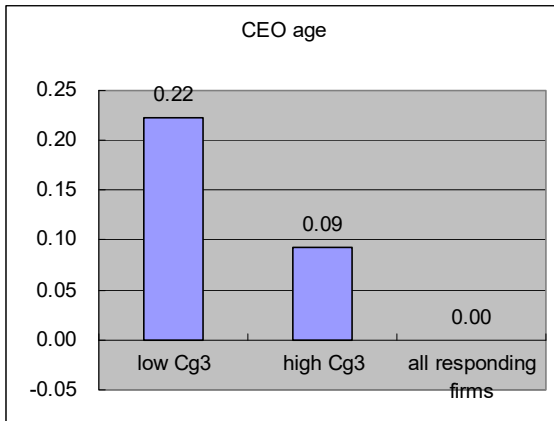
a. Cg3 and rate of foreign ownership



The high Cg3 group was significantly higher (5% level) than the low Cg3 group.

All responding firms	183
High Cg3 group	37
Low Cg3 group	31

b. Cg3 and CEO age

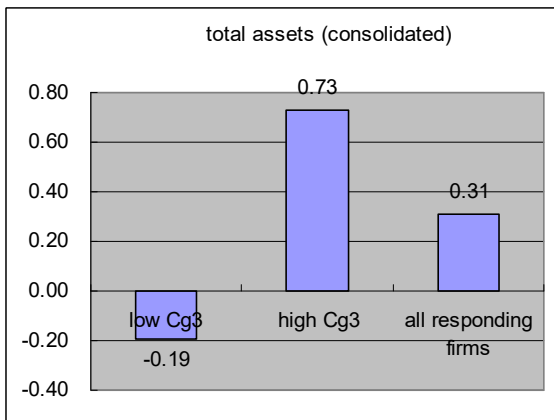


The high Cg3 group was younger than the low Cg3 group, though this difference was not statistically significant (at the 10% level).

All responding firms	183
High Cg3 group	38
Low Cg3 group	32

(3) Cg3 and firm size

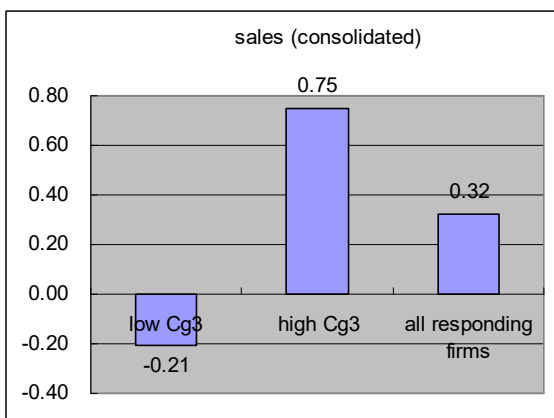
a. Cg3 and total assets (consolidated, 3 year average)



The high Cg3 group was significantly higher (1% level) than the low Cg3 group.

All responding firms	179
High Cg3 group	40
Low Cg3 group	29

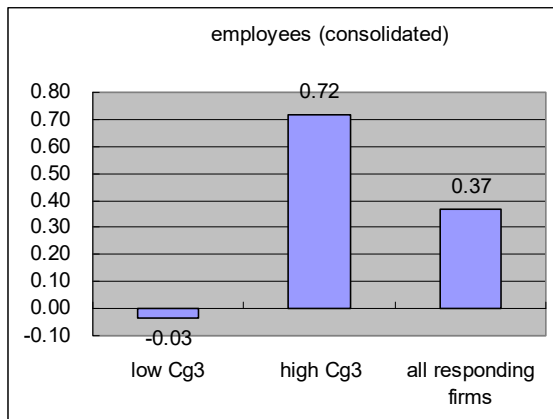
b. Cg3 and sales (consolidated, 3 year average)



The high Cg3 group is significantly higher (1% level) than the low Cg3 group.

All responding firms	179
High Cg3 group	40
Low Cg3 group	29

c. Cg3 and number of employees (consolidated, 3 year average)



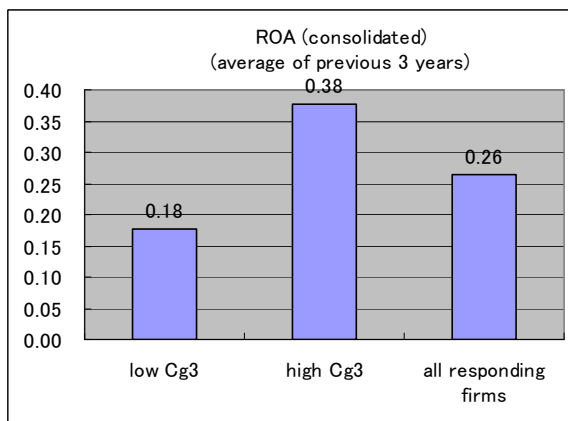
The high Cg3 group was significantly higher (1% level) than the low Cg3 group.

All responding firms	179
High Cg3 group	40
Low Cg3 group	29

(4) Cg3 and ROA and ROE

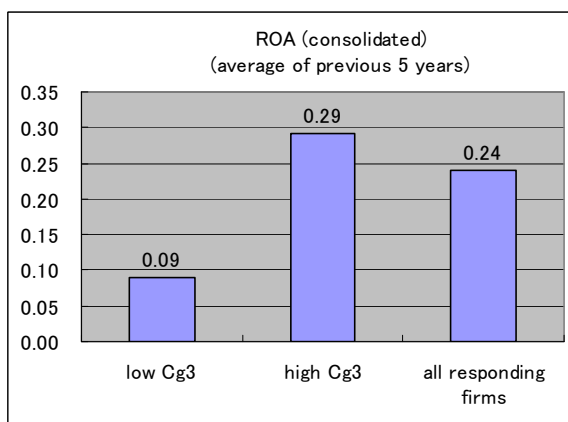
a. Cg3 and ROA (consolidated, 3 and 5 year average)

The high Cg3 group was higher than the low Cg3 group, though this difference was not statistically significant (at the 10% level).



3 year

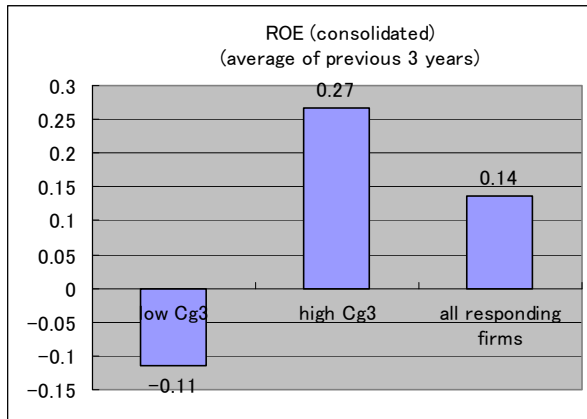
All responding firms	175
High Cg3 group	36
Low Cg3 group	29



5 year

All responding firms	156
High Cg3 group	35
Low Cg3 group	26

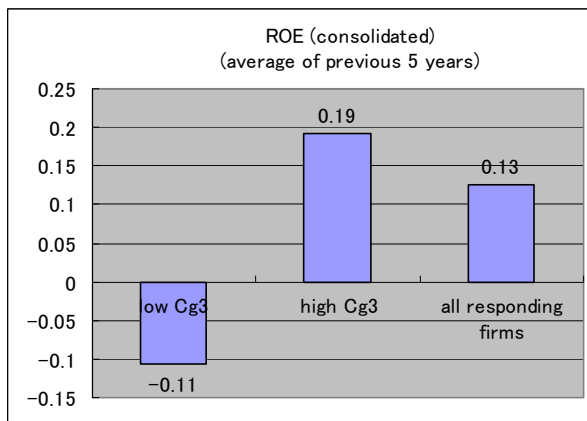
b. Cg3 and ROE (consolidated, 3 and 5 year average)



3 year

The high Cg3 group was significantly higher (10% level) than the low Cg3 group.

All responding firms	174
High Cg3 group	36
Low Cg3 group	29



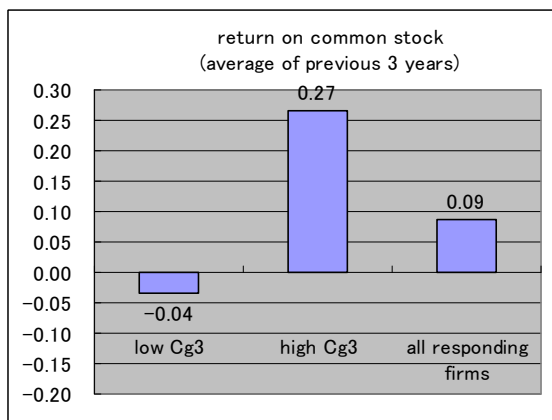
5 year

The high Cg3 group was higher than the low Cg3 group, though this difference was not statistically significant (at the 10% level).

All responding firms	156
High Cg3 group	35
Low Cg3 group	26

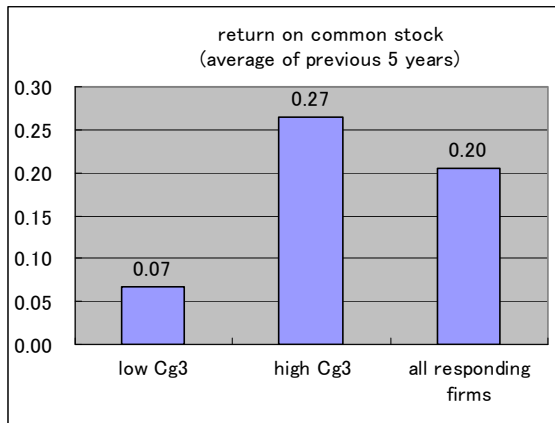
(5) Cg3 and stock return (3 and 5 years)

Stock returns were higher for the high Cg3 group, for both 3 and 5 years. This difference, however, was not statistically significant. Because we adjusted for risk by standardizing for industry, we did not calculate beta's.



3 year

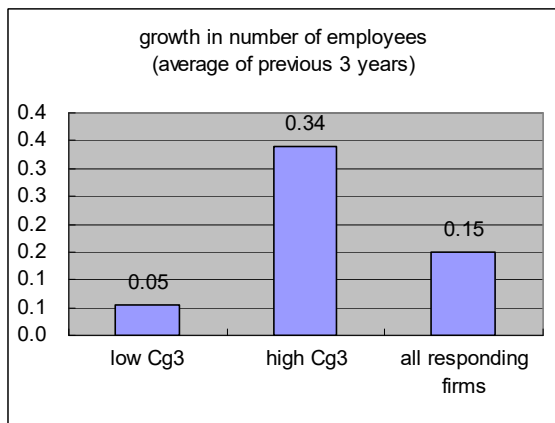
All responding firms	166
High Cg3 group	34
Low Cg3 group	28



5 year

All responding firms	161
High Cg3 group	33
Low Cg3 group	28

(6) Cg3 and growth in number of employees (consolidated, 3 year average)



The high Cg3 group was higher than the low Cg3 group, though this difference was not statistically significant (at the 10% level).

All responding firms	181
High Cg3 group	40
Low Cg3 group	30

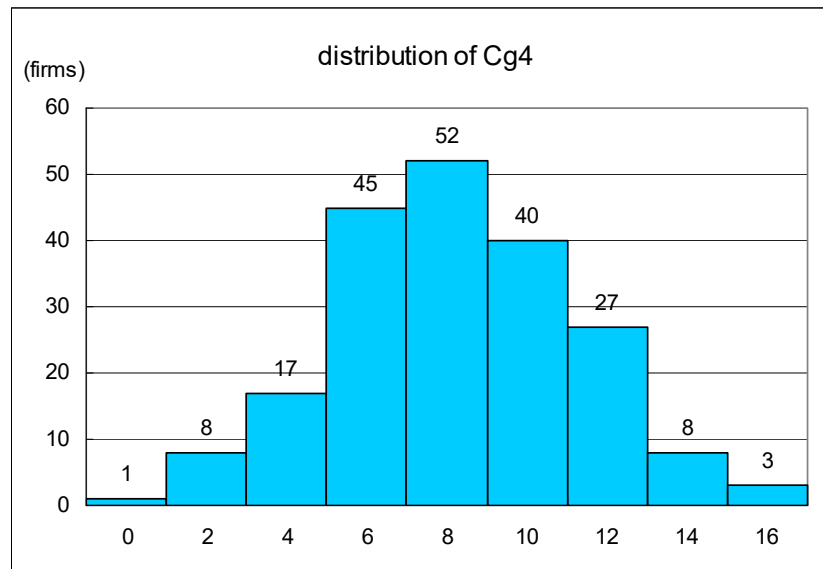
(Table A2-3) Summary of results for high and low Cg3 groups, standardized by industry

item	Comparison of high and low Cg3 groups (significance levels)	Comparison of high Cg3 group and all responding firms (significance levels)
Rate of foreign ownership	5%	5%
CEO age	X	X
Total assets (3 year average)	1%	5%
Sales (3 years)	1%	5%
Number of employees (3 years)	1%	10%
ROA (3 years)	X	X
ROA (5 years)	X	X
ROE (3 years)	10%	X
ROE (5 years)	X	X
Stock return (3 years)	X	X
Stock return (5 years)	X	X
Employment growth (3 years)	x	X

An X means not statistically significant at the 10% level.

D. Category IV (Transparency and communication to shareholders)

(1) The definition of high and low Cg4 groups



Distribution of Cg4

Mean: 7.7 Standard deviation: 3.2 Maximum: 15 Minimum 0

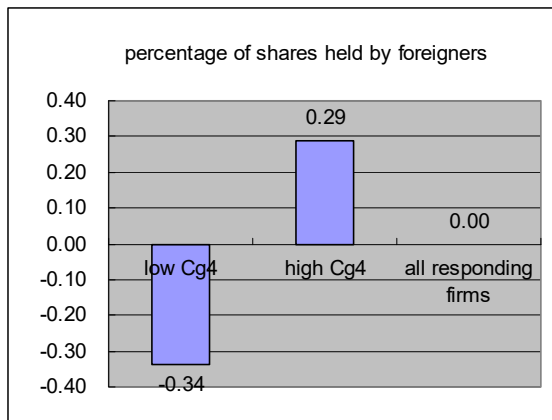
High Cg4 group: 37 firms above 10.9

Low Cg4 group: 23 firms below 4.5

The results for Category IV, which captures transparency and communication to shareholders, were very interesting. Except for CEO age, the high Cg4 group was higher than the low Cg4 group on all dimensions, and the statistical significance levels were all 1%. Firms that are serious about transparency and communication to shareholders perform well, and these are important features of corporate governance.

(2) Cg4 and firm characteristics

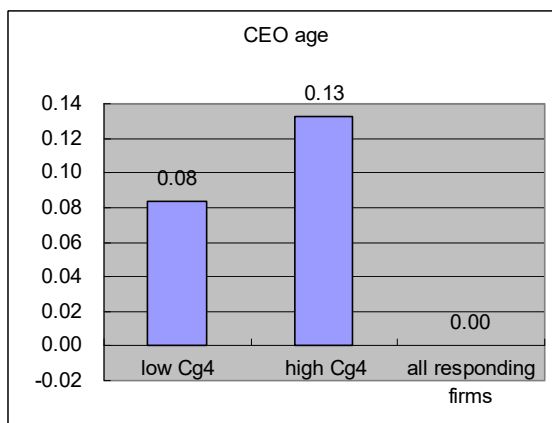
a. Cg4 and rate of foreign ownership



The high Cg4 group was significantly higher (1% level) than the low C4 group.

All responding firms	183
High Cg4 group	36
Low Cg4 group	23

b. Cg4 and CEO age

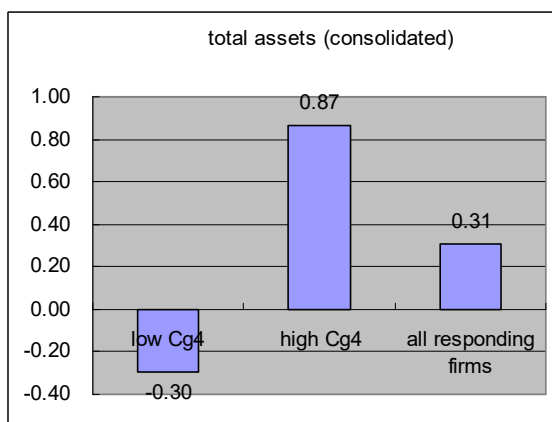


High Cg4 CEOs were slightly younger than low Cg4 CEOs, though this difference was not statistically significant (at the 10% level).

All responding firms	183
High Cg4 group	35
Low Cg4 group	22

(3) Cg 4 and firm size

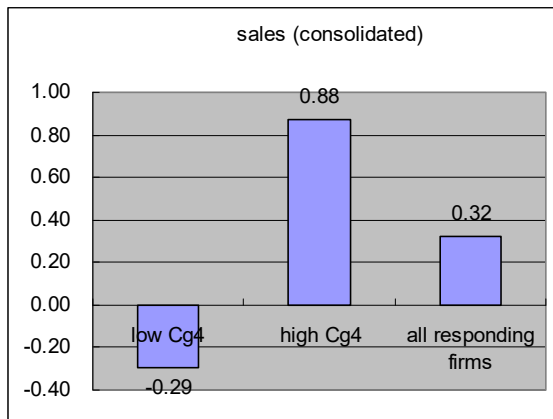
a. Cg4 and total assets (consolidated, 3 year average)



The high Cg4 group was significantly higher (1% level) than the low Cg4 group.

All responding firms	179
High Cg4 group	31
Low Cg4 group	25

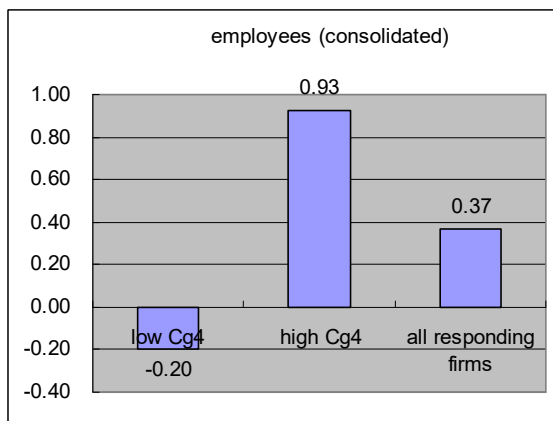
b. Cg4 and sales (consolidated, 3 year average)



The high Cg4 group was significantly higher (1% level) than the low Cg4 group.

All responding firms	179
High Cg4 group	31
Low Cg4 group	25

c. Cg4 and number of employees (consolidated, 3 year average)



The high Cg4 group was significantly higher (1% level) than the low Cg4 group.

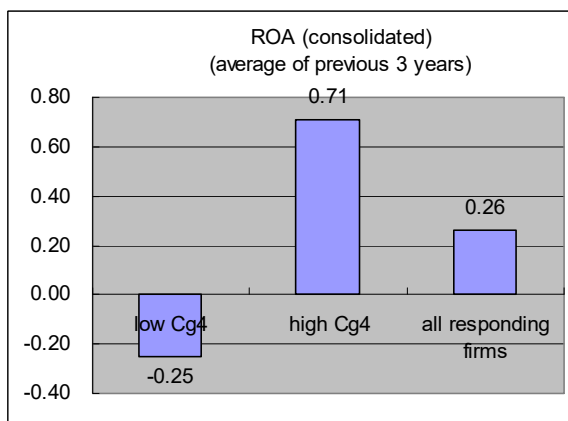
All responding firms	179
High Cg4 group	31
Low Cg4 group	25

(4) Cg4 and ROA and ROE

The high Cg4 group was significantly higher than the low Cg4 group, for both 3 and 5 years and for both ROA and ROE.

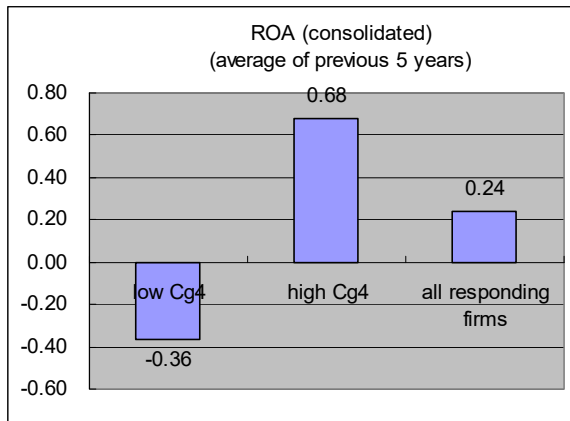
a. Cg4 and ROA (consolidated, 3 and 5 year average)

The high Cg4 group was significantly higher (1% level) than the low Cg4 group.



3 year

All responding firms	175
High Cg4 group	29
Low Cg4 group	25

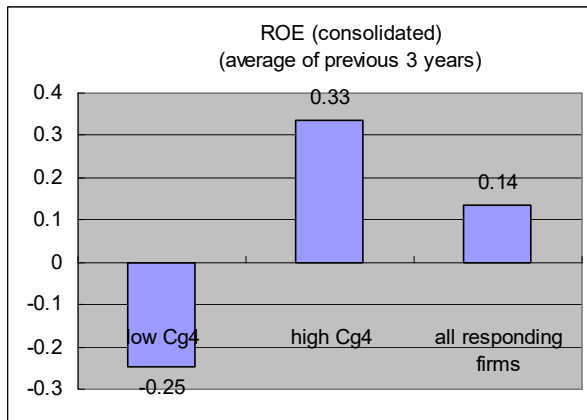


5 year

All responding firms	156
High Cg4 group	28
Low Cg4 group	21

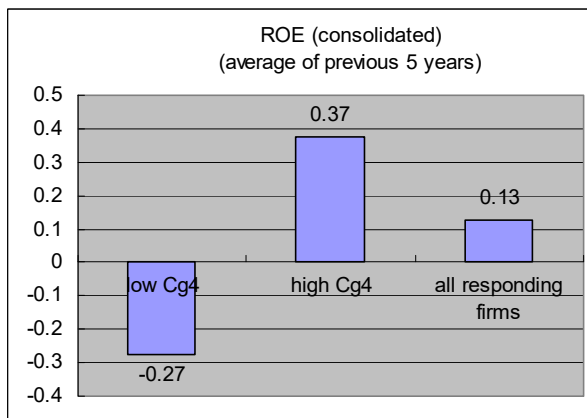
b. Cg4 and ROE (consolidated, 3 and 5 year average)

The high Cg4 group was significantly higher (1% level) than the low Cg4 group.



3 year

All responding firms	174
High Cg4 group	29
Low Cg4 group	24

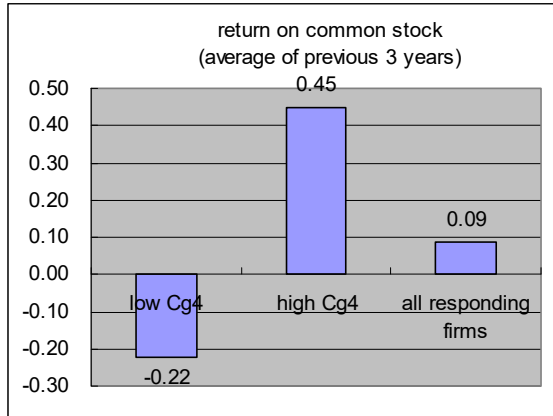


5 year

All responding firms	156
High Cg4 group	28
Low Cg4 group	21

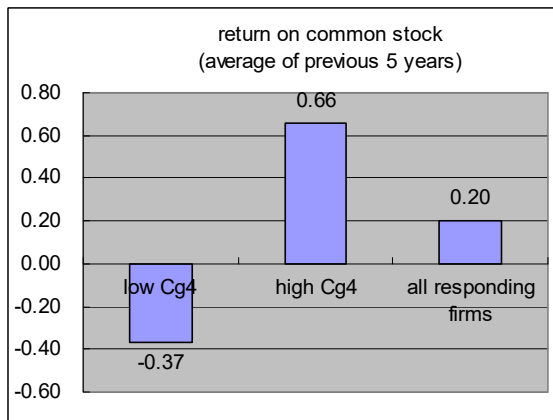
(5) Cg4 and stock returns

The high Cg4 group was significantly higher (1% level) than the low Cg4 group, for both 3 and 5 years. Because we adjusted for risk by standardizing for industry, we did not calculate beta's.



3 year

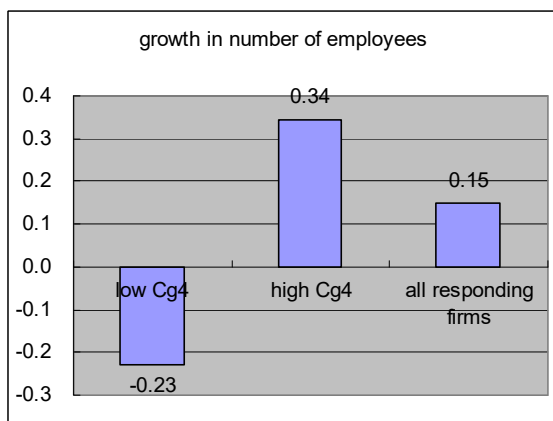
All responding firms	166
High Cg4 group	28
Low Cg4 group	25



5 year

All responding firms	161
High Cg4 group	27
Low Cg4 group	25

(6) Cg4 and growth in number of employees



The high Cg4 group was significantly higher (1% level) than the low Cg4 group.

All responding firms	181
High Cg4 group	31
Low Cg4 group	26

(Table A2-4) Summary of results for high and low Cg4 groups, standardized by industry

item	Comparison of high and low Cg4 groups (significance levels)	Comparison of high Cg4 group and all responding firms (significance levels)
Rate of foreign ownership	1%	5%
CEO age	X	X
Total assets (3 year average)	1%	10%
Sales (3 years)	1%	5%
Number of employees (3 years)	1%	5%
ROA (3 years)	1%	5%
ROA (5 years)	1%	5%
ROE (3 years)	1%	X
ROE (5 years)	1%	10%
Stock return (3 years)	1%	5%
Stock return (5 years)	1%	5%
Employment growth (3 years)	1%	X

An X means not statistically significant at the 10% level.

Data sources

Industry classification:

Tokyo Stock Exchange industry classifications

Financial data

Source: NEEDS (Nikkei Shinbunsha data bank)

Firms covered: Tokyo Stock Exchange First Section firms (1,538 firms as of 11/11/2003)

Items: Total assets, sales, number of employees, ROA, ROE (firm based and consolidated)

Period: 1998-2002

Stock information

Source: Nihon Shoken Keizei Kenkyusho 2002 Kabushiki Toshi Shueki Ritsu

Firms covered: Tokyo Stock Exchange First Section firms (1,538 firms as of 11/11/2003)

Items: Monthly returns on individual stock and market

Period: January 1998-December 2002