Real Estate Ownership by Non-Real Estate Firms: The Impact on Firm Returns

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Draft

May, 1999

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Introduction

For many years operating companies around the world generally have owned their real estate assets. In the United States alone it is estimated that corporate users own nearly $2 trillion, or roughly half of all commercial property. Companies own not only their production facilities, but frequently their offices, warehouses, and retail outlets. Although many of these properties are suitable for a broad range of users, these operating companies choose to commit their scarce capital to the ownership and operation of real estate, rather than re-deploying this capital to their core operating businesses.

A debate is emerging around the issue of whether non-real estate firms should own so much property. Linneman (1998) argues that it is harmful for non-real estate firms to commit so much of their scarce capital to investments outside their core competencies. Linneman and others also suggest that high cost of capital firms in particular should avoid committing to ownership of relatively low return buildings.

Pure finance theory does not support the latter contention in particular.[2] Capital budgeting principles imply that each investment project considered by the firm should be evaluated at its own opportunity cost of capital. Cash flows from risky projects should be discounted more severely than the cash flows from less risky projects regardless of whether the firm itself has a high or low cost of capital. That is, the true cost of capital depends upon the use to which the capital is put. Thus, theory implies that high cost of capital firms should not suffer a penalty when they use their scarce capital to invest in and own relatively low return real estate– as long as they receive a return high enough to compensate them for the risks of real estate ownership.

[2] See, for example, Brealey and Myers (1996) for a more detailed discussion.

Of course, the real world often does not conform perfectly to theory. Linneman's Conclusion that real estate ownership by non-real estate firms is harmful still could hold if: (a) investors believe non-real estate companies will earn sub-par returns on their real estate holdings; (b) investors in high cost of capital firms do not want these firms to use capital on such assets; stated differently, the investors may desire the higher risk profile, believing that they can diversify better than the firms; or (c) investors in high cost of capital firms may not fully perceive the lower risk associated with real property investment; if so, they effectively discount all projects at the company, not the project, cost of capital–contrary to what finance theory suggests should drive corporate value.

In this study, we examine firm level returns for 717 companies in 57 different non-real estate industries to see whether more real property ownership is associated with lower returns. That is, we look directly to the capital markets for our evidence.[3] More specifically, we test for whether the idiosyncratic component of firm return is less for firms with relatively high levels of real estate ownership. If returns are lower for firms with relatively high concentrations of real estate ownership, then the evidence is consistent with some penalty being imposed by investors.

The results show a consistent negative relation between the idiosyncratic component of firm return and the degree of real estate ownership. This is the first study of which we are aware to document a statistically significant negative relation between firm returns and the degree of real estate ownership over a long holding period. In addition, we cannot reject the null hypothesis that a return penalty exists only for relatively high risk firms with betas in excess of 0.9. Existing research suggests the beta of a diversified portfolio of commercial real estate is no

[3] The reason is that we think the alternative approach—a case-by-case analysis of individual real estate investments—is not feasible.

more than 0.9 (see Gyourko & Keim (1993)). Hence, our results indicate that the negative impact on return occurs only for firm with higher costs of capital.

The impacts for these firms are economically significant, not just statistically so. For a relatively high beta firm with a real estate concentration above the sample median, the idiosyncratic component of monthly excess return is 0.16% lower, all else constant. This amounts to almost a two percentage point lower annual return when compounded annually. Given that the mean annual excess return is about 11% for our sample period, this difference is about 18% of mean excess return.[4]

Our specifications also shed some light on the proximate cause of the return penalty, which is important in interpreting what the findings mean for real estate holdings by non-real estate firms. For example, the results do not strongly support a general inefficiency explanation. If high real estate concentrations were signals of general inefficiency, then all firms, not just risky firms with high betas and associated costs of capital, should suffer return penalties. That only firms with betas higher than that generally associated with commercial real estate suffer a penalty suggests that cause lies either with investors not wanting these firms to use scarce capital in this way or with investor ignorance of what real estate ownership does to the risk profile of risky firms.

If the former, then risky firms with higher than average real estate holdings should begin disgorging some of their property holdings, as our findings indicate a return bonus will result. Selling real estate could be the right strategy even if investor ignorance underlies our results, but that is a more subtle story. If learning occurs as a result of the asset sales, then the first few corporate sellers might benefit in the short run, but the long run could be different. That is, if investors begin to understand that real estate ownership affects the true risk profile of the firm, they will perceive the firm as more risky after the real estate is gone. We cannot distinguish between the two motivations in our data.

We believe that both explanations have some basis in truth. One of the strongest results in empirical finance is that there is no benefit to being a conglomerate, as diversification is more cheaply obtained at the shareholder, not the firm, level. With the rise of no-load mutual funds and lowered stock commissions, this is more true than ever. Hence, we find it eminently plausible that investors would penalize risky, high cost of capital firms for committing substantially more capital than competitors outside a core competency area. That said, we find it equally plausible that investors do not fully comprehend the impact of real estate ownership on the risk profile of a firm. For the reasons just discussed, this leads us to temper a recommendation towards wholesale real property sales by these firms. Still, there seems little doubt non-real estate firms with above average concentrations of real estate on their books should begin serious consideration of asset sales and revamping of their real estate ownership strategies.

The Data

The data sets used in this empirical study include the NYSE, AMEX, and NASDAQ monthly stock files maintained by the Center for Research in Security Prices (CRSP), and the Standard & Poor's COMPUSTAT annual industrial files. The CRSP Monthly Stock file provides detailed information on individual securities, most importantly including return data. COMPUSTAT is a database of financial, statistical, and marketing information. It provides more

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[4] These results are based upon a pooled sample of 717 firms across 57 industries. The impacts vary by industry. For a select group of industries with plentiful observations, we are able to do the analysis on firms within industry. The

than 300 annual Income Statement, Balance Sheet, Statement of Cash Flows, and supplemental data items on more than 7,500 publicly held companies.

A key variable used throughout our analysis is labeled as RC (Real Estate Concentration ratio). This variable measures corporate real estate concentration for a non-real estate firm and is computed from COMPUSTAT data. Specifically, RC is the ratio of the company's Property, Plant, and Equipment (including building at cost plus land and improvements) divided by the company's Total Assets. Both numerator and denominator are book values, as the use of book numbers reduces potential endogeneity problems that can bias the estimations reported below.[5]

Due to a variety of data limitations in both data bases, we confine our analysis to the period from 1984 to 1993. In addition, firms are included only if they have at least 60 months of consecutive monthly returns data, the standard in the finance literature for estimating stable betas (a key first step in the empirical strategy described below). Furthermore, each firm must have balance sheet information about property, plant, and equipment, total assets, as well as the company's year-end equity market capitalization information. After data cleaning and merging, the final sample includes stock returns and balance sheet data from 717 firms in 57 non-real estate industries.

The Test Methodology

Our test is based on an approach similar to the cross-sectional regression approach suggested by Fama and MacBeth (1973) and Fama and French (1992, 1993). The basic idea is

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impact is largest in the Electronics Industry. See the discussion below for the details.

[5] We also experimented with three other concentration measures. One is very similar to RC, except that its numerator reflects the value of buildings at cost less accumulated depreciation. Use of this measure yields results very similar to those reported below. The other two measures are ratios of the book value of real estate (gross and net of accumulated depreciation) to total property, plant, and equipment. Use of these two measures yields qualitatively similar results, although missing data is more of problem here, so that the findings often are not statistically significant due to the smaller number of observations.

that for each security, the total return can be broken down into idiosyncratic and systematic components. It is crucial to control for systematic risk (or beta) as theory suggests that is the primary reason why returns vary across firms. After controlling for risk differences across firms, we then examine whether the idiosyncratic component of return (i.e., that part not related to market risk) is related to the company's real estate concentration level.

More specifically, the test is implemented using the following two stage approach. In the first stage, a capital asset pricing model (CAPM) is estimated for 717 firms across 57 non-real estate industries such that

$$ERET_{it} = \alpha_i + \beta_i \, EMKT_{it} + \varepsilon_{it} \qquad (1)$$

where *ERET* is the monthly excess return over the risk-free return, which is measured as the difference between the company's monthly holding period return and the 30-day T-bill returns reported by CRSP monthly stock files; *EMKT* is the monthly excess return on the market portfolio, which is measured as the difference between the monthly return on the CRSP value-weighted market portfolio and the 30-day T-bill return reported by CRSP monthly stock files; α is the idiosyncratic component of the monthly excess return; β is the systematic component of the monthly excess return; ε is an error term following a standard normal distribution; *i* indexes for firm, and *t* indexes for time period measured in month.

The second stage examines the non-systematic, or idiosyncratic, component of return to see if it is associated with the concentration of real estate ownership. In addition to including a real estate concentration measure (RC), this second stage regression is estimated with a number of control variables: (a) all specifications include a vector of industry dummies, *IND*, to control for industry fixed effects; (b) *SIZE*, which is a measure of firm size as reflected in the year-end capitalization reported by CRSP, is added in a number of specifications;[6] (c) *PERFORMANCE* which is a dummy variable taking on a value of 1 if the company has suffered at least a ten percent drop in market capitalization during our sample period; this variable is included to control for the possibility that $\hat{\alpha}$ and RC could be spuriously correlated due to declining companies ending up with high concentrations of real estate as they sell off core assets during their decline; (d) *LOWBETA* which is a dummy variable indicating that the company's estimated beta is below that associated with commercial real estate; and (e) the interaction of LOWBETA and our real estate concentration measures; this is included to help distinguish whether the impact of real estate concentration differs for high versus low risk firms.

Thus, we estimate a series of specifications like that in equation (2)

$$\hat{\alpha}_i = f\left(IND_i, RC_i, SIZE_i, PERFORMANCE_i, LOWBETA_i\right) \qquad (2)$$

where $\hat{\alpha}$ is a company specific idiosyncratic component of the excess return estimated from the first stage regressions. We suspect that the *Alpha-RC* relationship, if it exists at all, may vary across industries. Ideally, equation (2) should be tested by industry. However, the limited number of firms which satisfy our data screening criteria in each industry may affect the power of our test. Therefore, we test the equation (2) using a pooled sample by combining all the industries together and controlling for industry fixed effects in all specifications.[7]

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[6] Size is included because recent research has shown that it often is related to differences in firm returns. While there is no theoretical explanation for this correlation, we control for it in case it is related to the degree of real estate correlation. In any event, it could be that firms which reach a certain size tend to accumulate real estate.

[7] We also estimate equation (2) by ten selected industries, each of them has at least 25 firms in our final sample. The ten industries are: Food and Kindred Products Industry; Paper and Allied Products Industry; Printing, Publishing and Allied Products Industry; Chemicals and Allied Products Industry; Primary Metal Industry; Fabricated Metal, Excluding Machinery, and Transportation Equipment Industry; Industrial, Commercial Machinery, and Computer Equipment Industry; Electronics, and other Electronic Equipment excluding Computer Industry; Transportation Equipment Industry; and Measuring Instrument, Photo Goods, and Watches Industry. The impact on company's returns varies across industries, being greatest in the Electronics Industry. We include the results from the Electronics Industry in next section – The Empirical Results.

The Empirical Results

Table 1 reports the means, medians, and standard deviations of key variables used in the analysis for the pooled sample as well as by industry.[8] Recall that these data are for the 1984-1993 time period and that returns are measured in excess of the CRSP value-weighted market return. The mean monthly excess return is 0.864%, with a large 12.4% standard deviation indicating a very large variance across firms. A look at the individual industry figures also documents the wide range of return performance. A median monthly excess return of 0.127% for the pooled sample also provides some indication of how skewed the return distribution is.

In many cases, the variation in excess returns within industry is even larger. For example, monthly excess returns vary from -52.8 percent to 229 percent in the Electronics Industry (SIC 3600), and from –77.1 percent to 524.5 percent in the Computer Equipment Industry (SIC 3500).[9]

Our pooled industries have slightly higher than average systematic risk as indicated by the mean beta of 1.13. Only 18 industries have the estimated beta less than one. Among the eighteen, ten of them have the estimated beta below 0.9. Seventeen industries have an estimated beta greater that 1.2. The Apparel and Accessory Stores Industries (SIC 5600) carry the greatest systematic risk, with their median level betas being about 1.68. The Electronics Industry, which we examine more closely below, has an estimated beta of 1.2. In general, our estimates are in line with previous research my Gibbons (1982) and Fama and French (1992, 1993) on systematic risk across industry groupings.

Real estate concentration averages 20%, with a median of 16%. However, this also varies a lot across industry. Figure 1 plots mean excess return (ERET) against real estate

[8] These summary statistics are listed by COMPUSTAT Standard Industrial Classification code (SIC). Table A-1 in the Appendix provides a lookup table for SIC code and industry names.

concentration for each firm in the Electronics Industry (SIC 3600). The raw data clearly do not indicate any relationship between excess returns and the degree of real estate concentration in assets—in this industry or any other.[10]

Figure 2 presents a very different picture with its plot of the idiosyncratic component of excess return in the Electronics industry against the measure of real estate concentration. Even though this is a simple plot of the raw data, the regression line draws the clear negative relationship. That is, once systematic risk is controlled for, the higher is an electronics firm's real estate concentration, the lower its idiosyncratic return component. However, this is not the case when we pool the industry data together. As we see in Figure 3, the negative relationship between idiosyncratic components of excess returns and the measure of real estate concentration is virtually invisible through the crude plot of raw data of the pooled sample. This phenomenon suggests the necessity of controlling the industry-specific fixed effects and possibly other variables when we examine the relationship between idiosyncratic returns and the company's real estate concentration. Figure 4 confirms this, as the negative relation between the idiosyncratic component of return and real estate concentration is restored once industry-specific fixed effects are controlled for.

This relationship is examined in more detail in a series of regression analyses reported in Tables 2-5. Tables 2-3 report results for the pooled regressions across all firms and industries, while Tables 4-5 report findings for the Electronics Industry (SIC 3600). Table 2 reports the simplest of the second stage models estimating the correlation between the idiosyncratic component of return and the degree of real estate concentration for the pooled samples. Models

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[9] Obviously, these are not averages but extreme values that occur in at least one monthly observation.
[10] Plots for other industries and the pooled sample are available upon request. None of them reveal any relationship between excess returns and real estate concentration.

1-3 present results from models including a measure of real estate concentration and industry dummies.

Specifically, Model 1 estimates a specification in which real estate concentration (RC Ratio) is included in continuous form. The results indicate that even for very small increases about the mean concentration ratio, the idiosyncratic component of excess return is lower (with a slightly less than 10 percent confidence level). Statistical significance aside, the economic impact of small differences in real estate concentration is negligible. A one percentage point higher RC Ratio is associated with a –0.00004 lower monthly excess return. Even if compounded over a long time period, this does not lead to an economically significant difference in return performance.

Models 2 and 3 report much larger impacts. In these specifications, the real estate concentration measure is transformed into dichotomous form that divides companies into those with concentrations above the median for the sample (RC>50%) and those in the top quartile in terms of real estate concentration (RC>75%). Model 2's results indicate that firms with concentration levels above the median, the idiosyncratic component of excess return is lowered by –0.016 per month (0.16 percent). This exceeds both the mean and the median of the idiosyncratic return in the sample.

A series of other models is then estimated that includes other covariates that reasonably could be thought to explain the relation just described. For example, Models 4-6 include a firm size control because numerous studies on the cross-section of expected stock returns suggest that average returns on stocks are related to the size of the company.[11] There is a positive partial correlation between log size and the idiosyncratic component of excess return, but it is not

[11] See, for example, Fama and French (1992, 1993) for a discussion.

statistically significant. Nor is there is any impact of including this variable on the real estate concentration coefficients.

The next set of models (#7-#9) includes a control for overall return performance. The Poor Performance variable takes on a value of 1 if the company experienced at least a ten percent drop in market capitalization over the sample period. This dummy variable is included to control for the possibility that the negative relation between RC with firm return is due to the fact that declining firms just happen to end up with a lot of real estate on their books after they disgorge other assets on the way down. As expected, Poor Performance is strongly negatively correlated with return. Its inclusion does lower the point estimates on the real estate concentration controls, but there is no statistically or economically significant change. Naturally, the R-squares improve considerably.

Table 3 then presents another six models that include our first controls for high and low beta firms. Models #10-#12, which include a dummy variable indicating whether the firm's beta is less than 0.9 (approximately the beta of commercial real estate), do not indicate any appreciable change in results. However, Models #13-#15, which effectively include the interaction of beta with real estate concentration provide the first indication that all the return penalty occurs in firms with relatively high betas (>0.9 in this case). That is, only the coefficients on the interaction of RC with H Beta are significantly negative. The coefficients on the interaction of RC with L Beta not only are statistically insignificant, but the point estimates are very close to zero.

Tables 5 and 6 report analogous results for the Electronics Industry (SIC 3600). This is one of the few industries for which there were enough individual firm observations to perform the estimations within industry. The size of the impact on firm return is larger than average for this industry, but the pattern of results is the same as for the pooled sample. That is, we cannot reject the null hypothesis that a return penalty occurs only for high risk firms in the industry.

Figure 5 plots the weighted average of the idiosyncratic component of return by degree of real estate concentration for all firms in the pooled sample based on the results for Models #8 and #9 in Table 2.[12] The difference in $\hat{\alpha}$ is about 0.15% per month for relatively high versus low real estate concentration firms. Table 6 reports $\hat{\alpha}$'s for all high real estate concentration firms split by whether firm beta is greater or less than 0.9 (i.e., based on Models #14 and #15 from Table 3). A comparison of Figure 6 with Figure 5 shows that the idiosyncratic component for low beta firms is virtually identical to that for low real estate concentration firms. However the idiosyncratic component for high beta firms is much lower. Effectively, all of the return differential is reflected in high risk firms. Figures 7 and 8 report the analogous results for the Electronics Industry. The differentials are wider than average in this industry, but the pattern of findings is the same as for the pooled sample. That is, we cannot reject the null hypothesis that all the impact is reflected in the returns of the riskier firms in the industry.

Figures 9-12 then present how these threshold differences translate into annual excess returns for the pooled sample and Electronics Industry samples, respectively. Estimated annual excess returns are calculated based on equation (3)

$$AERET = \left[\left(ERET + 1 \right)^{12} - 1 \right] \qquad (3),$$

where *AERET* is the annual excess returns, and *ERET* is computed based on equation (4):

$$ERET = \hat{\alpha} + \hat{\beta}\, EMKT \qquad (4),$$

[12] The computations assume a firm of median size and no drop in equity market capitalization of 10% or more (i.e., Poor Performance=0).

where α is the estimated idiosyncratic component of excess return from Figures 5-8, β is the median systematic risk estimated from the first stage regression[13], and the *EMKT* is the excess market returns.

Figure 9 shows there is a nearly 2.4 percentage point difference in annual return between high and low real estate concentration firms based on Models #8 and #9 from Table 2.[14] Figure 10 then confirms that this difference is associated virtually exclusively with the riskier firms with betas in excess of 0.9.[15] As before, there is little difference in results if one divides the sample into half or into the upper quartile. Figures 11-12 then report analogous, but much stronger findings for the Electronics Industry. Once again, all of the differential is reflected in the returns of the riskier firms in the industry.

Conclusion

There is a growing debate as to the wisdom of non-real estate companies investing large amounts of scarce capital in real estate. Capital budgeting theory does not suggest firms should be penalized for investing in real estate *per se* as long as they obtain the proper return for their investment. However, our findings strongly suggest that firms with high degrees of real estate concentration and high levels of risk as measured by beta do experience lower returns. It could be that investors do not wish risky firms to use relatively large amounts of capital to invest in such assets; it also could be that investors do not fully comprehend how ownership of such

[13] For the pooled sample, we use the median beta across all 717 firms. For the Electronics Industry calculation, we use the industry median.

[14] The level of excess returns reported is high because we eliminate the impact of all poor performers who lost more than ten percent of the equity market capitalization. This does not affect the differences in returns that are of most interest to us, as indicated by the fact that including the Poor Performer dummy has very little impact on the coefficients of the interactions of firm risk (beta) with real estate concentration (RC).

[15] We experimented with other beta cutoffs and found similar results for the 0.8 and 1.0 cutoff points.

assets lowers the risk profile of high risk firms, with higher risk firms being penalized inappropriately for the investment in real estate.

While we cannot distinguish between the two explanations in the data, we suspect that both have some basis in truth. If so, non-real estate firms with relatively large amounts of real estate on their books should be encouraged to disgorge at least some of their real estate. That said, any such decision should be approached with caution, as if the investor ignorance effect is predominant, the ultimate outcome is not perfectly clear. In this case, the first few firms are likely to realize return improvements, but if learning occurs because of the asset sales, investors ultimately will become aware that the long-run risk profile of the firm has changed (i.e., increased). If so, the true riskiness of the firm should be appropriately priced with a higher discount rate attached to the firm holding relatively little of the lower risk real property assets.

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Table 1. Mean, Median, and Standard Deviation of Key Variables by Industry[1]

SIC[2]	N[3]	ERET[4]	ALPHA[5]	BETA[6]	RC[7]	SIZE[8]	CSIZE[9]
Pooled[10]	**717**	**0.00864**	**0.00044**	**1.13676**	**0.20050**	**1.68813**	**3.76880**
		0.00127	0.00002	1.12135	0.16276	0.25627	1.44010
		(0.124)	(0.009)	(0.340)	(0.158)	(4.709)	(11.984)
0100	**4**	**0.00797**	**0.00159**	**0.87556**	**0.34431**	**0.96227**	**2.49560**
		0.00313	0.00066	0.86490	0.27473	1.08296	2.74680
		(0.095)	(0.002)	(0.192)	(0.224)	(0.583)	(1.169)
0200	**1**	**0.00656**	**-0.00005**	**0.90762**	**0.18885**	**0.33333**	**0.45500**
		-0.01929	-0.00005	0.90762	0.18885	0.33333	0.45500
		(0.119)	-	-	-	-	-
1000	**1**	**0.00511**	**0.00314**	**0.27153**	**0.16938**	**1.04013**	**3.54760**
		0.00820	0.00314	0.27153	0.16938	1.04013	3.54760
		(0.118)	-	-	-	-	-
1200	**1**	**-0.00110**	**-0.00763**	**0.89687**	**0.04172**	**0.36461**	**2.25200**
		0.00600	-0.00763	0.89687	0.04172	0.36461	2.25200
		(0.083)	-	-	-	-	-
1300	**6**	**0.00388**	**-0.00545**	**1.29490**	**0.09111**	**3.01539**	**7.19500**
		-0.00469	-0.00773	1.39692	0.10888	1.55620	0.25570
		(0.177)	(0.014)	(0.197)	(0.029)	(4.119)	(18.234)
1400	**2**	**0.00708**	**0.00149**	**0.76655**	**0.54683**	**1.04483**	**0.82390**
		0.00414	0.00149	0.76655	0.54683	1.04483	0.82390
		(0.081)	(0.003)	(0.126)	(0.433)	(0.452)	(0.300)
1500	**1**	**0.00353**	**-0.00710**	**1.45903**	**0.13951**	**0.14387**	**0.42380**
		-0.00436	-0.00710	1.45903	0.13951	0.14387	0.42380
		(0.135)	-	-	-	-	-
1600	**7**	**0.00627**	**-0.00038**	**0.94274**	**0.09425**	**0.14835**	**0.88550**
		-0.00574	-0.00042	1.00570	0.08223	0.05060	0.87010
		(0.151)	(0.004)	(0.521)	(0.029)	(0.241)	(0.980)
2000	**34**	**0.01269**	**0.00568**	**0.96787**	**0.21612**	**3.91760**	**2.99130**
		0.00848	0.00687	0.97730	0.21479	1.10082	2.49360
		(0.095)	(0.010)	(0.205)	(0.105)	(6.424)	(2.772)
2100	**2**	**0.01743**	**0.01032**	**0.97553**	**0.23075**	**9.81219**	**4.19560**
		0.01381	0.01032	0.97553	0.23075	9.81219	4.19560
		(0.071)	(0.000)	(0.102)	(0.067)	(6.462)	(0.213)
2200	**20**	**0.01314**	**0.00454**	**1.20879**	**0.14573**	**0.28920**	**7.84690**
		0.00461	0.00230	1.11866	0.14035	0.10251	3.06480
		(0.128)	(0.009)	(0.380)	(0.040)	(0.342)	(10.765)
2300	**5**	**0.00859**	**0.00140**	**0.97755**	**0.16250**	**0.45732**	**1.31820**
		0.00331	0.00189	1.00713	0.15780	0.08256	0.73110
		(0.100)	(0.007)	(0.274)	(0.049)	(0.750)	(1.537)

Table 1. Mean, Median, and Standard Deviation of Key Variables by Industry (Continued)

SIC	N	ERET	ALPHA	BETA	RC	SIZE	CSIZE
2400	**8**	**0.01047**	**0.00022**	**1.42290**	**0.16126**	**1.76082**	**3.16590**
		0.00343	-0.00304	1.38180	0.13288	1.68278	2.48500
		(0.115)	(0.006)	(0.215)	(0.050)	(1.900)	(2.291)
2500	**12**	**0.01171**	**0.00415**	**1.02076**	**0.20616**	**0.39153**	**6.38350**
		0.00457	0.00180	0.96848	0.21156	0.22971	3.36900
		(0.111)	(0.008)	(0.390)	(0.068)	(0.457)	(7.400)
2600	**26**	**0.00933**	**0.00044**	**1.21494**	**0.17291**	**1.78787**	**3.01390**
		0.00362	0.00023	1.22546	0.12267	0.95274	1.56640
		(0.098)	(0.008)	(0.288)	(0.146)	(3.189)	(4.657)
2700	**28**	**0.00819**	**0.00004**	**1.12482**	**0.15723**	**1.36377**	**1.94120**
		0.00584	0.00025	1.14172	0.15434	0.57640	1.26060
		(0.092)	(0.005)	(0.249)	(0.054)	(1.534)	(1.895)
2800	**68**	**0.01342**	**0.00541**	**1.12438**	**0.18383**	**3.67848**	**8.25470**
		0.00929	0.00429	1.11559	0.17407	0.86446	2.56630
		(0.113)	(0.009)	(0.302)	(0.093)	(6.689)	(30.868)
2900	**2**	**0.01371**	**0.00501**	**1.19388**	**0.55389**	**0.10393**	**2.56790**
		-0.00042	0.00501	1.19388	0.55389	0.10393	2.56790
		(0.113)	(0.002)	(0.187)	(0.335)	(0.033)	(1.905)
3000	**18**	**0.01491**	**0.00652**	**1.20143**	**0.17127**	**0.66529**	**5.81220**
		0.00023	0.00393	1.22645	0.18704	0.11203	1.53310
		(0.153)	(0.009)	(0.317)	(0.056)	(1.069)	(10.957)
3100	**4**	**0.01069**	**0.00540**	**0.71815**	**0.16460**	**0.01073**	**3.05180**
		-0.00656	0.00168	0.78736	0.16173	0.00607	2.44360
		(0.135)	(0.005)	(0.103)	(0.051)	(0.012)	(1.177)
3200	**10**	**0.00634**	**-0.00208**	**1.15559**	**0.39312**	**0.77974**	**2.47780**
		0.00032	-0.00240	1.06700	0.22588	0.29827	1.03710
		(0.126)	(0.009)	(0.379)	(0.393)	(1.134)	(3.209)
3300	**24**	**0.00627**	**-0.00241**	**1.18158**	**0.22466**	**0.84851**	**2.29060**
		-0.00037	-0.00344	1.12839	0.15835	0.24473	1.28400
		(0.124)	(0.008)	(0.241)	(0.203)	(1.240)	(2.775)
3400	**31**	**0.00524**	**-0.00174**	**0.95558**	**0.18344**	**0.50379**	**1.56290**
		-0.00252	-0.00153	0.91397	0.16250	0.10262	0.69550
		(0.112)	(0.010)	(0.311)	(0.129)	(1.142)	(2.916)
3500	**66**	**0.00810**	**-0.00065**	**1.22145**	**0.16683**	**1.62743**	**3.89440**
		-0.00410	-0.00120	1.25287	0.16290	0.15577	1.15050
		(0.149)	(0.012)	(0.351)	(0.064)	(7.788)	(7.149)
3600	**69**	**0.00418**	**-0.00483**	**1.23779**	**0.16648**	**1.64957**	**1.82720**
		-0.00420	-0.00390	1.21603	0.15454	0.13659	1.00580
		(0.133)	(0.007)	(0.364)	(0.065)	(5.230)	(3.090)

Table 1. Mean, Median, and Standard Deviation of Key Variables by Industry (Continued)

SIC	N	ERET	ALPHA	BETA	RC	SIZE	CSIZE
3700	**37**	**0.00741**	**-0.00151**	**1.21858**	**0.16279**	**2.56880**	**2.70680**
		0.00202	-0.00202	1.19713	0.16174	0.60932	0.76130
		(0.110)	(0.008)	(0.281)	(0.059)	(4.903)	(4.764)
3800	**33**	**0.00666**	**-0.00175**	**1.15052**	**0.17424**	**1.93062**	**2.61570**
		0.00056	-0.00148	1.10112	0.17253	0.77372	0.91310
		(0.124)	(0.009)	(0.313)	(0.066)	(3.045)	(4.897)
3900	**12**	**0.01312**	**0.00433**	**1.20618**	**0.15621**	**0.25250**	**8.20180**
		0.00099	0.00782	1.19763	0.14566	0.09810	2.37860
		(0.130)	(0.008)	(0.342)	(0.071)	(0.382)	(11.318)
4200	**3**	**0.00254**	**-0.00733**	**1.46273**	**0.27654**	**0.30650**	**0.60330**
		-0.00559	-0.00531	1.27832	0.21118	0.02730	0.53510
		(0.166)	(0.014)	(0.275)	(0.187)	(0.368)	(1.336)
4400	**2**	**0.00983**	**0.00282**	**0.96217**	**0.45784**	**0.25310**	**3.46140**
		0.00069	0.00282	0.96217	0.45784	0.25310	3.46140
		(0.115)	(0.007)	(0.258)	(0.440)	(0.185)	(1.317)
4500	**2**	**-0.00134**	**-0.00890**	**1.03768**	**0.13918**	**0.44090**	**-0.10000**
		-0.01659	-0.00890	1.03768	0.13918	0.44090	-0.10000
		(0.102)	(0.002)	(0.212)	(0.110)	(0.416)	(0.240)
4600	**1**	**0.01149**	**0.00814**	**0.49152**	**0.05994**	**0.32640**	**0.90910**
		0.00894	0.00814	0.49152	0.05994	0.32640	0.90910
		(0.051)	-	-	-	-	-
4700	**2**	**-0.00510**	**-0.01348**	**1.15114**	**0.04002**	**0.18430**	**0.98400**
		-0.00501	-0.01348	1.15114	0.04002	0.18430	0.98400
		(0.162)	(0.006)	(0.255)	(0.002)	(0.181)	(1.271)
4800	**5**	**0.01210**	**0.00439**	**1.04154**	**0.09406**	**9.86530**	**3.46150**
		0.00431	0.00626	0.90223	0.07690	0.63350	1.84780
		(0.185)	(0.008)	(0.288)	(0.040)	(15.679)	(4.892)
4900	**3**	**0.01166**	**0.00249**	**1.32409**	**0.20514**	**0.47420**	**2.54530**
		0.00295	-0.00153	1.23518	0.12036	0.22030	0.83960
		(0.130)	(0.007)	(0.122)	(0.154)	(0.361)	(3.211)
5000	**16**	**0.00726**	**-0.00175**	**1.26229**	**0.21278**	**0.35160**	**2.31100**
		0.00062	-0.00092	1.33248	0.11825	0.18250	1.35360
		(0.111)	(0.007)	(0.236)	(0.305)	(0.475)	(3.514)
5100	**7**	**0.00841**	**0.00146**	**0.97694**	**0.16113**	**1.12410**	**2.39500**
		0.00847	-0.00008	0.88671	0.13207	0.92450	1.23100
		(0.084)	(0.008)	(0.164)	(0.071)	(0.860)	(2.876)
5200	**2**	**0.02002**	**0.00959**	**1.43142**	**0.31060**	**3.94620**	**21.46490**
		0.02332	0.00959	1.43142	0.31060	3.94620	21.46490
		(0.116)	(0.010)	(0.169)	(0.038)	(2.582)	(17.603)

Table 1. Mean, Median, and Standard Deviation of Key Variables by Industry (Continued)

SIC	N	ERET	ALPHA	BETA	RC	SIZE	CSIZE
5300	**14**	**0.01143**	**0.00234**	**1.30608**	**0.21519**	**4.73910**	**3.13490**
		0.00729	0.00349	1.31152	0.22116	1.28380	1.61110
		(0.109)	(0.007)	(0.331)	(0.095)	(8.260)	(3.375)
5400	**14**	**0.00666**	**0.00012**	**0.90989**	**0.23754**	**0.92410**	**1.61340**
		-0.00098	-0.00236	0.85830	0.22996	0.86670	0.89770
		(0.101)	(0.006)	(0.229)	(0.162)	(0.986)	(1.700)
5500	**1**	**0.01410**	**0.00609**	**1.10003**	**0.60802**	**0.80299**	**5.93240**
		0.02383	0.00609	1.10003	0.60802	0.80299	5.93240
		(0.092)	-	-	-	-	-
5600	**6**	**0.00804**	**-0.00177**	**1.37546**	**0.16709**	**0.66599**	**2.23270**
		0.00141	0.00135	1.67788	0.13720	0.50456	2.30940
		(0.118)	(0.007)	(0.420)	(0.137)	(0.722)	(1.714)
5700	**5**	**0.01051**	**0.00074**	**1.34277**	**0.08574**	**0.74598**	**14.06830**
		0.00024	0.00448	1.26217	0.06148	0.21089	1.65340
		(0.142)	(0.011)	(0.185)	(0.046)	(1.146)	(24.560)
5800	**18**	**0.01053**	**0.00204**	**1.16823**	**0.42664**	**1.00546**	**3.03190**
		-0.00267	0.00359	1.12135	0.48384	0.32038	0.89730
		(0.125)	(0.006)	(0.292)	(0.222)	(2.542)	(4.846)
5900	**11**	**0.00575**	**-0.00199**	**1.07030**	**0.16447**	**1.45372**	**1.90170**
		-0.00255	-0.00177	1.06374	0.11746	0.12398	1.17260
		(0.124)	(0.008)	(0.292)	(0.138)	(2.016)	(2.048)
6300	**9**	**0.00507**	**-0.00158**	**1.01241**	**0.16841**	**0.73997**	**3.01820**
		-0.00335	-0.00199	1.02443	0.12463	0.10539	0.88550
		(0.127)	(0.013)	(0.325)	(0.112)	(1.150)	(5.469)
6400	**1**	**0.02017**	**0.01312**	**0.96743**	**0.08725**	**0.15215**	**0.87880**
		0.01689	0.01312	0.96743	0.08725	0.15215	0.87880
		(0.093)	-	-	-	-	-
6700	**7**	**0.00973**	**0.00563**	**0.56521**	**0.45814**	**0.10013**	**1.63360**
		0.00003	0.00564	0.51433	0.34724	0.06000	0.91900
		(0.100)	(0.008)	(0.232)	(0.275)	(0.072)	(1.509)
7000	**4**	**0.00491**	**-0.00264**	**1.03584**	**0.48258**	**1.27128**	**0.39120**
		0.00076	-0.00301	1.23482	0.51304	2.16368	1.04110
		(0.145)	(0.004)	(0.543)	(0.194)	(1.147)	(1.001)
7200	**4**	**0.00619**	**-0.00270**	**1.21952**	**0.23736**	**0.35868**	**1.55230**
		0.00458	-0.00297	1.15008	0.22966	0.27567	0.92150
		(0.092)	(0.004)	(0.194)	(0.055)	(0.272)	(1.332)
7300	**18**	**0.00623**	**-0.00115**	**1.02089**	**0.11027**	**1.11246**	**2.62450**
		-0.00196	-0.00032	1.01020	0.10087	0.36461	0.89680
		(0.145)	(0.012)	(0.345)	(0.062)	(2.532)	(4.439)

Table 1. Mean, Median, and Standard Deviation of Key Variables by Industry (Continued)

SIC	N	ERET	ALPHA	BETA	RC	SIZE	CSIZE
7500	**2**	**0.00194**	**-0.00636**	**1.13859**	**0.34190**	**0.91200**	**0.11780**
		-0.00582	-0.00636	1.13859	0.34190	0.91200	0.11780
		(0.089)	(0.000)	(0.383)	(0.250)	(0.863)	(0.665)
7800	**4**	**0.01167**	**0.00393**	**1.08022**	**0.26110**	**3.19442**	**4.55460**
		0.00963	0.00224	1.17784	0.19538	0.06371	3.75050
		(0.120)	(0.006)	(0.217)	(0.181)	(5.169)	(3.636)
7900	**8**	**0.01120**	**0.00570**	**0.77618**	**0.56826**	**0.37516**	**16.18070**
		0.00163	0.00670	0.57282	0.65605	0.13389	5.23060
		(0.133)	(0.013)	(0.385)	(0.193)	(0.489)	(38.440)
8000	**7**	**0.00880**	**-0.00106**	**1.33674**	**0.39091**	**0.52373**	**3.34610**
		-0.00597	-0.00363	1.39873	0.40508	0.12017	1.36460
		(0.168)	(0.008)	(0.337)	(0.220)	(0.749)	(5.080)
8700	**8**	**0.00398**	**-0.00309**	**1.05516**	**0.17509**	**0.12223**	**1.85150**
		-0.00472	-0.00339	1.01925	0.14829	0.02322	1.88710
		(0.152)	(0.007)	(0.322)	(0.145)	(0.224)	(2.776)
9900	**1**	**0.00671**	**-0.00343**	**1.39222**	**0.09262**	**0.12946**	**0.15830**
		-0.00276	-0.00343	1.39222	0.09262	0.12946	0.15830
		(0.126)	-	-	-	-	-

[1] Mean values are in bold type face, with the medians immediately below. Standard deviations are in parentheses.
[2] SIC is the COMPUSTAT Standard Industrial Classification code. See Table A-1 in Appendix for a list of SIC codes and industry names.
[3] Number of firms in the sample.
[4] ERET is monthly excess return over 30-day T-bill returns.
[5] ALPHA is the idiosyncratic component of the monthly excess returns estimated from the first stage regressions.
[6] BETA is the systematic risk of the monthly excess returns estimated from the first stage regressions.
[7] RC is the ratio of plan and equipment (buildings at cost plus land) divided by total assets, all at book value.
[8] SIZE is year-end equity market capitalization, measured in billion dollars.
[9] CSIZE is the percentage change in market capitalization during the relevant sample period.
[10] The pooled sample has 75,054 observations of monthly returns from 717 firms in 57 industries.

Table 2. Second Stage Estimation with the Pooled Sample

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
RC Ratio	-0.00416 (1.58)			-0.00432 (1.64)			-0.00414 (1.75)		
RC > 50%		-0.00162 (2.18)			-0.00162 (2.19)			-0.00117 (1.76)	
RC > 75%			-0.00158 (1.75)			-0.00157 (1.73)			-0.00141 (1.73)
Log Size				0.00024 (1.30)	0.00023 (1.24)	0.00022 (1.20)	-0.00038 (2.15)	-0.00038 (2.20)	-0.00039 (2.25)
Poor Performance							-0.01229 (12.60)	-0.01221 (12.50)	-0.01228 (12.58)
R^2	0.1545	0.1574	0.1552	0.1567	0.1593	0.1571	0.3207	0.3208	0.3207

NOTES: The pooled sample contains 717 firms. t-ratios are in parenthesis. Industry specific fixed effects were estimated for all models, but they are not reported here.

RC Ratio Property, Plan and Equipment (building at cost plus land) divided by Total Assets.

RC > 50% Dummy variable indicating that the company's RC Ratio is above the 50th percentile for the sample.

RC > 75% Dummy variable indicating that the company's RC Ratio is above the 75th percentile for the sample.

Log Size Log of Year End Equity Market Capitalization.

Poor Performance Dummy variable indicating the company suffered at least a ten percent decline in market capitalization during the sample period.

Table 3. Second Stage Estimation with the Pooled Sample

Variable	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
RC Ratio	-0.00431 (1.82)					
RC > 50%		-0.00123 (1.85)				
RC > 75%			-0.00141 (1.73)			
RC Ratio * H Beta				-0.00629 (2.41)		
RC Ratio * L Beta				-0.00034 (0.11)		
RC > 50%*H Beta					-0.00164 (2.26)	
RC > 50%*L Beta					0.00009 (0.09)	
RC > 75%*H Beta						-0.00187 (2.08)
RC > 75%*L Beta						0.00000 (0.00)
Beta < 0.9	0.00092 (1.12)	0.00094 (1.15)	0.00082 (1.00)			
Log Size	-0.00034 (1.88)	-0.00034 (1.93)	-0.00036 (2.01)	-0.00030 (1.70)	-0.00034 (1.91)	-0.00036 (2.03)
Poor Performance	-0.01235 (12.64)	-0.01226 (12.54)	-0.01232 (12.61)	-0.01233 (12.66)	-0.01229 (12.58)	-0.01228 (12.59)
R^2	0.3220	0.3221	0.3217	0.3246	0.3225	0.3222

NOTES: The pooled sample contains 717 firms. t-ratios are in parenthesis. Industry specific fixed effects were estimated for all models, but they are not reported here.
RC Ratio Property, Plan and Equipment (building at cost plus land) divided by Total Assets.
RC > 50% Dummy variable indicating that the company's RC Ratio is above the 50th percentile for the sample.
RC > 75% Dummy variable indicating that the company's RC Ratio is above the 75th percentile for the sample.
RC * H/L Beta RC variables interacted with a dummy indicating whether beta is above or below 0.9.
Beta < 0.9 Dummy variable indicating that the company's estimated beta is below 0.9.
Log Size Log of Year End Equity Market Capitalization.
Poor Performance Dummy variable indicating the company has suffered at least a ten percent decline in market capitalization during the sample period.

Table 4. Second Stage Estimation in the Electronics Industry

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Intercept	0.00050 (0.22)	-0.00303 (2.43)	-0.00315 (3.35)	-0.00507 (0.96)	-0.00770 (1.49)	-0.00821 (1.72)	0.00743 (1.46)	0.00574 (1.13)	0.00373 (0.79)
RC Ratio	-0.03164 (2.47)			-0.03196 (2.50)			-0.03107 (2.86)		
RC > 50%		-0.00317 (1.86)			-0.00303 (1.77)			-0.00346 (2.39)	
RC > 75%			-0.00607 (3.31)			-0.00603 (3.29)			-0.00543 (3.46)
Log Size				0.00047 (1.17)	0.00038 (0.93)	0.00042 (1.08)	-0.00037 (1.00)	-0.00050 (1.30)	-0.00039 (1.05)
Poor Performance							-0.00902 (5.13)	-0.00934 (5.22)	-0.00865 (5.04)
R^2	0.0833	0.0493	0.1403	0.1020	0.0616	0.1553	0.3611	0.3389	0.3925

NOTES: The sample contains 69 firms. t-ratios are in parenthesis. Industry specific fixed effects were estimated for all models, but they are not reported here.
RC Ratio Property, Plan and Equipment (building at cost plus land) divided by Total Assets.
RC > 50% Dummy variable indicating that the company's RC Ratio is above the 50th percentile for the sample.
RC > 75% Dummy variable indicating that the company's RC Ratio is above the 75th percentile for the sample.
Log Size Log of Year End Equity Market Capitalization.
Poor Performance Dummy variable indicating the company has suffered at least a ten percent decline in market capitalization during the sample period.

Table 5. Second Stage Estimation in the Electronics Industry

Variable	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
Intercept	0.00552 (1.09)	0.00384 (0.76)	0.00171 (0.37)	0.00577 (1.13)	0.00490 (0.94)	0.00331 (0.71)
RC Ratio	-0.03066 (2.89)					
RC > 50%		-0.00347 (2.45)				
RC > 75%			-0.00561 (3.68)			
RC Ratio * H Beta				-0.03224 (3.02)		
RC Ratio * L Beta				-0.00851 (0.53)		
RC > 50%*H Beta					-0.00373 (2.49)	
RC > 50%*L Beta					-0.00153 (0.51)	
RC > 75%*H Beta						-0.00619 (3.70)
RC > 75%*L Beta						-0.00152 (0.44)
Beta < 0.9	0.00435 (2.04)	0.00448 (2.06)	0.00484 (2.34)			
Log Size	-0.00026 (0.69)	-0.00038 (1.00)	-0.00025 (0.71)	-0.00025 (0.67)	-0.00043 (1.09)	-0.00035 (0.95)
Poor Performance	-0.00957 (5.51)	-0.00991 (5.61)	-0.00925 (5.51)	-0.00953 (5.46)	-0.00931 (5.18)	-0.00891 (5.18)
R^2	0.3999	0.3801	0.4405	0.3936	0.3446	0.4074

NOTES: The pooled sample contains 69 firms. t-ratios are in parenthesis. Industry specific fixed effects were estimated for all models, but they are not reported here.

RC Ratio Property, Plan and Equipment (building at cost plus land) divided by Total Assets.

RC > 50% Dummy variable indicating that the company's RC Ratio is above the 50th percentile for the sample.

RC > 75% Dummy variable indicating that the company's RC Ratio is above the 75th percentile for the sample.

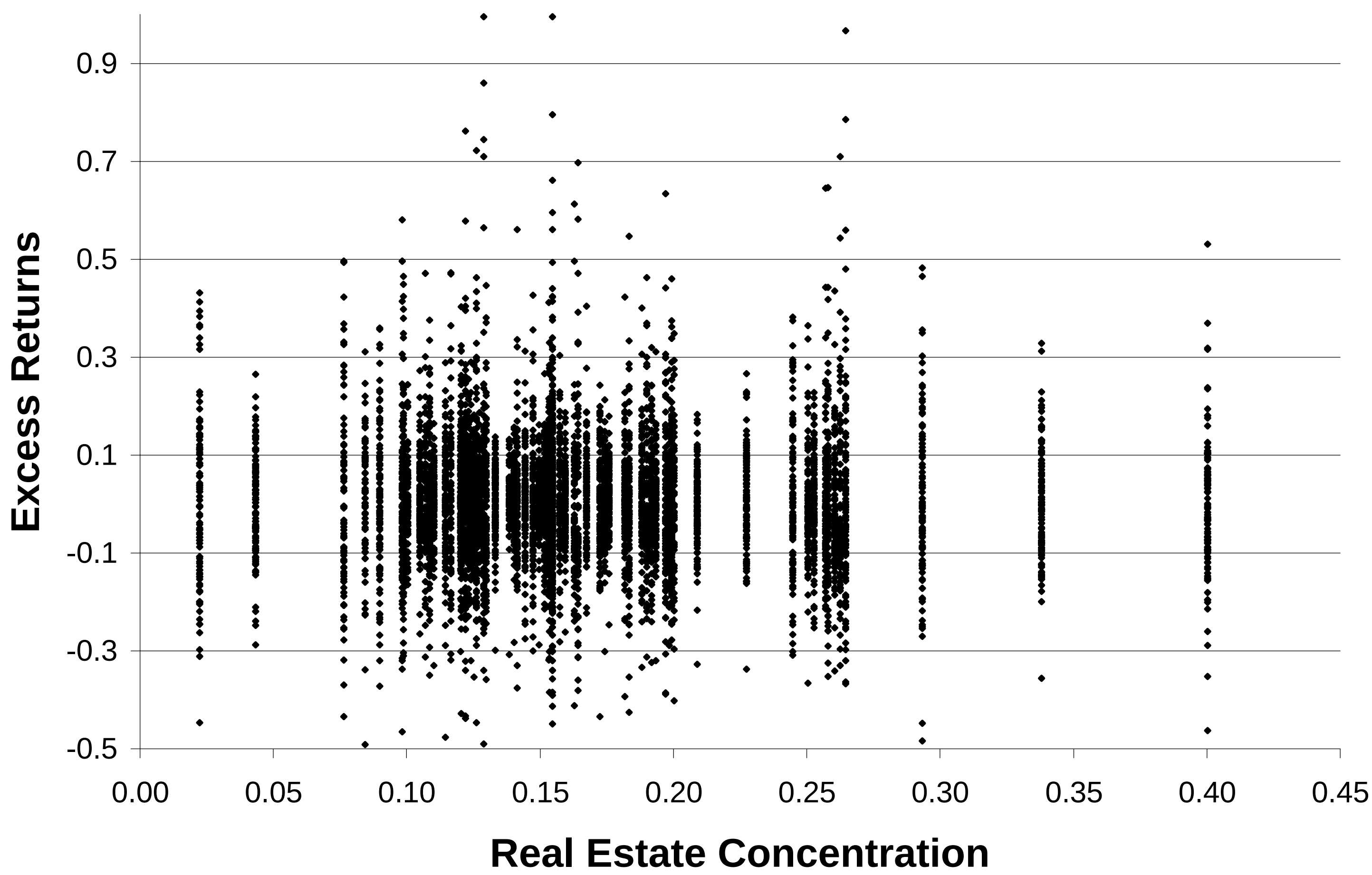
RC * H/L Beta RC variables interacted with a dummy indicating whether beta is above or below 0.9.

Beta < 0.9 Dummy variable indicating that the company's estimated beta is below 0.9.

Log Size Log of Year End Equity Market Capitalization.

Poor Performance Dummy variable indicating the company has suffered at least a ten percent decline in market capitalization during the sample period.

Fig. 1 Plot of Excess Returns on Real Estate Concentration in Electronics Industry



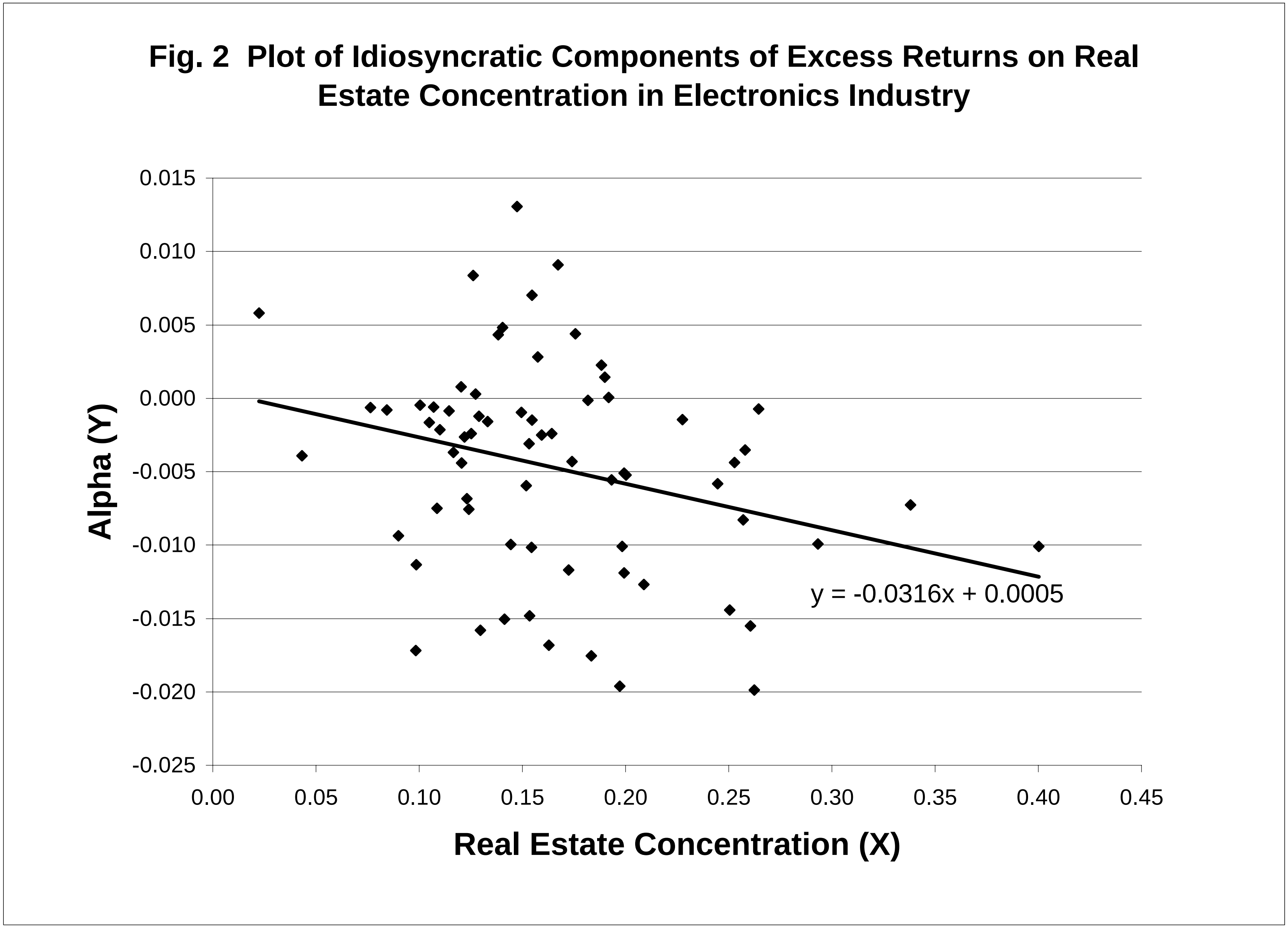


Fig. 2 Plot of Idiosyncratic Components of Excess Returns on Real Estate Concentration in Electronics Industry
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
Alpha (Y)
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
0.45
Real Estate Concentration (X)
y = -0.0316x + 0.0005

Fig. 3 Plot of Idiosyncratic Components of Excess Returns on Real Estate Concentration Using Pooled Sample

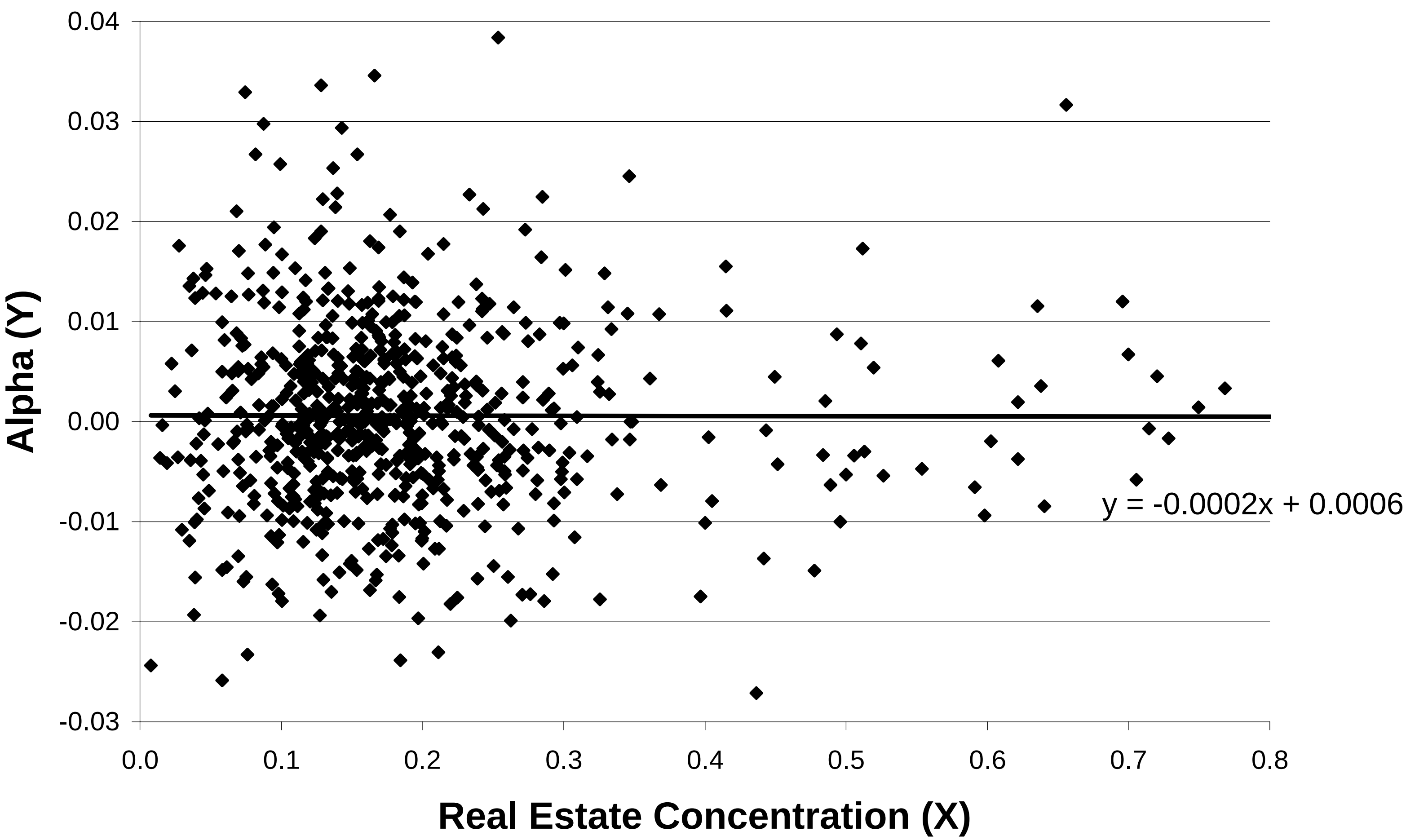


Fig. 4 Plot of Idiosyncratic Components of Excess Returns with Control of Industry Fixed-Effects Using Pooled Sample

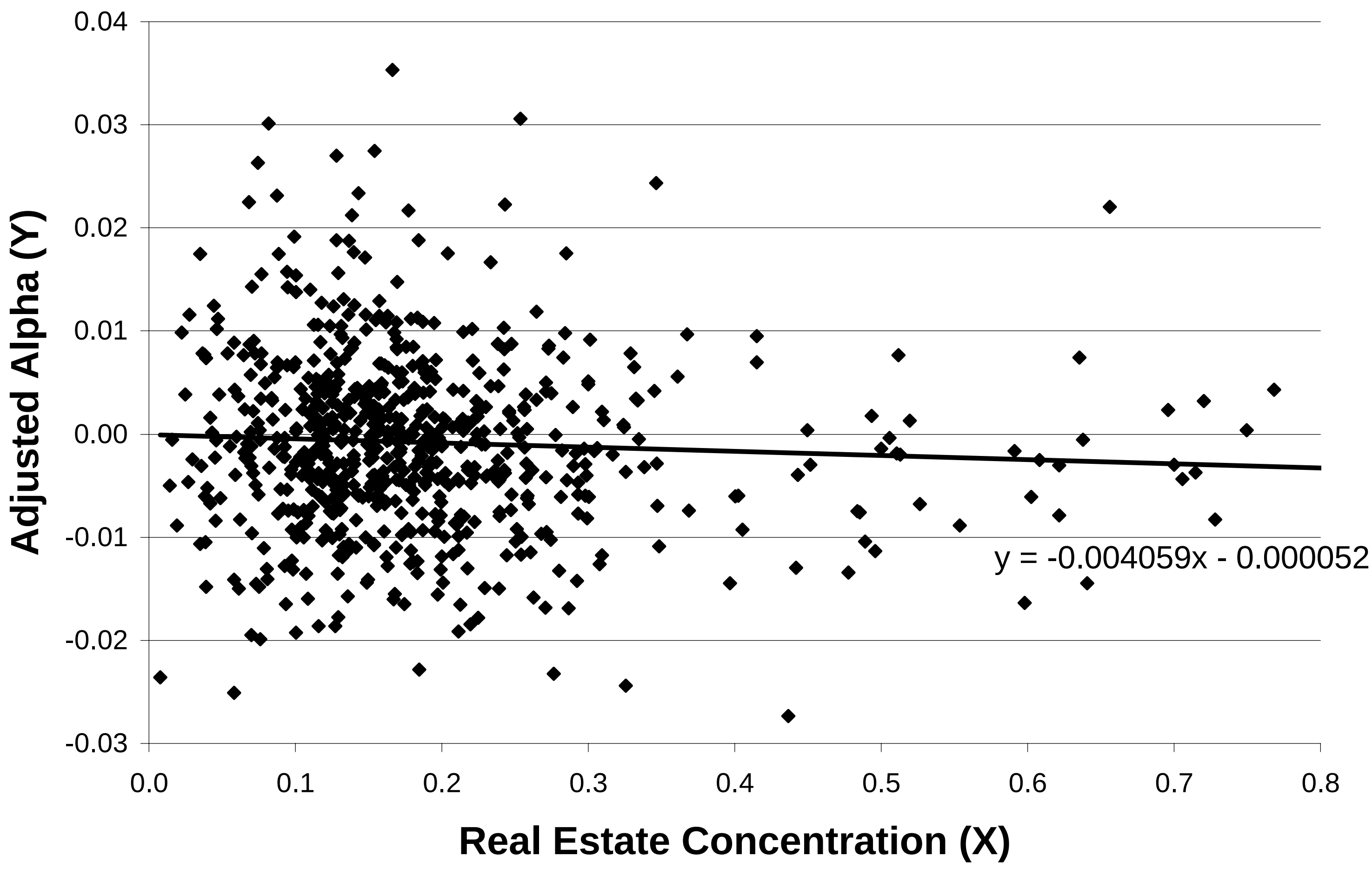


Fig. 5 Plot of Idiosyncratic Component of Monthly Excess Returns by Percentile of Real Estate Concentration Using Pooled Sample (Models 8 and 9, Table 2)

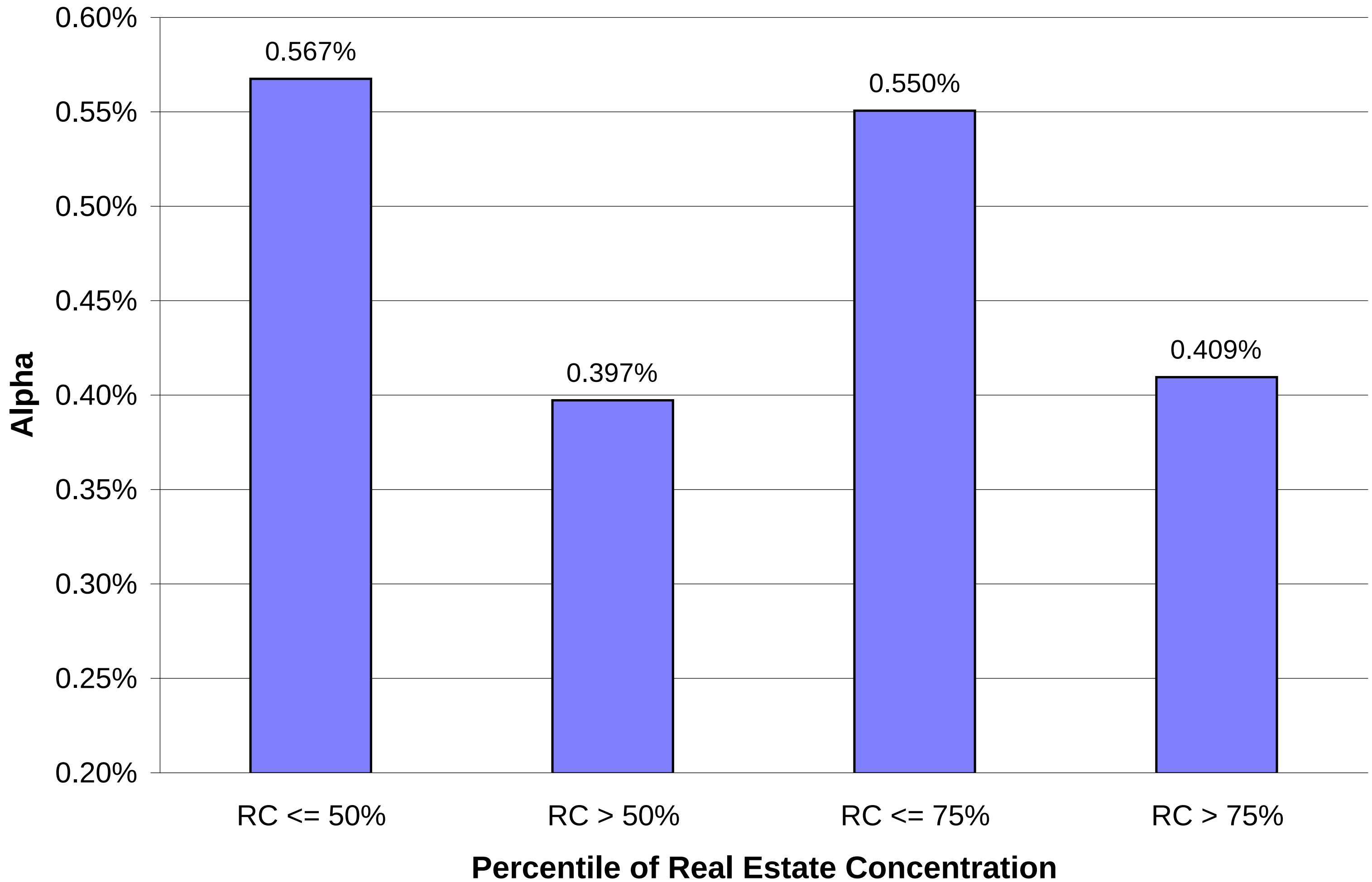
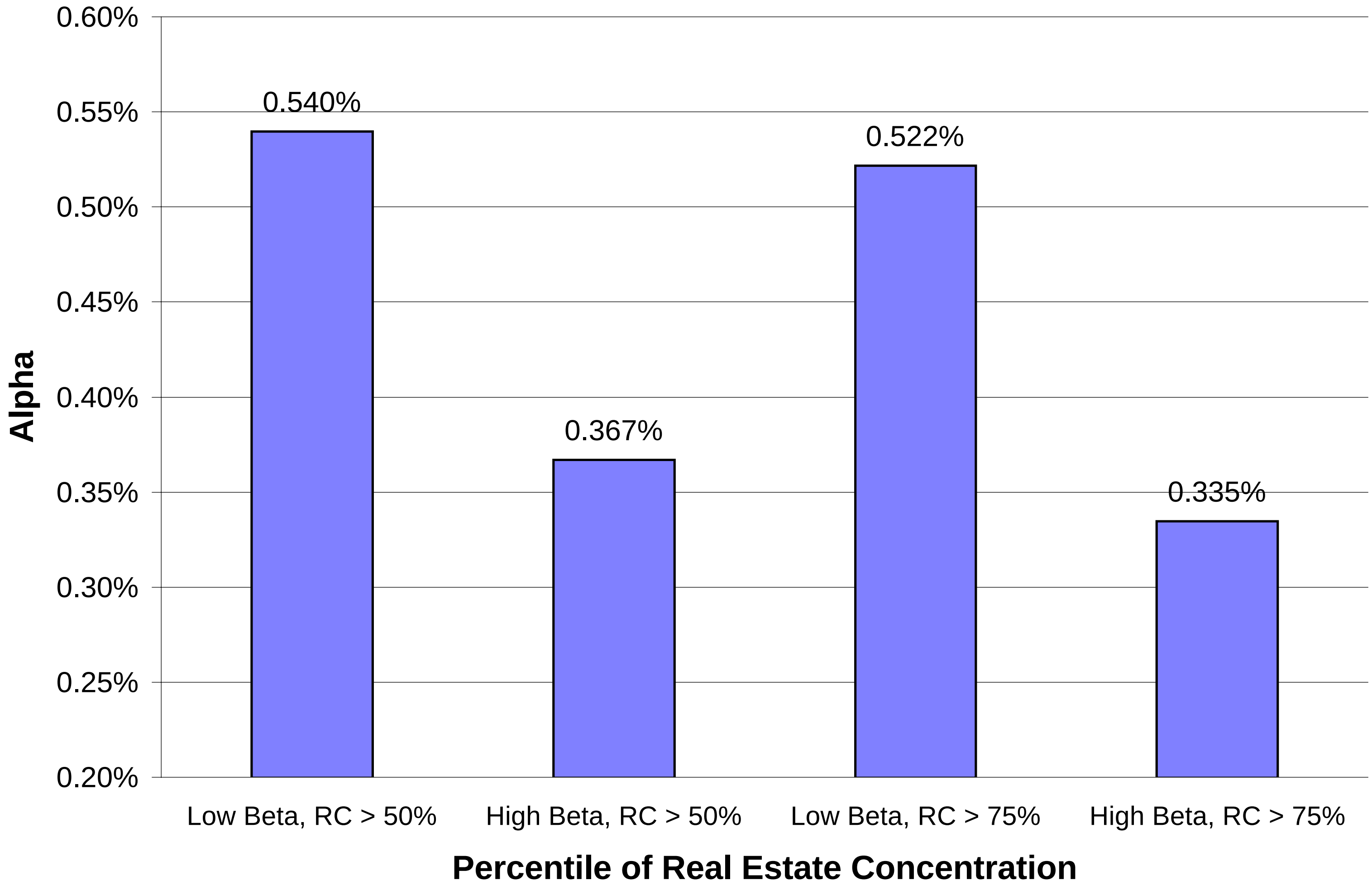


Fig. 6 Plot of Idiosyncratic Component of Monthly Excess Returns by Low Beta and High Beta Companies Using Pooled Sample (Models 14 and 15, Table 3)



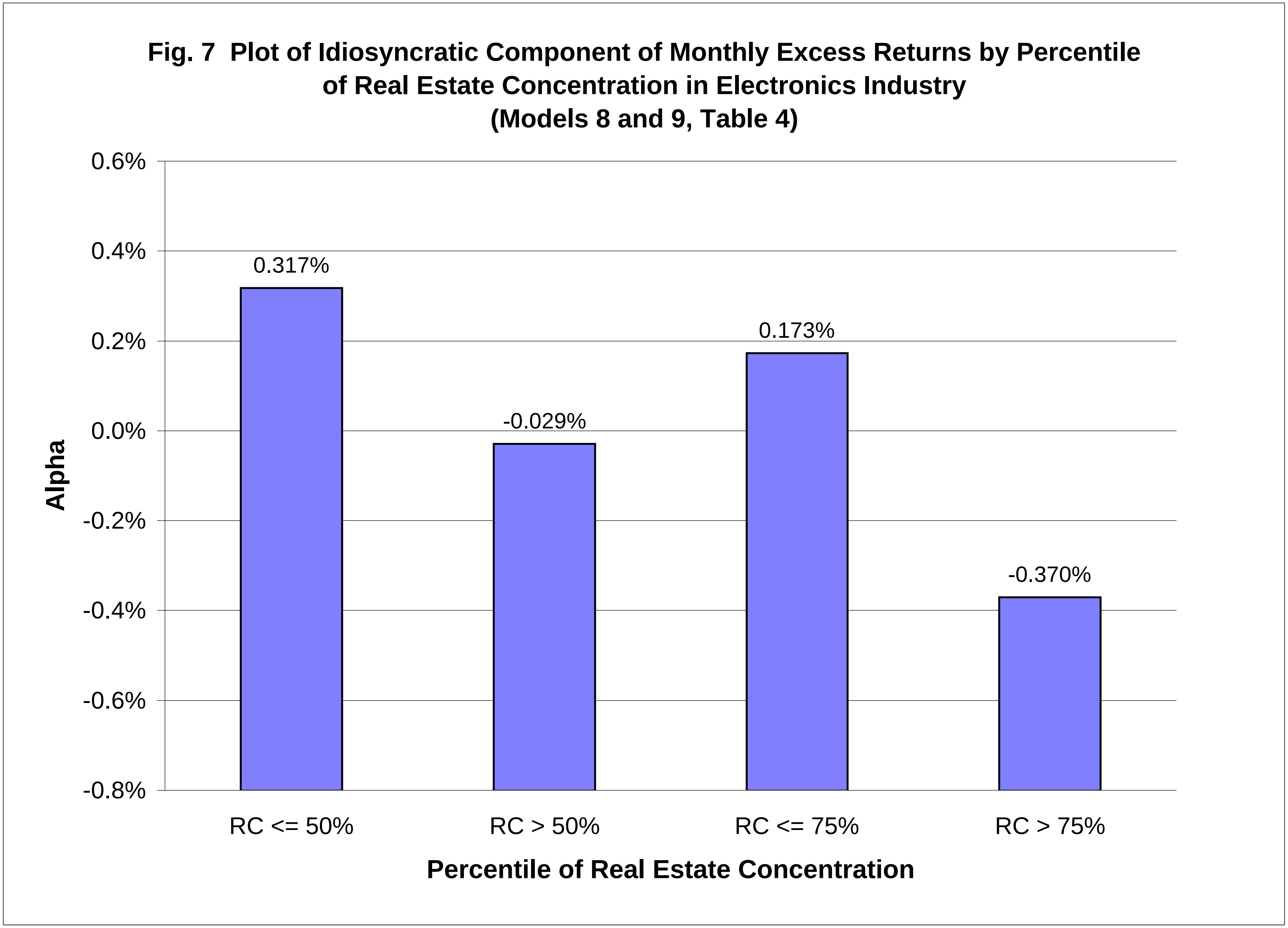
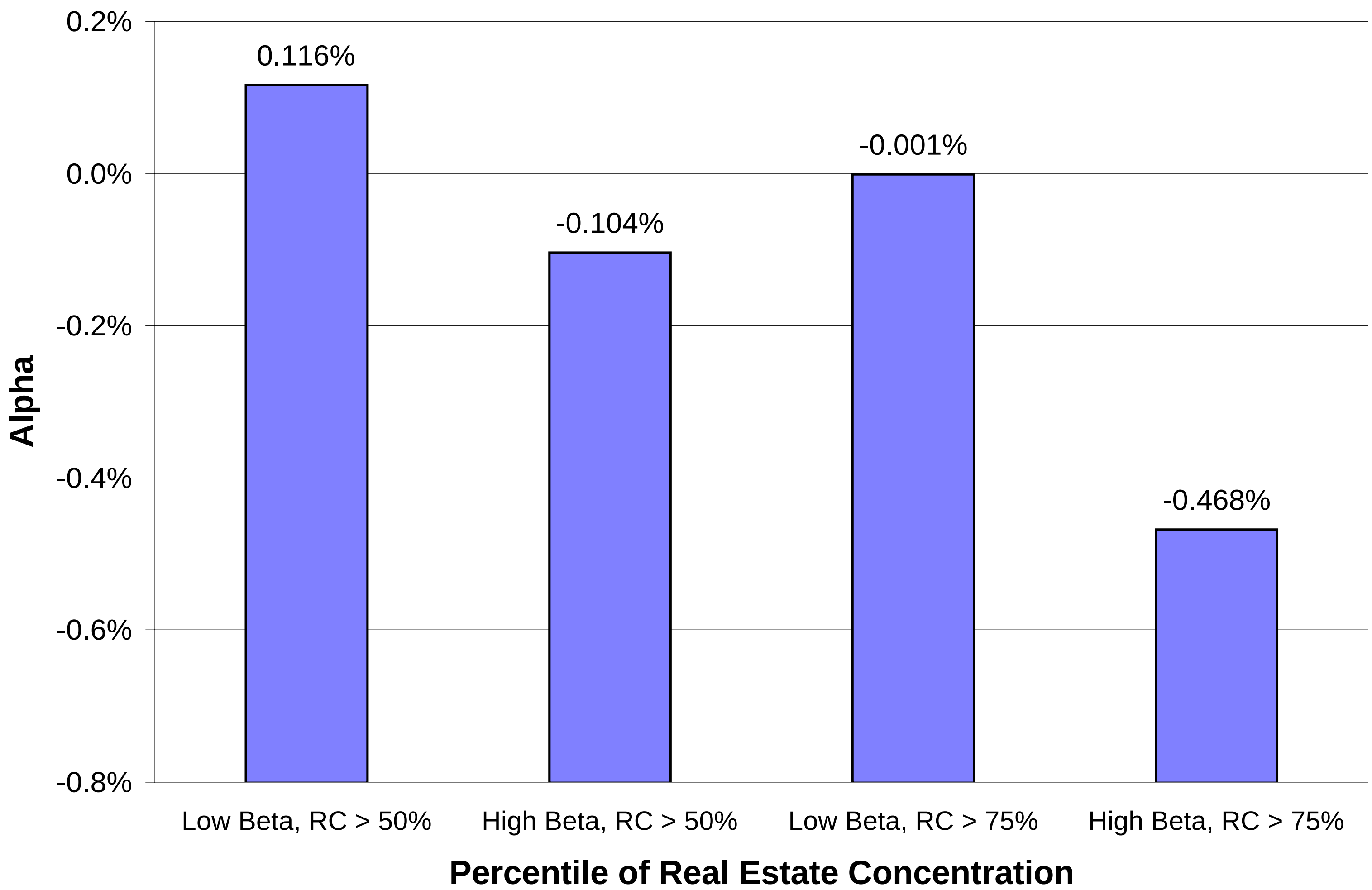


Fig. 7 Plot of Idiosyncratic Component of Monthly Excess Returns by Percentile
of Real Estate Concentration in Electronics Industry
(Models 8 and 9, Table 4)
0.6%
0.4%
0.2%
0.0%
-0.2%
-0.4%
-0.6%
-0.8%
Alpha
0.317%
-0.029%
0.173%
-0.370%
RC <= 50%
RC > 50%
RC <= 75%
RC > 75%
Percentile of Real Estate Concentration

Fig. 8 Plot of Idiosyncratic Component of Monthly Excess Returns by Low Beta and High Beta Companies in Electronics Industry (Models 14 and 15, Table 5)



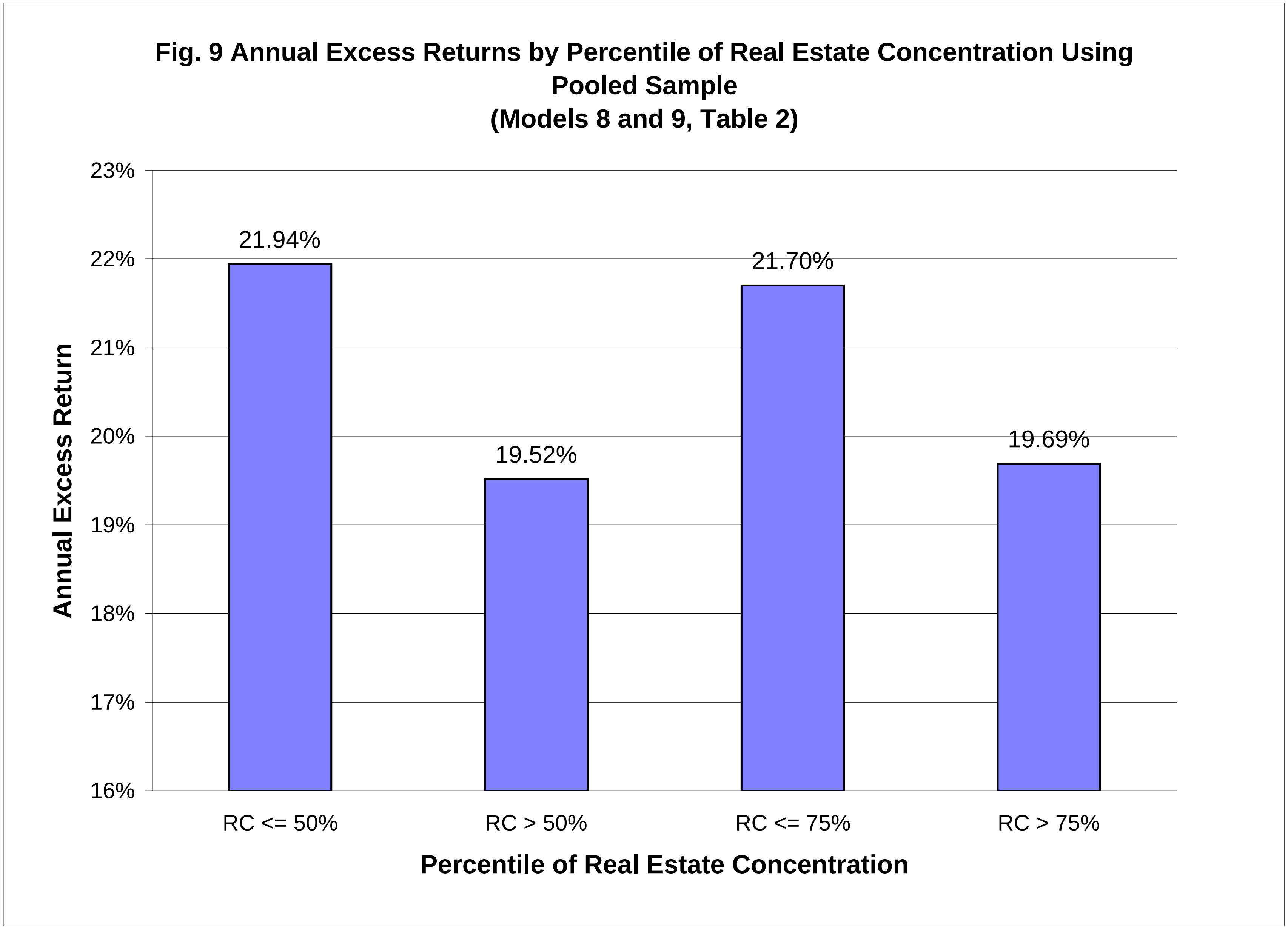
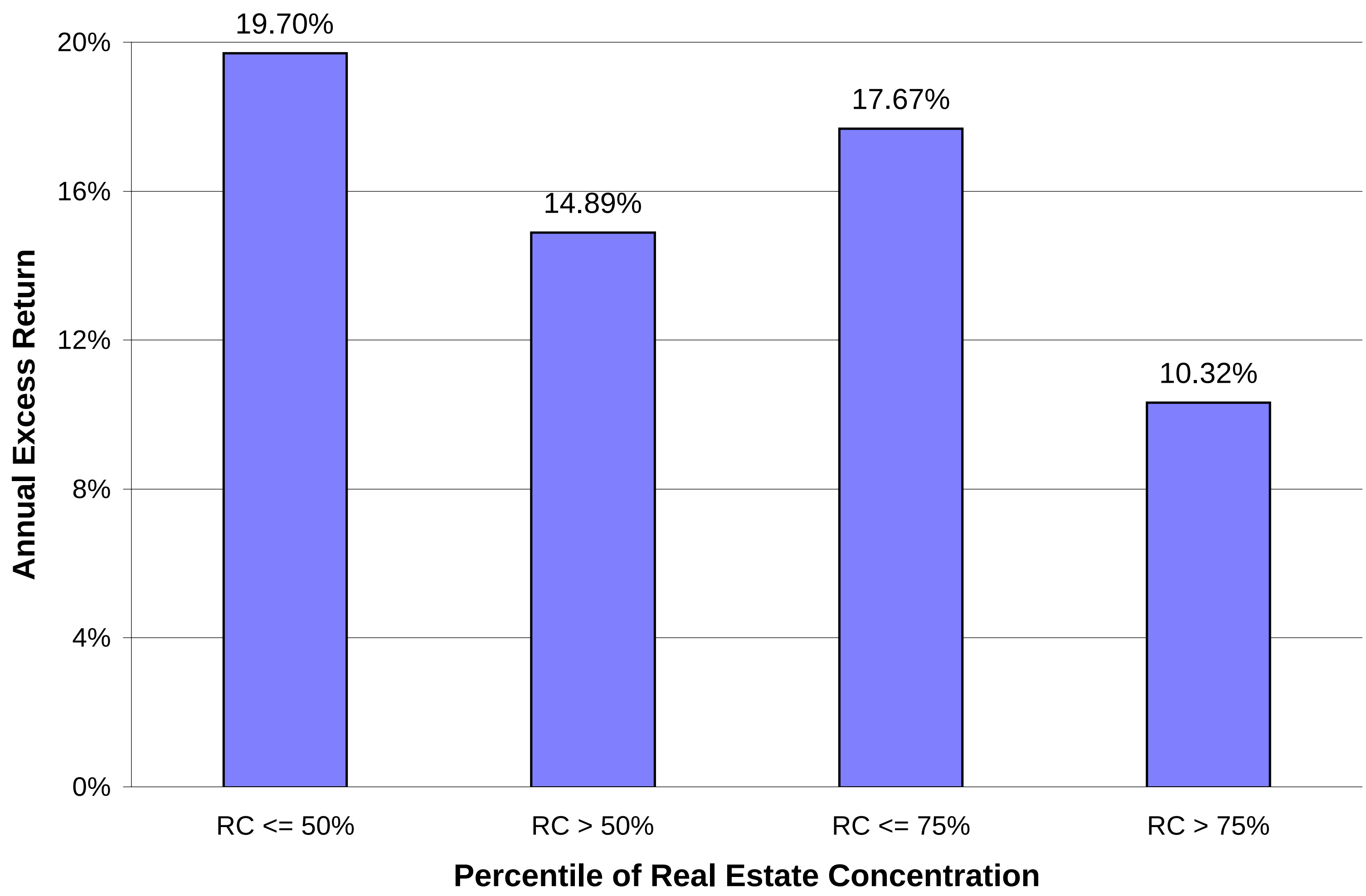


Fig. 9 Annual Excess Returns by Percentile of Real Estate Concentration Using Pooled Sample
(Models 8 and 9, Table 2)
23%
22%
21%
20%
19%
18%
17%
16%
Annual Excess Return
21.94%
19.52%
21.70%
19.69%
RC <= 50%
RC > 50%
RC <= 75%
RC > 75%
Percentile of Real Estate Concentration


Fig. 10 Annual Excess Returns by Low Beta and High Beta Companies Using Pooled Sample
(Models 14 and 15, Table 3)
Annual Excess Return
23%
22%
21%
20%
19%
18%
17%
16%
21.55%
19.09%
21.29%
18.63%
Low Beta, RC > 50%
High Beta, RC > 50%
Low Beta, RC > 75%
High Beta, RC > 75%
Percentile of Real Estate Concentration

Fig. 11 Annual Excess Returns by Percentile of Real Estate Concentration in Electronics Industry (Models 8 and 9, Table 4)



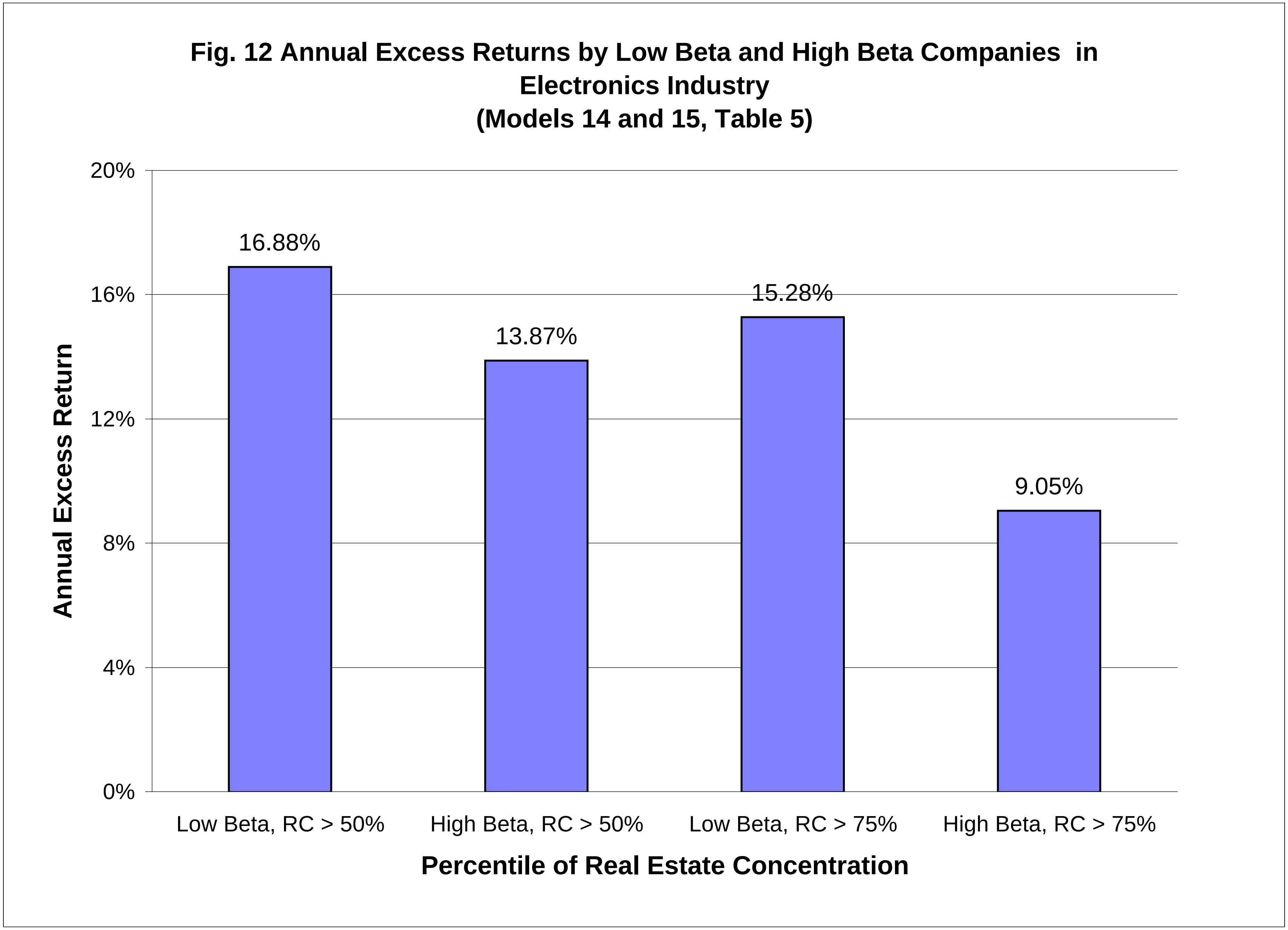


Fig. 12 Annual Excess Returns by Low Beta and High Beta Companies in Electronics Industry
(Models 14 and 15, Table 5)
20%
16%
12%
8%
4%
0%
Annual Excess Return
16.88%
13.87%
15.28%
9.05%
Low Beta, RC > 50%
High Beta, RC > 50%
Low Beta, RC > 75%
High Beta, RC > 75%
Percentile of Real Estate Concentration

Appendix

Table A-1. SIC Code and Industry Names

SIC CODE	INDUSTRY NAMES
0100	Agriculture Production-Crops
0200	Agriculture Production-Live Stock, Animal Species
1000	Metal Mining
1200	Coal Mining
1300	Oil And Gas Extraction
1400	Mining, Quarry Nonmetal Minerals
1500	Building Construction-General Contractors, Operative Builders
1600	Heavy Construction-Not Building Construction
2000	Food And Kindred Products
2100	Tobacco Products
2200	Textile Mill Products
2300	Apparel And Other Finished Products
2400	Lumber And Wood Products, Excluding Furniture
2500	Furniture And Fixtures
2600	Paper And Allied Products
2700	Printing, Publishing And Allied
2800	Chemicals And Allied Products
2900	Petroleum Refining And Related Industries
3000	Rubber And Misc. Plastics Products
3100	Leather And Leather Products
3200	Stone, Clay, Glass, And Concrete Products
3300	Primary Metal Industries
3400	Fabricated Metal, Excluding Machinery, Transportation Equipment
3500	Industrial, Commercial Machinery, Computer Equipment
3600	Electronics, Other Electronic Equipment, Ex Computer
3700	Transportation Equipment
3800	Measuring Instrument, Photo Goods, Watches
3900	Misc. Manufacturing Industries
4200	Motor Freight Transportation, Warehousing
4400	Water Transportation
4500	Transportation By Air
4600	Pipe Lines, Excluding Natural Gas
4700	Transportation Services
4800	Communications
4900	Electric, Gas, Sanitary Services
5000	Durable Goods-Wholesale
5100	Non-durable Goods-Wholesale
5200	Building Material, Hardware, Garden-Retail
5300	Misc. General Merchandise Stores
5400	Food Stores

Table A-1. SIC Code and Industry Names (continued)

SIC CODE	INDUSTRY NAMES
5500	Auto Dealers, Gas Stations
5600	Apparel And Accessory Stores
5700	Home Furniture And Equipment Store
5800	Eating And Drinking Places
5900	Miscellaneous Retail
6300	Insurance Carriers
6400	Insurance Agents, Brokers And Service
6700	Holding, Other Invest Offices
7000	Hotels, Other Lodging Places
7200	Personal Services
7300	Business Services
7500	Auto Repair, Services, Parking
7800	Motion Picture
7900	Amusement And Recreation Services
8000	Health Services
8700	Engineering, Accounting, Research, Management, Related Services
9900	Non-classifiable Establishments