Performance of the Swedish Real Estate Sector 1998-2002

An empirical study[1]

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Abstract:

In this paper, we analyze the performance of the Swedish real estate sector by various profitability measures. We use an unbalanced panel of 781 non-listed companies from 1998 to 2000 with 3421 observations. There exists large regional and sectorial differences in performance but it is not due to regional or sectorial effect. Rather those differences can be largely explained by capital structure, tangibility and turnover of the firm, etc.
We use both a single equations and a simultaneous equations approach to control for endogeneity and simultaneity. In the simultaneous equations framework we find a positive and significant effect capital structure on performance. Performance has a larger and significant effect on capital structure. The results indicate that banks and financial institutions lend more to profitable firms and firms with more tangible assets than otherwise. Tangible assets as 'inventory' contribute negatively to performance after taking into account the effect of capital structure on performance. We can conclude that tangible assets contribute to the profitability of a firm up to a point as collateral for bank loans. However, excessive tangible assets are negatively related to the profitability, at least for the shorter term. Our results stand the same even after controlling for regional differences and sub sectorial differences.

Keywords: Real Estate; Sweden; Panel Data; Performance; Simultaneous Equations

JEL Classifications: G3, C23, C33, L85

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1 Introduction

Many studies have been made on the performance of companies, relating performance to factors such as ownership structure, capital structure, legal environment, culture etc (Demsetz and Villalonga, 2001; Loderer and Martin, 1997). However, few papers deal with the real estate market performance and capital structure, even fewer studies deal with non-listed companies due to the availability of quality data. This is consequently one of the early studies on the performance of non-listed companies in the Swedish real estate sector using the advanced technique of a simultaneous equation framework.

Non-listed companies are the overwhelming majority of companies in the Swedish real estate market with only 12 listed and almost 800 active unlisted companies. This paper is a continuation of the work intended to fill a gap in the empirical literature that we started to address in Hammes and Chen (2003). The capital structure of firms was our starting point and the performance of different firms is our current interest based on our knowledge on capital structure.

In this paper, we use a panel of 781 firms to analyze the profitability of the Swedish real estate sector with regard to regional and sectorial aspects. Panel data regressions using single equation regressions are used to identify the relevant factors. However, a simultaneous equations framework is used to address the issue of the endogeneity and potential causality of the performance and capital structure determination.

2 Background study

We start by having a look at the development of the real estate market compared to the stock market. As can be seen from figure 1, the index for the real estate market has a much lower volatility and lower returns than the general stock market index for the period of our study. This is, given the nature of real estate as relatively secure investment, unsurprising.

- **Figure 1 Development of the real estate market index versus stock market index**

Real Estate vs. Stock Market
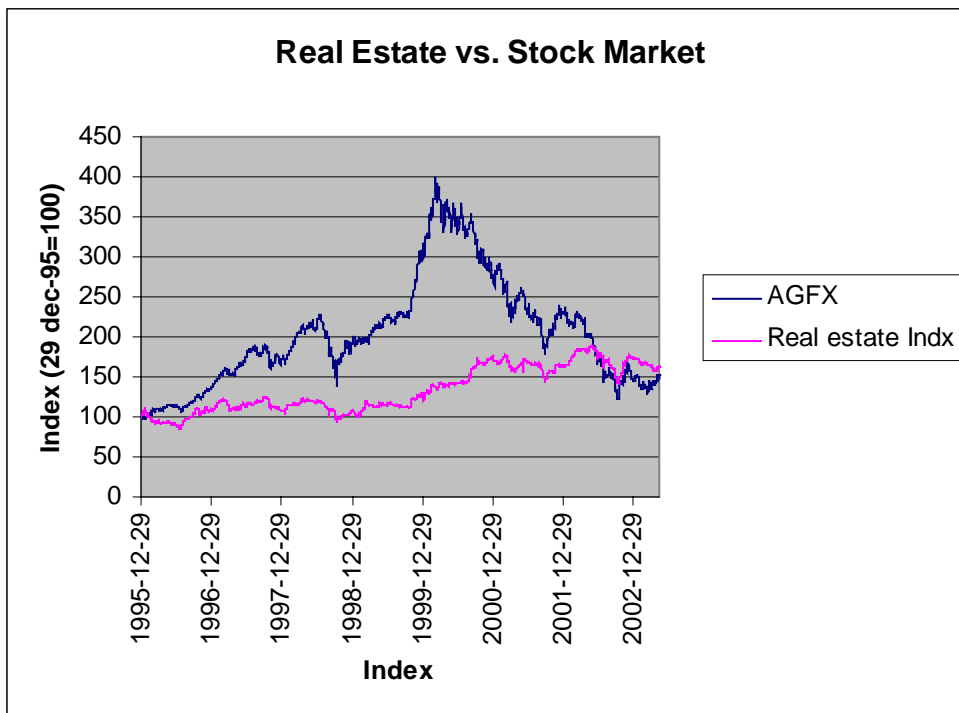
*AFGX denotes Affärsvärlden's General Index.

- **Figure 2 Annual returns on the Swedish stock market and the listed real estate companies**

Daily Return of Real estate index Vs. Market return
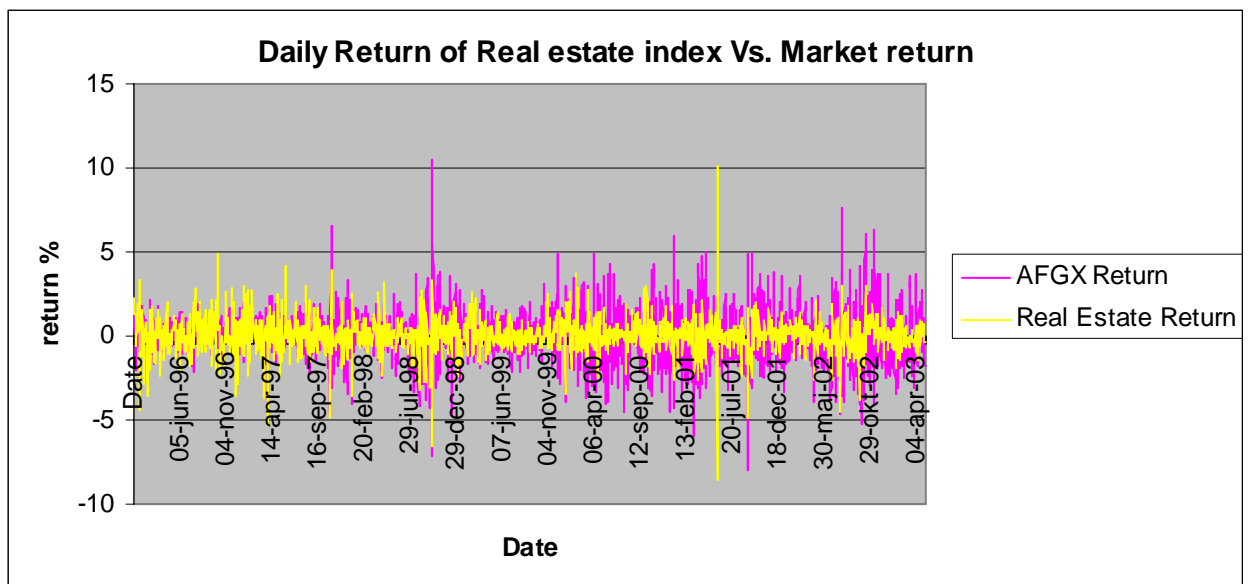
On average, the return of the real estate stock index is below the return of the general stock market index except for 2001-2003, a result of the stock market crash prompted by IT sector bubble bust.

Several, both recent and older structural factors, affect the real estate market in Sweden. The market for dwellings and the achievable returns are affected by two factors. The first one is the rent determination by use value and not by market value where the rent is largely based on the production cost. The second factor is the price-leadership of the publicly owned sector (allmänyttan), putting a cap on rents and thus on profits to private landlords. Furthermore, the annual changes of the rents are determined in a negotiation process between the tenants union and municipal housing companies. The result is a shortage of rental flats which has been a problem for more than forty years (see Bentzel, et al. (1963)). Only since the beginning of 2003 there is a possibility to charge a higher rent for newly built flats than would be appropriate according to use value. This is supposed to stimulate the production of flats in the future but does not affect our sample.

According to the Swedish central bank (Riksbanken (2000)) the prices for blocks of flats and commercial buildings have been rising continuously during the period 1993 to 2000. However, the economic downturn since 2000/2001 (slower GDP growth), accompanied by a massive drop of the stock market value since march 2000, gradually increasing unemployment, especially in Stockholm area and as a result a lower increase in household's disposable income have begun to affect both the commercial sector and the retail market for condominiums negatively. The effects on the commercial sector might not show up yet since many contracts are long-term contracts over up to 10 years and cannot easily be terminated. Furthermore, old contracts that are up for renewal may still have higher achievable rents compared to those stipulated in the expiring contracts (Riksbanken (2003). On the other hand, lower interest rates affect private demand positively, especially for houses and condominiums. The downturn of the Swedish interest rates should have a positive effect on the real-estate sector through lower refinancing costs. With an average debt ratio of around 75% (see Hammes and Chen (2003)) debt is a major part of the balance sheets of the Swedish real estate sector.

Another important factor is the regional orientation of the real estate market. It makes a study focused on regional and sectorial effects seem more interesting. Only major listed companies invest nationally, even those such as Wihlborgs AB divest recently. A further factor is an increasing interest of foreign buyers in 2003, which could contribute to the upward price pressure of the real estate market.

3   Measuring Firm Performance[2]

The first problem to be solved in this kind of study is the choice of profitability measure. Several decisions have to be made. The first one is whether to use a market-based performance measure such as Tobin's Q or related measures or measures derived from accounting data such as operating profits, return on investment, etc. This is not a problem in our case since we limit our study to non-listed companies.

One possible measure to be used would be the return on sales or simply the profit margin. However, as Majumdar and Chibber (1999) point out, this measure lacks a link with either agency or governance influences, since this measure neglects the investment dimension presented in the agency literature. They therefore settle for return on net worth[3] as the appropriate measure of profitability. In addition, the profit margin seems to be more appropriate for the service sector or production companies with continuous sales. Another often-employed measure is the return on equity as an alternative measure taking the stance of the equity owners. This measure has several disadvantages, among these the fact that it can be easily manipulated by delaying expenses or capitalizing losses. However, in most of the performance studies including Gleason, et al. (2000) as well as Hammes (2003), and capital structure studies such as Rajan and Zingales (1995) and Chen and Hammes (2003), some measures of return on assets, either based on pre- or after tax-profits, usually adjusted for depreciations and tax, are used as the appropriate measure. This measure seems to provide the above-mentioned link between the performance and the governance aspect as well. In this study, we will look at various types of return on assets based on balance sheet and income statement as performance measures.

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[2] See Mehran (1995) among others for a discussion.
[3] Net Worth=Total Assets-Total Liabilities.

4 Sample description and descriptive statistics

The data is extracted from the database "Affärsdata", which contains balance sheets and profit loss accounts of all Swedish companies. We use only non-listed companies for three reasons: First, listed companies have access to cheaper capital both from banks and the equity markets as a result of the listing, second we intend to use these companies for a separate comparative study and third, listed companies tend to be less regional in their business thus complicating regional analysis. In total, we obtain 3421 observations for the period 1998 to 2002 representing a maximum of 781 companies after we deleted companies with a capital ratio or debt ratio larger than one since this implies negative equity; these firms are bankrupt and could distort the results. Table 1 gives the geographical distribution of companies within Sweden. Unsurprisingly the greater Stockholm area has the largest number of registered companies (186), however closely shadowed by the much smaller Gothenburg region with 168 companies.

- **Table 1 Distribution of companies across regions (län)***

code	Län	Active companies	Companies with > 1 employee
L1	Stockholms län	375	186
L3	Uppsala län	26	10
L4	Södermanlands län	38	25
L5	Östergötlands län	74	40
L6	Jönköpings län	64	36
L7	Kronobergs län	29	12
L8	Kalmar län	37	17
L10	Blekinge län	35	13
L12	Skåne län	217	106
L13	Hallands län	55	24
L14	Västra Götalands län	325	168
L17	Värmlands län	38	20
L18	Örebro län	29	18
L19	Västmanlands län	27	14
L20	Kopparbergs län	38	22
L21	Gävleborgs län	30	14
L22	Västernorrlands län	28	11
L23	Jämtlands län	14	10
L24	Västerbottens län	28	22
L25	Norrbottens län	24	13
Total number	20	1531	781

*No real estate firms registered at Gotelands län.

In Figure 3, we can see the development of various profitability measures for the whole sample for time 1998 to 2002. As we can see there is a decrease in the various measures of return on asset over this period.

- **Figure 3 Development of profitability over time period (1998-2002)**
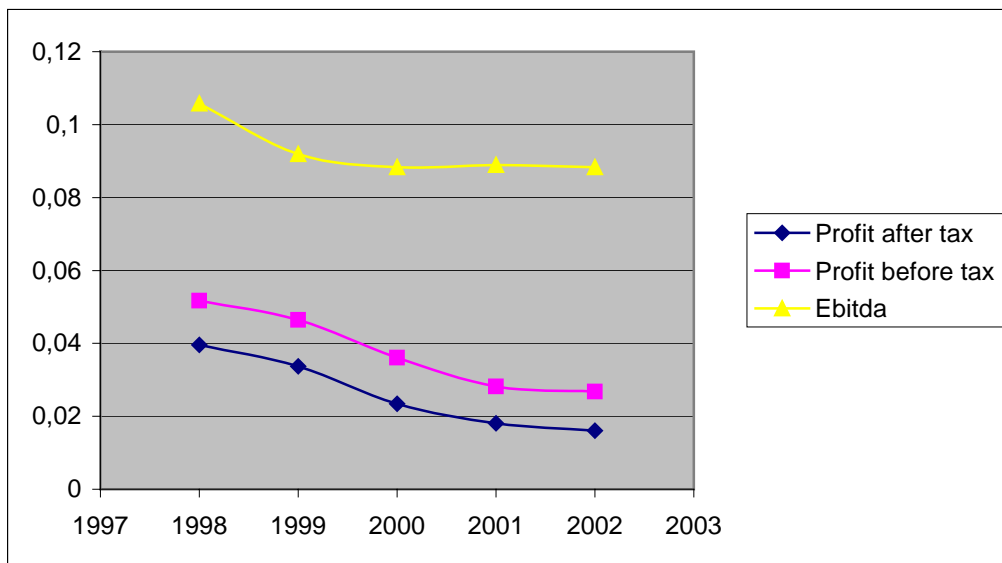
After the analysis of the whole sample, we break it down across regions and sectors. Figure 4 based on Table 6 shows large differences between the different sectors (for an explanation of the sectors see Table 3 in the appendix) with regard to Ebitda, but also large variations over our observation period. The most profitable sector and the only sector exhibiting a clear time trend is concerned with the buying and selling of real estate. Here we observe a development from 0.07833 to 0.1788 (or 17,88%), an increase by 128%. Letting of dwellings has a stable but low return, while the return on real estate agencies fluctuates strongly with a top in 1998 and a bottom in 2000. Cooperative administrations swings also quite a lot, here we have to take into consideration that there are only very few companies in this sector.

- **Figure 4 Profitability (Ebitda) by Sector**
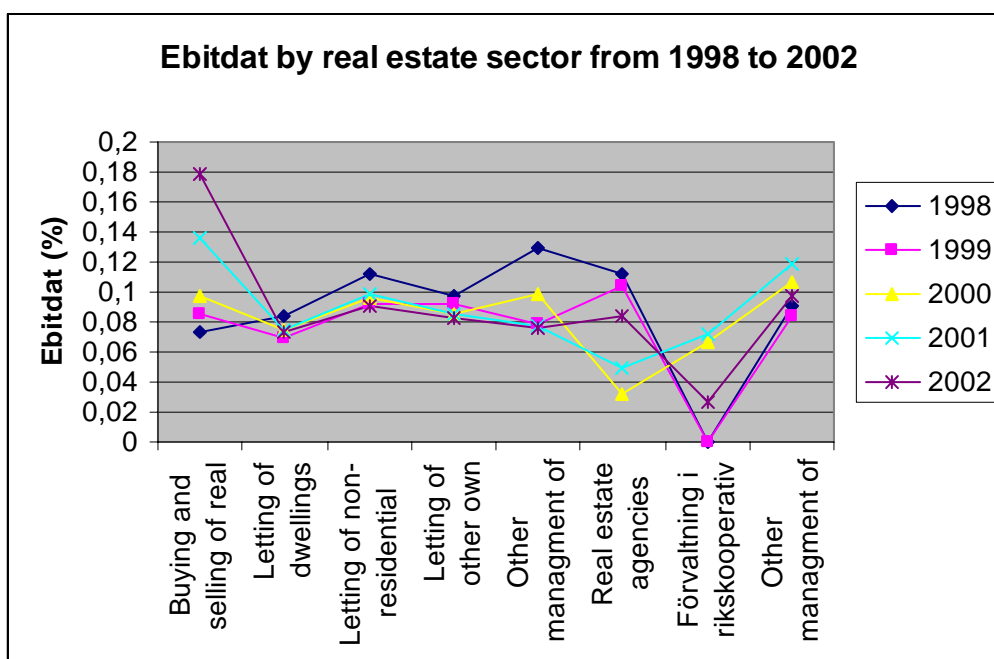
Finally, we examine the after tax profit in table 6 which should be the most interesting measure for comparison with alternative investments since this is the profit that can be distributed to the shareholders.

Insert Table 6

Here the extreme development of the retail sector (D2) becomes evident with a tremendous increase in profitability from 0.0014 in 1998 to 0.0923 in 2002. Most of the other sectors show a declining tendency over the years. The average after tax profit in the rental-housing sector (D3) decreases for example from 0.0270 in 1998 to 0.0121 in 2002.

The observed differences in profitability can partly be explained by the following factors. The first factor comes from the demand side through demographic changes. Stockholm and the other two metropolitan areas Gothenburg and Malmö are growing, which contributes to a lack of rental house while most of the regions north of Stockholm are suffering from a decline in population (see Figure 5).

- **Figure 5 Development of the population (based on SCB data)**
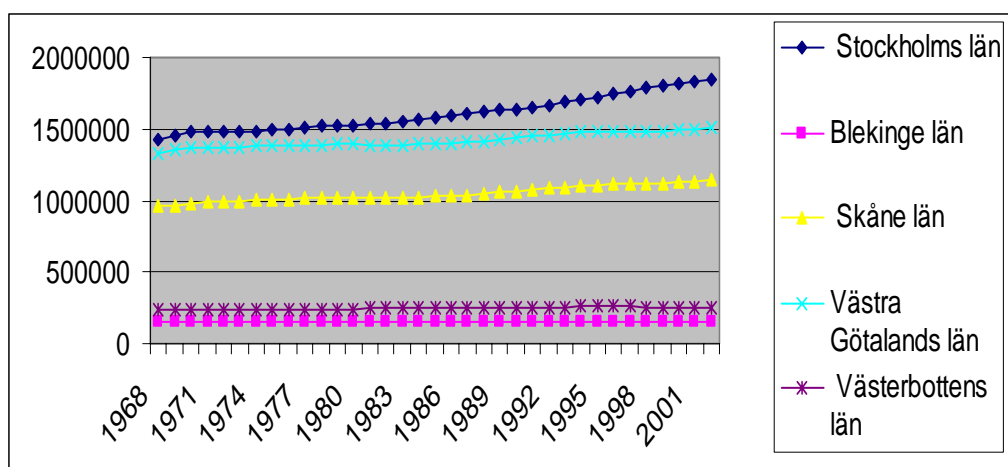
This also affects level of competition on the supply side and housing demand. In addition, the demand for commercial buildings was quite high up to 2000, the year the IT-bubble burst. Furthermore, the performance of the private sector for dwellings is affected by the leading role processed by publicly owned companies in the determination of rents in Sweden, putting a cap on the attainable profitability.

Comparing the returns in our sample of real estate companies to the returns generated by various government bond and treasury bills as in Figure 6 shows a clear underperformance in the real estate market.

- **Figure 6 Interest rate development for Swedish Treasury bills (SSVX) and Government bonds (SO) compared to after tax profits**
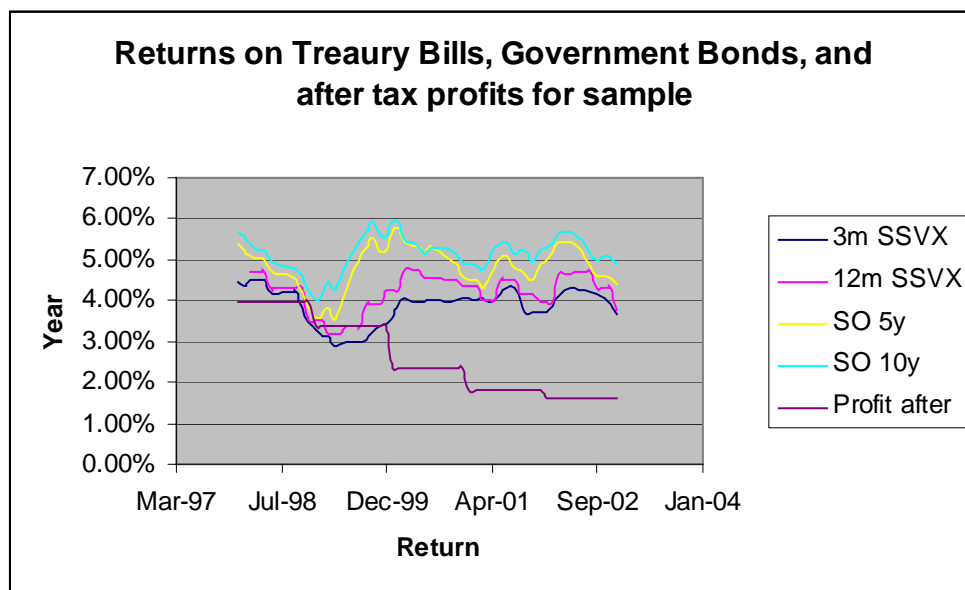
Taking a closer look at the regional differences, we next study Figure 7 based on Table 7.

Insert table 7

Here we find some regional differences and variations within regions but no clear time trends except for Kronobergs region and Västernorrland region. Both exhibit a negative trend over the observation period.

- **Figure 7 Profitability (Ebitda) by region from 1998 to 2002**
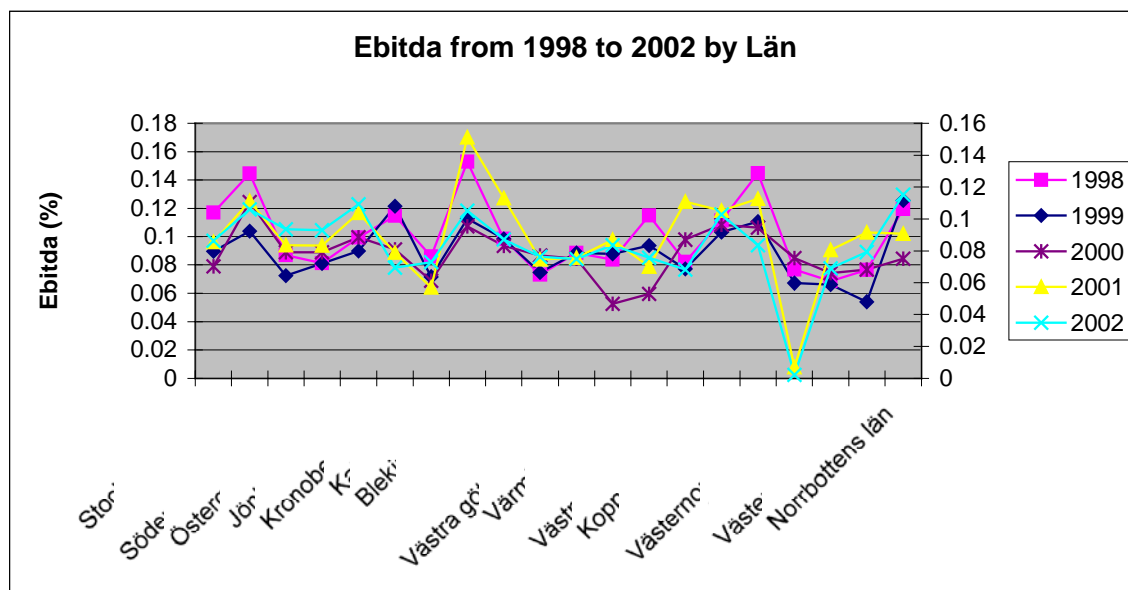
The regions Blekinge in the South of Sweden and Västernorrland in the north of Sweden represent extreme values, where the north deviates in a negative direction while the south deviates upwards with huge variation.

In the appendix in tables 8 to 15 we extend the descriptive analysis to the three metropolitan areas and the two regions deviating most from the mean, namely Blekinge and Västernorrland breaking the data further down to the sectorial level for an enhanced analysis of the regional differences.

The first observation we make in Table 8 to Table 15 is that the sectorial composition is quite different between the metropolitan areas and the other two regions Västerbotten and Blekinge; only Stockholm and Gothenburg have a complete setup of sectors. Companies within the retail sector (D2) are incorporated in either Stockholm or Gothenburg. The sector is characterized by a huge difference in profitability in favor of the Stockholm region. This might partly be explained by the fact that real estate prices in Stockholm increased rapidly, triggered by a net increase of the population and the IT-bubble driving up prices up to 2000. Meanwhile Gothenburg was never really a center for IT-sector development and remains more an industrial city with traditional companies such as SKF and Volvo. The development in Stockholm is however changing due to the bust of the IT-bubble and consequently increasing unemployment, as a consequence the net inflow of inhabitants has decreased dramatically (See Riksbanken (2003)).

This assessment is valid again with respect to the return on the letting of dwellings (Table 9). The return in this sector is twice as high in the Stockholm region compared to the Gothenburg region with 0.0422 for the former and 0.0147 for the latter. However, Västernorrland, a region with a lower population growth (see Figure 5) than the other regions during the observation period, marks the minimum while Blekinge represents the maximum, even higher than the Stockholm region. The high returns in the Blekinge region need to be explained by other factors than the population growth such as investment climate etc.

Real estate agencies (Table 13) earn more in Blekinge (with only 5 agencies) as well as in Skåne compared to Stockholm and Gothenburg; Västernorrland comes last as in all other sectors.

The development in the South of Sweden might be partly due to the proceeding integration of that with the Copenhagen region after the completion of the bridge over the Öresund on July 1, 2000. More and more Danes buy or rent flats in Malmö because of rapidly increasing prices in Copenhagen.

5   Regressions

We delete companies with a capital ratio or debt ratio less than zero from the regressions since this implies negative equity; firms can report temporary negative equity without going into bankruptcy, but inclusion of these years data would distort the results. However, we also run regressions (not presented here) with all companies. The results from these regressions are only slightly weaker indicating that relatively few negative values, consequently censoring is not a problem here.

In the first step, we run single equation models and in the second step, simultaneous equation models addressing the endogeneity problem between the capital structure decision and firm performance.

5.1   Single equation models

In total, we run three different regressions for various measures of the return on assets in all cases controlling for the impact of capital structure changes and thus the risk level of the company. We estimate the model using a random effects estimator for this unbalanced panel as described in Baltagi and Chang (1994) and Baltagi (1995, pp 149). This estimator allows us to include time-invariant dummy variables, in our case sectorial and regional dummies.

We estimate the following model:

(1) Profit=f(tangibility, debt ratio, size, age, industry, region)

Where

    Profit=Profit of company i in time t measured by various profitability measures

    Debt=debt-ratio of company i in time t

    Tangibility=Ratio of fixed assets to total assets

    Size=logarithm of size of company i in time t in 1000SEK

    Age=Age of a company i in time t

Industry=A set of 7 industry dummies representing sub sectors of the real estate sector (D2 is excluded from the estimation and serves as reference point)

Region= a set of 23 dummy variables for the different Swedish regions (the Stockholm region, L1, is excluded from the estimation and serves as reference point)

Ignoring the potential endogeneity issue, which is addressed in chapter 5.2 we find in all estimations (see Hammes (2003), Hammes and Chen (2003)) the standard variables tangibility, debt ratio and age to be significant. Size is positively related to profitability with coefficients of 0.035 for after-tax profits and 0.032 for pre-tax profit, which stands in contrast to the findings in Hammes (2003). The debt ratio is negatively related to performance, real estate companies thus seem to borrow more than is good for them, from the single equation result. This coincides with a negative impact of tangibility on profitability. Firms with higher level of tangibility have lower profit level.

In all profitability regressions (see table 16), firm's age is negatively related to profitability, which seems to indicate that older firms have fewer profitable investment opportunities available. In the later section, we will be able to check this effect in the simultaneous framework.

5.2 Simultaneous Equation models

Agrawal and Knoeber (1996) Loderer and Martin (1997), Cho (1998), Demsetz and Villalonga (2001) as well as Bøhren and Ødegaard (2003) all point out the importance of endogeneity and the question of causality when analyzing firm performance.

To address these issues we run simultaneous panel regressions using 3SLS as described in Baltagi (1995 chapter 7), which has been shown to perform very well compared to other estimators by Baltagi and Chang (2000). We use the capital structure and the profitability equation as in Hammes (2003)[4], and we use the follow system of equations:

(2) Performance=f(capital structure, size, age, region, sub sector)

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[4] Only the results using ebitda and profit before tax are shown here, the after tax profit is dropped since the results are almost identical to those of the profit before tax as can also be seen for the single equation regressions.

(3) Capital structure= f(size, performance, region, sub sector)

Equation (2) is identical to the single equation regression (1) and equation (3) is the capital structure equation used in Chen and Hammes (2003), excluding market values, and in Hammes and Chen (2003).

The age variable (years since incorporation) is used to identify equation (3). It is required that one predetermined variable is omitted from each structural equation. Age seems to fulfill this criterion since it seems to influence performance but is unrelated to capital structure. We run the simultaneous equation system for two measures of profitability, profit before tax and EBITDA.

Examining the results in Table 17, we find that corporate performance affects capital structure positively (1.7652 and 1.946599) and capital structure (0.1775 and 0.129105) affects performance positively but with a smaller effect, confirming our set up of the model as simultaneous equations. Higher borrowing contributes to performance generally in a market upturn. In a market downturn, these effects may very well be reversed. For that to be tested we need to extent our data set to cover over business cycles, specifically, real estate business cycles.

Insert Table 17

Further, we find a positive relationship of tangibility to capital structure as indicated by the parameter value 0,32821 and 0.435405 at the 1% significance level. Furthermore, high tangibility leads to a significant deterioration in performance, holding capital structure constant, although the effect is small (-0.10068 and –0.0611 respectively). Size has in both capital structure equations a positive sign (0.040252 and 0.030959) indicating that bigger firms borrow more. However, bigger firms have larger ebitda (0.030959) but lower pre tax profits (-0.00273)

In the regressions on the debt ratio using the pre tax profit, we still find almost no significant coefficients for the regional and sectorial dummies except for sector D3 (letting of dwellings), which is negative and significant. In the capital structure equation, we find several positive and significant coefficients for the regional dummies. In both specifications, we see that in the regions Skåne Län (L12), Hallands Län (L13), Västra Götalands Län (L14) and Gävleborgs Län (L21) companies borrow more than those in the Stockholm area. In the regressions using the pre tax profits even companies in Kalmar Län (L8) and most of the other regions have a higher debt ratio. The reason can be attributed to better access to equity capital in big Stockholm region. On the sub sector level, letting of non-residential housing (sector D4) borrows less, together with letting of other own property (D5) compared to buying and selling own or leased real estate (D2). The age variable shows evidence of a slightly negative relation between age and performance although the effect is small (-0,00037 and –0.00040 respectively) at the 1% significance level.

6   Conclusions

In this study, we find that performance and capital structure are two endogenous variables that it merits to study in a simultaneous equation framework. Firm performance can be explained by capital structure, size, age, tangibility and other factors. There is however no significant difference among sub-sectors or regions. This indicates that, on average, there is no arbitrage profit to be gained by switching investment to different regions or sectors. In the capital structure equation, we find large regional and sectorial differences in the Swedish real estate sector in terms of capital structure.

The profitability in the market for housing is very low which probably contributes to the lack of flats in the longer run. Profitability is much higher in the retail sector, which is a result of the fact that most of the newly built flats are condominiums and not rental flats. The regional differences in the capital structure equations confirm our earlier results in the single equation estimations in Hammes and Chen (2003), that capital structure is endogenously determined, supporting the importance of using simultaneous equations as opposed to a single equation framework.

The results indicate that banks and financial institutions lend more to profitable firms and firms with more tangible assets than otherwise. Tangible assets as 'inventory' contribute negatively to performance after taking into account the effect of capital structure on performance. However, we can conclude that tangible assets, essentially the property owned by a company, contribute to the profitability of a firm up to a point as collateral for bank loans. Excessive tangible assets are negatively related to profitability, at least for the shorter term. This indicates possible over-investment in property for at least some firms. Our results stand the same even after controlling for regional differences and sub-sectorial differences. It is also possible that companies sustain low profits but realize hidden values in their property at times and reinvest into new projects thus increasing their asset base. Therefore, for the future, we intend to extend the analyzed time to cover the turbulent period at the beginning of the 90's, also to include the effects of the tax reforms in 1987 and 1991. This will give us a fuller understanding of how the real estate sector works over the business cycle and how changes in the tax code affect the overall profitability of the real estate sector.

Appendix Descriptive statistics and regression results

- **Table 2 Description of variables**

Variables	*Definition*
s	Size. Log of turnover in 1000 Sek
Solvency	(0.7*untaxed reserves + total equity)/Total assets
profat	Profit after tax divided by total assets
profbt	Profit before tax divided by total assets
EBITDA	Earnings before interest payment, tax and depreciation divided by total assets
eaf	Earnings after financial items divided by total assets
dr	Debt ratio. Debt divided by total assets
cr	Capital ratio. Debt divided by total capital
de	Debt equity ratio, Total debt divided by equity
roe	Return on equity (Earnings after financial items /(0.7*untaxed reserves + total equity)
trade credit	Trade credit divided by total assets
trade debt	Trade debt divided by total assets
short term debt	Short term debt divided by total assets
long term debt	Long term debt divided by total assets
age	The number of years of incorporation
tangibility	Tangibility equals to tangible (fixed) assets divided by total assets
pmgross	Gross profit margin. Earnings before financial items divided by turnover
L1-L25	Regional Dummies see text
D1-D9	Sector Dummies

- **Table 3 Description of Sector Dummies**

Variable	*Nace1.1*	*Description*
D1	70110	Development and selling of real estate (Markexploatering), none in sample
D2	70120	Buying and selling of own or leased real estate (Handel med egna fastigheter)
	7020	**Letting och administrations of own property (Uthyrning och förvaltning av egna fastigheter) consisting of:**
D3	70201	Letting of dwellings (Uthyrning och förvaltning av egna bostäder)
D4	70202	Letting of non-residential housing (Uthyrning och förvaltning av egna industrilokaler)
D5	70203	Letting of other own property (Uthyrning och förvaltning av egna, andra lokaler)
D6	70204	Management of condominiiums (Förvaltning i bostadsrättsföreningar) none in sample
D7	70209	Other Management of real estate (Övrig fastighetsförvaltning)
D8	70310	Real Estate Agencies (Fastighetsförmedling)
	7032	**Management of real estate on a fee or contract basis:**
D9	70321	Cooperative management of real estate on a fee or contract basis (Förvaltning i rikskooperativ regi)
D10	70329	Other management of real estate on a fee or contract basis (Övrig fastighetsförvaltning på uppdrag)

Means and Estimates

• Table 4 Pearson Correlation Coefficients, N = 3421 Prob > |r| under H0: Rho=0

	EBITDA	profbt	profat	tan	dr	s	age	re
EBITDA	1.00000	0.85629	0.84294	-0.10070	-0.14810	0.04053	0.00808	0.14611
		<.0001	<.0001	<.0001	<.0001	0.0178	0.6366	<.0001
profbt		1.00000	0.98566	-0.17175	-0.23660	0.04998	0.04415	0.15099
			<.0001	<.0001	<.0001	0.0035	0.0098	<.0001
profat			1.00000	-0.12894	-0.18711	0.04478	0.05004	0.15562
				<.0001	<.0001	0.0088	0.0034	<.0001
tan				1.00000	0.52991	-0.13096	0.01659	0.03114
					<.0001	<.0001	0.3320	0.0686
dr					1.00000	-0.08803	-0.14730	-0.03845
						<.0001	<.0001	0.0245
s						1.00000	0.25996	-0.00438
							<.0001	0.7980
age							1.00000	0.01895
								0.2678
roe								1.00000

• Table 5 Basic statistics

Variable	1998 N=577 Mean StdDev Minimum Maximum	1999 N=639 Mean StdDev Minimum Maximum	2000 N=683 Mean StdDev Minimum Maximum	2001 N=740 Mean StdDev Minimum Maximum	2002 N=781 Mean StdDev Minimum Maximum	all years N=3421 Mean StdDev Minimum Maximum
s	10.3143	10.2839	10.3993	10.3780	10.3797	10.3543
	1.6445	1.6433	1.5966	1.6060	1.6141	1.6192
	5.2575	2.6391	6.1924	5.3706	5.3706	2.6391
	17.0084	17.0026	17.0289	17.0764	17.0132	17.0764
solvency	0.2430	0.2406	0.2419	0.2510	0.2572	0.2473
	0.2178	0.2183	0.2132	0.2202	0.2220	0.2184
	0.0003	0.0002	0.0013	0.0034	0.0006	0.0002
	0.9467	0.9547	0.9660	0.9734	0.9938	0.9938
profat	0.0369	0.0337	0.0252	0.0221	0.0152	0.0258
	0.0921	0.0725	0.1414	0.0961	0.0959	0.1028
	-0.2038	-0.6527	-2.7319	-0.8764	-0.7864	-2.7319
	1.4641	0.5174	0.9092	0.9108	0.9108	1.4641
profbt	0.0489	0.0458	0.0376	0.0323	0.0252	0.0371
	0.1065	0.0859	0.1532	0.1117	0.1089	0.1160
	-0.2679	-0.6528	-2.7319	-0.8764	-0.7941	-2.7319
	1.5074	0.6000	1.2630	1.2000	0.9819	1.5074
EBITDA	0.1002	0.0894	0.0857	0.0882	0.0840	0.0890
	0.1091	0.0926	0.1410	0.1136	0.1010	0.1128
	-0.1814	-0.6211	-2.6942	-0.8441	-0.5111	-2.6942
	1.6142	0.9026	0.7443	1.6794	0.9745	1.6794
trc	0.0726	0.0685	0.0717	0.0700	0.0697	0.0704
	0.0994	0.1004	0.1489	0.1071	0.1035	0.1135
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.5120	0.6081	2.8944	0.7544	0.7294	2.8944
trd	0.0517	0.0502	0.0498	0.0490	0.0475	0.0495
	0.0693	0.0643	0.0652	0.0638	0.0602	0.0643
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.4050	0.3507	0.4003	0.3994	0.3691	0.4050
std	0.1949	0.1913	0.1854	0.1859	0.1884	0.1889
	0.1731	0.1749	0.1663	0.1703	0.1717	0.1711
	0.0000	0.0000	0.0000	0.0088	0.0040	0.0000
	0.9834	0.9887	0.8774	0.9192	0.9563	0.9887

ltd	0.5237	0.5318	0.5355	0.5276	0.5200	0.5276
	0.3124	0.3085	0.3049	0.3048	0.3003	0.3057
	0.0000	0.0000	-0.0028	0.0000	0.0000	-0.0028
	0.9729	0.9741	0.9709	0.9701	0.9563	0.9741
dr	0.7186	0.7231	0.7209	0.7135	0.7084	0.7164
	0.2232	0.2206	0.2172	0.2211	0.2223	0.2208
	0.0533	0.0453	0.0000	0.0266	0.0062	0.0000
	0.9927	0.9991	0.9937	0.9940	0.9976	0.9991
cr	0.7559	0.7597	0.7573	0.7495	0.7428	0.7525
	0.2196	0.2184	0.2152	0.2207	0.2221	0.2193
	0.0533	0.0453	0.0000	0.0266	0.0062	0.0000
	0.9997	0.9998	0.9987	0.9966	0.9994	0.9998
de	20.4888	30.4131	12.4857	11.3536	12.1275	16.8574
	155.7048	246.1986	36.0867	25.4203	59.9718	129.0867
	0.0563	0.0474	0.0000	0.0273	0.0063	0.0000
	3654.1271	4800.3636	740.2907	296.9265	1551.8894	4800.3636
pmnet	0.0994	0.1282	0.0962	0.0398	0.0473	0.0793
	0.5581	0.7819	0.5162	0.6398	0.5646	0.6183
	-4.1834	-7.2857	-9.2107	-15.2979	-5.7436	-15.2979
	11.7879	12.2030	5.1776	2.6597	9.8600	12.2030
pmgross	0.0734	0.0926	0.0659	0.0186	0.0225	0.0520
	0.4284	0.6305	0.4657	0.6645	0.4839	0.5459
	-4.1834	-7.2857	-9.2107	-16.4255	-5.6880	-16.4255
	8.3939	10.1325	3.4868	1.8225	6.9000	10.1325
eq	0.2297	0.2267	0.2293	0.2375	0.2441	0.2340
	0.2096	0.2088	0.2064	0.2125	0.2143	0.2105
	0.0003	0.0002	0.0013	0.0033	0.0006	0.0002
	0.9467	0.9547	1.0000	0.9734	0.9938	1.0000
age	24.8094	24.2394	24.5871	24.6027	24.4987	24.5428
	20.4018	20.4090	20.4416	20.0173	19.8397	20.1899
	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	102.0000	103.0000	104.0000	105.0000	106.0000	106.0000
re	0.1296	-0.3561	0.0515	0.1055	0.0325	-0.0041
	2.5821	10.5157	2.0591	1.0620	1.7195	4.8524
	-53.9862	-246.7054	-33.0075	-17.1649	-41.3873	-246.7054
	26.4091	23.8286	6.4017	13.9745	6.3894	26.4091
tan	0.6410	0.6404	0.6485	0.6519	0.6544	0.6478
	0.3595	0.3146	0.3159	0.3166	0.3135	0.3229
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	4.8281	1.0052	0.9950	1.1186	1.1186	4.8281

• **Table 6 Profitability by sector (number of observations in parenthesis)**

Sector		1998	1999	2000	2001	2002	Average
D2	Ebitda	0.0733 (7)	0.0852(7)	0.0968 (8)	0.1362 (9)	0.1788 (7)	0.1148(38)
	Profbt	0.0049	0.0467	0.0418	0.0799	0.1328	0.0617
	Profat	0.0014	0.0414	0.0318	0.0610	0.0923	0.0460
D3	Ebitda	0.0845(175)	0.0694(193)	0.0752(216)	0.0752(243)	0.0737(235)	0.0754(1062)
	Profbt	0.0331	0.0289	0.0371	0.0233	0.0182	0.0276
	Profat	0.0270	0.0218	0.0272	0.0171	0.0121	0.0205
D4	Ebitda	0.1122 (137)	0.0916(147)	0.0965(156)	0.0993(166)	0.0901(174)	0.0975 (780)
	Profbt	0.0503	0.0405	0.0407	0.0400	0.0235	0.0384
	Profat	0.0372	0.0274	0.0290	0.0291	0.0133	0.0266
D5	Ebitda	0.0972(275)	0.0915(308)	0.0857(319)	0.0852(339)	0.0832(335)	0.0882(1576)
	Profbt	0.0463	0.0450	0.0347	0.0282	0.0273	0.0358
	Profat	0.0346	0.0331	0.0239	0.0199	0.0174	0.0253
D7	Ebitda	0.1293 (40)	0.0786 (39)	0.0982 (38)	0.0767 (40)	0.0756 (43)	0.0914 (200)
	Profbt	0.0815	0.0471	0.0428	0.0128	0.0233	0.0412
	Profat	0.0643	0.0320	0.0270	0.0029	0.0161	0.0283
D8	Ebitda	0.1125(42)	0.1045 (49)	0.0317 (50)	0.0498 (54)	0.0834 (55)	0.0748 (250)
	Profbt	0.0767	0.0766	0.0090	0.0164	0.0192	0.0339
	Profat	0.0632	0.0635	-0.0191	0.0071	0.0101	0.0230
D9	Ebitda			0.0673 (2)	0.0717 (2)	0.0270 (1)	0.0610 (5)
	Profbt			0.0109	0.0290	0.0266	0.0126
	Profat			-0.0109	0.0244	0.0190	0.0092
D10	Ebitda	0.0906 (54)	0.0843 (67)	0.1068 (74)	0.1190 (76)	0.0972 (75)	0.1005 (346)
	Profbt	0.0474	0.0710	0.0603	0.0582	0.0393	0.0506
	Profat	0.0352	0.0344	0.0411	0.0394	0.0265	0.0353

• **Table 7 Profitability by region (number of observations in parentheses)**

Län		1998	1999	2000	2001	2002	Average
L1	Ebitda	0.1169(136)	0.0897(152)	0.0791(167)	0.0855(183)	0.0863(186)	0.0903(824)
	Profbt	0.0747	0.0596	0.0462	0.0360	0.0331	0.0482
	Profat	0.0577	0.0448	0.0261	0.0239	0.0199	0.0329
L3	Ebitda	0.1445 (10)	0.1038 (12)	0.1245 (10)	0.1112 (10)	0.1060(10)	0.1174(52)
	Profbt	0.1148	0.0536	0.0708	0.0600	0.0521	0.0696
	Profat	0.0785	0.0354	0.0534	0.0403	0.0343	0.0479
L4	Ebitda	0.0871 (17)	0.0725 (18)	0.0888 (22)	0.0836 (22)	0.0935(25)	0.0858(104)
	Profbt	0.0290	0.0295	0.0431	0.0312	0.0361	0.0342
	Profat	0.0207	0.0221	0.0309	0.0227	0.0263	0.0249
L5	Ebitda	0.0813 (24)	0.0810 (31)	0.0889 (33)	0.0834 (37)	0.0928(40)	0.0861(165)
	Profbt	0.0159	0.0273	0.0301	0.0246	0.0308	0.0264
	Profat	0.0118	0.0211	0.0249	0.0168	0.0206	0.0194
L6	Ebitda	0.0994 (33)	0.0898 (35)	0.0996 (31)	0.1037 (32)	0.1092((36)	0.1004(167)
	Profbt	0.0445	0.0502	0.0563	0.0442	0.0422	0.0473
	Profat	0.0326	0.0379	0.0415	0.0314	0.0288	0.0343
L7	Ebitda	0.1146 (9)	0.1214 (9)	0.0909 (9)	0.0789 (10)	0.0693 (12)	0.0931(49)
	Profbt	0.0523	0.0882	0.0339	0.0352	0.0179	0.0436
	Profat	0.0374	0.0646	0.0224	0.0244	0.0119	0.0307
L8	Ebitda	0.0861 (13)	0.0716 (15)	0.0688 (16)	0.0569 (15)	0.0728 (17)	0.0709(76)
	Profbt	0.0247	0.0386	0.0225	0.0109	-0.0183	0.0146
	Profat	0.0196	0.0320	0.0175	0.0069	-0.0210	0.0100
L10	Ebitda	0.1530 (8)	0.1127 (10)	0.1073 (10)	0.1511 (12)	0.1052 (13)	0.1246(53)
	Profbt	0.0785	0.0693	0.0561	0.0777	0.0403	0.0630
	Profat	0.0563	0.0491	0.0400	0.0541	0.0268	0.0441
L12	Ebitda	0.0986 (78)	0.0985 (79)	0.0933 (86)	0.1130 (99)	0.0872 106)	0.0980(448)
	Profbt	0.0464	0.0511	0.0319	0.0439	0.0219	0.0381
	Profat	0.0341	0.0364	0.0235	0.0320	0.0139	0.0272
L13	Ebitda	0.0732 (16)	0.0747 (19)	0.0866 (20)	0.0747 (21)	0.0762 (24)	0.0772(100)

	Profbt	0.0336	0.0373	0.0335	0.0217	0.0182	0.0281
	Profat	0.0256	0.0270	0.0238	0.0174	0.0129	0.0207
L14	Ebitda	0.0885(133)	0.0884(152)	0.0843 162)	0.0757 172)	0.0748 168)	0.0819(787)
	Profbt	0.0343	0.0376	0.0349	0.0254	0.0240	0.0309
	Profat	0.0260	0.0276	0.0253	0.0184	0.0161	0.0224
L17	Ebitda	0.0838 (14)	0.0878 (15)	0.0527 (17)	0.0868 (18)	0.0835 (20)	0.0788(84)
	Profbt	0.0360	0.0456	-0.0046	0.0357	0.0350	0.0292
	Profat	0.0254	0.0334	-0.0140	0.0239	0.0242	0.0183
L18	Ebitda	0.1148 (13)	0.0938 (11)	0.0596 (13)	0.0700 (15)	0.0758 (18)	0.0816(70)
	Profbt	0.0635	0.0463	0.0136	0.0219	0327	0.0347
	Profat	0.0453	0.0325	0.0010	0.0110	0.0203	0.0213
L19	Ebitda	0.0822 (12)	0.0771 (13)	0.0978 (13)	0.1108 (15)	0.0683 (14)	0.0877(67)
	Profbt	0.0220	0.0293	0.0401	0.0410	-0.0108	0.0243
	Profat	0.0124	0.0170	0.0251	0.0238	-0.0185	0.0119
L20	Ebitda	0.1113 (9)	0.1032 (13)	0.1083 (14)	0.1052 (15)	0.1028 (22)	0.1055(73)
	Profbt	0.0463	0.0379	0.0452	0.0416	0.0380	0.0411
	Profat	0.0342	0.0226	0.0337	0.0295	0.0206	0.0270
L21	Ebitda	0.1448 (13)	0.1105 (13)	0.1063 (15)	0.1126 (17)	0.0836 (14)	0.1111(72)
	Profbt	0.0750	0.0549	0.0544	0.0454	0.0051	0.0465
	Profat	0.0564	0.0390	0.0384	0.0322	-0.0031	0.0322
L22	Ebitda	0.0767 (13)	0.0672 (13)	0.0850 (12)	0.0069 (11)	0.0022 (11)	0.0498(60)
	Profbt	0.0559	0.0198	0.0458	-0.0519	-0.0588	0.0053
	Profat	0.0559	0.0134	0.0312	-0.0500	-0.0591	0.0012
L23	Ebitda	0.0686 (6)	0.0661 (4)	0.0744 (6)	0.0805 (6)	0.0690 (10)	0.0717(32)
	Profbt	0.0181	0.0163	0.0165	-0.0246	0.0441	0.0177
	Profat	0.0153	0.0132	0.0133	-0.0221	0.0311	0.0126
L24	Ebitda	0.0765 (14)	0.0541 (15)	0.0768 (16)	0.0915 (18)	0.0792 (22)	0.0765(85)
	Profbt	0.0178	0.0076	0.0199	0.0300	0.0128	0.0177
	Profat	0.0116	0.0033	0.0138	0.0213	0.0050	0.0109
L25	Ebitda	0.1193 (6)	0.1255 (10)	0.0843 (11)	0.0906 (12)	0.1152 (13)	0.1054(52)
	Profbt	0.0667	0.0693	0.0216	0.0222	-0.0058	0.0293
	Profat	0.0481	0.0612	0.0171	0.0136	-0.0107	0.0214

Sectorial differences by region

• **Table 8 Buying and selling of own or leased real estate** (Mean, StdDev, Minimum Maximum)

	Gothenburg N=12	Stockholm N=16
profat	0.0244	0.0893
	0.0516	0.1146
	-0.0420	-0.0018
	0.1008	0.3765
profbt	0.0320	0.1195
	0.0610	0.1602
	-0.0415	-0.0023
	0.1284	0.5611
EBITDA	0.0757	0.1650
	0.0616	0.1504
	-0.0226	0.0296
	0.1730	0.5841

Table 9 Letting of dwellings (Mean, StdDev, Minimum, Maximum)

	Gothenburg N=279	Blekinge N=13	Skåne N=111	Stockholm N=252	Västernorrland N=18
profat	0.0147	0.0485	0.0189	0.0422	0.0057
	0.0444	0.0753	0.0563	0.1514	0.0418
	-0.2010	-0.0064	-0.0492	-0.3291	-0.0715
	0.3717	0.2892	0.5160	1.4641	0.1263
profbt	0.0203	0.0682	0.0224	0.0547	0.0097
	0.0529	0.1110	0.0537	0.1728	0.0574
	-0.2071	-0.0085	-0.0492	-0.3480	-0.0897
	0.4694	0.4257	0.4439	1.5074	0.1850
EBITDA	0.0652	0.1136	0.0813	0.0877	0.0530
	0.0533	0.0952	0.0648	0.1554	0.0329
	-0.1245	0.0472	-0.0295	-0.2964	-0.0525
	0.5685	0.4103	0.4325	1.6142	0.0933

Table 10 Letting of non-residential housing (Mean, StdDev, Minimum Maximum)

	Gothenburg N=188	Blekinge N=12	Skåne N=106	Stockholm N=111	Västernorrland N=11
profat	0.0311	0.0158	0.0267	0.0260	0.0136
	0.0467	0.0249	0.0766	0.1061	0.0677
	-0.0656	-0.0270	-0.2887	-0.6527	-0.1686
	0.2851	0.0637	0.2859	0.3798	0.0933
profbt	0.0403	0.0229	0.0395	0.0382	0.0209
	0.0590	0.0333	0.0916	0.1210	0.0930
	-0.0613	-0.0355	-0.2865	-0.6528	-0.2317
	0.3114	0.0803	0.3971	0.5329	0.1393
EBITDA	0.1016	0.1103	0.0907	0.0863	0.1018
	0.0710	0.0427	0.0979	0.1104	0.0828
	-0.0199	0.0347	-0.1995	-0.6211	-0.1002
	0.4649	0.1871	0.4283	0.4665	0.2236

Table 11 Letting of other own property (Mean, StdDev, Minimum Maximum)

	Gothenburg N=308	Blekinge N=18	Skåne N=215	Stockholm N=418	Västernorrland N=20
profat	0.0261	0.0252	0.0327	0.0270	-0.0147
	0.0501	0.0516	0.0904	0.1142	0.2486
	-0.2096	-0.0582	-0.406	-1.4137	-0.6061
	0.2851	0.1544	0.5048	0.3765	0.7412
profbt	0.0340	0.0376	0.0438	0.0411	-0.0116
	0.0609	0.0721	0.1088	0.1255	0.2496
	-0.2096	-0.0760	-0.4070	-1.3932	-0.6061
	0.3527	0.2234	0.6000	0.5611	0.7305
EBITDA	0.0862	0.1038	0.1015	0.0888	0.0110
	0.0808	0.0933	0.1154	0.1034	0.1812
	-0.0849	-0.0010	-0.1662	-0.7908	-0.5111
	0.9026	0.3707	0.7371	0.7218	0.3069

● **Table 12 Other Management of real estate** (Mean, StdDev, Minimum Maximum)

	Gothenburg N=63	Skåne N=20	Stockholm N=52	Västernorrland N=5
profat	0.0084	0.0078	0.0661	0.0062
	0.0290	0.1139	0.2211	0.0046
	-0.0980	-0.4271	-0.2810	-0.0017
	0.0921	0.1943	1.4641	0.0097
profbt	0.0152	0.0193	0.0895	0.0085
	0.0366	0.1306	0.2315	0.0060
	-0.1011	-0.4440	-0.2956	-0.0021
	0.0947	0.2799	1.5074	0.0124
EBITDA	0.0728	0.0825	0.1266	0.0734
	0.0507	0.143	0.2347	0.0162
	-0.0636	-0.4317	-0.0472	0.0508
	0.2975	0.3503	1.6142	0.0909

● **Table 13 Real Estate Agencies (Mean, StdDev, Minimum Maximum)**

	Gothenburg N=68	*Blekinge N=5*	*Skåne N=26*	*Stockholm N= 105*	*Västernorrland N=5*
profat	0.0207	0.0287	0.0301	0.0133	0.0008
	0.0583	0.0094	0.0586	0.3117	0.0033
	-0.3408	0.0201	-0.0997	-2.7319	-0.0040
	0.1990	0.0407	0.1381	0.4618	0.0039
profbt	0.0273	0.0353	0.0408	0.0247	0.0008
	0.0656	0.0090	0.0646	0.3210	0.0034
	-0.3753	0.0262	-0.0997	-2.7319	-0.0044
	0.1990	0.0460	0.1603	0.5428	0.0039
EBITDA	0.0655	0.0746	0.0802	0.0583	0.0363
	0.0696	0.0076	0.0705	0.3241	0.0500
	-0.3802	0.0675	-0.0775	-2.6942	-0.0525
	0.1923	0.0856	0.2155	0.6398	0.0675

● **Table 14 Cooperative management of real estate on a fee or contract basis** (Mean, StdDev, Minimum Maximum)

	Gothenburg N=2	*Stockholm N=3*
profat	-0.0042	0.0182
	0.0501	0.0008
	-0.0397	0.0176
	0.0312	0.0190
profbt	-0.0025	0.0226
	0.0525	0.0044
	-0.0397	0.0179
	0.0346	0.0266
EBITDA	0.1201	0.0217
	0.0002	0.0065
	0.1199	0.0144
	0.1202	0.0270

• **Table 15 Management of real estate on a fee or contract basis** (Mean, StdDev, Minimum Maximum)

	Gothenburg N=89	Blekinge N=5	Skåne N=63	Stockholm N=82	Västernorrland N=10
profat	0.0285	0.1847	0.0320	0.0526	0.0092
	0.0477	0.0609	0.1569	0.1125	0.0258
	-0.1099	0.1360	-0.4971	-0.3400	-0.0166
	0.2504	0.2853	0.8827	0.5127	0.0476
profbt	0.0407	0.2643	0.0458	0.0763	0.0102
	0.0614	0.0809	0.1906	0.1511	0.0331
	-0.1058	0.1994	-0.5259	-0.3441	-0.0220
	0.3348	0.3999	1.2000	0.7508	0.0613
EBITDA	0.0852	0.3129	0.1212	0.1105	0.0496
	0.0679	0.0790	0.2236	0.1489	0.0273
	-0.0606	0.2417	-0.1909	-0.1603	0.0274
	0.3870	0.4443	1.6794	0.7443	0.0906

• **Table 16 Panel Regressions: single equation models (Coefficient, Standard Error) significance ***=1% **=5% *=10%**

Dependent Variable	PROFAT	PROFBT	EBITDA	ROE
Constant	-.1474193452***	-.1210890395***	-.8380656832E-01***	.9658213450***
	.13291543E-01	.18320522E-01	.20146424E-01	.83086438E-02
DR	-.1759297571***	-.1790495687***	-.1430932969***	-.9668682068***
	.45985007E-02	.83936535E-02	.10268101E-01	.37696271E-02
SIZE	.3628463053E-01***	.3360171154E-01***	.2976398420E-01***	-.9433873073E-02***
	.78448133E-03	.13586870E-02	.15873395E-02	.61214200E-03
AGE	-.3574424984E-02***	-.1898585576E-02***	-.1214381441E-02***	.5435849775E-03***
	.14198655E-03	.17636161E-03	.17574389E-03	.80584123E-04
TAN	-.6174501593E-01***	-.6783629134E-01***	-.2333450494E-01***	.4332943226E-01***
	.27518555E-02	.51376269E-02	.64076511E-02	.23042482E-02
L3	.4125799535E-01	.4127872002E-01	.3645482435E-01	.5308006337E-02
	.26664883E-01	.29124651E-01	.28084767E-01	.13354572E-01
L4	.2036826726E-02	-.1754919886E-02	.6574311280E-02	-.1036753004E-01
	.19101337E-01	.20870865E-01	.20134864E-01	.95697024E-02
L5	.2133838377E-01	.1550343941E-01	.2643626120E-01	-.1487318456E-01**
	.16147258E-01	.17645473E-01	.17020894E-01	.80907882E-02
L6	.1436942666E-01	.1464733239E-01	.2288697217E-01	-.7488322125E-02
	.16277830E-01	.17795923E-01	.17175325E-01	.81595141E-02
L7	.8579376639E-02	.1236238562E-01	.2060719765E-01	-.1453781336E-01
	.25264303E-01	.27752477E-01	.26934817E-01	.12720418E-01
L8	.2542189616E-01	.1707425921E-01	.2035690028E-01	-.9031455553E-02
	.22979435E-01	.25157038E-01	.24313922E-01	.11533579E-01
L10	-.6808349146E-02	.4353035507E-02	.1907645578E-01	-.1073845567E-01
	.25935307E-01	.28404054E-01	.27472265E-01	.13021766E-01
L12	.2582105497E-01**	.2216136433E-01*	.3386290559E-01***	-.1170297489E-01**
	.10895393E-01	.11943844E-01	.11554790E-01	.54754123E-02
L13	.3001635359E-01	.2335501373E-01	.2346329781E-01	-.1749561646E-01*
	.18657762E-01(.1077)	.20460650E-01	.19813888E-01	.93793609E-02
L14	.3748057897E-01***	.2813997261E-01***	.2645013726E-01***	-.1005054959E-01**
	.93797761E-02	.10285143E-01	.99504102E-02	.47149687E-02
L17	.2665791845E-01	.1997212783E-01	.1525208110E-01	.3544663894E-02
	.21193612E-01	.23204617E-01	.22430453E-01	.10638378E-01
L18	-.5998424125E-04	.3604328547E-02	.5405082438E-03	-.3815356527E-02
	.22902673E-01	.25072795E-01	.24240794E-01	.11494843E-01

L19	.1450936231E-01	.3938566984E-02	.1746358971E-01	-.2661030791E-01**
	.23949925E-01	.26199873E-01	.25305333E-01	.12012229E-01
L20	.1055420174E-01	.5585932381E-02	.2105919595E-01	-.1831412698E-01*
	.21929649E-01	.24030460E-01	.23259304E-01	.11016237E-01
L21	.4838486863E-01**	.4857591296E-01*	.5192656504E-01**	-.1248990536E-01
	.23964418E-01	.26187912E-01	.25254057E-01	.12007766E-01
L22	.1275965940E-02	-.1379101929E-01	-.2561743659E-01	.1379701895E-01
	.25147028E-01	.27500311E-01	.26553140E-01	.12608718E-01
L23	.2677951467E-01	.3076114766E-01	.9828353612E-02	-.7511365145E-02
	.29744205E-01	.32721074E-01	.31815917E-01	.14996180E-01
L24	.8151505026E-02	.9744527814E-02	.1997394298E-01	-.3068964663E-02
	.20470684E-01	.22465155E-01	.21771071E-01	.10297776E-01
L25	.2157318817E-01	.1884573830E-01	.7431354592E-01***	.3735504717E-02
	.25941762E-01	.28417783E-01	.27492629E-01	.13027842E-01
D3	.4869852521E-01***	.3485645815E-01***	.4884402148E-02	.3418453727E-01***
	.85401727E-02	.94449505E-02	.92034564E-02	.43276355E-02
D4	.7367586091E-02	-.4620523348E-02	-.6878701411E-02	.1249676582E-02
	.93083653E-02	.10209975E-01	.98790232E-02	.46805105E-02
D5	.1724485325E-01**	.1339294204E-02	-.1227863297E-01	.1121569532E-01***
	.84444174E-02	.93164321E-02	.90549540E-02	.42695083E-02
D7	.2767807316E-01	.9391082780E-02	-.5430988328E-02	.2474327882E-01***
	.15119691E-01	.16579158E-01	.16037363E-01	.76004508E-02
D8	.1885909509E-01	.1278613451E-01	-.8824915633E-03	.3201027445E-01***
	.14223723E-01	.15556134E-01	.15019536E-01	.71323860E-02
D9	-.1118264549	-.1156031629	-.8223321079E-01	-.7239567930E-03
	.71436479E-01	.78127815E-01	.75483403E-01	.35820473E-01
D10	.2366928600E-01*	.2514021546E-01*	.1157354155E-01	.2856712590E-01***
	.12677556E-01	.13884774E-01	.13426786E-01	.63654625E-02

• **Table 17 Simultaneous Equation Estimates (Coefficient, Standard Error) significance ***=1% **=5% *=10%**

	Model 1		Model 2	
	profbt	dr	ebitda	dr
Intercept	0.002262	-0.00159	0.004562	-0.00165
	0.004748	0.008077	0.005093	0.013130
dr	0.177515***		0.129105***	
	0.011206		0.008607	
profbt		1.765175***		
		0.145085		
ebitdat				1.946599***
				0.183095
gs	-0.00273***	0.040252***	0.003539***	0.030959***
	0.000873	0.000971	0.000739	0.001764
tan	-0.10068***	0.434571***	-0.06110***	0.397145***
	0.006798	0.010655	0.006645	0.016494
age	-0.00037***		-0.00040***	
	0.000081		0.000049	
l3	-0.00177	-0.01893	-0.00378	-0.02023
	0.010913	0.018414	0.011397	0.029147
l4	-0.00676	0.018210	-0.00044	0.015961
	0.007914	0.013352	0.008264	0.021130
l5	-0.01034	0.030271***	-0.00170	0.017127
	0.006544	0.011037	0.006795	0.017378
l6	-0.00159	0.014401	-0.00039	0.017341
	0.006507	0.010978	0.006777	0.017330
l7	-0.00528	0.026103	-0.00441	0.021458
	0.011232	0.018946	0.011700	0.029918
l8	-0.00627	0.056117***	-0.00969	0.043697
	0.009282	0.015649	0.009647	0.024667
l10	-0.00155	-0.00796	0.013176	-0.00786
	0.010808	0.018235	0.011330	0.028975
l12	-0.00438	0.029804***	0.001146	0.023024*
	0.004504	0.007593	0.004692	0.011998
l13	-0.00867	0.049033***	-0.00716	0.041401*
	0.008111	0.013673	0.008443	0.021591
l14	-0.00110	0.025412***	-0.00043	0.026010**
	0.003864	0.006512	0.004018	0.010270
l17	-0.00270	0.025485**	-0.00196	0.022526
	0.008788	0.014825	0.009167	0.023441
l18	-0.00521	0.014461	-0.00496	0.013138
	0.009499	0.016026	0.009903	0.025326
l19	-0.00455	0.030534*	0.001854	0.027214
	0.009682	0.016330	0.010103	0.025835
l20	-0.00838	0.026717*	-0.00089	0.021655
	0.009310	0.015708	0.009722	0.024861
l21	-0.00406	0.036115**	0.007117	0.039751
	0.009445	0.015930	0.009879	0.025252
l22	-0.00632	0.020299	-0.00960	0.019065
	0.010211	0.017229	0.010628	0.027179
l23	-0.01836	0.054532**	-0.00358	0.051913
	0.013703	0.023111	0.014308	0.036581
l24	-0.01062	0.036551**	-0.00989	0.034413
	0.008781	0.014801	0.009130	0.023343
l25	-0.00545	0.031650*	-0.00010	0.028631
	0.010880	0.018357	0.011370	0.029075
d3	-0.00018	-0.00631	-0.00632*	-0.00468
	0.003565	0.006009	0.003717	0.009500
d4	0.000987	-0.02385***	0.002893	-0.02308**
	0.003860	0.006508	0.004030	0.010305
d5	0.001401	-0.02505***	-0.00181	-0.02178**
	0.003530	0.005946	0.003682	0.009412
d7	0.000959	-0.00955	0.001016	-0.00702
	0.006219	0.010491	0.006495	0.016609
d8	-0.00076	0.008952	-0.00608	0.010321
	0.005820	0.009820	0.006103	0.015606
d9	-0.01804	-0.00984	-0.01453	-0.01538
	0.034143	0.057612	0.035676	0.091237
d10	0.003282	-0.01219	0.002423	-0.01073
	0.005276	0.008898	0.005514	0.014101
System Weighted R2	0.8070		0.7304	
Degrees of freedom	6779			

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