The Luxury Tax Act and Its Effect on Real Estate Companies - The Case of Taiwan

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Abstract

"The Specifically Selected Goods and Services Tax Act" which is also known as luxury tax act has been passed by Legislative Yuan in Taiwan on April 15, 2011. This Act is used to reduce the possible real estate bubble occurred. Some investors treat the imposition of luxury tax on real estate transactions as negative information to real estate companies, especially to real estate development companies. But the effect of luxury tax of real estate transactions on shareholder wealth still remains undecided. Hence, I examine whether Luxury Tax Act will really affect shareholder wealth of real estate companies? Positive abnormal returns at the announcement day and cumulative abnormal returns around the announcement day of luxury tax act passed by Legislative Yuan are found in this study. Real estate companies with larger firm size which do experience significantly positive cumulative abnormal returns. The empirical results suggest that real estate companies with higher EPS may take advantage of the announcement of luxury tax act passed by Legislative Yuan than those with lower EPS.

Keywords: Luxury Tax, Real Estate Transactions, Real Estate Companies, Abnormal Returns

Around 2010 there are some countries/areas which are facing the growing real estate bubble in Asia. In order to shrink down the growing real estate bubble, some governments use direct and/or indirect policies to intervene real estate market. For example, one of Taiwan government's policy is to promulgate a new tax act to tax on real estate transactions to prevent the transactions of short-term investors who could be one of the key persons pushing the real estate bubble happening. On April 15, 2011,

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“The Specifically Selected Goods and Services Tax Act” has been passed by Legislative Yuan. Specifically selected goods and services tax is also known as luxury tax.

The specifically selected goods regulated by this Act includes seven categories which are: (1) buildings and land, (2) passenger cars,[1] (3) yachts,[2] (4) airplanes, helicopters, and ultra-light vehicles,[3] (5) turtle shells, hawksbill, coral, ivory, furs, and their products,[4] and (6) furniture,[5] (7) membership.[6]

In this Act, the specifically selected goods include real estate which is defined in Article 2 as “Any unit of a building and the share of land associated with the unit, or any urban land for which a construction permit may lawfully be issued, that has been held for a period of no more than 2 years.” Hence, if a real estate investor sells his/her real estate which he/she only owned within two years, this real estate transaction will be imposed 10 percent to 15 percent luxury tax which is based on the actual real estate transaction price. But it also offers some exceptional provision in Article 5 for real

[1] Any passenger car that, including the driver’ s seat, has nine seats or less and a selling price or taxable value of not less than NT$3 million.
[2] Any yacht with a selling price or taxable value of not less than NT$3 million.
[3] Any airplane, helicopter, or ultra-light vehicle with a selling price or taxable value of not less than NT$3 million.
[4] Any of the aforesaid items that has a selling price or taxable value of not less than NT$500,000, excluding those that are not protected species under the Wildlife Conservation Act, or products made from them.
[5] Any item of furniture with a selling price or taxable value of not less than NT$500,000.
[6] As used in this Act, "specifically selected services" means any membership rights with a selling price of not less than NT$500,000, except when in the nature of a refundable deposit.

estate transactions.[7] If real estate sellers sell their real estate which can meet the criteria of exceptional provision in Article 5, their real estate transactions will not be taxed 10 percent to 15 percent luxury tax.

In 1990 the US government has imposed luxury tax on Yachts, Airplanes, luxury cars, and jewelry. Unfortunately, it is a defeated policy because the US government does not reach her goal to collect the taxes. And relative industries cause severe losses in sales due to executing the luxury tax. Consequently, thousands employees of relative industries lose their jobs. Hence, investors of Taiwan market believe that luxury tax act may impact the relative market seriously, and pay high attention to the similar new

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[7] Article 5: Under any of the following circumstances, a good is not regulated by this Act:
(1). The owner and owner's spouse and lineal relatives of minor age, have only one unit of a building and the land associated with the unit, have completed household registration, and during the holding period neither provide it for business use nor lease it out.
(2). The owner or the owner's spouse under the preceding subparagraph purchases a unit of a building and the land associated with the unit, such that they now hold a total of two such units of buildings and land, and, within 1 year after the date on which transfer registration for the newly acquired building unit and land is completed, they sell the originally acquired building unit and land, or sell the newly acquired building unit and land because of a job transfer, involuntary separation from employment, or any other involuntary cause, and they remain, after the sale, in conformance with the requirements of the preceding subparagraph.
(3). The commodity is sold to or by a government at any level.
(4). Non-imposition of the land value increment tax has been approved.
(5). Land designated as reserved for public facilities under the Urban Planning Act is transferred prior to expropriation.
(6). A commodity obtained through inheritance or legacy is sold.
(7). A unit of a building is transferred for the first time after completion of construction by the business entity.
(8). The commodity is sold in a forced sale pursuant to the Compulsory Execution Act, Administrative Execution Act, or other law.
(9). The commodity is the subject of a disposition pursuant to Article 76 of the Banking Act or other law, or pursuant to an order of the competent authority for the relevant industry.
(10). An owner, using his or her own residence and land, demolishes and rebuilds or enters into a joint construction and allocation project with a business entity and sells his or her share.
(11). A unit of a renewed building and the share of land associated with the unit, which were obtained through distribution in an urban renewal project implemented through rights transformation pursuant to the Urban Renewal Act, are sold.

tax policy in Taiwan. Due to the luxury tax of Taiwan is proposed mainly to impose on real estate transactions, this study will focus on the effect of luxury tax policy on shareholder wealth of real estate companies. But it is doubtful those whether this possible new tax burden of short-term real estate investors will really affect real estate companies' sales and profits and then reduce shareholder wealth? And do stockholders treat this information as a negative impact on the stock prices of real estate companies?

The imposition of luxury tax on real estate transactions looks like a negative information to real estate companies, especially to real estate development companies. There are several reasons supporting the negative impact hypothesis. First, Taiwan government estimates that there are around 5% of real estate buyers who are short-term investors who sell the real estate they owned within two years, these real estate transactions of short-term investors will be imposed 10% to 15% luxury tax which is based on the transaction prices. But as real estate development companies estimate, there could be more than 20% buyers of some newly developed real estate who are short-term investors. If it is true, real estate development companies might not be able to have high sales and profits in the near future as previous two years. Consequently, stock prices of real estate companies may be downside adjusted, and shareholder wealth shrinks down corresponsive.

Second, short-term real estate investors may leave real estate market and transfer their capital into the other commodity or security markets. It will reduce the power which promotes real estate price increase. Sales and profits of real estate development companies will get worse than before consequently. Shareholder wealth then is getting worse either.

Third, in order to prevent the extra payment of luxury tax, short-term investors may need to make a quick sale of real estate in hand. This will increase the short-term supply of real estate in the market. And it could lower down the asking and bidding prices of real estate. Prices of newly developed real estate may get impact and decrease. It will reduce sales and profits of real estate development companies. Then shareholder wealth is going to be reduced.

However, from some other viewpoints the other investors may believe that this information should not be treated as a negative signal. First, short-term investors of real estate are not the major buyers in the real estate market. Hence, the new Act may affect real estate companies’ sales and profits shortly. In addition, short-term real estate investors may shift their strategy from short-term investment to long-term investment. Therefore, the new Act may not really affect significantly.

Second, because in the Act it also offers some exceptional provisions for real estate transactions, short-term investors of real estate can use these exceptional provisions to exempt luxury tax. Therefore, luxury tax may not really affect the real estate market.

Finally, Taiwan's real estate market is still going up. Hence, if real estate prices keep increasing and the incremental profits through real estate transactions may be higher than the possible payment of luxury tax, short-term real estate investors may not change their strategy in real estate investment. It means that the new Act could not slow down the growing price of real estate market.

In sum, the effect of luxury tax of real estate transactions on shareholder wealth remains undecided here. Hence, I will like to examine whether "The Specifically Selected Goods and Services Tax Act" will really affect shareholder wealth of real estate companies? And what kind effect of this Act on shareholder wealth of real estate companies will cause?

Literature Review

There are a few studies focusing on the tax policies and their effect on shareholder wealth, such as Amoako-Adu (1983), Schipper, Thompson, and Weil(1987), Downs and Hendershott (1987), Cutler (1988), Shaw (1988), and Howe and Jain (2004). All of the previous studies investigate the effect of tax reduction policies, and their empirical results mainly suggest that shareholder wealth will take advantage of these tax reduction policies. On the other hand, Horng (2011) has examined the policy effect of increasing tax burden on the vacant lots, and his findings also indicate that shareholder wealth will take advantage of this tax increase policy.

Amoako-Adu (1983) examines whether shareholder wealth is affected by the differential taxation of dividends and capital gains on stock prices around the 1971 Canadian Tax Reform and its subsequent amendments in 1977. His results show that the tax changes of 1971 and 1977 do affect portfolios with high dividend yields and portfolios with low dividend yields differently. The cumulative average residuals of high-yield portfolios are significantly higher than the cumulative average residuals of low-yield portfolios.

Schipper, Thompson, and Weil (1987) investigate the effects of several interrelated regulatory changes, including the Motor Carrier Act of 1980 and the 1981 Economic Recovery Tax Act, on shareholder wealth of 27 trucking firms listed on the New York Stock Exchange (NYSE) or the American Stock Exchange (ASE). The Motor Carrier Act of 1980 offers truck operating rights easier to secure, and the 1981 Economic Recovery Tax Act allows that companies with no amortization of operating rights for tax purpose can alter to a five-year amortization schedule. These two Acts should be able to benefit trucking firms and increase firm values. Consequently, shareholder wealth of trucking firms should receive the positive benefit from these two Acts. Their empirical results show that the 1981 Economic Recovery Tax Act does benefit trucking-firm shareholders but it also contains the provision which is less favorable than anticipated.

Downs and Hendershott (1987) examine the effect of the Tax Reform Act of 1986 on the stock prices. In this study, they show that equity values of U.S. firms should be raised by 10 percent to 13 percent because the Tax Reform Act of 1986 not only cuts the corporate tax rate but also eliminates the investment tax credit and increases tax depreciation period on structure.

Cutler (1988) uses industry-specific returns and firm-specific returns to examine whether the Tax Reform Act of 1986 affects stock market. His empirical results suggest a mixed conclusion about the impact of tax reform and indicate that the market may exist inefficient pricing of the tax news.

The 1981 Economic Recovery Tax Act includes Safe Harbor Lease Law which allows sellers (lessees) can pass tax depreciation deduction and investment tax credits to buyers (tenants) thru leasing. Shaw (1988) uses Seemingly Uncorrelated Regression (SUR) model suggested by Zellner (1962) to examine the effect of promulgating Safe Harbor Lease Law on stock prices. At the announcement day, shareholders of sellers obtain significantly positive abnormal returns, but shareholders of buyers receive negative abnormal returns.

Howe and Jain (2004) examine the wealth effect associated with the legislative events of the passage of the REIT Modernization Act of 1999. Their empirical results suggest that the shareholders of REITs have experienced a modest positive wealth effect associated with the legislative events.

There are few studies focusing on the effect of increasing tax. It sounds that its effect is still undecided. Luxury tax on real estate transactions is released in Taiwan on April

15, 2011. Does it indicate a negative wealth effect as the market predicted? I will like to find out how really the luxury tax news tells us in this study.

Methodology

In this study, when Legislative Yuan passes the Luxury Tax Act, I examine its effect on real estate companies. Because it's an one time announcement and likely to have similar effects on the disturbances of the different functions being used to estimate different real estate companies' returns, the seemingly unrelated regression equations (SURE) introduced by Zellner (1962, 1963) is used in this study. The model assumes that the realized returns are estimated by a set of individual equations which are treated as one jointed equation.

In this study, the comparison period runs from 90th trading day before announcement to 31st trading day before announcement. The abnormal return or the disturbance term of security j at time t, $AR_{j,t}$, is measured as the following equation:

$$AR_{j,t} = R_{j,t} - \overline{R}_{j,t}, \tag{1}$$

Where $\overline{R}_{j,t}$ the estimate is expected return of security j at day t from the SURE using the comparison period that runs from trading day -90 to -31, $R_{j,t}$ is the return of security j at day t.

The mean abnormal return for a portfolio of N firms at day t is

$$\overline{AR}_t = \frac{1}{N}\sum_{j=1}^{N} AR_{j,t} \qquad (2)$$

Where $\overline{AR}_0 = 0$ is the null hypothesis which means that the announcement has no effect on the wealth of real estate companies' shareholders.

The cumulative abnormal return over a particular event period, from day a to day b, is defined as

$$CAR_j(a,b) = \sum_{t=a}^{b} AR_{j,t}\ , \qquad (3)$$

For example, Car(0,1) will represent the cumulative abnormal return from the imposing luxury tax announcement day to one day after the announcement day for security j.

The average cumulative abnormal return for a portfolio of N firms over a particular event period, from day a to day b, is calculated as

$$\overline{CAR}(a,b) = \frac{1}{N}\sum_{j=1}^{N} CAR_j(a,b) \qquad (4)$$

Where $\overline{CAR}(a,b) = 0$ is the null hypothesis which means that the announcement has no effect on the wealth of real estate companies' shareholders over the period from a to b.

Data

In this study, real estate companies are confined to be public real estate companies which are listed in Taiwan Security Exchange only. Hence, the entire sample companies including both real estate development companies and non-development companies are drawn from the Taiwan Security Exchange. The event date (t=0) is defined as the date when the Specifically Selected Goods and Services Tax Act has been passed and officially announced by Legislative Yuan. The data set of daily stock returns and market returns is obtained from the *Taiwan Economic Journal* (TEJ). The following three preliminary screening devices are also employed:

(1) The real estate companies must be listed in Taiwan Security Exchange when the Specifically Selected Goods and Services Tax Act has been passed and officially announced by Legislative Yuan.

(2) The real estate companies must be listed on the TEJ with daily returns file for a 151-day period that begins 120 trading days prior to the announcement and ends 30 days after the announcement.

(3) There must not be any coincidence with any other major corporate event such as dividend or earning announcements.

The sample then consists of a total of 38 real estate companies, which meet the screening criteria.

Empirical Results

Descriptive Statistics

Table 1 presents a list of the number of real estate companies by firm type, firm size, current ratio, and EPS. It also shows the statistics under different characteristics of real estate companies which are classified on the basis of main business type of firms, firm size, current ratio and EPS. The sample consists of 25 real estate companies with main business in real estate development, 10 companies in construction, and 3 companies in other related areas. The mean firm size, mean current ratio and mean EPS of real estate development companies are higher than construction companies and the mean firm size and mean EPS of real estate development companies are higher than those companies in other business related real estate. The 19 real estate companies with larger firm size also have higher mean EPS and lower mean current ratio than the other 19 real estate companies with smaller firm size. The 19 real estate companies with larger current ratio have higher mean firm size and mean EPS than the other 19 real estate companies with smaller current ratio. The 19 real estate companies with larger EPS have higher mean firm size and lower current ratio than the other 19 real estate companies with smaller EPS.

(Table 1 here)

The Wealth Effect of Luxury Tax Act Announcement

Figure 1 to Figure 4 show the movement of daily mean abnormal returns of whole real estate companies, real estate development companies, construction companies, and the others, which begin from 30th days before the luxury tax policy announcement and end at 30th days after the luxury tax policy announcement. It also reveals the cumulative mean abnormal returns which begin from 30th days before the luxury tax policy announcement and end at 30th days after the luxury tax policy announcement. From Figure 1 to Figure 4 we can see no matter what kind main business the company involves, except the group of the others, they have similar movement around the luxury tax policy announcement. And this new tax imposition policy looks not like a bad news to the market.

(Figure 1 to Figure 4 here)

(Table 2 here)

Table 2 shows daily mean abnormal returns of whole real estate companies which begin from 30th days before the luxury tax policy announcement and end at 30th days after the luxury tax policy announcement. At the announcement day, the mean abnormal return is 0.178%. The announcement effect looks like happening from two day before the announcement day. At one day before the announcement day the daily mean abnormal return is 0.172%, and at two day before the announcement day the daily mean abnormal return is 0.214%. From the empirical results we do not see negative impact on the shareholders of real estate companies. And the market reaction is taken before the official announcement. It reveals that the market believes that luxury tax is going to be passed by Legislative Yuan soon.

(Table 3 here)

In Table 3, most of the cumulative mean abnormal returns, especially prior to the announcement and around the announcement, show significantly positive, which include $\overline{CAR}(-20,0)$, $\overline{CAR}(-10,0)$, $\overline{CAR}(-5,0)$, $\overline{CAR}(-3,0)$, $\overline{CAR}(-1,0)$, $\overline{CAR}(0,3)$, $\overline{CAR}(0,5)$, $\overline{CAR}(-1,1)$, $\overline{CAR}(-3,3)$, $\overline{CAR}(-5,5)$ and $\overline{CAR}(-10,10)$. The cumulative mean abnormal return from one day prior to the announcement day to the announcement day, $\overline{CAR}$(-1,0) is 0.35%. The cumulative mean abnormal return from the 20th day prior to the announcement day to the announcement day, $\overline{CAR}$(-20,0) is 1.913%. The cumulative mean abnormal return from the announcement day to 5th day after the announcement, $\overline{CAR}$(0,and 5) is 0.633%. The cumulative mean abnormal return from 10th day prior to the announcement day to 10th day after the announcement, $\overline{CAR}$(-10,10) is 1.548%.The empirical results present that an investor hold real estate companies' stocks during some periods, such as holding from 20th day before the announcement day to the announcement day or later, he is able to receive positive abnormal return.

(Table4 here)

Table 4 shows statistics of the sub-sample by different characteristics including main business type, firm size, current ratio, and EPS. The empirical results do not show that there is any significant difference between each two sub-samples with different characteristics of $\overline{CAR}$(0,1), $\overline{CAR}$(-30,0), $\overline{CAR}$(0,30), and $\overline{CAR}$(-30,30). However, the empirical results show that real estate companies with larger firm size do experience significantly positive cumulative abnormal returns at the period (0,1), (-30,0), (0,30), and (-30,30). In addition, real estate companies with larger current ratio and larger EPS looks like to have positive cumulative abnormal returns at the period, (-30,0) and (0,1) respectively. The main business of real estate companies are not in real estate development which have significantly positive $\overline{CAR}$(0,30) and $\overline{CAR}$(-30,30). Their $\overline{CAR}$(0,30) and $\overline{CAR}$(-30,30) are 2.555% and 4.342% respectively.

(Table 5 here)

Table 5 shows that only a firm’s EPS is significantly related to the CAR(0,1). It means that a firm with higher EPS can provide investors higher cumulative abnormal return during the period form the announcement day to one day after the announcement. The empirical results are only supporting that companies with higher profits will take advantage of this announcement than those with lower profits around the announcement day.

Conclusions

Taiwan government promulgates “The Specifically Selected Goods and Services Tax Act” which is also known as luxury tax act. In this Act it gives the government a power to impose a new tax on real estate transactions to prevent the transactions of short-term investors on April 15, 2011. The effect of luxury tax act on shareholder wealth remains controversial. Hence, in this study I examine the effect of “The Specifically Selected Goods and Services Tax Act” on shareholder wealth of real estate companies. I also investigate what kind effect of this information on shareholder wealth of real estate companies and what can explain the abnormal returns.

Examining 38 public real estate companies which are listed in Taiwan Security Exchange, I find that there exist positive abnormal returns and cumulative abnormal return around the announcement of luxury tax act passed by Legislative Yuan. It is a little different from the market’ s thinking. The results are more supporting that this information reveals a positive signal, especially to those real estate companies with larger firm size which do experience significantly positive cumulative abnormal returns. Hence, shareholders may believe that after the luxury tax act is executed they will take advantage from the increase of real estate companies’ sales and profits, and their wealth should increase in the near future.

In addition, the empirical results from the regressions also suggest that real estate companies with higher profits may take advantage of this announcement than those with lower profits around the announcement of luxury tax act passed by Legislative

Yuan.

In sum, sometimes increasing a new tax burden looks like a bad news in the market, and it may reduce shareholders wealth. Unfortunately in this study the market does not really treat this information as bad information.

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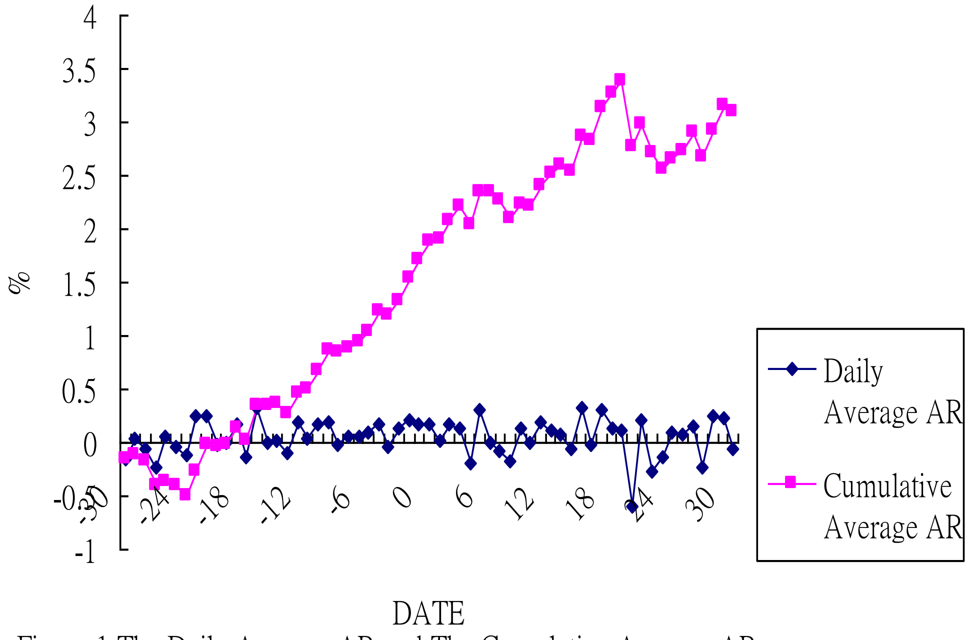

Figure 1 The Daily Average AR and The Cumulative Average AR-The Full Sample

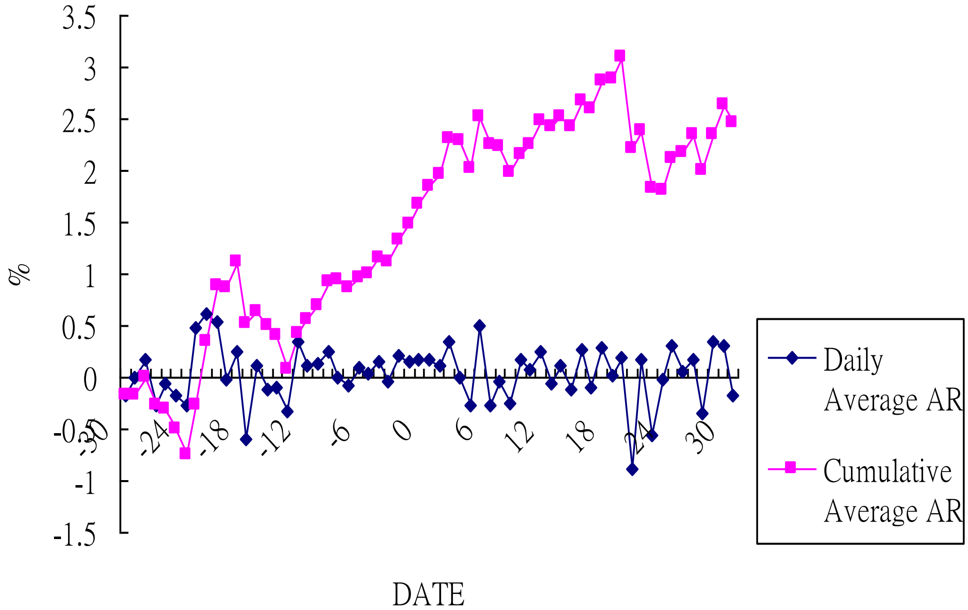

Figure 2 The Daily Average AR and The Cumulative Average AR-
Real Estate Development Companies

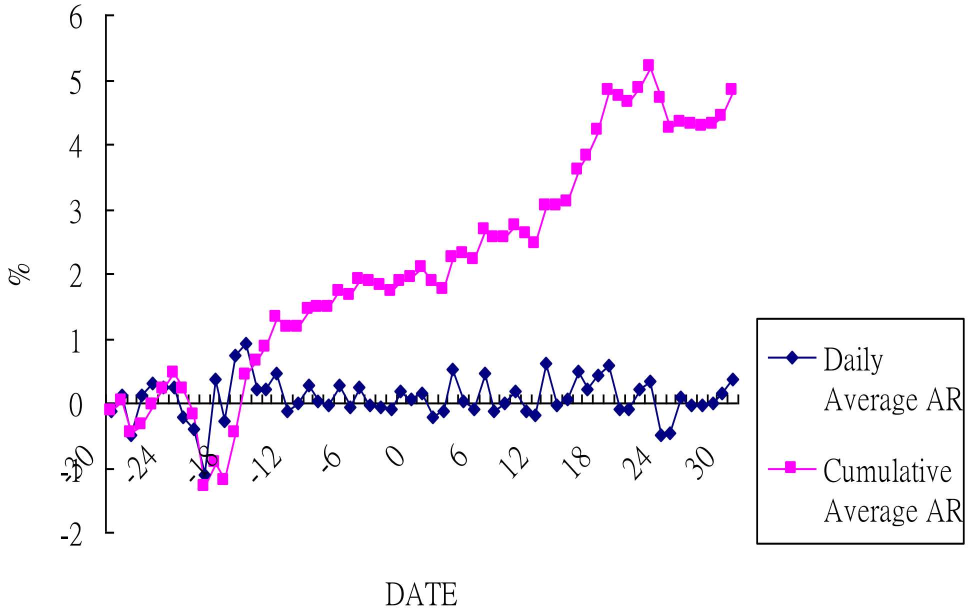

Figure 3 The Daily Average AR and The Cumulative Average AR-Construction Companies

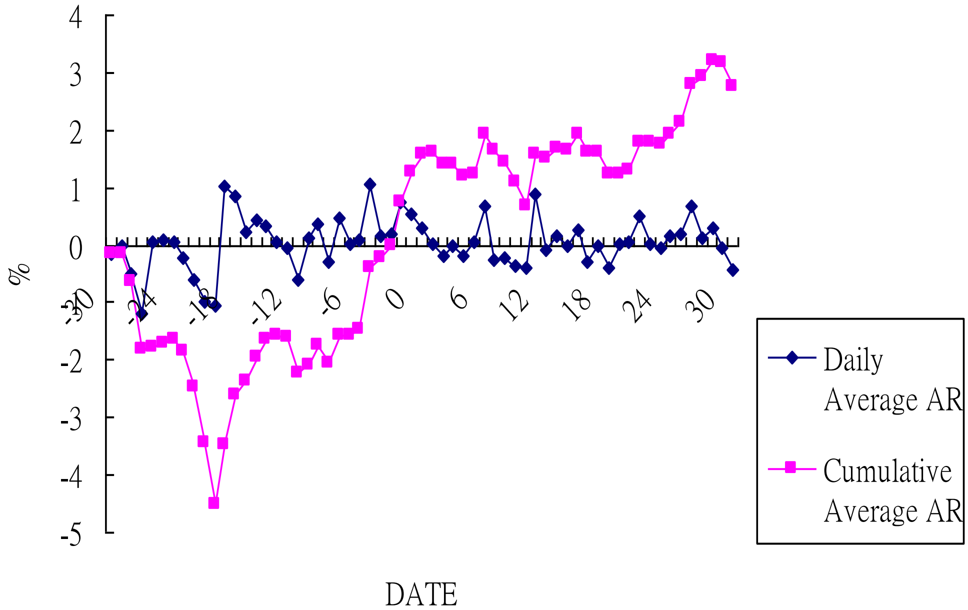

Figure 4 The Daily Average AR and The Cumulative Average AR-
The Other Real Estate Companies

Table 1 Distribution of the Sample by Characteristics

Characteristics	No. of Sample	Average Firm Size	Average Current Ratio	Average EPS
Total	38	14,819M	310.78%	2.56
Panel A. By Main Business Type				
Development	25	17,654M	210.59%	3.20
Non-Development				
-- Construction	10	11,382M	151.18%	1.31
-- Others	3	2,647M	1,677.71%	1.41
Panel B. By Firm Size				
Larger	19	24,550M	186.26%	3.71
Smaller	19	5,087M	435.31%	1.41
Panel C. By Current Ratio				
Larger	19	14,980M	496.33%	3.13
Smaller	19	14,657M	125.23%	1.99
Panel D. By EPS				
Larger	19	17,448M	188.42%	4.55
Smaller	19	12,189M	433.15%	0.57

Table 2 The daily mean abnormal returns ($\overline{AR}$) of the Luxury Tax Act announcement

DATE	$\overline{AR}$ (%)	t-Statistic	Min AR (%)	Max AR (%)
-30	-0.154	-1.68	-2.137	0.862
-29	0.037	0.47	-1.132	1.258
-28	-0.059	-0.22	-5.065	4.123
-27	-0.232	-0.95	-6.890	1.918
-26	0.052	0.46	-2.146	1.531
-25	-0.046	-0.48	-1.777	0.947
-24	-0.106	-0.51	-5.866	1.795
-23	0.242	2.09**	-0.859	2.752
-22	0.253	0.92	-2.290	4.036
-21	-0.017	-0.04	-4.396	4.929
-20	0.003	0.02	-3.800	2.133
-19	0.170	1.11	-2.100	3.918
-18	-0.132	-0.52	-3.831	3.157
-17	0.330	2.20**	-0.633	5.082
-16	0.008	0.07	-2.865	1.365
-15	0.016	0.10	-3.564	1.843
-14	-0.093	-0.49	-5.502	1.540
-13	0.194	1.59	-1.802	1.931
-12	0.032	0.13	-6.852	3.323
-11	0.172	1.48	-1.629	1.876
-10	0.194	0.88	-3.489	7.094
-9	-0.027	-0.32	-1.972	0.972
-8	0.055	0.50	-1.379	1.557
-7	0.051	0.72	-1.341	0.830
-6	0.096	0.78	-2.693	1.432
-5	0.181	1.37	-2.178	3.608
-4	-0.034	-0.26	-3.028	1.220
-3	0.132	1.12	-2.102	1.948
-2	0.214	1.75*	-1.077	3.103
-1	0.172	1.93*	-1.059	1.975
0	0.1786	2.14**	-1.239	1.405

Table 2 (Continued)

DATE	$\overline{AR}$ (%)	*t*-statistic	Min AR (%)	Max AR (%)
1	0.024	0.18	-1.531	3.042
2	0.176	1.69*	-1.020	2.274
3	0.132	1.14	-2.268	2.106
4	-0.183	-1.19	-2.874	2.310
5	0.307	2.39**	-0.708	4.021
6	0.004	0.01	-2.802	4.177
7	-0.071	-0.54	-3.482	1.108
8	-0.182	-1.59	-2.536	0.938
9	0.137	1.52	-1.028	1.975
10	-0.006	-0.03	-4.965	1.895
11	0.185	1.52	-1.524	1.930
12	0.110	0.70	-1.698	3.728
13	0.079	0.86	-1.447	1.398
14	-0.057	-0.27	-3.031	3.801
15	0.323	1.93*	-1.802	4.031
16	-0.026	-0.24	-2.142	1.523
17	0.298	1.87*	-1.074	4.181
18	0.135	1.00	-1.293	3.767
19	0.109	1.30	-1.476	1.291
20	-0.600	-0.80	-28.107	1.307
21	0.209	1.71*	-1.517	3.666
22	-0.279	-0.92	-10.905	1.057
23	-0.141	-0.76	-5.904	1.357
24	0.091	0.47	-2.890	5.038
25	0.078	0.77	-2.268	1.143
26	0.163	0.90	-1.956	5.006
27	-0.227	-0.88	-5.026	5.106
28	0.251	1.87*	-1.746	4.054
29	0.233	1.89*	-2.002	3.004
30	-0.053	-0.38	-3.277	2.034

Notes: Date 0 is the announcement day; Date -1 means one day before the announcement; Date 1 means one day after the announcement, and so on. *** indicates significance at the 1% level; ** indicates significance at the 5% level; * indicates significance at the 10% level.

Table 3 the Cumulative Mean Abnormal Returns Before and After the Announcement of Luxury Tax Act

Cumulative Period	$\overline{CAR}$ (%)	*t*-statistic
-30~0	1.884	1.51
-20~0	1.913	1.911*
-10~0	1.213	2.251**
-5~0	0.843	2.73***
-3~0	0.696	3.50***
-1~0	0.350	3.15***
0~1	0.201	1.256
0~3	0.509	2.29**
0~5	0.633	2.27**
0~10	0.513	1.102
0~20	1.070	0.89
0~30	0.847	0.64
-1~1	0.374	2.41**
-3~3	1.027	3.43***
-5~5	1.298	3.16***
-10~10	1.548	2.12**
-20~20	2.806	1.45
-30~30	2.530	0. 88

Notes: *** indicates significance at the 1% level; ** indicates significance at the 5% level; * indicates significance at the 10% level.

Table 4 Statistics of the Sub-Sample by Characteristics

Characteristics	No	$\overline{CAR}$ (0,1)	$\overline{CAR}$ (-30,0)	$\overline{CAR}$ (0,30)	$\overline{CAR}$ (-30,30)
Panel A. By Main Business Type					
Development	25	0.295% (1.41)	1.842% (1.04)	0.794% (0.39)	2.457% (0.69)
Non-Development	13	0.022% (0.09).	1.964% (1.41)	2.555% (2.04)*	4.342% (1.83)*
Difference	38	0.283% (0.28)	-0.122% (-0.02)	-1.761% (-0.07)	-1.885% (-0.10)
Panel B. By Firm Size					
Larger	19	0.571% (2.51)**	3.823% (2.03)*	3.097% (1.83)*	6.671% (1.95)*
Smaller	19	-0.168% (-0.84)	-0.056% (-0.04)	-0.305% (-0.14)	-0.467% (-0.14)
Difference	38	0.739% (0.78)	3.879% (0.50)	3.402% (0.13)	7.138% (0.38)
Panel C. By Current Ratio					
Larger	19	0.319% (1.30)	2.944% (1.77)*	2.325% (1.56)	5.020% (1.69)
Smaller	19	0.084% (0.40)	0.823% (0.44)	0.467% (0.20)	1.184% (0.30)
Difference	38	0.235% (0.24)	2.121% (0.28)	1.858% (0.07)	3.836% (0.20)
Panel D. By EPS					
Larger	19	0.433% (1.87)*	2.951% (1.56)	2.227% (1.52)	4.902% (1.55)
Smaller	19	-0.031% (-0.14)	0.817% 0.50	0.566% (0.23)	1.303% (0.34)
Difference	38	0.464% (0.47)	2.134% (0.23)	1.661% (0.06)	3.599% (0.19)
Notes: *t*-statistics are in parentheses. *** indicates significance at the 1% level; ** indicates significance at the 5% level; * indicates significance at the 10% level.					

Table 5 Estimates of parameters from cross-sectional regression test on CARs

Variable	CAR(0,1)	CAR(-30,0)	CAR(0,30)	CAR(-30,30)
Constant	-1.134	5.483	0.360	6.295
	(-1.05)	(0.53)	(0.05)	(0.37)
Firm Size	0.003	0.003	0.016	0.004
	(1.42)	(1.31)	(1.135)	(1.32)
Current Ratio	0.000	-0.002	-0.000	-0.003
	(1.04)	(-0.72)	(-0.18)	(-0.58)
EPS	0.438	-0.077	-0.299	-0.482
	(2.34)**	(-0.04)	(-0.22)	(-0.16)
Development	0.336	-6.350	-1.287	-8.100
	(0.34)	(-0.67)	(-0.18)	(-0.52)
Construction	0.292	-6.145	-0.529	-7.294
	(0.27)	(-0.59)	(-0.07)	(-0.43)
Adjusted R^2	0.138	-0.145	-0.195	-0.150

Notes: *t*-statistics are in parentheses. ** indicates significance at the 5% level.