

**The Wealth Effects of “Oil” Name Changes on Stock Prices:  
Evidence from U.S. and Canadian Stock Markets**

Shih-An Yang

*National Chengchi University  
Taipei, Taiwan*

Robert (Chi-Wing) Fok

*University of Wisconsin-Parkside  
Kenosha, WI 53141  
U.S.A.*

Yuanchen Chang\*

*National Chengchi University  
Taipei, Taiwan*

---

\* Corresponding author, Department of Finance, National Chengchi University, Taipei, Taiwan.  
Phone: 8662-29393091-81102; Fax: 8662-29393394; e-mail: [yccchang@nccu.edu.tw](mailto:yccchang@nccu.edu.tw)

# **The Wealth Effects of “Oil” Name Changes on Stock Prices: Evidence from U.S. and Canadian Stock Markets**

## **Abstract**

Using data from the U.S. and Canadian stock markets, we examine the valuation effects of corporate name changes during recent oil price surges. We find that there is a tendency for firms to add the words “oil” or “petroleum” to their corporate names when oil prices are high. Stock returns and trading volume are significantly increasing for companies adding “oil” or “petroleum” in their names. For the full sample, firms that added “oil” or “petroleum” in their corporate names show significant and positive abnormal returns, while those deleted “oil” or “petroleum” from their names show negative abnormal returns except on the event day. In general, market responses are stronger for major name changes, changes that add oil related terms to corporate names, and resource-unrelated name changes. Market responses are more positive during the hot market period. We also find that U.S. investors seem to respond more enthusiastically to these name change events than Canadian investors.

**Keywords:** corporate name change, oil price, event study

**JEL classification:** F31; F33, G14; G15

# **The Wealth Effects of “Oil” Name Changes on Stock Prices: Evidence from U.S. and Canadian Stock Markets**

## **1. Introduction**

Do companies tend to add the words “oil” or “petroleum” to their names during the recent oil price surge? If so, what are the valuation effects of these name changes? We study the effect of corporate name changes associated with “oil” or “petroleum” on stock prices and trading volume. We also compare valuation effects of corporate name changes between firms traded in the U.S. and Canadian stock markets from January 2000 to December 2005.

The academic literature has found mixed evidence on the valuation effects of corporate name changes. Early evidence found no statistically significant valuation effects associated with corporate name changes (Howe, 1982, Karpoff and Rankine, 1994). However, the dot.com phenomenon provides contrasting results. Lee (2001) and Cooper, Dimitrov and Rau (2001) documented significant and positive market reactions to the changes of internet-related dot.com names. Cooper et al. (2001) suggest that effects of corporate name changes are associated with investor mania driven by a price pressure induce-bubble in the stock markets. As the internet bubble burst, valuation effect of corporate name changes seems remains, but operates in a reverse direction. Cooper, Osobov, Khorana, Patel, and Rau (2005) found positive market reaction to name changes for firms deleting “dot.com”, “dot.net”, and “internet” from their names after the internet crash. They concluded that investors are affected by cosmetic changes and managers try to take advantage of investor sentiment by changing corporate names.

In this study, we examine whether valuation effects of corporate name changes exist in the oil industry. Our study contributes to the current literature in two ways.

Firstly, most previous studies on the effects of corporate name changes examine sample of firms from different industries.<sup>1</sup> As suggested by Koku (1997), aggregation bias may be resulted by lumping firms form different industries together. Ignoring the industry effects may contaminate empirical results. Koku examined the impact of name changes with a focus on service industry and found positive reactions to corporate name changes. To the best of our knowledge, no study has examined the market effects of corporate name changes in a single manufacturing industry. This study fills the gap by examining the effects of corporate name changes in the oil industry. The recent surges in oil price provides us an opportunity to revisit the claim that managers take advantage of investors' bias by changing corporate names conditional on market condition as reported in Cooper et. al (2005). Secondly, we compare the valuation effects of corporate name changes between the U.S. and Canadian stock markets. This is the first study directly comparing the market effects of corporate name changes in the U.S. with another market. Previous studies mainly examined the U.S. market with the exception of Josev, Chan, Faff (2004) and Karbhari, Sori and Mohamad (2004), which show conflicting results of the valuation effects of corporate name changes for the Australian and Malaysian markets. Studies on the valuation effects of corporate name changes in other non-U.S. markets are warrant. Many assume that the Canadian market is basically the same as the US market due to the geographic proximity and cultural/economic integration between the two countries, but this assumption has rarely been examined. Except the study by Sati, Hanna and Richardson (1994), we are not aware of any published research that compares market effects between the U.S. and Canadian markets.<sup>2</sup> It is of

---

<sup>1</sup> Lee (2001) controlled for industry effect by including dummy variables in the regression analysis. However, no details of the results are provided. It is not clearly how many different industries are included in the sample and whether the coefficients of the industry dummies are significant or not. Moreover, industry dummy is not likely to mitigate the impact of industry effects completely.

<sup>2</sup> Previous studies on the U.S. and Canadian markets mainly focus on the issues of integration or

interest to examine if investors in these two markets react to corporate name changes differently. Our results provide insight into the difference in investor sentiment between the two markets.

Our results show that there is a tendency for firms to include the words “oil” or “petroleum” to their names when oil prices are high. Returns and trading volume are significantly increasing for companies adding “oil” or “petroleum” to their names. Firms that delete “oil” or “petroleum” from their names suffer negative returns in the post-event period. Valuation effects of corporate name changes are stronger for major name changes and varying across market conditions. We find that the valuation effects differ between Canada and U.S.A. U.S. investors seem to respond more enthusiastically to these name changes than Canadian investors, and the valuation effects dissipate much slower in the U.S. market than in the Canadian market.

The remainder of the article is organized as follows. Section 2 discusses literature and provides hypotheses of valuation effects for corporate name changes. Section 3 describes our sample and the event study methodology that we use. Section 4 presents and discusses the empirical results. Section 5 concludes.

## **2. Literature review and Hypotheses of this paper**

Because corporate name changes are costly and firm names are related to certain qualities of firm performance, it is naturally to ask why do firms change their names. Howe (1982) argued that information asymmetries are related to the

---

segmentation between the two countries. For example, Forester and Karolyi (1995) examined the short-run cross market dependence in returns and volatility between the U.S. and Canadian markets. Forester and Karolyi (1993) investigated the stock price movement of Canadian firms before and after they interlisted in the U.S. They found evidences of some degree of segmentation between the two markets. Forester and Karolyi (1998) examined the impact on trading costs of the decision to interlist on a U.S. exchange. Sati, Hanna and Richardson (1994) examined the capital market effects of U.S.-Canada GAAP differences.

valuation effects of company name changes. He showed that in situation of quality uncertainty, high quality firms can benefit from name changes to their stock prices. He used event study methods to assess name change effects and concluded that no statistically significant valuation effect was associated with U.S. corporate name changes. Karpoff and Rankine (1994) examined the effects of U.S. corporate name changes from 1979 to 1987 and confirmed that there is no significant effect on stock returns due to corporate name changes. Recent empirical evidence using data from the internet bubble period shows different results. Cooper et al. (2001) documented a positive stock price reaction to the changes of internet-related dotcom names. Cooper et al. (2005) showed that investors were deceived by companies seeking to be disassociated from internet industry by deleting “dot.com”, “dot.net” or “internet” from their corporate names during the period 1998-2001. These results suggest that corporate name change effects are associated with investor mania driven by a price pressure induce-bubble in the stock markets; and managers take advantage of investor sentiment by changing corporate names to capture gains.

Previous researchers also show conflicting results of the valuation effects of corporate name changes among different countries. For example, Josev, Chan and Faff (2004) examined 107 firms underwent corporate name changes from 1995 to 1999 in Australia. They found that name changes were associated with a negative impact on stock prices in their event periods. Karbhari, Sori and Mohamad (2004) analyzed the Kuala Lumpur Stock Exchange between 1984 and 1996, and found corporate name changes had no wealth effects on the shareholders of the firms.

We are interested in comparing the valuation effects of oil price changes between the U.S. and Canadian stock markets. Specifically, we test the following null hypotheses:

**$H_1$  : Stock price reactions to announcement of “oil” or “petroleum” name**

**changes are insignificantly from zero during event periods.**

A company name change associated with “oil” or “petroleum” provides a signal about the firm’s focus on the oil industry. It is of interest to see if the market responds to such a signal.

We compare the valuation effects of corporate name changes between Canadian and U.S. firms. This, in turn, gives rise to the following hypothesis.

**$H_2$  : Stock price reactions to announcement of “oil” or “petroleum” name changes are the same between U.S. and Canadian stock markets.**

Market response to corporate name change may not be symmetric across different market conditions. Therefore, we compare the valuation effects of corporate name changes during the normal and hot oil markets. This gives rise to the following hypothesis.

**$H_3$  : The magnitude of abnormal returns to announcements of “oil” or “petroleum” name changes are the same between the normal and hot oil markets.**

To investigate the valuation effects of different types of name change, we separate company’s name changes into the three categories: (1) add versus delete the words “oil” or “petroleum”, (2) major versus minor name changes, and (3) resource-related versus resource-unrelated name changes. We test the following hypotheses regarding the relationship between the valuation effects of corporate name changes and the types of name change.

**$H_4$  : The magnitude of abnormal return to announcement of company’s name changes are the same between companies adding “oil” or “petroleum” to their names and companies deleting the words from their names.**

**$H_5$  : The magnitude of abnormal return to announcement of company’s name changes are the same between major and minor name changes.**

**$H_6$  : The magnitude of abnormal return to announcement of company's name changes are the same between resource-related and resource-unrelated name changes.**

We also compare the trading volume effects of corporate name changes. This gives rise to the following hypothesis.

**$H_7$  : The mean abnormal trading volume ratio around the announcement day is not significantly different from one.**

### **3. Data and methodology Description**

#### ***A. Data description***

Our sample consists of companies that changed their names from January 2000 to December 2005. We consider companies that are listed in the U.S. and Canadian markets. The U.S. companies are traded in the NYSE, AMEX, NASDAQ, and OTCBB. The Canadian companies are traded in the Toronto Stock Exchange (TSX), Venture Exchange (TSX Venture), and NEX Board (NEX). We search for name change events that associate with the words “oil” or “petroleum” from these exchanges and cross check with the Mergent Event Data. A sample of 246 companies is obtained. Since the information of name changes may be released to the market before official name change announcement made by the stock exchanges, we also search for news reports on these name change events. We have two choices regarding the announcement day (or the event day): (1) the day when corporate name changes are announced by stock exchanges; and (2) the first available day of name changes news in the Factiva database. We use the earlier one between these two dates as the event day. Daily stock returns, trading volumes, companies' market

value, benchmark indices, and oil price are obtained from Datastream<sup>3</sup>. We delete 69 companies due to insufficient price and volume data in the event period and the final sample consists of 177 firms listed in the U.S. and Canadian stock markets.

The information of sample firms is summarized in Table 1. Based on information from news releases of corporate name changes, we divide the sample firms into three categories. Category 1 separates firms that add the words “oil” or “petroleum” into their corporate names from firms that delete these words. Among the 177 sample firms, more than half (53%) of the firms add the words “oil” or “petroleum” into their names. A small percentage of firms (7.3%) experienced name changes with both addition and deletion of “oil” or “petroleum.” An example of this is the change from Algonquin Petroleum Corporate to Algonquin Oil & Gas Limited. In the U.S. market, more firms add oil related terms to their names than the case of deleting those terms (58 vs. 36), while there is equal number of Canadian firms (35) that add oil related terms into or delete them from their corporate names. Category 2 separates firms with major name changes from those with minor name changes following Bosch and Hirschey (1989). A major name change indicates that new corporate name is entirely different from the old name. A minor name change still allows investors identify the association with the old name. For example, Benton Oil & Gas Co. changed its name to Harvest Natural Resource, Inc. The new name has no resemble to the old name and represents a major name change. On the other hand, the change from Tesoro Petroleum Corp to Tesoro Corporation represents a minor name change. Table 1 shows that the majority of corporate name changes in our sample firms are major changes. The percentage of major name changes for all

---

<sup>3</sup> Market value on Datastream is the share price multiplied by the number of ordinary shares in issue. We use the Datastream North America Oil & Gas price index as market index in the market-adjusted model.

sample firms, U.S. firms and Canadian firms are 78.4%, 82.18%, and 69.74% respectively. Category 3 separates firms with resource-related names from firms with resource-unrelated names. This classification considers the core business of companies. We consider mining, gold, energy, resource and exploration sectors are considered to be resources-related industries.

To examine the valuation effects of name changes in different market conditions, we divide our samples into two sub-periods: the normal and hot markets. As shown in Figure 1, both the crude oil price and North America Oil & Gas price index started to rise from the first quarter of 2004. Therefore, we choose the first quarter of 2004 as the cutoff point between the “normal” and “hot” markets in the oil industry. For the full sample, the number of name change events during the normal period is slightly higher than that for the hot market period (93 versus 84). However, more U.S. firms have their name changes during the hot market period than the normal period, while more Canadian firms change their names during the normal period than the hot market period. There are more resource-unrelated name changes (65) than resource-related name changes (36) in the U.S. market. The opposite case exists in Canada market, which has 49 resource-related name changes but only 27 resource-unrelated name changes.

[Insert Table 1 here]

Figure 1 also shows that the number of additions and deletions of the words “oil” or “petroleum” in the sample together with the trend of crude oil price. Before the first quarter in 2004, the numbers of firms adding and deleting “oil” or “petroleum” in their names do not have a particular pattern. However, in the hot market period from the first quarter of 2004 onwards, the number of additions increases substantially

when the price of crude oil rose, while the number of deletions firms remain unchanged. This indicates that corporations seem to have an urge to signal their association with the oil industry explicitly while the oil price is continued surging.

[Insert Figure 1 here]

### ***B. Methodology***

Standard event study methodology is used in this paper. We compute abnormal returns in the following ways. First, we compute abnormal returns (AR) for firm  $i$  on day  $t$  as follows:

$$AR_{it} = R_{it} - R_{mt}, \quad (1)$$

where  $R_{it}$  is the return for firm  $i$  on day  $t$  and  $R_{mt}$  is the market return using the Datastream North America Oil & Gas price index for that day. We then compute the cumulative abnormal return (CAR <sub>$i$</sub> ) for firm  $i$  for various event windows from  $t = j$  to  $t = k$  as

$$CAR_i = \sum_{t=j}^k AR_{it} \quad (2)$$

The mean cumulative abnormal return (CAR) of  $N$  firms is

$$CAR = \frac{\sum_{i=1}^N CAR_i}{N} \quad (3)$$

The corresponding t-statistics that measure whether the CAR is significantly different from zero is

$$t(CAR) = \frac{CAR}{\sqrt{\frac{Var(CAR_i)}{N}}}, \quad (4)$$

where  $\text{Var}(\text{CAR}_i)$  is the variance of  $\text{CAR}_i$  among  $N$  firms.

We also use a two-sample *t-statistics* to test whether different CARs in two subcategories are equal to each other. The *t-statistic* of two-sample mean cumulative abnormal return is as follows:

$$t = \frac{\text{CAR}_{S1} - \text{CAR}_{S2}}{\sqrt{\frac{S_{S1}^2}{N_{S1}} + \frac{S_{S2}^2}{N_{S2}}}}, \quad (5)$$

where  $\text{CAR}_{S1}$  ( $\text{CAR}_{S2}$ ) is the CAR of subcategory 1 (subcategory 2),  $S_{S1}^2$  ( $S_{S2}^2$ ) is the variance of  $\text{CAR}_i$  in subcategory 1 (subcategory 2), and  $N_{S1}$  ( $N_{S2}$ ) is the number of firms in subcategory 1 (subcategory 2).

We follow the methodology proposed by Lee et al. (2001) to test the abnormal volume of the name change effects. First, we compute the abnormal volume ratio ( $\text{AVR}_{iT}$ ) for firm  $i$  on the single day  $T$  ( $T = -1, 0, +1$ )

$$\text{AVR}_{iT} = \frac{V_{iT}}{\frac{\sum_{t=-100}^{-16} V_{it}}{85}}, \quad (6)$$

where  $V_{it}$  is the trading volume of firm  $i$  on day  $t$ , and then calculate the mean abnormal volume ratio ( $\text{AVR}_T$ ) for  $N$  firms on day  $T$  as

$$\text{AVR}_T = \frac{\sum_{i=1}^N \text{AVR}_{iT}}{N} \quad (7)$$

The corresponding *t-statistics* that measure whether the mean abnormal volume ratio is significantly different from 1 on day  $T$  is

$$t(\text{AVR}_T) = \frac{\text{AVR}_T - 1}{\sqrt{\frac{\text{Var}(\text{AVR}_{iT})}{N}}}, \quad (8)$$

where  $\text{Var}(\text{AVR}_{iT})$  is the variance of mean abnormal volume ratio among  $N$  firms on

day  $T$ .

#### **4. Empirical results**

##### **A. Do firms that change their names involving the words “oil” or “petroleum” earn abnormal returns?**

In estimating abnormal returns around the event day, we exclude firms which have no trading volume from day -1 to day +1 relative to the event day to avoid the impact of stale trading. With this criterion, 125 firms remain in the sample. Table 2 reports the abnormal returns for the full sample, U.S firms, and Canadian firms in seven different event periods.

[Insert Table 2 here]

Panel A of Table 2 shows the abnormal returns for the full sample period (2000-2005). On average, there is a 12.5% abnormal return on the event day for firms with name changes involving the words “oil” or “petroleum. The positive abnormal return is significantly greater than 0 at the 1% level. The cumulative abnormal returns (CAR) for event periods (-15 to -1), (+1 to +30), (-15 to +60), and (-15 to +120) are also positive but not statistically significant.

The results of the full sample on the event day reject Hypothesis 1. However, the positive valuation effect is weakened after the event day. Our results on the event day is in contrast with previous studies by Howe (1982), Horsky and Swyngedouw (1987) and Karpoff and Rankine (1994), but are aligned with the findings in Lee (2001), Cooper et al. (2001) and Cooper et. al. (2005)

Regarding the differences between the U.S. and Canadian markets, Panel A of Table 2 shows that CARs in both markets are significantly positive on the event day.

On average, U.S. companies show an abnormal return of 17.4%, which is more than two times higher than that of Canadian companies (6.5%). While the CARs are positive in all event periods for the U.S. firms, the significant and positive abnormal return on the event day in Canadian market is outweighed by stock price declines afterward. In particular, for the Canadian sample, the CARs in three post event periods, (+1 to +30), (+1 to +60), and (+1 to +120), are significantly negative at the 5% level. On the other hand, the market response in the U.S. market seems to be more persistent. The U.S. firms' CAR in the event period (-15 to +60) is 38.1%, which is significant at the 5% level. The two-sample *t-statistics* for the mean values of the CARs between the U.S. and Canadian markets show that Hypothesis 2 can be rejected on the event day and in four other event periods.

The above comparison indicates that market response in the U.S. market is more acute on the event day, and in general, investors precept name change as a positive signal. On the other hand, market response in Canada is more dramatic. The positive reaction on the event day is quickly outweighed by price drop afterward.

As illustrated in Figure 1, there are more companies add "oil" or "petroleum" to their names than delete them during the hot market started from the first quarter of 2004. If investors are affected by cosmetic changes in corporate names and managers take advantage of investors' irrationality, we expect valuation effects of corporate name changes would be varying across different market conditions. Panels B and C of Table 2 report the CARs for the normal and hot market periods, respectively. Panel B of Table 2 shows that the valuation effects of corporate name changes are less strong during the normal period. For the full sample, the abnormal return on the event date is positively significant (8%). None of the CARs for the U.S. market is significant during the normal period. The patterns of CARs for the Canadian market are similar to those in Panel A of Table 2. The abnormal return on

the event day is positively significant (5.5%), and CARs in other event periods are all negative. However, none of these negative CARs are significant

Panel C of Table 2 shows that, for the full sample, CARs are significantly positive on the event day, and in two event periods, (-15 to -1) and (-15 and +60). The abnormal returns in the hot market period are higher than those reported in Panel B of Table 2. Similar to the results for the full sample period, U.S. firms show positive and significant abnormal returns on the event day and in the event period (-15 to +60). The significant results reported in panel A seems to be driven by the result of the “hot” market period. Figure 2 illustrates the difference in CARs between the U.S. and Canadian firms. Our results indicate that U.S investors respond more enthusiastically to these name change events than Canadian investors.

[Insert Figure 2 here]

### **B. Addition versus deletion of “oil” or “petroleum”**

Our sample includes corporate name changes associated with the words “oil” or “petroleum”. An addition of “oil” or “petroleum” to a corporate name signals an increasing focus on the oil industry, while a deletion suggests the opposite. Panel A of Table 3 reports the CARs for companies adding or deleting the “oil name” separately. Companies that add “oil” or “petroleum” to their names earn significant positive abnormal returns in the pre-event period (-15 to -1) and on the event day. The CAR for the pre-event period is 17.9%, and the abnormal return on the event date is 17.8%. The CAR for the event period (-15 to +60) is also significantly positive (45.5%). In contrast, companies deleting “oil” or “petroleum” from their names show a 6% abnormal return on the event day, and the CARs in other event periods are

all negative but insignificant<sup>4</sup>.

As for the U.S. firms, Panel B of Table 3 shows that adding “oil” or “petroleum” to company names have a significant CAR of 27.4%, 74%, and 56.2% on the event day and in event periods (-15 to +60) and (-15 to +120) respectively. None of the CARs for the U.S. sample is statistically significant when firms deleting “oil” or “petroleum” from their names. The two-sample *t*-statistics indicate that market response for the addition sample is significantly higher than that for the deletion sample on the event day and in the event period (-15 to +60).

Panel C of Table 3 shows a significant and positive abnormal return on the event day for both the addition and deletion sub-sample for Canadian firms. Unlike the U.S. market, Canadian market shows negative market effects regardless the nature of name changes. For the addition sample, Canadian firms show negative market response in four event periods. For the deletion sample, the CARs are all negative except on the event day.

The above results suggest that the U.S. market treats an addition of “oil” or “petroleum” to corporate names as a major signal, while a deletion of “oil” or “petroleum” from company names conveys less important information. On the other hand, the market response to name changes in Canada is more symmetric, For the full sample, the two-sample *t*-statistics show that the difference in market response between the addition and deletion samples are significantly different from zero in four event periods. The CARs for the “addition” sample is significantly greater than those for the “deletion” sample in the event periods (-15 to -1), (-15 to +60), (-15 to +120), and the event date. These results provide evidence to reject Hypothesis 4.

---

<sup>4</sup> We did not discuss the “both” subcategory due to the small samples in this categories.

### **C. Major versus minor name changes**

Table 4 shows that major name changes have positive reaction on the event day while minor name changes have mixed effects. There are significant and positive abnormal returns on the event day for the full sample, the U.S. sample, and the Canadian sample. The U.S. market shows a greater abnormal return (20.4%) than that for the Canadian market (8.2%). Similar to the full sample, the U.S. sample also has a significant and positive CAR on the event day and in the event period (-15 to +60). Investors do not react significantly to minor name change in the U.S. market. For the sample of Canadian firms, minor name changes lead to a significantly negative CAR in event periods (+1 to +120) and (-15 to +120); the CARs are -31.65% and -32.5% respectively. The Canadian negative post-announcement reaction for minor name changes is consistent with the results in Bosch and Hirschey (1989). In Table 4, the results on the event day provide evidence to reject Hypothesis 5; the market responds differently between major and minor name changes.

### **D. Resource-related versus resource-unrelated name changes**

In Panel A of Table 5, both resource-related and resource-unrelated name changes show a significant and positive abnormal return on the event day (5.4% and 19.5%, respectively.) There is a 19.1% CAR for resource-unrelated changes over the pre-event period from day -15 to day -1. On the contrary, resource-related corporate name changes show a significant but negative CAR (-10.7%). Firms with resource-related name changes also have a significant 46.3% CAR in the event period (-15 to +60). The two-sample *t*-statistics for CAR mean tests indicate that CARs for resource-related name changes are significantly lower than those for resource-unrelated name changes on the event day and in the event periods (-15 to -1), (-15 to +60), and (-15 to 120). These results provide evidence to reject Hypothesis 6.

In Panel B of Table 5, only resource-unrelated name changes have significant and positive market response to corporate name changes in the U.S. market. In specific, the CARs on the event day and in the event periods (-15 to +60) and (-15, +12) are 25.3%, 73.2%, and 48.3%, respectively. These CARs are higher than those reported in Panel A in the same event periods. Similar to the results for the full sample, the pairwise-*t* test statistics indicate that the CARs for resource-related name changes are significantly lower than those for resource-unrelated name changes over four different event periods in the U.S. market.

As shown in Panel C of Table 5, the results for Canadian market are quite different. There are five significant and negative CARs for the Canadian firms with resource-related name changes. As for resource-unrelated name changes, there is only a significantly positive CAR on the event day (7.2%), which is followed by two significantly negative CARs for two post-event periods (+1 to +30), and (+1 to +60).

### **E. Abnormal trading volume**

We calculate the average trading volume ratio (AVR) in the pre-event period from day -100 to day -16 and divide it into the single day trading volume on the event day (day 0). The results are provided in Table 6. The sample size drops from 177 to 154 due to the exclusion of firms with insufficient trading volume data in the pre-event period. Panel A of Table 6 shows that, for the full sample, the AVR is 26.34 and significantly different from one at the 10% level. We also calculate the AVR for day -1 and day +1, both are positive (6.75 and 26.04) but not statistically significant.

For the sub-samples, AVRs are significantly positive for firms with name changes associated with the words “oil” or “petroleum” (addition and deletion) and for both resource-related and resource-unrelated firms. However, AVRs are

significantly increased only for firms with major name changes; the AVR for minor name change is only 1.11 and not significantly different from one. Also, AVR is significantly positive only during the hot market period. The pairwise-*t* test statistics indicate that average trading volume ratios are significant different between firms with different nature of name changes (addition vs. deletion of “oil” or “petroleum”; major vs. minor; and resource-related vs. resource-unrelated). In general, the AVR results for the full sample reject Hypothesis 7 on the event day, which means the announcement of “oil name” changes influence the trading volume. It confirms the previous study by Lee (2001) that dotcom name changes lead to positive abnormal trading volume.

Panels B of Table 6 shows that, in the U.S. market, the AVR is significant only when firms delete the words “oil” or “petroleum” from their names or during the hot market period. The pairwise-*t* test show no significant difference in AVR by types of name change (addition vs. deletion; major vs. minor; and resource-related vs. source-unrelated) and market condition (hot vs. normal). In Panel C of Table 6, the AVRs for Canadian firms are all positive, but none of them are significantly different from one.

#### **F. Cross-sectional analysis of the determinant of corporate name change effects**

The preceding analysis suggests that name changes are associated with a positive stock price reaction in general. However, the above analyses examine the valuation effects of name change for different categories one at a time and do not control for other factors that may affect the market response to corporate name change. To address this, we estimate the following cross sectional regressions:

$$CAR_0 = \beta_0 + \beta_1 D_C + \beta_2 D_1 + \beta_3 D_2 + \beta_4 D_3 + \beta_5 D_P + \beta_6 AVR_0 + \beta_7 LMV_0 + e_0 \quad (9)$$

The  $CAR_0$  is the abnormal return on the event day.  $D_C$  is a dummy variable taking a value of 1 for Canadian firms and 0 for the U.S. firms.  $D_1$  equals 1 for firms adding “oil” or “petroleum to their names and 0 for firms deleting the oil related terms from their names.  $D_2$  equals to 1 for major name changes and 0 for minor name changes.  $D_3$  equals to 1 for resource-related name changes and 0 for resource-unrelated name changes.  $D_P$  is equal to 1 for name changes during the hot market period and 0 for changes in the normal period.  $AVR_0$  is the abnormal volume ratio on the event.  $LMV_0$  is the natural logarithm of the equity market value on the event day. The sample size drops to 109 due to insufficient data during the period from day -100 to +120. The regression results are reported in Table 7.

In Table 7, model 1 estimates the specification with  $D_C$  for the full sample; model 2 excludes the dummy  $D_C$ ; models 3 and 4 estimate the regression model for the U.S. and Canadian sample separately. In model 1, the coefficient of  $D_C$  is significantly positive; indicating that the announcement of name changes for the U.S. firms has a marginal effect of 15.6% over Canadian firms. The coefficients of  $D_1$ ,  $D_2$  and  $D_P$  are all positive, although they are not statistically significant; the expected signs are consistent with the CAR results in the sections B and C. The significant negative coefficient of  $D_3$  indicates that resource-related name changes have a lower valuation effect compared with resource-unrelated name changes. This relationship is also consistent with CAR result in section D. The significant coefficient of  $AVR_0$  states that if the abnormal volume ratio increases one unit, CAR falls 0.4% on average. The coefficient of market value (LMV) is negatively significant at the 1% level; implying a negative relation between firm size and market response to corporate name

changes on the event day. If name changes provide a signal about a change in the firm's operation or its prospect, the signaling effect is larger for small firms which generally have a more severe asymmetric information problem.

Model 2 does not control for market conditions. The results are parallel to those for model 1, except that major name changes are significantly and positively related to the abnormal return on the event day. The regression result for the U.S. firms (model 3) are also similar to those reported in model 1 in terms of the sign and significance of the independent variables. For the Canadian firm, only abnormal volume ratio can explain the market response on the event day.

## **5. Conclusions**

We analyze the effects of corporate name changes for a sample of U.S. and Canadian oil companies from January 2000 to December 2005. The valuation effects for different market periods (normal versus hot) and nature of name changes (minor versus major; adding versus deleting oil related terms; and resource related versus resource unrelated) are examined. Our results for the whole sample period indicate that firms that added "oil" or "petroleum" in their corporate names show significant and positive abnormal returns, while those deleted "oil" or "petroleum" from their names show negative abnormal returns except on the event date. In general, market responses are stronger for major name changes and changes that add oil related terms to corporate names. We also find that market responses are more positive during the hot market period.

There are some interesting similarities between market responses to corporate name changes in the U.S. and Canadian markets. It is seen that both markets show a significant and positive abnormal return on the event day; a more positive response during the hot market period; and a stronger response to an addition of "oil" or

“petroleum” to corporate name and major name changes. However, market responses to corporate name changes also differ in many respects between the U.S. and Canadian markets. It is seen that market valuation effects in the U.S. market across different event periods are all positive; while the significant positive abnormal return on the event day is followed by significant negative abnormal returns in the Canadian market. U.S. investors seem to respond more enthusiastically to name changes than Canadian investors since the positive market effects on the event date dissipate much slower in the U.S. market. However, the U.S. market shows significant valuation effects only for major name changes and changes that add oil-related terms to corporate names. The Canadian market shows significant abnormal return to corporate name changes regardless of whether firms add or delete the word “oil” or “petroleum”. This evidence suggests that the signaling effects of the name change events are different between these two markets.

## ***References***

- Bosch, Jean-Claude, and Mark Hirschey, 1989, "The Valuation Effects of Corporate Name Changes" *Financial Management* 18, 64-73.
- Cooper Michael J., Orlin Dimitrov, and P. Raghavendra Rau, 2001, "A Rose.com by Any Other Name" *Journal of Finance* Vol. liv, No.6 2371-2388.
- Cooper, Michael J., Huseyin Gulen, and P. Raghavendra Rau, 2005, "Changing Names with Style: Mutual Fund Name Changes and Their Effects on Fund Flows", *Journal of Finance* 60, 2825-2858.
- Cooper Michael J., Igor Osobov, Ajay Khorana, and Ajay Patel, 2005, "Managerial actions in response to a market downturn: Valuation effects of name changes in the dot.com decline" *Journal of Corporate Finance*, 11, 319-335.
- Foerster, Stephen R., and G. Andrew Karolyi, 1993, "International Listing of Stocks: The Case of Canada and the U.S.," *Journal of International Business Studies*, 24, 763-784.
- Foerster, Stephen R., and G. Andrew Karolyi, 1998, "Multimarket Trading and Liquidity: A Transaction Data Analysis of Canada U.S. Interlisting," *Journal of International Financial Markets, Institutions and Money*, 8, 393-412,
- Gonedes, Nicholas J., 1978, "Corporate Signaling, External Accounting , and Capital Market Equilibrium: Evidence on Dividends, Income and Extraordinary Items" *Journal of Accounting Research* Spring
- Horsky D, Swyngedouw P., 1987, "Does it pay to change your company's name? A Stock market perspective" *Marketing Science* 6, 320-335.
- Howe John S., 1982 "A Rose by any Other Name? A Note on Corporate Name Changes" *The Financial Reivew* 17, 271-278.
- Josey, T., A. Peker and R. Faff, 1999, "The Potential Distorting Effect of Extreme Observations in Event Studies: Astralian Corporate Name Changes as an

- Illustrative Case” *Accounting, Accountability and Performance*, 5, April, 1-10
- Josev, Thomas, Howard Chan, and Robert Faff, 2004, "What's in a Name? Evidence on Corporate Name Changes form the Australian Capital Market", *Pacific Accounting Review* 16, 57-75.
- Karolyi G. Andrew, 1995, “A Multivariate GARCH Model of International Transmissions of Stock Returns and Volatility: The Case of the United States and Canada, *Journal of Business and Economic Statistics*, 13, 11-25.
- Karbhari, Yusuf, Zulkarnain Muhamad Sori, and Shamsheer Mohamad, 2004, "Share Price Reaction to Corporate Name Change Evidence from an Emerging Economy", *Corporate Ownership and Control* 2, 38-49.
- Karpoff, Jonathan M., and Graeme Rankine, 1994, “In Search of a Signaling effect: The Wealth Effects of Corporate Name Changes” *Journal of Banking and Finance* 18, 1027-1045.
- Koku, Paul S., 1997, "Corporate Name Change Signaling in the Services Industry", *Journal of Services Marketing* 11, 392-408.
- Lee, Peggy M., 2000, “What’s in A Name.com?: the Effects of ‘.com’ Name Changes on Stock prices And trading Activity” *Strategic Management Journal* 22:793-804.
- Sati, P. Bandyopadhyay, Hanna, J. Douglas and Richardson, Gordon, 1994, "Capital Market Effects of U.S.-Canada GAAP Differences" *Journal of Accounting Research*, 32, 2, Autumn, 262-277.
- Tadelis, S. 1999, “What’s in a Name? Reputation as a Tradeable Asset” *American Economic Review*, 89, 548-563.
- Thomas Josev, Howard Chan, Robert Faff, 2004, “What’s in a Name? Evidence on Corporate Name Changes form the Australian Capital Market” *Pacific Accounting Review* Vol. 16, No.1, June

**Table 1: Data Description**

This table describes the sample companies that changed their names involving the words “oil” or “petroleum” from January 2000 to December 2005. Firms are divided into four subcategories. Category 1: firms adding “oil” and “petroleum” to their names versus firms deleting “oil” and “petroleum” from their names. Category 2: major versus minor name changes. Category 3: resource-related versus resource-unrelated name changes. Category 4: normal period (before the first quarter of 2004) versus (hot market period (after the first quarter of 2004)).

	<b>Sub-categories</b>	<b>All</b>	<b>U.S.</b>	<b>Canada</b>
<b>Initial number of firms in sample</b>		246	167	79
<b>Delete due to lack of price and volume data</b>		69	66	3
<b>Total number of remaining firms</b>		177	101	76
<b>Category 1</b>	<i>Additions</i>	93	58	35
	<i>Deletions</i>	71	36	35
	<i>Both</i>	13	7	6
<b>Category 2</b>	<i>Major</i>	136	83	53
	<i>Minor</i>	41	18	23
<b>Category 3</b>	<i>Resource-related</i>	85	36	49
	<i>Resource-unrelated</i>	92	65	27
<b>Sub-sample periods</b>	<i>Normal period</i>	93	38	55
	<i>Hot period</i>	84	63	21

**Table 2: Analysis of CARs for the full sample and two sub-samples**

This table reports market-adjusted cumulative abnormal returns (CARs). The CARs are calculated for various event periods for corporate names changes associated with the words “oil” or “petroleum” from January 2000 to December 2005. Each cell reports the average CAR for the respective event periods. T statistics are reported in parentheses. \*\*\*, \*\*, and \* indicate that the coefficient is significant at the 1%, 5%, and 10 level, respectively. Panel A shows the results for the full sample period; Panels B and C show the results for the normal and hot market periods respectively.

**Panel A: Full sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
All	125	0.043 (0.75)	0.125*** (3.47)	0.008 (0.14)	0.001 (0.02)	-0.088 (-1.07)	0.170 (1.62)	0.080 (0.69)
U.S.	69	0.081 (0.84)	0.174*** (2.75)	0.091 (0.94)	0.127 (1.18)	0.001 (0.01)	0.381** (2.22)	0.255 (1.33)
Canada	56	-0.003 (-0.07)	0.065*** (3.51)	-0.095** (-2.43)	-0.153** (-2.37)	-0.198** (-2.33)	-0.092 (-1.03)	-0.136 (-1.35)
		Event Period						
Pairwise-t test	U.S.	1	2	3	4	5	6	7
	Canada	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	0.78	1.65*	1.77*	2.24**	1.27	2.45**	1.81*
	p-value	0.439	0.086	0.080	0.027	0.208	0.016	0.074

**Panel B: Normal period (when oil price is low)**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
All	67	-0.1** (-2.14)	0.08* (1.67)	0.072 (0.9)	0.038 (0.4)	0.032 (0.32)	0.018 (0.13)	0.012 (0.08)
U.S.	25	-0.136 (-1.39)	0.122 (0.98)	0.288 (1.46)	0.296 (1.34)	0.277 (1.33)	0.282 (0.84)	0.262 (0.79)
Canada	42	-0.079 (-1.66)	0.055** (2.57)	-0.057 (-1.33)	-0.115 (-1.6)	-0.114 (-1.17)	-0.138 (-1.62)	-0.138 (-1.33)
		Event Period						
Pairwise-t test	U.S.	1	2	3	4	5	6	7
	Canada	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	-0.52	0.53	1.71*	1.77*	1.7*	1.22	1.15
	p-value	0.605	0.604	0.100	0.087	0.098	0.235	0.258

**Panel C: Hot period (when oil price is high)**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
All	58	0.209*	0.177***	-0.066	-0.041	-0.226*	0.344**	0.159
		(1.93)	(3.28)	(-0.82)	(-0.45)	(-1.71)	(2.16)	(0.83)
U.S.	44	0.204	0.203***	-0.021	0.031	-0.156	0.438**	0.252
		(1.49)	(2.91)	(-0.2)	(0.28)	(-0.94)	(2.27)	(1.06)
Canada	14	0.224	0.094**	-0.209**	-0.269*	-0.448**	0.049	-0.13
		(1.75)	(2.56)	(-2.44)	(-1.86)	(-2.78)	(0.2)	(-0.49)

		Event Period						
Pairwise-t test	U.S.	1	2	3	4	5	6	7
	Canada	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
T-statistic		-0.10	1.38	1.41	1.40	1.26	1.05	1.08
p-value		0.917	0.172	0.164	0.168	0.214	0.300	0.289

**Table 3: Analysis of CARs of subcategory 1: additions versus deletions of “oil” related terms**

This table reports market-adjusted cumulative abnormal returns (CARs) for Category 1: firms adding “oil” and “petroleum” to their names versus firms deleting “oil” and “petroleum” from their names. The category “others” include firms replacing the word “oil” (“petroleum”) with “petroleum” (“oil”). The CARs are calculated for various event periods from January 2000 to December 2005. Each cell reports the average CAR across all firms for the respective event periods. T statistics are reported in parentheses. \*\*\*, \*\*, and \* indicate that the coefficient is significant at the 1%, 5%, and 10 level, respectively. Panel A reports the results for the full sample; Panel B reports the results for the U.S. sample; and Panel C reports the results for the Canadian sample.

**Panel A: Full sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Additions	67	0.179* (1.88)	0.178*** (2.76)	0.037 (0.47)	0.098 (1.07)	-0.047 (-0.35)	0.455*** (2.87)	0.310 (1.59)
Deletions	48	-0.077 (-1.56)	0.06*** (2.82)	-0.023 (-0.25)	-0.074 (-0.65)	-0.101 (-1.07)	-0.090 (-0.67)	-0.118 (-1.08)
Others	10	-0.292 (-1.74)	0.080 (1.33)	-0.042 (-0.22)	-0.287* (-2.1)	-0.298 (-1.34)	-0.499** (-2.35)	-0.511** (-2.32)
		Event Period						
Pairwise-t test	Additions	1	2	3	4	5	6	7
	Deletions	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	2.38**	1.74*	0.49	1.19	0.33	2.62***	1.91*
	p-value	0.019	0.086	0.623	0.236	0.742	0.010	0.059

**Panel B: U.S. sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Additions	38	0.234 (1.45)	0.274** (2.48)	0.138 (1.02)	0.233 (1.52)	0.055 (0.25)	0.74*** (2.84)	0.562* (1.75)
Deletions	24	0.000 (-0.01)	0.056 (1.62)	0.028 (0.16)	0.053 (0.29)	-0.039 (-0.3)	0.108 (0.5)	0.017 (0.11)
Others	7	-0.467* (-2.25)	0.034 (0.87)	0.059 (0.22)	-0.194 (-1.2)	-0.156 (-0.53)	-0.627* (-2.13)	-0.589 (-1.92)
		Event Period						
Pairwise-t test	Additions	1	2	3	4	5	6	7
	Deletions	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	1.36	1.88*	0.51	0.75	0.37	1.87*	1.52

	p-value	0.180	0.066	0.614	0.459	0.716	0.067	0.134
<b>Panel C: Canada sample</b>								
Event Period								
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Additions	29	0.108 (1.58)	0.053** (2.31)	-0.094** (-2.14)	-0.078 (-1.4)	-0.181 (-1.58)	0.083 (0.79)	-0.020 (-0.13)
Deletions	24	-0.153* (-2.03)	0.064** (2.48)	-0.073 (-1.02)	-0.200 (-1.53)	-0.164 (-1.18)	-0.288* (-1.83)	-0.252 (-1.69)
Others	3	0.116* (3.51)	0.188 (1)	-0.276 (-1.5)	-0.506 (-2.01)	-0.632 (-2.86)	-0.202 (-2.13)	-0.328 (-1.58)
Event Period								
Pairwise-t test	Additions	1	2	3	4	5	6	7
	Deletions	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	2.57**	-0.34	-0.25	0.86	-0.09	2.03**	1.10
	p-value	0.013	0.733	0.805	0.397	0.925	0.048	0.277

**Table 4: Analysis of CARs of subcategory 2: major versus minor name changes**

This table reports market-adjusted cumulative abnormal returns (CARs) for subcategory 2: major versus minor name changes.

The CARs are calculated for various event periods from January 2000 to December 2005. Each cell reports the average CAR across all firms for the respective event periods. T statistics are reported in parentheses. \*\*\*, \*\*, and \* indicate that the coefficient is significant at the 1%, 5%, and 10 level, respectively. Panel A reports the results for the full sample; Panel B reports the results for the U.S. sample; and Panel C reports the results for the Canadian sample.

**Panel A: Full sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Major	94	0.061 (0.93)	0.155*** (3.28)	0.026 (0.36)	0.001 (0.02)	-0.103 (-1.09)	0.218* (1.76)	0.113 (0.84)
Minor	31	-0.012 (-0.1)	0.034** (2.14)	-0.047 (-0.63)	0.002 (0.02)	-0.041 (-0.25)	0.024 (0.12)	-0.020 (-0.08)
		Event Period						
Pairwise-t test	Major	1	2	3	4	5	6	7
	Minor	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	0.55	2.44**	0.70	0.00	-0.32	0.80	0.49
	p-value	0.585	0.016	0.483	0.997	0.746	0.426	0.623

**Panel B: U.S. sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Major	56	0.094 (0.93)	0.204*** (2.66)	0.106 (0.92)	0.082 (0.66)	-0.077 (-0.54)	0.381* (1.98)	0.221 (1.07)
Minor	13	0.024 (0.09)	0.040 (1.38)	0.029 (0.19)	0.320 (1.61)	0.338 (1.08)	0.385 (0.97)	0.403 (0.79)
		Event Period						
Pairwise-t test	Major	1	2	3	4	5	6	7
	Minor	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	0.28	2.00	0.31	-0.87	-1.24	-0.01	-0.37
	p-value	0.779	0.050	0.761	0.389	0.219	0.993	0.714

**Panel C: Canada sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Major	38	0.013 (0.19)	0.082*** (3.2)	-0.092* (-1.87)	-0.118 (-1.66)	-0.142 (-1.39)	-0.023 (-0.21)	-0.046 (-0.36)

Minor	18	-0.038 (-0.56)	0.029 (1.63)	-0.102 (-1.54)	-0.228 (-1.68)	-0.316* (-2.06)	-0.237 (-1.56)	-0.325** (-2.25)
Event Period								
Pairwise-t test	Major	1	2	3	4	5	6	7
	Minor	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	0.47	1.71	0.13	0.79	0.96	1.13	1.30
	p-value	0.640	0.094	0.900	0.432	0.343	0.264	0.198

**Table 5: Analysis of CARs of subcategory 3: resource-related vs. resource-unrelated**

This table reports market-adjusted cumulative abnormal returns (CARs) for subcategory 3: resource-related versus resource-unrelated names changes. The CARs are calculated for various event periods from January 2000 to December 2005.

Each cell reports the average CAR across all firms for the respective event periods. T statistics are reported in parentheses.

\*\*\*, \*\*, and \* indicate that the coefficient is significant at the 1%, 5%, and 10 level, respectively. Panel A reports the results for the full sample; Panel B reports the results for the U.S. sample; and Panel C reports the results for the Canadian sample.

**Panel A: Full sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Resource related	62	-0.107*	0.054***	0.000	-0.076	-0.117	-0.128	-0.170
		(-1.7)	(2.92)	(-0.01)	(-1.06)	(-1.34)	(-1.16)	(-1.54)
Resource unrelated	63	0.191**	0.195***	0.016	0.077	-0.060	0.463***	0.326
		(2.06)	(2.85)	(0.16)	(0.69)	(-0.43)	(2.73)	(1.64)

		Event Period						
Pairwise-t test	Resource related	1	2	3	4	5	6	7
	Resource unrelated	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	-2.65***	-1.99*	-0.14	-1.15	-0.35	-2.92***	-2.18**
	p-value	0.009	0.051	0.888	0.253	0.728	0.004	0.032

**Panel B: U.S. sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Resource related	26	-0.137	0.044	0.136	0.059	-0.028	-0.034	-0.121
		(-1.02)	(1.47)	(1.37)	(0.58)	(-0.2)	(-0.15)	(-0.56)
Resource unrelated	43	0.213	0.252**	0.064	0.168	0.019	0.632***	0.483*
		(1.66)	(2.57)	(0.44)	(1.04)	(0.1)	(2.69)	(1.75)

		Event Period						
Pairwise-t test	Resource related	1	2	3	4	5	6	7
	Resource unrelated	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	-1.79*	-2.02**	0.41	-0.57	-0.20	-2.07**	-1.73*
	p-value	0.078	0.049	0.683	0.569	0.845	0.043	0.088

**Panel C: Canada sample**

		Event Period						
		1	2	3	4	5	6	7
Subcategory	N	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
Resource related	36	-0.085*	0.061**	-0.099*	-0.173*	-0.181	-0.197*	-0.205*

		(-1.7)	(2.59)	(-1.78)	(-1.8)	(-1.63)	(-1.82)	(-1.84)
Resource unrelated	20	0.144	0.072**	-0.088*	-0.118*	-0.228	0.098	-0.012
		(1.39)	(2.36)	(-1.87)	(-2.03)	(-1.71)	(0.65)	(-0.06)
Event Period								
Pairwise-t test	Resource related	1	2	3	4	5	6	7
	Resource unrelated	-15 to -1	0	+1 to +30	+1 to +60	+1 to +120	-15 to +60	-15 to +120
	T-statistic	-1.99*	-0.29	-0.15	-0.49	0.26	-1.61	-0.92
	p-value	0.056	0.773	0.879	0.629	0.793	0.114	0.362

**Table 6 Analysis of abnormal volume ratios**

This table reports the abnormal volume ratios on the event day. The abnormal volume on the event date is calculated for companies that changed their names involving the words “oil” or “petroleum” from January 2000 to December 2005. \*\*\*, \*\*, and \* indicate that the coefficient is significant at the 1%, 5%, and 10 level, respectively. Firms are divided into four subcategories. Category 1: firms adding “oil” and “petroleum” to their names versus firms deleting “oil” and “petroleum” from their names. Category 2: major versus minor name changes. Category 3: resource-related versus resource-unrelated name changes. Category 4: normal period (before the first quarter of 2004) versus (hot market period (after the first quarter of 2004)). Panel A reports the results for the full sample; Panel B reports the results for the U.S. sample; and Panel C reports the results for the Canadian sample.

**Panel A: Abnormal volume ratio on day 0 for complete sample**

	N	AVR	t	p-value	Pairwise-t test	p-value of t test
All	154	26.34*	1.86	0.065		
Additions	79	48.24*	1.79	0.078		
Deletions	62	3.5**	2.05	0.045	1.69*	0.095
Others	13	2.25	0.70	0.500		
Major	118	34.04*	1.86	0.065		
Minor	36	1.11	0.41	0.683	1.85*	0.066
Resource-related	77	2.78*	1.78	0.079		
Resource-unrelated	77	49.91*	1.81	0.075	-1.74*	0.084
Normal period	84	27.31	1.12	0.266		
Hot period	70	25.19**	2.30	0.024	-0.08	0.935

**Panel B: Abnormal volume ratio on day zero in the US market**

	N	AVR	t	p-value	Pairwise-t test	p-value of t test
All	85	38.54	1.58	0.117		
Additions	47	67.54	1.56	0.125		
Deletions	31	3.12*	1.94	0.062	1.51	0.138
Others	7	0.68	-1.58	0.166		
Major	72	45.26	1.58	0.118		
Minor	13	1.34	0.79	0.448	1.57	0.121
Resource-related	33	1.74	0.87	0.394		
Resource-unrelated	52	61.89	1.58	0.120	-1.56	0.125
Normal period	31	68.95	1.07	0.294		
Hot period	54	21.08**	2.35	0.022	0.75	0.461

**Panel C: Abnormal volume ratio on day zero in the Canadian market**

	N	AVR	t	p-value	Pairwise-t test	p-value of t test
All	69	11.32	1.21	0.231		

Additions	32	19.89	1.03	0.310		
Deletions	31	3.88	1.31	0.202	0.87	0.392
Others	6	4.07	0.78	0.469		
Major	46	16.49	1.21	0.232		
Minor	23	0.98	-0.06	0.955	1.21	0.232
Resource-related	44	3.56	1.57	0.124		
Resource-unrelated	25	24.98	1.02	0.316	-0.91	0.371
Normal period	53	2.95	1.46	0.151		
Hot period	16	39.04	1.04	0.315	-0.99	0.340

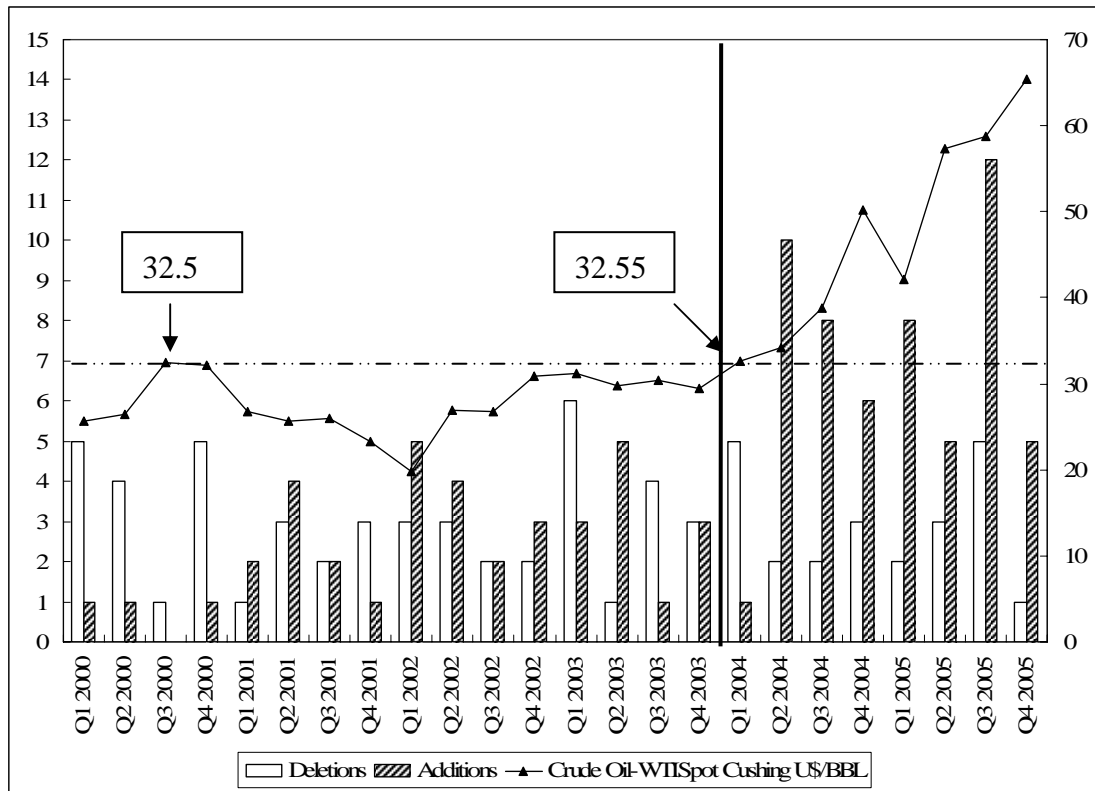
**Table 7: Cross-sectional regressions of CAR on the event day:**

This table reports results of following regression:  $CAR_0 = \beta_0 + \beta_1 D_c + \beta_2 D_1 + \beta_3 D_2 + \beta_4 D_3 + \beta_5 D_p + \beta_6 AVR_0 + \beta_7 LMV_0 + \epsilon_0$ .

The  $CAR_0$  is the abnormal return on the event day for companies that undergo a name change.  $D_c$  equals to 1 for Canadian firms and 0 for the U.S. firms.  $D_1$  equals 1 for name changes that adding the words “oil” or “petroleum” and 0 for deleting them.  $D_2$  equals to 1 for major name changes and 0 for minor name changes..  $D_3$  equals to 1 for resource-related name changes and 0 for resource-unrelated name changes.  $D_p$  equals to 1 for name changes during the hot market and 0 for changes in the normal period..  $AVR_0$  is the abnormal volume ratio on the event day which calculated in the section D.  $LMV_0$  is the natural logarithm of the equity market value on the event day. Each cell reports the average abnormal volume across all firms for the respective event windows. T statistics are reported in parentheses. \*\*\*, \*\*, and \* indicate that the coefficient is significant at the 1%, 5%, and 10 level, respectively.

Variable	Model 1	Model 2	Model 3 (U.S.)	Model 4 (Canada)
Intercept	0.2305** (2.06)	0.1235 (1.25)	0.2175 (1.02)	0.013 (0.27)
$D_c$	-0.1564*** (-1.95)			
$D_1$	0.0498 (0.800)	0.0444 (0.7)	0.2097 (1.64)	0.008 (0.26)
$D_2$	0.1285 (1.57)	0.1484* (1.8)	0.2705 (1.58)	0.043 (1.13)
$D_3$	-0.1576** (-2.10)	-0.1826** (-2.43)	-0.3796** (-2.55)	0.012 (0.31)
$D_p$	0.0478 (0.60)	0.0900 (1.15)	-0.1202 (-0.76)	0.029 (0.67)
$AVR_0$	-0.0004* (-4.31)	-0.0003*** (-4.05)	-0.0004*** (-3.92)	0.0006*** (3.39)
$LMV_0$	-0.0309** (-2.56)	-0.0249** (-2.1)	-0.0371* (-1.8)	-0.010 (-1.3)
$Adj R^2$	0.1995	0.1774	0.262	0.1498
N	109	109	53	56

**Figure 1: Oil price trend and changes of corporate names with additions and deletions of oil from their names in the U.S. and Canadian markets.**



**Figure 2: CAR charts from day -15 to +120 of corporate name change effects:**

**U.S versus Canada**

