Pisco Med Publishing

Market Reaction to CEO Turnover: Empirical Evidence from Fortune 500 Firms

Dipesh Karki, Binam Ghimire

Kathmandu University School of Management, Pinche Tole, Gwarko Lalitpur, Nepal
Newcastle Business School, Northumbria University, City Campus East, Newcastle upon Tyne NE1 8ST, UK

Abstract: This paper applies event study analysis to explore the impact of change in leadership on the market return of Fortune 500 firms. The study analyzes various market reaction following the announcement of CEO's departure along with the circumstances leading to it. The results show that on the occurrence of the event, market reacts positively in line with "ability hypothesis". Especially inside succession comparatively found to provide better market reaction than outside succession. However the type of departure showed no statistically significant abnormal returns Further abnormal return prior to the event was witnessed suggesting information leak. Overall the study is consistent with Efficient Market Hypothesis.

Keywords: JEL Code: G14, G15, G11

1. Introduction

Chief Executive Officer's (CEO) role is considered as one of the most important and critical in the organisation (Glick, 2011). CEO along with the board of directors determine the overall strategy and vector of development of the company. Further, CEO's also links the external world to the world inside the organization and represent the organization in all formal matters (Mintzberg, 1973; Lafley, 2009). Senior media and financial analysts admit, that reputation of the CEO has a significant impact on how the company is perceived by them, most notably it influences the likelihood of buying and holding shares of the company (Wirthlin Worldwide, 2001). No matter what the reason may be CEO turnover significantly increases the likelihood of strategic changes at the firm (Barron, Chulkov and Waddell, 2011). Especially if firm is poorly performing then CEO turnover can result in strong managerial discretion over financial variables such as RandD, advertising, capital expenditure and accounting accruals(Murphy and Zimmerman, 1993). Several studies (Elliott and Shaw, 1988; Pourciau, 1993; Strong and Meyer, 1987; Weisbach, 1995) have corroborated this thesis as appointment of new CEO is often accompanied by asset write-offs, accounting method change that leads to income reduction and divestitures which leads to long term effect in firms performance. Actually impact of CEO turnover can be based gauged through change in capital market than change in current accounting as stock market value captures both current and future earning (Reinganum, 1985). Hence as CEO's departure leads to performance uncertainty it is pertinent for firm to understand the mechanisms behind ensuing market behaviour to weather changes without stock depreciation.

The extent of market reaction following departure of CEO like any other event can be analyzed using Efficient Market Hypothesis (Fama, 1970). EMH in fact served as an underpinning to "random walk" hypothesis (Dupernex, 2007) – a financial theory, that claims, that prices always fully reflect the information available and no profit can be

doi: 10.18282/gfr.v1i1.615

made from information-based trading (Lo and MacKinley, 2011). Hence according to EMH after the event, prices should immediately incorporate all information in an unbiased fashion (Malkiel, 2003). But it is not always the case, as the behaviour of market participants is not always completely rational and sometimes investors adjust their reaction, proving market initial over or under-reaction, hence its partial inefficiency. Out of three different forms of Effficient Market- viz weak, semi-strong and strong, event studies in general test the semi-strong efficiency of the market (Dua *et al*., 2010; Boya and Monino, 2011; Ashraf and Rajaa, 2012), according to which all publicly available information is already used in stock price formation and hence neither technical nor fundamental analysis could be used to gain additional benefits from the stock trading. Therefore only holders of privileged, not publicly available information can achieve excess returns, in comparison with the whole market.

Besides EMH, behavioural finance (Sewell, 2007) also provides insight upon market inefficiency following an event as investors are exposed to multiple psychological and behavioural biases and thus don't always act rationally (Tversky and Kahneman, 1973, 1981, 1992; Gilovich *et al*., 2002; Le Bon, 2009 and others). Further despite information coming from the respectful reliable sources, investors usually make their decisions based on their own perception of the situation, which makes it particularly hard to predict the way financial market will react following an event. According to DeBondt and Thaler (1985) market over-reacts or under-reacts to different events. People systematically overreact to unexpected and dramatic news, which leads to substantial weak-form inefficiency. However, sometimes individuals tend to be conservative and rely too much on their prior beliefs, and hence under-react to news. It results in price adjustments after market's strong initial reaction. This hypothesis was however empirically rejected in by Fama (1998), who found, that under-reaction is as common as over-reaction, so its occurrence could be considered random, and hence, the market is still considered efficient.

In this context departure of existing and appointment of new CEO is a significant event in the life of firm (Cheung and Jackson, 2013) during which investors tend to reconsider how they view the company and how they expect her to perform. If new CEO is a perfect substitute of the departing CEO, then theoretically, the company doesn't lose any managerial resources and doesn't obtain any new ones; hence company's value remains the same (Aivazan *et al*., 2009). In reality, CEO's usually differ in their approaches to company's management in terms of methods, priorities, and risk aversion so their change leads to the adjustment of the company value in eyes of investors. Such periods of uncertainty are usually associated with periods of high price volatility (Jackson, 2011). General findings show, that management turnover is negatively related to firm's performance. Studies by Warner *et al*. (1988), Kim (1996), Gregory-Smith, Thompson and Wright (2009) and Barro and Barro (1990) link CEO turnover probability and company's performance indicators, such as stock returns and firm earnings, agreeing that CEO is more likely to depart from the position if the company is struggling to show acceptable performance. Meanwhile Farrell and Whidbee (2003) suggest that deviation from expected performance rather than performance itself is more likely cause for turnover. On the other hand from a study in China (Conyon and He, 2014) showed that accounting performance rather than stock performance is important in managerial change. No matter what the reason may be for managerial succession, there is still no consensus and clear understanding of market reaction on CEO's departure.

Existing literature has provided plethora of guidelines regarding the affect CEO transition have over the stock prices. According to Warner *et al*. (1988) and Jensen and Warner (1988), market's abnormal reaction to CEO change is a sum of negative "information effect" and positive "real effect". Where information effect suggests, that company performed worse, than market imagined, and real effect indicates the change in company leadership was made in shareholder's interest. The combination of these components explains the different reaction to different CEO turnovers (Bonnier and Brunner, 1989). Based on this theory, literature tests four hypotheses of investor's reaction to an announcement of CEO departure on developed markets viz: ability hypothesis, strategy hypothesis, information hypothesis, and scapegoat hypothesis (Huson, Malatesta and Oarrino, 2004; Clayton, Hartzell and Rosenberg, 2005; Pessarossi and Weill, 2013). According to the ability hypothesis(real effect) all CEO's have different skill sets and different qualifications and, as board of directors always thrives to hire the manager with the best possible skill set,

CEO turnover happens in case when new CEO has more suitable skills, than a departing one (Fee and Hadlock, 2004). Further, board of directors has a limited influence on how a company works or operates and usually limits it involvement to the appointment of new CEO – doing so is considered their main tool of control (Manne, 1965; Alchian and Demsetz, 1972). Besides cross-sectional differences in firm value and performance is found to be associated with differences in ability of CEOs (Chang *et al*, 2010). Therefore, the market should positively react to the change in expectation of improved company performance. This claim is supported by findings of Weisbach, 1988, Denis and Denis (1995), Huson *et al*., (2004), and others. As pool of CEO talent is rather limited, usually only government-owned or rich companies could attract the best CEO talents (Pessarossi, Weill, 2013). Information hypothesis (information effect) on the other hand holds that CEO turnover happens due to some poor management decisions that are yet to be revealed to the public. As CEO departure announcement is made, previously private information is uncovered. Consequently, market negatively reacts to the revelation of poor management choice (Bonnier and Brunner, 1989). Similarly in study of firms in UK Dedman et(2002) found that market backlash observed against those firm that chose not to officially announce CEO departure.

Often, when company's performance doesn't meet performance expectations, board of directors would want the company to change its strategy and methods, and if they believe existing CEO is not suited for the new strategy, they will forcefully change the present CEO for someone, who is expected to implement the change of company's course. This case falls within strategy hypothesis (Clayton *et al*., 2005). Market reaction depends on the specialities of the strategy. For instance in case of take over it was found that CEO turnover has positive impact in long run operating performance but had no apparent impact stock return (Demirtas and Simsir, 2016). Scapegoat hypothesis meanwhile is based on the agency models of Mirrlees (1976), Shavell (1979) and Holmström (1979). This hypothesis suggests, that in fact, CEO's have an equal skill set and abilities; this idea was supported in researches by Khanna and Poulsen (1995),Kim (1996), and others. In such environment, companies' performance depends only on effort exerted and random luck. Board members wield the ability to dismiss CEO if he fails to deliver full effort. So in equilibrium, all CEO's put sufficient amount of effort and only those get fired, who are just unlucky (Huson *et al*., 2004). Such CEO's are called scapegoats, as they are usually dismissed for public-relations type reasons and not their expertise. Since according to scapegoat hypothesis all candidates are the same and no one neither brings any extra managerial talent to the firm nor decreases the firm's performance, the market doesn't react to CEO changes.

Besides the stated four hypothesis that speculate about the reasons for the CEO dismissal and its influence on stock performance, there is another theory known as origin of successor that attempts to explain turnover-related performance change. According to which stock performance following much depends on whether the succession to CEO position is from inside or outside of the organization. Apparently as it is more costly to appoint outsiders as a successor (due to their non-acquaintance with the company's business), this option is chosen only if an additional improvement over the inside candidates is expected (Dalton and Kesner, 1985). Therefore, if manager from the outside gets the position of the CEO, he is supposed to bring much more to the company, than any internal candidate. This theory is supported by findings, that in a case of forced CEO departures, the market reacts better to the outside appointments, that to the inside ones (Borokhovich *et al*., 1996). Thus by considering outside successors, a board of directors may decrease the incentives of inside competitors to exert effort in getting the position (Chan, 1996). Meanwhile corporate culture is also suggested to influence whether the succession is insider or outsider (Fiordelisi and Ricci, 2013).

Still, despite the significant body of studies on the topic, no studies have attempted to measure market reaction to CEO turnover in the largest, most successful companies on the market. This study thus attempts to fill this clear and present literature gap The study mainly focus on US market as it is the most developed market in the world, so supposedly there should be no problems with thin trading and data availability.

2. Methodology

Event Study model with its roots that can be traced back to Dolley (1933) is the way to determine the impact of

specific event on value of firm by observing the movement of security prices during the days surrounding the event Mackinlay (1997)

The return of security i on day t (Rit) was first computed,

$$R_{it} = \ln\left(\frac{P_{it}}{P_{it-1}}\right) \quad (1)$$

Where Pit is the closing price of share i on day t, and Pit-1 is a closing price of share i on day t-1.

Then OLS (ordinary least squares) market model is applied to find expected returns.

$$E(R_{it}) = a_i + \beta_i(R_{mt}) \quad (2)$$

Event Study then proceeded using two different technique as outlined in RItter (1991) and Barber and Lyon (1997) which are as follows:

a) Cumulative Abnormal Method

Under this method abnormal returns are then calculated using the following equation:

$$AR_{it} = R_{it} - E(R_{it}) \quad (3)$$

a_i and β_i were estimated over a period from day -245 to day -6, where day 0 is the event date, this period is inbound with Strong (1992) recommended estimation period and consistent with event studies on this topic (Dahyaa *et al*, 2000). As all stocks are American, SandP was taken as the benchmark for all the estimations and calculations.

To avoid errors from the AR_{it}, average abnormal returns were found for each day of the test period (Yang, 2013). It is defined as,

$$AAR_t = \frac{1}{N}\sum_{i-1}^{N} AR_{it} \quad (4)$$

Another measure used in the study is cumulative average abnormal returns (CAAR), it measures abnormal returns not on one day, but on a period from τ_{1th} to τ_{2th} event date. It is calculated to measure abnormal fluctuations over a period of time and is defined as,

$$CAAR_t(\tau_1,\tau_2) = \frac{1}{N}\sum_{\tau=\tau_1}^{\tau_2} AAR_{it} \quad (5)$$

CAAR were found for four periods: [t-5,t+1], [t-1,t+1], [t0,t+1], [t-2,t+2] and [t-1,t+5].

After AAR and CAAR were found, it is important to test the results for statistical significance. It is done through rejecting the null hypothesis Ho: $\mu = 0$, and accepting alternative hypothesis H1: $\mu \neq 0$, where μ represents AARs or CAARs, depending on which results are being tested. Due to its computational simplicity and appropriateness in the chosen sample, cross-sectional t-test was used in this paper (Brown and Jerrod, 1980);

$$T_{AAR_t} = \sqrt{N}\frac{AAR_t}{S_{AAR_t}}, \quad (6)$$

$$T_{CAAR_t} = \sqrt{N}\frac{CAAR_t}{S_{CAAR_t}} \quad (7)$$

Where T_{AAR_t} and T_{CAAR_t} are t-values for AAR and CAAR on day t, S_{AAR_t} – is standard deviation of abnormal returns of all the companies in the sample on day t, S_{CAAR_t} – is standard deviation of cumulative abnormal returns across the sample on period t.

Null hypothesis assumes, that average abnormal returns and median are equal to zero, consequently, abnormal returns are normally distributed, which means, that event of interest had no particular effect on the stock prices (Kliger, Gurevich, 2014). To reject the null hypothesis and capture the effect of the event, t-statistic should exceed, which was taken as 5% (1.96) in this study to locate even minimum distortions.

In a case when will be in the range between 5% and 10%, skewness will be tested for significance using the t-test with the procedure, similar to the evaluation of AR significance (Pallant, 2010).

$$T_{S_t} = \frac{S_t}{\text{Std.error}} \quad (8)$$

where $\text{Std.error} = \sqrt{\frac{6N(N-1)}{(N-2)(N+1)(N+3)}}$

Where T_{S_t} - is a t-value of skewness on day t, St – is skewness of the distribution of AR's on day t, and Std. error is a standard error for skewness. If t-value of skewness exceeds 5% alpha (1.96), distribution of AR's is considered not normal and null hypothesis will be rejected as well.

AR and CARR was computed for four different succession Inside, Outside, Pressure or Forced Health and Time to Retire

b) Buy And Hold Abnormal Return (BHAR) methods

Besides use of AR and CARR the study also employed another technique of Average Buy and Hold Abnormal Returns (ABHAR) for event analysis in all four cases. This was used because Ritter (1991), Barber and Lyon (1997) and Lyon (1999) have argued that Cumulative Abnormal Return introduces biases such as new listing bias, measurement bias and skewness bias as it doesn't consider the compounding factor. Thus Buy and Hold Average Return is obtained for each day of the test period Barber and Lyon (1997)

$$\mathrm{BHAR_t}(\tau_1,\tau_2) = \prod_{t=\tau_1}^{\tau_2}(1+\mathrm{R_{it}}) - \prod_{t=\tau_1}^{\tau_2}(1+\mathrm{E(R_{it})} \quad (9)$$

Average of BHAR (ABHAR) for all the N companies in given window (τ_1,τ_2) was then computed using

$$\mathrm{ABHAR}_{(\tau_1,\tau_2)} = \frac{1}{\mathrm{N}}\sum_{\mathrm{i}-1}^{\mathrm{N}} \mathrm{BHAR_i} \quad (10)$$

The significance of BHAR was then tested using the cross-sectional t-test

$$\mathrm{t_{BHAR}} = \sqrt{\mathrm{N}}\frac{\mathrm{ABHAR}_{(\tau_1,\tau_2)}}{\sigma_{\mathrm{BHAR}(\tau_1,\tau_2)}} \quad (11)$$

where σ_{BHAR} is standard deviation of BHAR across all the compnies

Further since according to Barber and Lyon (1997) and Kothari and Warner(1997) ABHAR method is positively skewed, Skewness Adjusted t-test by Johnson(1978) was used for taking the skewness under consideration.

$$t_{skewness-adjusted} = \sqrt{N}\left[S + \frac{1}{3}\gamma S^2 + \frac{1}{6N}\gamma\right] \quad (12)$$

where

$$\mathrm{S}= \frac{\mathrm{ABHAR}_{(\tau_1,\tau_2)}}{\sigma_{BHAR(\tau_1,\tau_2)}} \quad \text{and} \quad \gamma = \sum_{i=1}^{n}\frac{\left[\mathrm{BHAR_t}(\tau_1,\tau_2)-\mathrm{ABHAR}_{(\tau_1,\tau_2)}\right]^3}{N\sigma_{BHAR(\tau_1,\tau_2)}{}^3}$$

Finally the study also performed the linear regression between BHAR and CAR as described in Barber and Lyon (1997) to check whether CAR is biased predictor of BHAR in long run for all event cases across all companies

$$BHAR_i = \alpha + \beta CAR_i + \epsilon \quad (13)$$

3. Result and Analysis

The study focused on CEO departure in US fortune 500 firm from period of 2005 to 2015. The total succession type and event are summarized as below in **Table 1.**

CEO DEPARTURE SUCCESSION TYPE	Number of event
Overall	115
Events with inside succession after CEO turnover	96
Events with outside succession after CEO turnover	11
Voluntary departure	48
Forced departure	27

Table 1. Succession Type

Table 2 below summarizes descriptive statistics (from day -5 to day 5) around CEO departure announcements for the entire sample (115 events) under various succession type. Result shows that in overall sample significant positive abnormal returns were present only in t-5 day with t-value of 1.9469 close to 5% significance. Further the significantly high skewness shows confirmation of presence of abnormal returns on that day. In addition table shows that for both overall succession type and insider succession type the abnormal return is significantly positive at 95% on t-1 day while it is at 10 % significant in case of outsider succession. Both these findings of pre-event reaction could be attributed to early information leaks, unchecked rumours or even insider trading. On the other hand Post-event reaction shows Negative abnormal returns on day t+3 especially with 5% significance in case of voluntary departure. According to Malkiel (2003), the market immediately incorporates all information in an unbiased way. Under the assumption, that information leaks and trustworthy rumours are common on day t-1, the fact that market has a negative reaction on day

t+3 could be considered an indication of market post-event adjustment due to initial overreaction and questions Malkiel's findings.

Day wise AAR Analysis

Day number	Succession Type	AAR	t -test	Positive AAR %	Median	Skewness	Skewness t-test
-5	Overall	0.003257	*1.946872970	0.5877	0.0019	3.068228482	***13.5478783063447
-5	Insider	0.0016	1.2810	0.5895	0.0016	-0.8097	***-3.27195012344175
-5	Outsider	0.0097	1.3191	0.7273	0.0045	2.2913	***3.46811637520964
-5	Voluntary	-0.00009	-0.0450	0.5208	0.0003	-1.2851	***-3.74496101926645
-5	Forced	0.0009	0.4551	0.5185	0.0022	0.0152	0.0339
-4	Overall	0.0018	1.1029	0.4737	-0.0006	0.1327	0.5860
-4	Insider	0.002020	1.1116	0.5	-0.0007	0.2	0.6090
-4	Outsider	0.0056	1.1477	0.4	-0.0019	1.9	***2.91998883942135
-4	Voluntary	0.002767	1.0307	0.458	-0.0009	1.3	***3.87932071818216
-4	Forced	0.004792	1.4476	0.458	0.0009	-0.2548	-0.5690
-3	Overall	-0.000341	-0.2425	0.4912	-0.0008	1.004062988	***4.43347790004298
-3	Insider	-0.000488	-0.3293	0.5	-0.0008	0.9	***3.43667820689501
-3	Outsider	-0.0038	-0.9166	0.4	-0.0017	-1.6	**-2.47830078304097
-3	Voluntary	-0.000888	-0.3410	0.521	0.0007	0.7	*1.90951390478085
-3	Forced	0.001642	0.6000	0.521	0.0008	2.4725	***5.52073259664146
-2	Overall	0.000483	0.3704	0.4912	-0.0002	0.553903062	**2.44577981217312
-2	Insider	0.000576	0.3889	0.5	-0.0001	0.5	**2.06223770721014
-2	Outsider	-0.0010	-0.2368	0.4	-0.0023	1.3	**1.96661719511666
-2	Voluntary	0.000945	0.5017	0.542	0.0007	0.9	***2.71436921439584
-2	Forced	-0.002184	-1.1947	0.542	-0.0020	-0.1406	-0.3139
-1	Overall	0.003445	**2.06318307	0.5263	0.0008	0.910517434	***4.02042398642038
-1	Insider	0.004531	**2.46453068	0.5	0.0008	1.2	***4.82147755913711
-1	Outsider	-0.0093	*-1.892029505	0.3	-0.0054	-1.4	**-2.16013323824816
-1	Voluntary	0.001941	0.8731	0.521	0.0005	0.2	0.6740
-1	Forced	0.002951	0.8603	0.521	0.0057	-0.6124	-1.3674
0	Overall	0.001808	0.9264	0.4561	-0.0006	1.310089501	***5.7847494822185
0	Insider	0.001797	1.0837	0.5	-0.0005	1.7	***6.81115981900736
0	Outsider	0.0093	0.9071	0.5	-0.0002	1.8	***2.72009547964192
0	Voluntary	0.000478	0.2264	0.396	-0.0011	2.0	**2.12667148102464
0	Forced	0.000426	0.0705	0.396	-0.0019	1.4408	***3.2171024267079
1	Overall	-0.000075	-0.0384	0.4561	-0.0015	0.210282854	0.9285
1	Insider	-0.000739	-0.4126	0.5	-0.0014	-0.9	***-3.68380351824881
1	Outsider	-0.0039	-0.5699	0.4	-0.0066	0.1	0.1038
1	Voluntary	-0.000014	-0.0070	0.458	-0.0003	0.6	1.6124
1	Forced	-0.002755	-0.4797	0.458	-0.0054	-0.2422	-0.5408
2	Overall	-0.001025	-0.7230	0.4825	-0.0003	-0.84331952	***-3.72370907209803
2	Insider	0.000453	0.3227	0.5	0.0005	-0.8	***-3.24741073402579
2	Outsider	-0.0040	-0.6691	0.4	-0.0028	-0.1	-0.0911
2	Voluntary	0.000133	0.0583	0.521	0.0017	-0.7	**-2.0747827522411
2	Forced	-0.003616	-1.2551	0.521	-0.0016	-0.3026	-0.6757
3	Overall	-0.003014	*-1.881663651	0.4211	-0.0020	-0.087545088	-0.3866
3	Insider	-0.003100	*-1.815434052	0.4	-0.0015	0.3	1.3057
3	Outsider	-0.0066	-0.9839	0.3	-0.0058	-1.7	***-2.63539452175648
3	Voluntary	-0.005472	***-2.7016095	0.333	-0.0051	-1.7	***-4.93091520522834
3	Forced	-0.000955	-0.2577	0.333	-0.0036	1.1806	***2.63602815651232
4	Overall	0.000382	0.3002	0.4649	-0.0010	1.080747216	***4.77207999541238
4	Insider	-0.000457	-0.3788	0.5	-0.0011	0.4	*1.70053049846116
4	Outsider	0.0036	0.6853	0.5	-0.0009	0.5	0.7342
4	Voluntary	0.000480	0.2326	0.521	0.0001	0.4	1.0641
4	Forced	0.000728	0.2311	0.521	-0.0034	2.2005	***4.91337592628254
5	Overall	0.000570	0.4455	0.5702	0.0026	-0.664636045	***-2.9347254620305
5	Insider	0.000273	0.1941	0.6	0.0024	-0.8	***-3.35319254531497
5	Outsider	0.0031	0.6610	0.7	0.0033	0.0	0.0707
5	Voluntary	0.002359	1.3408	0.625	0.0034	-0.4	-1.2107
5	Forced	-0.001219	-0.3472	0.625	0.0017	-0.8384	*-1.87214084451765

Table 2. Day wise AAR Analysis

Meanwhile finding couldn't establish difference between forced and voluntary departure. This could be because

forced departures are usually anticipated by bad company's performance and CEO turnover announcement holds very little negative "information effect" (Gilson, 1989; Dahyaa *et al*., 2000). So positive "real effect" (Warner *et al*., 1988) evens out the negative and no AR's are present. Meanwhile voluntary departure means retirement which is already anticipated. Thus, in accordance to EMH this information is already incorporated and the market doesn't react to the actual announcement.

Table 2 presents a summary of descriptive statistics of CAAR on the different days for various type of succession. Positive significant CAAR is observed in both overall and insider succession in [-5,+1] period and [-1,+1] period. While in case of [-2,+2] period it was seen in case of insider succession. This does indicate information leak prior to the official announcement of CEO turnover and absence of market post-event adjustments. Further absence of significant CAAR in case of outsider succession additionally rejects the hypothesis that market will show higher abnormal returns for cases of outside succession, than for cases of inside successor. This thus proves inapplicability of Borokhovich (1996) findings to present-time US top companies. Also the absence of market reaction on forced departures rejects the hypothesis that market reacts negatively to force departure.

CAAR Analysis

Period Range	Succession Type	CAAR	t-test	Positive CAAR %	Median	Skewness	T-Test Skewness
(-5,+1)	Overall	0.010421894	**2.2206641114196	2.052722547	0.004719888	0.388924234	1.145411834
(-5,+1)	Insider	0.009316038	*1.93995077857269	0.536842105	0.003973784	0.640768289	***2.58934420200033
(-5,+1)	Outsider	0.006566737	0.353710337	0.636363636	0.021752185	-0.787571378	-1.192048299
(-5,+1)	Voluntary	0.005137754	0.786947147	0.541666667	0.003675016	1.573125063	***4.58437485062537
(-5,+1)	Forced	0.005765309	0.516576026	0.481481481	-0.000995343	-0.488803908	-1.091440676
(-1,+1)	Overall	0.005177257	*1.65690473663487	0.526315789	0.001366383	-0.074249151	-0.327849922
(-1,+1)	Insider	0.005589386	*1.88363662502308	0.526315789	0.00082149	0.039474196	0.1595152
(-1,+1)	Outsider	-0.003905957	-0.27371508	0.545454545	0.004481232	-1.13163938	*-1.71282100294101
(-1,+1)	Voluntary	0.00240478	0.702465657	0.479166667	-0.000569212	1.018551812	***2.96824672206009
(-1,+1)	Forced	0.000622041	0.06802608	0.592592593	0.005815297	-0.63911502	-1.427067418
(0,+1)	Overall	0.001732608	0.660727893	0.561403509	0.000773475	0.289325056	1.277525672
(0,+1)	Insider	0.00105789	0.46652832	0.568421053	0.000625152	-0.083165391	-0.336071284
(0,+1)	Outsider	0.005419701	0.412778048	0.545454545	0.008034876	-0.197478654	-0.298898741
(0,+1)	Voluntary	0.000463708	0.170534092	0.541666667	0.000324462	0.434594031	1.266486684
(0,+1)	Forced	-0.002328583	-0.283920929	0.481481481	-0.003069347	0.0904353	0.201931211
(-2,+2)	Overall	0.004635601	1.212009051	0.51754386	0.001832858	-0.417167106	*-1.84201705098673
(-2,+2)	Insider	0.006619302	*1.78383937622492	0.526315789	0.002384596	0.118292839	0.47802128
(-2,+2)	Outsider	-0.008895066	-0.473967033	0.545454545	0.005854247	-1.780589145	***-2.69505510429953
(-2,+2)	Voluntary	0.00348305	0.669242305	0.479166667	-0.000779542	0.624879633	*1.82101381540454
(-2,+2)	Forced	-0.005178584	-0.522588013	0.518518519	0.003662164	-1.458287099	***-3.25618071535342
(-1,+5)	Overall	0.000292149	0.077981626	0.526315789	0.0011118	-0.315253436	-1.392013408
(-1,+5)	Insider	0.002759467	0.68393873	0.536842105	0.001367807	-0.253102169	-1.022785684
(-1,+5)	Outsider	-0.007762767	-0.413440133	0.454545455	-0.007977315	-0.711985838	-1.07764392
(-1,+5)	Voluntary	-9.53157E-05	-0.017421456	0.541666667	0.0011118	-0.106268274	-0.309685233
(-1,+5)	Forced	-0.008594961	-0.708828285	0.481481481	-0.003322854	-0.612523793	-1.367692387

Table 3. CAAR Analysis

Following table illustrates the Buys and Hold Strategy using market model approach (Barber and Lyon (1997)). Since BHAR is thought to be positively skewed Skewness Adjusted t-test is also performed. The result is very much similar to the one obtained using the CAAR analysis. Positive significant ABHAR is observed in both overall and insider succession in [-5,+1] period in case of [-1,+1] period it was found to be significant only in case of Insider. This could be as BHAR takes compounding factor into account and thus variability was minimized within three days period. Also in case of [-2,+2] period the outcome was in line with the CAR analysis. Meanwhile akin to CAR study no significance abnormal return was seen in voluntary and forced departure.

BHAR Analysis								
Period Range	Succession Type	ABHAR	t-test	Positive BHAR %	Median	Skewness	T-Test Skewness	Skewness Adjusted T-test
(-5,+1)	Overall	0.00136819	**2.05272254716618	0.552631579	0.000558551	0.332311087	1.467332109	**2.10034558287739
(-5,+1)	Insider	0.001245215	*1.82197849854827	0.023340961	0.000494823	0.592431333	**2.39401459341196	*1.89693979354915
(-5,+1)	Outsider	0.000790841	0.296017346	0.636363636	0.002870239	-0.826614535	-1.251143044	0.25970588
(-5,+1)	Voluntary	0.000649472	0.701497823	0.541666667	0.000460098	1.565829462	***4.56311413180909	0.771632193
(-5,+1)	Forced	0.000650566	0.405851325	0.481481481	-0.000143814	-0.518700861	-1.158196998	0.386130034
(-1,+1)	Overall	0.001608729	1.551169126	0.535087719	0.00044242	-0.131926111	-0.582524709	1.539512893
(-1,+1)	Insider	0.001779048	*1.80918998384634	0.023545706	0.000274516	-0.03016677	-0.121903897	*1.80541933978304
(-1,+1)	Outsider	-0.001466782	-0.310268736	0.545454545	0.001380908	-1.208028135	*-1.82844110946562	-0.364115193
(-1,+1)	Voluntary	0.000738312	0.652484489	0.5	-0.000107927	0.973244182	***2.83621198000611	0.693160683
(-1,+1)	Forced	-2.83708E-05	-0.009311818	0.592592593	0.001954126	-0.672107291	-1.500735214	-0.02853683
(0,+1)	Overall	0.000769833	0.58927538	0.552631579	0.000318072	0.227691308	1.005379537	0.59514039
(0,+1)	Insider	0.000472823	0.417814139	0.024685608	0.00025154	-0.162885102	-0.658218583	0.414174251
(0,+1)	Outsider	0.002523161	0.389412644	0.545454545	0.00393757	-0.266252567	-0.402993212	0.376442567
(0,+1)	Voluntary	0.000187594	0.139019928	0.541666667	0.000149946	0.367130973	1.069886964	0.147627743
(0,+1)	Forced	-0.00138867	-0.340180792	0.481481481	-0.001552515	0.034746329	0.077584399	-0.338957087
(-2,+2)	Overall	0.00081909	1.072449893	0.51754386	0.000316411	-0.471311676	**-2.08109443703964	1.048804617
(-2,+2)	Insider	0.00123442	*1.66992705467497	0.023496241	0.000375585	0.059781048	0.241575173	*1.67643977691065
(-2,+2)	Outsider	-0.001896765	-0.504318129	0.545454545	0.00131372	-1.795719684	***-2.71795630759344	-0.605579398
(-2,+2)	Voluntary	0.000612386	0.592348677	0.479166667	-0.000146673	0.586915667	*1.71037985985649	0.614894901
(-2,+2)	Forced	-0.001233225	-0.618796093	0.518518519	0.000671878	-1.465502939	***-3.27229282272437	-0.692805195
(-1,+5)	Overall	0.000191835	0.33954969	0.51754386	0.00010168	-0.342244673	-1.511194229	0.333147443
(-1,+5)	Insider	0.000302839	0.527203334	0.024182077	0.000195886	-0.273621335	-1.105703618	0.520151883
(-1,+5)	Outsider	-0.001268644	-0.47336399	0.454545455	-0.001153583	-0.744002102	-1.126102935	-0.513635353
(-1,+5)	Voluntary	-8.4436E-05	-0.108987045	0.479166667	-0.000146673	0.586915667	*1.71037985985649	-0.110810097
(-1,+5)	Forced	-0.000818669	-0.537102514	0.444444444	-0.000766898	-0.627334515	-1.400762957	-0.565395062

Table 4. BHAR Analysis

Meanwhile the following table shows the long run relationship between BHAR and CAR and the result shows that CAR is biased estimator of BHAR as the regression parameters are significant. This is in conformance with the study by Barner and Lyon (1997)

Regression BHAR vs CAAR								
Period	Succession Type	Coefficients	Value	Standard Error	t Stat	P-value	R2	Adj. R2
(-5,1)	Overall	intercept	-0.000111255	2.07649E-05	***-5.35783619082581	4.55384E-07	0.999078245	0.99907001
		beta	0.141955491	0.000407428	***348.418311235166	7.8529E-172		
	Inside	intercept	-8.03466E-05	1.44126E-05	***-5.57476881452673	2.4101E-07	0.999576956	0.99957241
		beta	0.142288149	0.000303537	***468.766507181446	1.1055E-158		
	Outside	intercept	-0.000153983	5.04435E-05	***-3.05258768143338	0.013735289	0.99968311	0.9996479
		beta	0.143880385	0.000853893	***168.499371453172	4.64433E-17		
	Voluntary	intercept	-7.89881E-05	1.73774E-05	***-4.54544248912706	3.96869E-05	1	1
		beta	0.141785773	0.000385715	***367.592141719361	2.00196E-81		
	Forced	intercept	1.0842E-19	3.38393E-19	0.320397347	0.751329817	1	1
		beta	1	4.12705E-17	***24230411359780100	0		
(-1,1)	Overall	intercept	-0.000109271	2.2406E-05	***-4.87686030688452	3.58895E-06	0.999548355	0.99954432
		beta	0.331835866	0.000666516	***497.865948300894	3.5082E-189		
	Inside	intercept	-7.28599E-05	1.94773E-05	***-3.740755919188	0.000317133	0.999625962	0.99962194
		beta	0.331325848	0.000664588	***498.542885484754	3.6073E-161		
	Outside	intercept	-0.000173036	9.42941E-05	*-1.83506572276698	0.09969026	0.999644602	0.99960511
		beta	0.331223891	0.00208178	***159.106117358814	7.78139E-17		
	Voluntary	intercept	-5.63493E-05	2.61996E-05	**-2.1507662566592	0.036782622	0.999480752	0.99946946
		beta	0.330450739	0.001110524	***297.562862257697	3.32606E-77		
	Forced	intercept	-0.000235579	6.8247E-05	***-3.45186278535133	0.001991648	0.999517627	0.99949833
		beta	0.333110661	0.001463574	***227.600841751297	5.5082E-43		
(0,1)	Overall	intercept	-9.31969E-05	2.44398E-05	***-3.81332862296865	0.00022478	0.999654457	0.99965137
		beta	0.49811024	0.00087507	***569.22329500334	1.0779E-195		
	Inside	intercept	-5.50517E-05	1.93405E-05	***-2.84644109869009	0.00543958	0.999711692	0.99970859
		beta	0.498988048	0.000878698	***567.871839095026	1.995E-166		
	Outside	intercept	-0.000150933	0.000127835	-1.180682564	0.267990449	0.99965554	0.99970859
		beta	0.493402469	0.003052981	***161.613368909706	6.76026E-17		
	Voluntary	intercept	-4.24872E-05	2.48159E-05	*-1.71209142102867	0.09361468	0.99965554	0.999662
		beta	0.496175287	0.001330803	***372.839133127087	1.04329E-81		
	Forced	intercept	-4.24872E-05	2.48159E-05	*-1.71209142102867	0.09361468	0.999617576	0.99960228
		beta	0.496175287	0.001330803	***372.839133127087	1.04329E-81		
(-2,2)	Overall	intercept	-9.31969E-05	2.44398E-05	***-3.81332862296865	0.00022478	0.999654457	0.99945685
		beta	0.49811024	0.00087507	***569.22329500334	1.0779E-195		
	Inside	intercept	-8.3916E-05	1.58104E-05	***-5.30763786014906	7.51207E-07	0.999562223	0.99955752
		beta	0.199165471	0.000432209	***460.807955707144	5.431E-158		
	Outside	intercept	-0.000114379	6.39608E-05	*-1.78826527611784	0.107365036	0.999745432	0.99971715
		beta	0.200379194	0.001065832	***188.002639384229	1.73358E-17		
	Voluntary	intercept	-7.93755E-05	1.94898E-05	***-4.0726622758797	0.00018139	0.999655443	0.99964795
		beta	0.198607947	0.000543655	***365.319945342855	2.66247E-81		
	Forced	intercept	-0.000192034	4.87618E-05	***-3.93819717041371	0.000580574	0.999430361	0.99940758
		beta	0.201057024	0.000960004	***209.433595834642	4.40292E-42		

(-1,5)	Overall	intercept	-0.000105604	1.60472E-05	***-6.58082075830081	1.56243E-09	0.99920233	0.99919521
		beta	0.142274172	0.000379841	***374.562301839779	2.3913E-175		
	Inside	intercept	-8.98962E-05	1.52742E-05	***-5.88550907913133	6.22889E-08	0.999303943	0.99929646
		beta	0.142323026	0.0003895	***365.39933724503	1.258E-148		
	Outside	intercept	-0.000160806	5.50497E-05	***-2.92111277112676	0.017001013	0.999626662	0.99958518
		beta	0.142711668	0.000919328	***155.234714478911	9.71198E-17		
	Voluntary	intercept	-7.09438E-05	2.09419E-05	***-3.38765461330473	0.001453324	0.999284874	0.99926933
		beta	0.141552456	0.000558323	***253.531700845639	5.23781E-74		
	Forced	intercept	-0.000183742	3.88249E-05	***-4.73259084105284	7.45125E-05	0.999380282	0.99935549
		beta	0.142984322	0.000712115	***200.788265468825	1.26235E-41		

Table 5. BHAR Vs CAR Analysis

4. Conclusion

The study has found that in case of CEO turnover in fortune 500 companies there is positive market abnormal return prior to the announcement of CEO departure which is in line with the "ability hypothesis". This results are consistent with other similar studies conducted in the USA and other countries(Weisbach, 1988; Adams & Mansi, 2009; Pessarossi & Weill, 2013). Further the absence of post-event adjustments further shows a confirmation of market efficiency. Meanwhile unlike the suggestion by Borokhovich (1996) the study showed that insider succession lead to better market reaction. This could be explained by reasoning that since top companies are very complex to operate it would be very difficult for outsider to acclimatize with its working. Meanwhile since CEO's who are promoted from the within are already familiar with the business the company would likely perform well. In addition study also showed that both voluntary and forced departure didn't register any reaction which can be attributed to the fact, that companies deliberately prepare the market for the CEO turnover so as to avoid any unease in investor community (Dahyaa *et al*., 2000). Finally the empirical study indicated strong negative return on third day after the event which could be result of market correction after period of uncertainty.

References

1. Aivazian, V., Lai, T. and Rahaman, M. (2009) Unravelling the corporate "black box": how do CEOs create value for their firms? Working Paper, University of Toronto. Retrieved from: http://www.academia.edu/14837916/Unraveling_the_Corporate_Black_Box_How_do_CEOs_Create_Value_for_Their_Firms
2. Alchian, A. A., and Demsetz, H. (2005). Production, information costs and economic organization. Revista De Administração De Empresas, 45(3), 92-108.
3. Ashraf Ali, A., and Rajaa, P. (2012). Semi strong form efficiency: Reaction of market towards dividend announcement in banking sectors. European Journal of Economics, Finance and Administrative Sciences, (55), 6-20.
4. Barber, B.M., and J.D. Lyon, 1997. Detecting Long-Run Abnormal Stock Returns: The Empirical Power and Specification of Test Statistics. Journal of Financial Economics, (43), 341-372
5. Barro, J. R., and Robert J. B (1990). Pay, performance, and turnover of bank CEOs. Journal of Labor Economics, 8, p. 48-481
6. Barron, J. M., Chulkov, D. V., and Waddell, G. R. (2011). Top management team turnover, CEO succession type, and strategic change. Journal of Business Research, 64(8), 904-910. doi:10.1016/j.jbusres.2010.09.004
7. Bonnier, K., and Bruner, R. F. (1989). An analysis of stock price reaction to management change in distressed firms. Journal of Accounting and Economics, 11(1), 95-106. doi:10.1016/0165-4101(89)90015-3
8. Borokhovich, K. A., Parrino, R., and Trapani, T. (1996). Outside directors and CEO selection. Journal of Financial and Quantitative Analysis, 31(3), 337-355. doi:10.2307/2331395
9. Boya, C., and Monino, J. (2011). Information coloration in semi strong efficiency. Innovations, 36, 147-157. doi:10.3917/inno.036.0147
10. Brown, S. J., and Jerold B. W.(1980). Measuring Security Price Performance. Journal of Financial Economics, 8(3), 205 - 258
11. Chan, W. (1996). External recruitment versus internal promotion. Journal of Labor Economics, 14(4), 555-570. doi:10.1086/209822
12. Chang Y. Y., Dasgupta , S., Hilary, G., (2010). CEO Ability, Pay, and Firm Performance. Management Science 56(10):1633-1652
13. Cheung, W. J. and Jackson, A. B. (2013). Chief executive officer departures and market uncertainty. Australian Journal of Management, 38(2), 279-310. doi:10.1177/0312896212450040
14. Clayton, M., Hartzell, J., and Rosenberg, J. (2005). The impact of CEO turnover on equity volatility. The Journal

of Business, 78(5), 1779-1808. doi:10.1086/431442#
15. Conyon, M. J., He, L. (2014). CEO turnover in China: the role of market-based and accounting performance measures. The European Journal of Finance, 20, Nos. 7–9, 657–680, http://dx.doi.org/10.1080/1351847X.2012.676559
16. Dalton, D. R., and Kesner, I. F. (1985). Organizational performance as an antecedent of Inside/Outside chief executive succession: An empirical assessment. Academy of Management Journal, 28(4), 749.
17. Dahyaa, J., Lonie, A. A., and Power, D. M. (2000). Changes in corporate management: Do they have an impact on share prices and company earnings? Managerial Finance, 26(9), 66-79. doi:10.1108/03074350010766882
18. Dedman, E., Lin S.W.-J (2002). Shareholder wealth effects of CEO departures: evidence from the UK. Journal of Corporate Finance , 8, 81–104
19. Demirtas, G., Simsir, S. A (2016) .The effect of CEO departure on target firms post-takeover performance : Evidence from not-delisting target firms. Finance Research Letters. 16(2016),55–65
20. Denis, D. J., and Denis, D. K. (1995). Performance changes following top management dismissals. The Journal of Finance, 50(4), 1029-1057. doi:10.1111/j.1540-6261.1995.tb04049.x
21. DeBondt, W., and Thaler, R. (1985). Does the stock market overreact? The Journal of Finance, 40(3), 793.
22. Dolley, J. (1933). Characteristics and Procedure of Common Stock Split-Ups. Harvard Business Review, 11, 316–26.
23. Dua, V., Puri, H., and Mittal, R. K. (2010). Impact of buy-back of shares on stock prices in india: An empirical testing of stock market efficiency in its semi-strong form. Pranjana: The Journal of Management Awareness, 13(1), 59-71.
24. Dupernex, S. (2007). Why might share price follow a random walk? Student Economic Review, 2007(21), 167-179
25. Elliott, J. and Shaw, W. (1988) Write-offs as accounting procedures to manage perceptions. Journal of Accounting Research, vol. 26, pp. 91-119.
26. Farrell, K.A and Whidbee, D.A (2003). Impact of firm performance expectations on CEO turnover and replacement decisions. Journal of Accounting and Economics, 36 (2003), 165-196
27. Fama, E. F.. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. The Journal of Finance, 25(2), 383–417. http://doi.org/10.2307/2325486
28. Fama, Eugene F., 1998, Market efficiency, long-term returns and behavioral finance, Journal of Financial Economics, forthcoming
29. Fee, C. E., and Hadlock, C. J. (2004). Management turnover across the corporate hierarchy. Journal of Accounting and Economics, 37(1), 3-38. doi:10.1016/j.jacceco.2003.11.003
30. Fiordelisi, F., Ricci, O.(2013). Corporate Culture and CEO turnover .Journal of Corporate Finance, 28 (2014), 66–82
31. Gilovich, T., Griffin, D. W., and Kahneman, D. (2002). Heuristics and biases: The psychology of intuitive judgement. Cambridge: Cambridge University Press.
32. Glick, M. B. (2011). The role of chief executive officer. Advances in Developing Human Resources, 13(2), 171-207. doi:10.1177/1523422311415642
33. Gregory-Smith, I., Thompson, S. and Wright, P.W. (2009) Fired or retired? A competing risks analysis of chief executive turnover. The Economic Journal 119, 463–48
34. Hölmstrom, B. (1979). Moral hazard and observability. The Bell Journal of Economics, 10(1), 74-91.
35. Huson, M. R., Malatesta, P. H., and Parrino, R. (2004). Managerial succession and firm performance. Journal of Financial Economics, 74(2), 237-275. doi:10.1016/j.jfineco.2003.08.002
36. Jackson, A.B. (2011). Stock Return Volatility Surrounding management Earnings Forecasts. Working Paper. The University of New South Wales. Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1797375
37. Johnson, N.J. (1978). Modified t-tests and confidence intervals for asymmetrical populations. Journal of the American Statistical Association, 73, 536-544.
38. Jencen, M.C. and Warner, J.B. (1988) The distribution of power among corporate managers, shareholders, and directors. Journal of Financial Economics, 20, 3-24
39. Khanna, N. and Poulsen, A. B. (1995). Managers of financially distressed firms: Villains or scapegoats? The Journal of Finance, 50(3), 919-940. doi:10.1111/j.1540-6261.1995.tb04042.x
40. Kim, Y. (1996). Long-term firm performance and chief executive turnover: An empirical study of the dynamics. Journal of Law, Economics, and Organization, 12(2), 480-496. doi:10.1093/oxfordjournals.jleo.a023372
41. Kliger, D., and Gurevich, G. (2014). Event studies for financial research: A comprehensive guide. Basingstoke: Palgrave Macmillan.
42. Kothari, S. P., and Jerold B. W. (1997). Measuring long-horizon security price performance. Journal of Financial Economics, 43, 301-340.
43. Lafley, A.G. (2009). What only the CEO can do. Harvard Business Review, 87(5), 54-62.
44. Le Bon, G. (2009). The crowd: A study of the popular mind. Auckland, New Zealand: Floating Press.

45. Lo, A. W., and MacKinlay, A. C. (2011). A non-random walk down wall street. Princeton: Princeton University Press.
46. Mackinlay, C. (1997).Event Studies in Economics and Finance.Journal of Economic Literature, 35(1), 13-39
47. Malkiel, B.G. (2003). The Efficient Market Hypothesis and Its Critics. CEPS Working Paper No. 91. Princeton University.
48. Manne, H.G., 1965, Mergers and the market for corporate control. Journal of Political Economy 73, 110-120
49. Mintzberg, H. (1973). The nature of managerial work. New York: Harper and Row.
50. Mirrlees, J. A. (1976). The optimal structure of incentives and authority within an organization. The Bell Journal of Economics, 7(1), 105-131.
51. Murphy, K., and Zimmerman, J. L (1993). Financial Performance Surrounding CEO turnover. Journal of Accounting and Economics , 16 (1993), 273-215
52. Pallant, J. (2010). SPSS survival manual: A step by step guide to data analysis using SPSS. Maidenhead: McGraw-Hill.
53. Pessarossi, P., and Weill, L. (2013). Does CEO turnover matter in china? Evidence from the stock market. Journal of Economics and Business, 70, 27. doi:10.1016/j.jeconbus.2013.04.003
54. Pourciau, S. (1993) Earnings management and non-routine executive changes, Journal of Accounting and Economics, vol. 16, pp. 317-336.
55. Reinganum, M.K. (1985) The effect of executive succession on stockholder wealth. Administrative Science Quarterly, vol. 30, no.1, pp. 46-60
56. Sewell, M. (2007). Behavioural Finance. Retrieved from http://www.behaviouralfinance.net/
57. Shavell, S. (1979). Risk sharing and incentives in the principal and agent relationship. The Bell Journal of Economics, 10(1), 55-73.
58. Strong, J., and Meyer, J. (1987) Asset writedowns: managerial incentives and security returns. Journal of Finance, vol. 20, pp. 643-663
59. Strong, N. (1992). Modelling abnormal returns: A review article. Journal of Business Finance and Accounting, 19(4), 533.
60. Tversky, A., and Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. Cognitive Psychology, 5(2), 207-232. doi:10.1016/0010-0285(73)90033-9
61. Tversky, A. and Kahneman, D. (1981). The framing of decisions and the psychology of choice. Science, 211(4481), 453-458. doi:10.1126/science.7455683
62. Tversky, A., and Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. Journal of Risk and Uncertainty, 5(4), 297-323. doi:10.1007/BF00122574
63. Warner, J. B., Watts, R. L., and Wruck, K. H. (1988). Stock prices and top management changes. Journal of Financial Economics, 20(1-2), 461-492. doi:10.1016/0304-405X(88)90054-2
64. Weisbach, M. S. (1988). Outside directors and CEO turnover. Journal of Financial Economics, 20(1,2), 431.
65. Weisbach, M.S. (1995) CEO turnover and the firm"s investment decisions. Journal of Financial Economics, vol. 37, no.2, pp. 159-188.
66. Wirthlin Worldwide Australia (2001, July 16) CEO / Corporate Reputation Research. Retrieved from: http://www.ceoforum.com.au/downloads/CorpRepResearchReport.pdf
67. Yang, T. (2013). The impact of resumption of former top executives on stock prices: An event study approach. Journal of Business Economics and Management, 14(2), 292. doi:10.3846/16111699.2011.634922