Are Investors Ethics Agnostic?

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Abstract

In this paper we ask if the perception investors have regarding ethical nature of the management *per se* influences their action. In order to check for rent seeking behaviour that could arise when there is negative perception regarding ethics, we look a single company's management whose actions – though not related to the performance of the company – have led to doubts regarding its ethical nature. Using event study mechanism, we find that when the action leads to a positive outcome for the company, the investors' reaction is statistically insignificant. However, when another action did not lead to any potential positive outcome, the abnormal returns associated with the company's stock are negative and significant. Therefore, it is possible that unethical practices, even if unrelated to company's performance, lead to lesser trust regarding the company, thereby reducing the stock prices, which suggests rent seeking behaviour.

JEL Classification: G14;

Key words: Investor perceptions, brand ambassador, event study, sports economics

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"Action, indeed, is the sole medium of expression for ethics."

-- Jane Addams

1. Introduction

Investors form opinions about a company and its financial health based on several actions undertaken by the management of the company, even if some such actions have no tangible impact on the company's day-to-day performance. Further, some such actions can also lead to shareholders forming perceptions regarding the ethical behaviour of the management, thereby influencing their actions. The role of such perceptions regarding the ethical nature of the management is the main focus of the paper.[§] The main question we address in this paper is, whether or not the investors care about the ethical perception of the management *per se*. More specifically, we ask the following question: If investors punish a company for unethical perception, can it be interpreted that the investors value the ethical practices?

Ryan and Buchholtz (2001) argue that the investor develops trust over a company, and that translates into a proxy for risk. An unethical perception can impact the trust factor, thereby leading to a change in the investor's valuation. Therefore, investors punishing the company for unethical perceptions cannot be interpreted as investors valuing ethics *per se*, but as an evidence of rent seeking. Further, unambiguous evidence that the shareholders indeed care about the ethical perception *per se* that a management creates is that they punish the management for a breach in the ethical behaviour irrespective of whether or not such breach would result any gains to the shareholders.

[§] For the rest of the paper we interpret the perceptions to mean the opinion formed about the company through activities that are presumably unrelated to the performance of the company.

In order to answer this broad research question relatively unambiguously, we need to find a company whose unethical behaviour has led to a perception of positive, as well as negative gains for the shareholders, and estimate how shareholders have responded in each of these circumstances. Also, the closer both these events are related, the better it would be for identifying if the shareholders indeed care about the management's perceived ethical behaviour. Further, in order to answer the research question we pose, we need these activities to not influence the performance of the company as such.

The two events surrounding India Cements Limited (one of the largest cement manufacturers in India; hereafter referred to as ICL) the Indian Premier League (a major cricketing event in India; hereafter referred to as IPL) fit the bill perfctly. In both these events, popular perception is that ICL has indulged in unethical practices that are not quite related to its core performance of cement manufacturing. While one event could be presumed to impact ICL positively, the other event is quite the opposite.

In the latter half of 2007, the Board of Cricket Control India (BCCI), the apex authority for cricket in India announced the launch of *Indian Premier League*, a city based cricketing event similar to the *English Premier League* in soccer. At that time, the managing director of ICL, Mr. N. Srinivasan, was also the president (the highest authority) of BCCI. The contract rights for the city of Chennai were bought by India Cements (ICL) in 2008, and the team was named *Chennai Super Kings* (CSK).One of the reasons for India Cements to acquire the franchise rights to the Chennai team was to project itself as a pan-India company and promote its brand and corporate image (India Cements, 2014b). What is interesting is that the then vice-Chairman and managing director of ICL, Mr. N. Srinivasan, was also the president (head) of BCCI. While the obvious conflict of interest in the head of a sports organization running the league also owning a team in the leaguewas apparent to many and was also highlighted in the print and internet media (Ali, 2013; ESPNCricInfo, 2010;

Subramani, 2013), ICL was allowed to go ahead with acquisition of CSK.[**]Some recent events in 2014 do indicate that the Supreme Court of India has pointed to this evident conflict of interest and asked that Mr. Srinivasan either relinquish his position with CSK or ICL.

In 2013, sixth season of IPL, Mr. Meiyappan, one of the members of the CSK management, and the son-in-law of Mr. Srinivasan, had been accused of fixing matches in IPL. Based on the media reports, it was speculated that, perhaps Mr. Srinivasan was also involved in the match fixing scandal. In both circumstances, neither ICL's performance nor Mr. Srinivasan's ability to lead the company was questioned.

How did the investors react to these news items? We use event study methodology to address this question. First, when the news that ICL acquired CSK came out, the shareholders did not seem to care much. Event study results indicate that the abnormal return on that day is both numerically and statistically zero. However, at the time the match fixing scandal broke out, the stock market reacted rather adversely. Event study results show a highly significant negative abnormal return (both numerically as well as statistically) when the news initially came out.

How can one interpret these results? First off, CSK is a tiny fraction of the overall value of ICL. In 2013, CSK is valued at $75 million whereas, ICL is valued at $400 Million indicating that CSK is financially not that relevant in the eyes of an investor. Definitely, the unethical behaviour with respect to match fixing, might have cast doubts in the investors' mind regarding the veracity of the statements Mr. Srinivasan makes, including about the financial health of the company. Therefore, the trust the investors of ICL would place on the ICL's management team (led by Mr. Srinivasan) could diminish leading to a loss in the share price. On the other hand, acquiring of the CSK team could be looked at as an exercise that

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[**] Recently a public interests litigation (PIL) filed in the Supreme Court of India (country's apex court) led to the beginning of an independent enquiry into the issue led by a former Supreme Court judge in 2014. As of time of submission of this study, the Committee has released its (confidential) report and Supreme Court has asked Mr. N. Srinivasan to step down as the head of the BCCI

would boost ÍCL's image (through better brand ambassadorship), or an outcome that would at best result in positive image building for ICL. Therefore, a likely reaction from an investor would be to be optimistic about ICL. Further, it is possible that the optimistic view due to acquisition of brand ambassadorship is being cancelled by the loss of trust due to unethical perception, which supports the hypothesis or rent-seeking, rather than valuing ethics *per se*.

An alternative explanation for such results could be that CSK was the brand ambassador of ICL, and when the reputation of the brand is tarnished, it is likely that the company would lose investor confidence (Ferrel et al, 2000). In order to check if this explanation is valid, we have looked at how investors have reacted to the performance of CSK on the cricket field. We find that their performance has had no impact on the stock prices. Even in the year 2009, when CSK has won the IPL, results from event study suggest no abnormal returns for ICL immediately after the win. Same thing holds true for the games lost by CSK as well. Further, while India Cements agreed to pay 91million US dollars to operate the franchise (over the 10 years starting 2008; ignoring all the revenues it would receive from the league over that period), as of March 2013, the company was valued at a little under 1.5 billion US dollars. Therefore, any 'damage' to the CSK franchise adversely affecting the valuation of ICL could be ruled out as well.

To sum up, we find different reactions from the investors regarding the two events that led to change in ethical perception regarding ICL. In the first case where there is a possibility of positive gains, we find that the stock market returns for ICL were statistically insignificant. In the second case, however, we find that the stock market returns were negative and significant. This leads one to conclude that the behaviour of the investors is less motivated by their perception of ethics *per se*, and more by rent seeking arguments.

Rest of the paper is organized as follows: In the next section, we present the relevant literature on ethics and investor behaviour to highlight the contribution of our paper. In

Section 3, we present the background on IPL, and in Section 4, we describe our methodology and present our data. In Section 5, we discuss our results, and conclude in Section 6.

2. Literature review

Our paper contributes to two strands of literature on investors' reaction to: (1) ethical behaviour of the companies,and (2) brand ambassadors' (pertaining to sports) reputation.

The mainpurpose of this study is to characterize shareholders' perceptions – with a focus on ethics – based on the actions undertaken by the firm, even when such actions have no rational impact on the profitability.In one of the earlier studies pertaining to investors and ethics, Rivoli (1995) answers a slightly different question. In a cross-company analysis she concludes that shareholders look favourably upon stocks of the companies that follow ethical practices. Further, a survey conducted by Epstein, McEwen and Spindle (1994) also shows that the investors are willing to trade-off profits for ethical behaviour on the part of the companies. However, our study is more about *ex ante* ethical perception as against ethical behaviour that the management of the company generates. All the ethical breaches/compliances cited in the paper directly affect profitability of the companies. The main focus of our study, on the other hand is to characterize investors' reaction to a company's ethical breach *even if such a breach does not impact the profitability* of the company in any significant way. In other words, if some remote actions undertaken by the management send some signal about their ethical quotient, which factor pertaining to the investor's behaviour – rent seeking or importance to ethics – dominates?

Ryan and Buchholtz (2001) answer a similar question from a theoretical perspective. They argue that the 'trust' investor develops over a company plays a greater role in influencing investor decision making process. They argue that, "[T]rust acts as the antecedent of the risk variable in existing investor decision-making process." If this is indeed true, a

natural corollary would be that if there is a change in the perceived 'trust-level', it is will have some consequence on the investor's perception regarding the company. In this context, our paper can be seen as an empirical corroboration of this result.

Some recent studies address this question regarding investors' perceptions and their subsequent actions. For example, Kashmiri and Mahajan (2014) show that a family firm that names itself after its founding fathers enjoys greater investor confidence. They posit that, while the founding father's name *per se* has no tangible impact on firm's performance, the name provides a perception of trust. In a more recent study that deals with investors' perceptions, Ullah, Massoud and Scholnick (2014) shows that the shareholders react strongly to any fraudulent false information released in the market. Further, they show that even if the information is denied by credible sources (such as the SEC in the US), the abnormal returns continue. This shows that even an allegation is sufficient to raise questions about the credibility of the management in the shareholders' minds. This result can be explained away by rent-seeking behaviour because allegation of fraud could raise questions on the announcements made by the firm.

Another strand of literature our paper contributes to is the area of sports economics, and more particularly, the role of brand ambassador's reputation and investor behaviour. Some studies have shown that if the teams are publicly traded, then the performance of that team has a significant impact on the stock prices of those teams (see Brown and Hartzell (2001) for the case of Boston Celtics). Moreover, the experience with the European football teams suggests that the negative valuations associated with the losses are greater than the gains associated with the winnings (Scholtens and Peenstra (2009)). On the other hand, the evidence on brand ambassador's performance and its impact on stock market is mixed. Farrell et al (2000) show that the relationship between Tiger Wood's performance on the

golfing circuit, and the performance of the company in stock market is contextual; while some stocks are positively related to Woods' performance, some others are not.
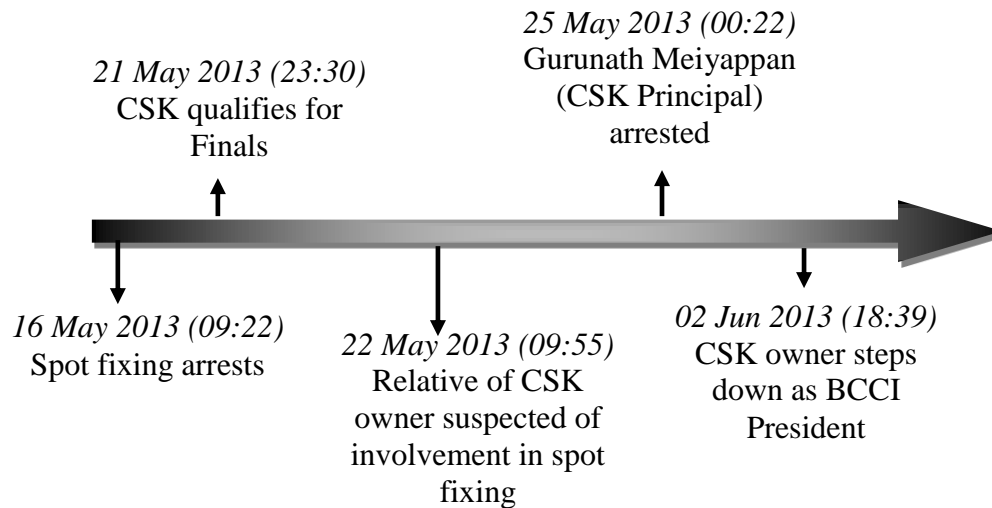
Finally, our paper also contributes to the literature on the performance of the team and the collective psyche of the individuals. Studies have found that sports teams' performance has a tangible impact on the mood of the fans. For example, Hirt and Zillmann (1992) have shown that a group of Indiana University college students have performed significantly better at physical, social and mental skills when their university's basketball team is winning. This behaviour of collective psyche can be extended to investment decisions as well. Arkes and Herren (1988) find that is an increase in the Ohio state lottery following the victory of the Ohio State University football team. Further, Mishra and Smyth (2010) show that when the Indian cricket team loses, it is reflected in the negative returns in the Indian stock market.

3. Background: The match-fixing scandal

The sixth instalment of IPL commenced on 3rd April 2013 and was scheduled till 26th May 2013. Spot fixing controversy in the IPL first came to public view when three notable cricketers (not part of CSK) were arrested on 16th May 2013 (Hindustan Times, 2013). This was followed by a widespread investigation by the Indian police forces. CSK team name surfaced when one of the suspects ("bookie") claimed that a relative of CSK's owner was also involved in spot fixing. The news was widely publicized on the web and Television news channels on 22nd May 2013 morning (CNN-IBN, 2013). This was the first time CSK's name was officially brought into the spot fixing scandal. It was revealed on 23rd May that the relative under the scanner was Mr. GurunathMeiyappan and was later arrested in the early hours of 25th May 2013 (Times of India, 2013). The timeline of events is illustrated in Fig. 1.

Figure 1

Timeline of events during IPL, 2013

25 May 2013 (00:22)
Gurunath Meiyappan
(CSK Principal)
arrested

21 May 2013 (23:30)
CSK qualifies for
Finals

16 May 2013 (09:22)
Spot fixing arrests

22 May 2013 (09:55)
Relative of CSK
owner suspected of
involvement in spot
fixing

02 Jun 2013 (18:39)
CSK owner steps
down as BCCI
President

4. Methodology and data

The empirical analyses in this paper consists of separately studying the impact of the announcement of ICL managing director and BCCI president buying an IPL franchise (CSK), and that of the match-fixing scandal surrounding the son-in-law (a CSK principal) of managing director of ICL. The way to approach such analyses is the event study methodology, a standard methodology in the empirical finance and law literature (Mackinlay, (1997) and Kothari and Warner (2006)). For the problem at hand, however, there are two complications:

1. Both the events are confounded by the results of the IPL auctions and matches involving CSK

2. Unlike most standard applications of event studies (Kothari and Warner, 2004)), the sample size for all events analysed in the study is effectively only one

The first complication can be addressed by conducting a two-stage event study. There is no *a priori* reason to expect that outcome of the matches/auction involving CSK players would

affect the performance of ICL. It may well be the case the Indian markets are not strong-form efficient (Fama, 1970), and such affects may show up. (It is unlikely given the size of ICL holding in CSK as a percentage of total market capitalization of ICL.) However, we make no such assumptions and rely on the data to validate this further.

The second complication of inference in the single-firm, single-event context is slightly more serious. Using standard ordinary least squares (OLS) based inference in a single-firm, single-event study can lead to serious under-rejection of the null hypothesis for any given significance level (Conley and Taber, 2011).

We use a novel approach recently developed in the empirical law literature (where single-firm single-event studies are a rule rather than the exception), known as the sample-quantiles, or the SQ test by Gelbach et al. (2013) to conduct our inferences. Using careful Monte Carlo studies, Gelbach et al. (2013) show that that SQ test's asymptotic error rate always equals to its size (significance level). To our understanding, this is the first application of the SQ test outside the law literature to the domain of empirical finance and governance.

To ensure robustness and triangulate our results, we also present results from the standard OLS approach (Mackinlay, 1997) and those from data-based bootstrap resampling method on the lines of Hein and Westfall (2004)[††].

4.1 Estimation

Before coming to the results, we describe the regression equation used and the inference rules for the three tests. For details the reader is referred to the original articles. The main equation that we estimate is:

$$R_t = \beta_0 + \beta_M R_{Mt} + \beta_I R_{It} + \sum_{s=1}^{N} \gamma_s I(t=s) + \varepsilon_t$$

[††] Gelbach et al (2011} show that the bootstrap based inference of Hein and Westfall (2004) and SQ test of Gelbach et al (2013) are asymptotically equivalent

where:

R_t represents the continuously compounded return on ICL for date t

R_{Mt} represents the continuously compounded return on the CNX NIFTY index of the

National Stock Exchange (NSE) for date t

R_{It} represents the continuously compounded return on an index constructed for the Cements

industry in India (representing more than 95% of the cement industry's market capitalization)

for date t. The methodology for the index construction is exactly the same as used to create

CNX NIFTY by NSE. Details and the data are available on request.

$I(t = s)$ represents an indicator variable taking the value 1 when $t = s$ and 0 otherwise

$t = s$ represents an event date

The null hypothesis for all event dates is that the abnormal return on the trading date immediately after the event date is zero, with the alternative hypothesis for match dates after a win (loss) by CSK is that abnormal return would be positive (negative) and significant.

For each year's IPL, all tests proceed by first estimating the regression equation using OLS and noting the coefficient γ_s for the event dates and the associated standard errors. As far as excess returns are concerned, it is assumed that the shareholders consider the outcome of each match independent of all others, so that each event is considered to be a standalone event, i.e. all tests are of the kind $H_0 : \gamma_s = 0 \ \ \forall t = s$ and not $H_0 : \gamma_1 = \gamma_2 = \cdots = 0$. Unless there is a large betting market (illegal in India) which allows for placing bets on a sequence of matches, there is no reason to expect correlation of returns across trading dates of interest.[‡‡]

It cannot be ignored that most IPL matches are held over the weekends, so if there is a match on a Friday and a Sunday of the same week, the relevant post-match trading day for both matches would be Monday. Same issue arises if there happens to be a holiday on a

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[‡‡] It may be that some shareholders may be dealing in illegal bets with their 'local' bookmakers; it is assumed that its size is insignificant compared to the positions held by large institutional investors

Thursday (a couple of matches over the years on fall on such a holiday, e.g. the Labour Day on May). For all such trading dates, and for days corresponding to match dates when the outcome was a 'draw' (no decision could be taken in the match) or the match was abandoned, a two-tailed test is conducted (the alternative hypothesis being that excess return is significantly different from 0). For all match dates, when the match result is known the appropriate one-tailed test is conducted.

Event study for each year of IPL is conducted separately (that is, the data is non-overlapping across IPL years), and the sample size for each year's event study is one year preceding the end of that year's IPL (around 252 days for each year; standard in the event studies literature (Kothari and Warner, 2007)).

4.2 Inference rule using OLS (Mackinlay, 1997)

The inference based on OLS relies on the usual t-statistic based statistical significance of coefficient γ_s for each event date. In tabulated results below the result from OLS is labelled as *H0_Std*. If the hypothesis is not rejected for a date, *H0_Std* takes the value 'Accept' for that date, otherwise 'Reject'.

4.3 Inference rule using the SQ Test (Gelbach et al, 2013)

The SQ test is an order-statistic test, and proceeds in the following steps (adapted directly from the original article):

1. Given the parameter estimates from OLS, calculate the abnormal return on each non-event date as: $\hat{\varepsilon}_t = R_t - \left(\hat{\beta}_0 + \hat{\beta}_M R_M + \hat{\beta}_I R_I \right) \ \forall \ t \neq s$, which gives the series of abnormal returns on non-event dates $\{\hat{\varepsilon}_t\}$ based on the OLS estimates $\hat{\beta}_0, \hat{\beta}_1$ and $\hat{\beta}_2$ in the first step.

2. Given the sample size N (on an average about 252 days a year) and the significance level α (taken to be 5% here), find the 'ceiling' of $c(\alpha, N) = \lceil \alpha N \rceil$ (product of α and N 'rounded-up'). Call $s = c(\alpha, N)$.

3. Sort the realized excess returns on non-event dates in an ascending order. Find the sth least value and the sth the top value of $\{\hat{\varepsilon}_t\}$. Call them respectively, γ_l and γ_h.

4. For single-tailed tests, reject H_0 if $\hat{\gamma}_s < \gamma_l$ for a 'loss' event; reject H_0 if $\hat{\gamma}_s > \gamma_h$ for a 'win' event. For a two-tailed test, reject H_0 if $\hat{\gamma}_s < \gamma_l$ or $\hat{\gamma}_s > \gamma_h$.

5. In tabulated results below the result the SQ test is labelled as *H0_SQ*. If the hypothesis is not rejected for a date, *H0_SQ* takes the value 'Accept' for that date, otherwise 'Reject'.

4.4 Inference rule using the bootstrap (Hein and Westfall, 2004)

The data-based bootstrap of Hein and Westfall (2004) for multivariate regression model with dummy variables is based on the standard "plug-in principle" for bootstraps (Efron and Tibshirani, 1998). It corrects for the fact that the size of tests in presence of dummy variables does not necessarily equal the significance level in large finite samples (Hein and Westfall, 2004). The methodology of the bootstrap for the univariate case proceeds as follows:

1. Given the parameter estimates $\hat{\beta}_0, \hat{\beta}_1$ and $\hat{\beta}_2$ in the first step from OLS, calculate the series of abnormal returns (residuals) for all non-event dates: $\{\hat{\varepsilon}_t\}$. The bootstrap works on this sample of abnormal returns

2. Sample N (same as the original sample size) draws with replacement from $\{\hat{\varepsilon}_t\}$. Call this series $\{R_t^*\}$

3. Run the original regression with the same regressors, replacing the original series $\{R_t\}$ with $\{R_t^*\}$, that is for each bootstrapped sample the regression equation is:

$$R_t^* = \beta_0^* + \beta_M^* R_M + \beta_I^* R_I + \sum_{s=1}^{N} \gamma_s^* I(t = s) + \varepsilon_t$$

4. Obtain and store the t-statistic corresponding to γ_s^*

5. Repeat steps 2 to 4 above for NBOOT = 10000 times. The bootstrap p-value (variable *pvalBoot* in tabulated results) of the test is the proportion of NBOOT samples with the absolute value of the t-statistic for γ_s^* that is greater than or equal to the absolute value of the original t-statistic corresponding to γ_s from step 1 above

6. The null is rejected if the bootstrap p-value is less than or equal to the selected level of significance α (taken to be 5% here)

7. In tabulated results below the result from the data-based bootstrap is labelled as *H0_Boot*. If the hypothesis is not rejected for a date, *H0_Boot* takes the value 'Accept' for that date, otherwise 'Reject'.

5. Results and discussion

5.1 IPL, 2008 – IPL, 2012

Before presenting statistical results for the event study around the match-fixing scandal, we first present results for all years before till the 2013 IPL (involving the match-fixing scandal).

Figure 2

India Cements log returns for the period July, 2007 – June, 2008

Shaded portion represent the auction and the IPL period in 2008; with dark dots representing the dates of interest. Dashed and dash-dot line respectively represent inter-quartile ranges corresponding to 3 and 2 standard deviations of a standard Normal distribution.

Figure 3

India Cements log returns for the period July, 2008 – June, 2009

Shaded portion represent the auction and the IPL period in 2009; with dark dots representing the dates of interest. Dashed and dash-dot line respectively represent inter-quartile ranges corresponding to 3 and 2 standard deviations of a standard Normal distribution.
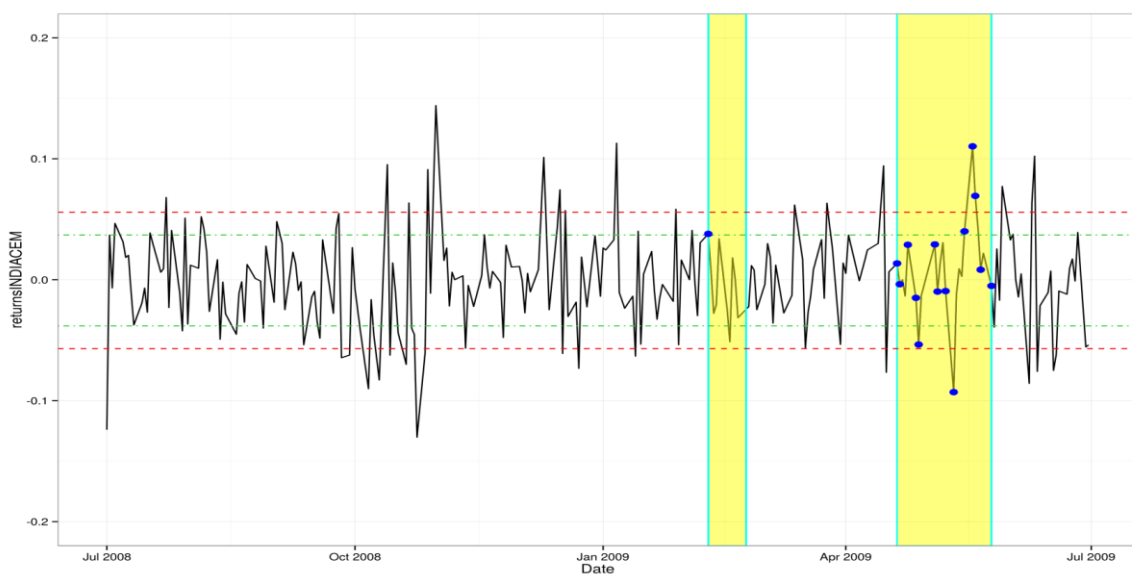
Figure 4

India Cements log returns for the period July, 2009 – June, 2010

Shaded portion represent the auction and the IPL period in 2010; with dark dots representing the dates of interest. Dashed and dash-dot line respectively represent inter-quartile ranges corresponding to 3 and 2 standard deviations of a standard Normal distribution.
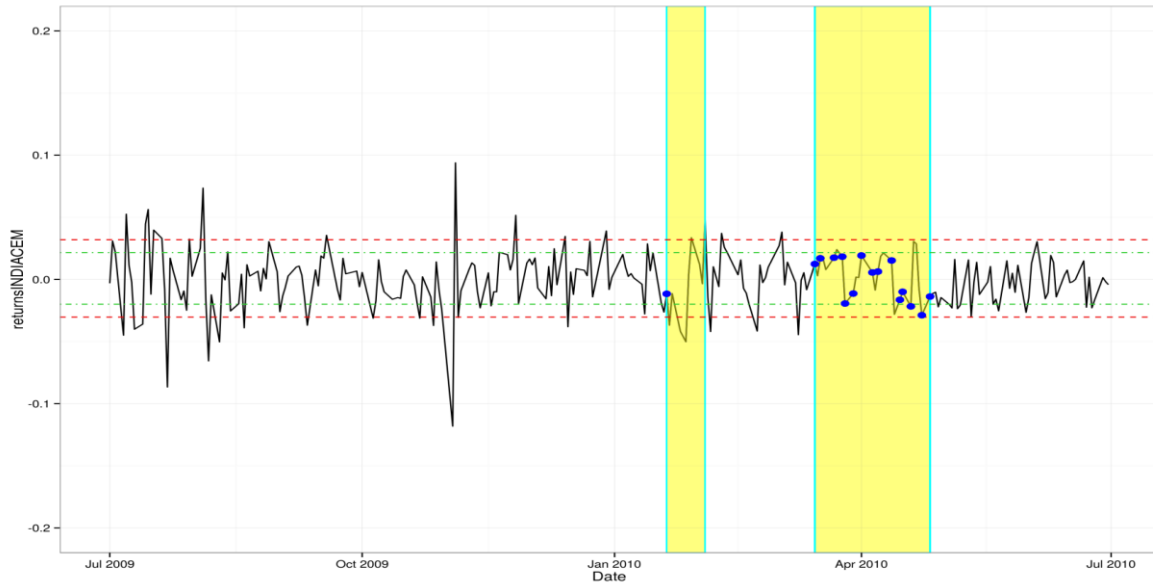
Figure 5

India Cements log returns for the period July, 2010 – June, 2011

Shaded portion represent the auction and the IPL period in 2011; with dark dots representing the dates of interest. Dashed and dash-dot line respectively represent inter-quartile ranges corresponding to 3 and 2 standard deviations of a standard Normal distribution.
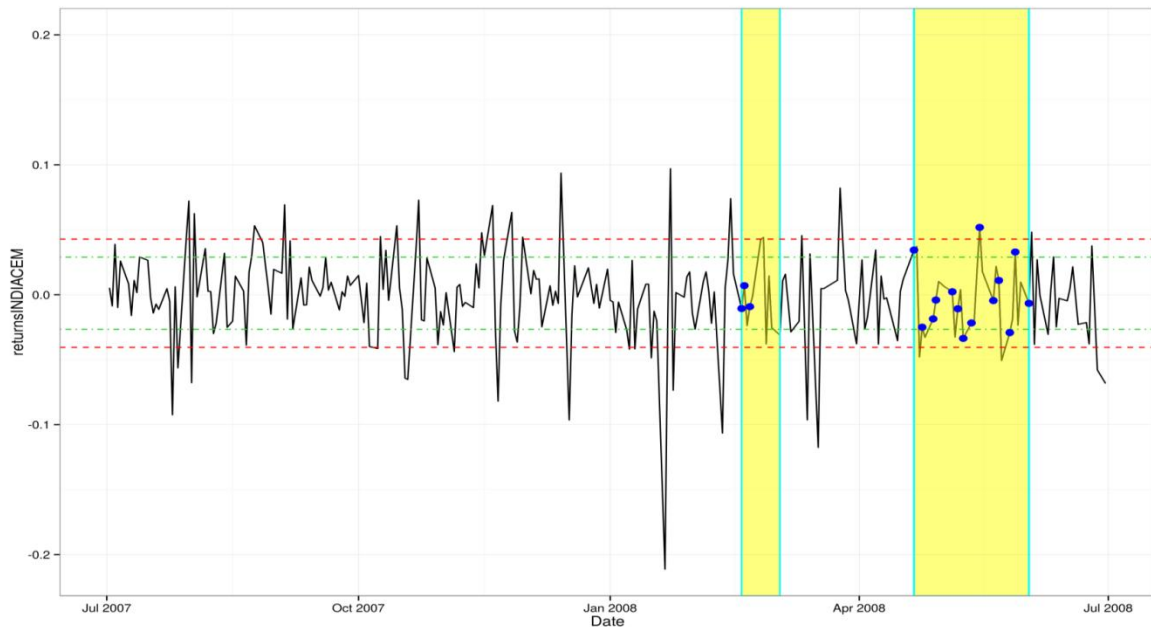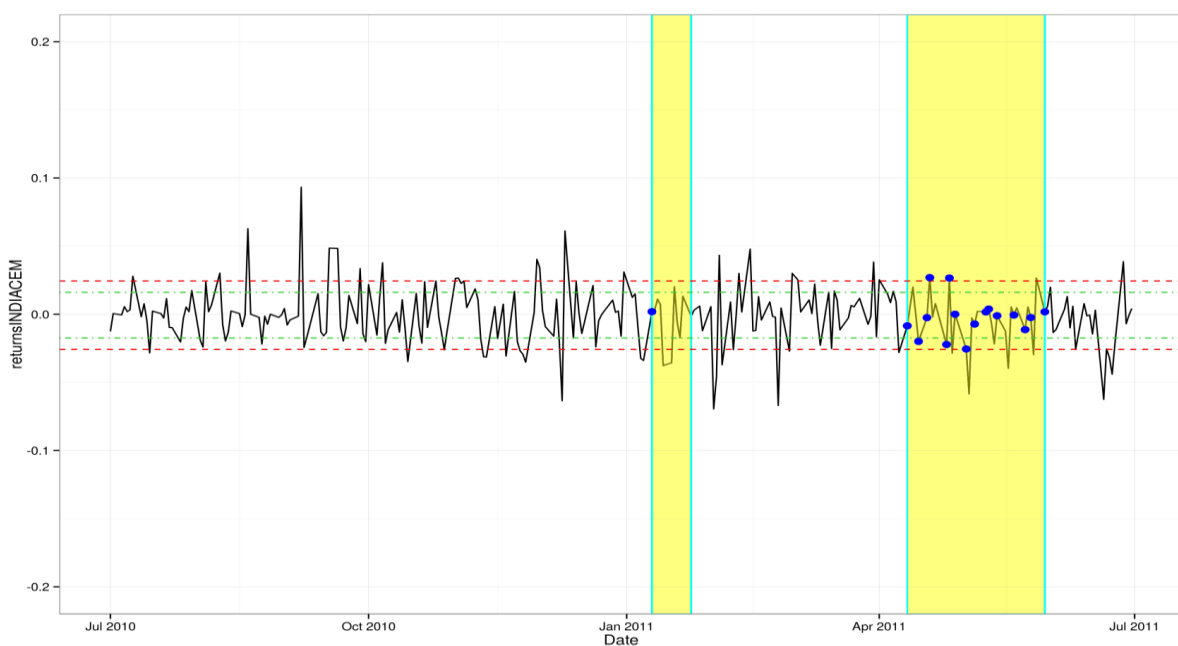
Figure 6

India Cements log returns for the period July, 2011 – June, 2012

Shaded portion represent the auction and the IPL period in 2012; with dark dots representing the dates of interest. Dashed and dash-dot line respectively represent inter-quartile ranges corresponding to 3 and 2 standard deviations of a standard Normal distribution.
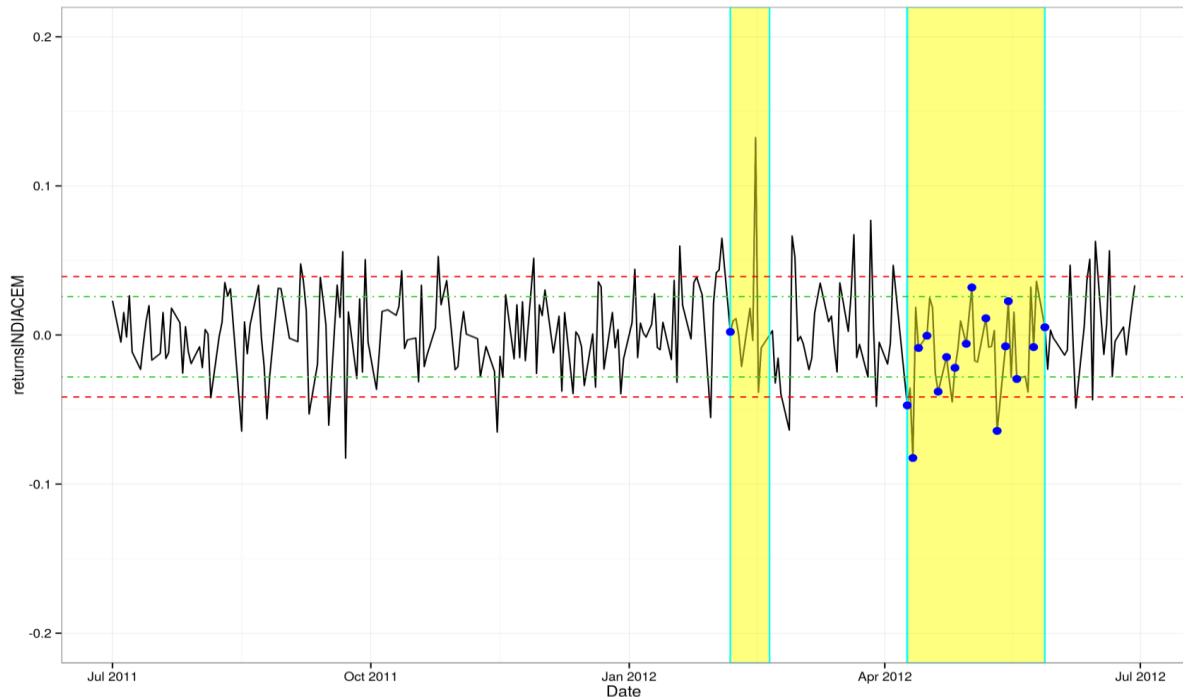

Figures 2 to 6 present the plot of returns of ICL (variable *returnsINDIACEM*) with inter-quartile ranges corresponding to the 2 and 3 standard deviations for a standard Normal distribution super-imposed. The first of the two shaded portions in the plots represent a fortnight after the auction period, and the second one represent the period involving the IPL. The shaded regions are deliberately selected to be wider than the number of dates involved for ease of visibility. The dates of interest are marked with dark dots on the line chart.

It is clear from the five plots for 2008 to 2012 that barring a couple of dates in 2009 and 2012, the daily returns of ICL lie all within the inter-quartile range, at least visually indicating that for the most part IPL matches do not affect the returns of ICL one way or the other. The formal statistical results in Tables 1 to 5 tell a similar story.

For the 2008 IPL, there is one date for which the abnormal return is significant and that is the last date. The result for that, however, is confounded by two matches involving CSK just before the trading date. The abnormal return is numerically positive, despite CSK losing the more important second match (championship match of that year's IPL).

Table 1

Event study results for the IPL year 2008

Sr	Code	Date	γ_s	pval	pvalBoot	H0_SQ*	H0_Std	H0_Boot
1	2	18-Feb-08	-0.004	0.862	0.856	Accept	Accept	Accept
2	2	19-Feb-08	-0.010	0.615	0.602	Accept	Accept	Accept
3	2	21-Feb-08	-0.027	0.186	0.179	Accept	Accept	Accept
4	1	21-Apr-08	0.024	0.254	0.238	Accept	Accept	Accept
5	1	24-Apr-08	0.007	0.751	0.743	Accept	Accept	Accept
6	1	28-Apr-08	0.002	0.934	0.931	Accept	Accept	Accept
7	1	29-Apr-08	-0.017	0.416	0.390	Accept	Accept	Accept
8	0	5-May-08	0.005	0.814	0.813	Accept	Accept	Accept
9	4	5-May-08	0.005	0.814	0.813	Accept	Accept	Accept
10	0	7-May-08	-0.004	0.844	0.840	Accept	Accept	Accept
11	1	9-May-08	0.009	0.680	0.665	Accept	Accept	Accept
12	1	12-May-08	-0.014	0.512	0.506	Accept	Accept	Accept
13	0	15-May-08	0.016	0.427	0.414	Accept	Accept	Accept
14	1	20-May-08	0.000	0.985	0.983	Accept	Accept	Accept
15	0	22-May-08	0.034	0.095	0.082	Accept	Accept	Accept
16	0	26-May-08	0.018	0.395	0.368	Accept	Accept	Accept
17	1	28-May-08	-0.012	0.551	0.536	Accept	Accept	Accept
18	1	2-Jun-08	0.038	0.069	0.063	Reject	Accept	Accept
19	4	2-Jun-08	0.038	0.069	0.063	Reject	Accept	Accept

* SQminus = -0.031; SQplus = 0.032. These values indicate the threshold for the SQ test. For the 'loss' event date the SQminus statistic is used, and for the 'win' event dates the SQplus statistic is used.

The coding of results is as follows (column 'Code'): Loss = 0, Win = 1, Auction day = 2, Match abandoned = 3, Two consecutive matches before the return day = 4

Table 2

Event study results for the IPL year 2009

Sr	*Code*	*Date*	γ_s	*pval*	*pvalBoot*	*H0_SQ**	*H0_Std*	*H0_Boot*
1	2	9-Feb-09	0.021	0.415	0.389	Accept	Accept	Accept
2	0	20-Apr-09	0.003	0.920	0.921	Accept	Accept	Accept
3	1	21-Apr-09	0.007	0.788	0.761	Accept	Accept	Accept
4	0	24-Apr-09	0.011	0.654	0.613	Accept	Accept	Accept
5	3	27-Apr-09	-0.008	0.756	0.719	Accept	Accept	Accept
6	0	28-Apr-09	-0.024	0.338	0.306	Accept	Accept	Accept
7	1	4-May-09	0.003	0.903	0.891	Accept	Accept	Accept
8	4	4-May-09	0.003	0.903	0.891	Accept	Accept	Accept
9	1	5-May-09	-0.003	0.915	0.918	Accept	Accept	Accept
10	1	8-May-09	0.024	0.340	0.308	Accept	Accept	Accept
11	1	11-May-09	-0.072	0.005	0.009	Accept	Reject	Reject
12	0	15-May-09	0.027	0.293	0.262	Accept	Accept	Accept
13	1	18-May-09	-0.049	0.071	0.071	Accept	Accept	Accept
14	0	19-May-09	0.063	0.014	0.020	Accept	Reject	Reject
15	1	21-May-09	0.015	0.564	0.541	Accept	Accept	Accept
16	0	25-May-09	-0.013	0.603	0.574	Accept	Accept	Accept

* SQminus = -0.037; SQplus = 0.040. These values indicate the threshold for the SQ test. For the 'loss' event date the SQminus statistic is used, and for the 'win' event dates the SQplus statistic is used.

The coding of results is as follows (column 'Code'): Loss = 0, Win = 1, Auction day = 2, Match abandoned = 3, Two consecutive matches before the return day = 4

Table 3

Event study results for the IPL year 2010

Sr	Code	Date	γ_s	pval	pvalBoot	H0_SQ*	H0_Std	H0_Boot
1	2	20-Jan-10	-0.008	0.604	0.486	Accept	Accept	Accept
2	0	15-Mar-10	0.014	0.390	0.339	Accept	Accept	Accept
3	1	17-Mar-10	0.028	0.085	0.078	Reject	Accept	Accept
4	1	22-Mar-10	0.026	0.103	0.089	Accept	Accept	Accept
5	3	22-Mar-10	0.026	0.103	0.089	Accept	Accept	Accept
6	0	25-Mar-10	0.025	0.126	0.108	Accept	Accept	Accept
7	0	26-Mar-10	-0.027	0.096	0.084	Reject	Accept	Accept
8	0	29-Mar-10	-0.027	0.092	0.082	Reject	Accept	Accept
9	1	1-Apr-10	0.022	0.172	0.127	Accept	Accept	Accept
10	1	5-Apr-10	0.000	0.976	0.964	Accept	Accept	Accept
11	1	7-Apr-10	-0.010	0.557	0.469	Accept	Accept	Accept
12	0	12-Apr-10	0.025	0.125	0.103	Accept	Accept	Accept
13	1	15-Apr-10	-0.010	0.553	0.450	Accept	Accept	Accept
14	0	16-Apr-10	0.002	0.881	0.819	Accept	Accept	Accept
15	1	19-Apr-10	-0.007	0.661	0.543	Accept	Accept	Accept
16	1	23-Apr-10	-0.021	0.200	0.153	Accept	Accept	Accept
17	1	26-Apr-10	-0.018	0.268	0.208	Accept	Accept	Accept

* SQminus = -0.021; SQplus = 0.027. These values indicate the threshold for the SQ test. For the 'loss' event date the SQminus statistic is used, and for the 'win' event dates the SQplus statistic is used.

The coding of results is as follows (column 'Code'): Loss = 0, Win = 1, Auction day = 2, Match abandoned = 3, Two consecutive matches before the return day = 4

Table 4

Event study results for the IPL year 2011

Sr	Code	Date	γ_s	pval	pvalBoot	H0_SQ*	H0_Std	H0_Boot
1	1	10-Jan-11	0.027	0.128	0.118	Accept	Accept	Accept
2	2/4	10-Jan-11	0.027	0.128	0.118	Accept	Accept	Accept
3	1	11-Apr-11	0.006	0.726	0.673	Accept	Accept	Accept
4	0	15-Apr-11	0.000	0.997	0.996	Accept	Accept	Accept
5	1	18-Apr-11	0.021	0.242	0.200	Accept	Accept	Accept
6	0	19-Apr-11	0.028	0.106	0.101	Accept	Accept	Accept
7	0	25-Apr-11	-0.021	0.218	0.175	Accept	Accept	Accept
8	1	26-Apr-11	0.024	0.170	0.136	Accept	Accept	Accept
9	1	28-Apr-11	0.010	0.567	0.512	Accept	Accept	Accept
10	1	2-May-11	-0.006	0.721	0.665	Accept	Accept	Accept
11	1	5-May-11	0.017	0.328	0.277	Accept	Accept	Accept
12	0	9-May-11	0.005	0.794	0.749	Accept	Accept	Accept
13	1	10-May-11	0.009	0.610	0.543	Accept	Accept	Accept
14	1	13-May-11	-0.013	0.441	0.393	Accept	Accept	Accept
15	1	19-May-11	0.004	0.835	0.789	Accept	Accept	Accept
16	0	23-May-11	0.010	0.560	0.501	Accept	Accept	Accept
17	1	25-May-11	0.006	0.712	0.652	Accept	Accept	Accept
18	1	30-May-11	0.009	0.602	0.544	Accept	Accept	Accept

* SQminus = -0.027; SQplus = 0.027. These values indicate the threshold for the SQ test. For the 'loss' event date the SQminus statistic is used, and for the 'win' event dates the SQplus statistic is used.

The coding of results is as follows (column 'Code'): Loss = 0, Win = 1, Auction day = 2, Match abandoned = 3, Two consecutive matches before the return day = 4

Table 5

Event study results for the IPL year 2012

Sr	Code	Date	γ_s	pval	pvalBoot	H0_SQ*	H0_Std	H0_Boot
1	2	6-Feb-12	-0.055	0.011	0.021	Reject	Reject	Reject
2	0	9-Apr-12	-0.022	0.282	0.231	Accept	Accept	Accept
3	4	9-Apr-12	-0.022	0.282	0.231	Accept	Accept	Accept
4	0	11-Apr-12	-0.049	0.021	0.038	Reject	Reject	Reject
5	1	13-Apr-12	0.002	0.938	0.917	Accept	Accept	Accept
6	0	16-Apr-12	0.014	0.512	0.436	Accept	Accept	Accept
7	1	20-Apr-12	-0.019	0.367	0.294	Accept	Accept	Accept
8	1	23-Apr-12	0.001	0.943	0.924	Accept	Accept	Accept
9	3	26-Apr-12	-0.030	0.151	0.146	Accept	Accept	Accept
10	0	30-Apr-12	-0.026	0.204	0.184	Accept	Accept	Accept
11	0	2-May-12	0.042	0.044	0.057	Accept	Reject	Accept
12	1	7-May-12	-0.019	0.372	0.294	Accept	Accept	Accept
13	4	7-May-12	-0.019	0.372	0.294	Accept	Accept	Accept
14	1	11-May-12	-0.041	0.046	0.055	Accept	Reject	Accept
15	1	14-May-12	-0.009	0.666	0.599	Accept	Accept	Accept
16	1	15-May-12	0.010	0.615	0.528	Accept	Accept	Accept
17	0	18-May-12	-0.021	0.305	0.251	Accept	Accept	Accept
18	1	24-May-12	-0.033	0.115	0.123	Accept	Accept	Accept
19	1	28-May-12	-0.016	0.424	0.327	Accept	Accept	Accept
20	4	28-May-12	-0.016	0.424	0.327	Accept	Accept	Accept

* SQminus = -0.030; SQplus = 0.036. These values indicate the threshold for the SQ test. For the 'loss' event date the SQminus statistic is used, and for the 'win' event dates the SQplus statistic is used.

The coding of results is as follows (column 'Code'): Loss = 0, Win = 1, Auction day = 2, Match abandoned = 3, Two consecutive matches before the return day = 4

Ignoring the result for which only the standard OLS based result shows statistical significance, over the entire next four years starting 2009, there are two dates each of significant abnormal returns in 2009, 2010 and 2012 – meaning that in the 90 matches involving first five years of IPL, there are only six days with significant abnormal return, and none for the dates involving the championship games. CSK won the IPL in 2009 and 2010 and abnormal return for both dates after the championship match date is both numerically and statistically insignificant (and with the 'wrong' sign).

Importantly for us, the abnormal return for the date immediately after announcement that ICL is going to buy CSK is both numerically and statistically 0, suggesting that despite being aware of the apparent conflict interest, the shareholders did not perceive it to be anything 'bad' or negative about the company.

5.2 IPL, 2013

Looking at the IPL for the year 2013 separately, again the outcome of matches themselves seem unimportant both visually (Figure 7) and from the formal tests (Table 6). For all dates preceding the match-fixing scandal involving CSK coming to light, the abnormal return is statistically insignificant, and for most dates even numerically so.

Figure 7

India Cements log returns for the period July, 2012 – June, 2013

Shaded portion represent the auction and the IPL period in 2013; with dark dots representing the dates of interest. Dashed and dash-dot line respectively represent inter-quartile ranges corresponding to 3 and 2 standard deviations of a standard Normal distribution.
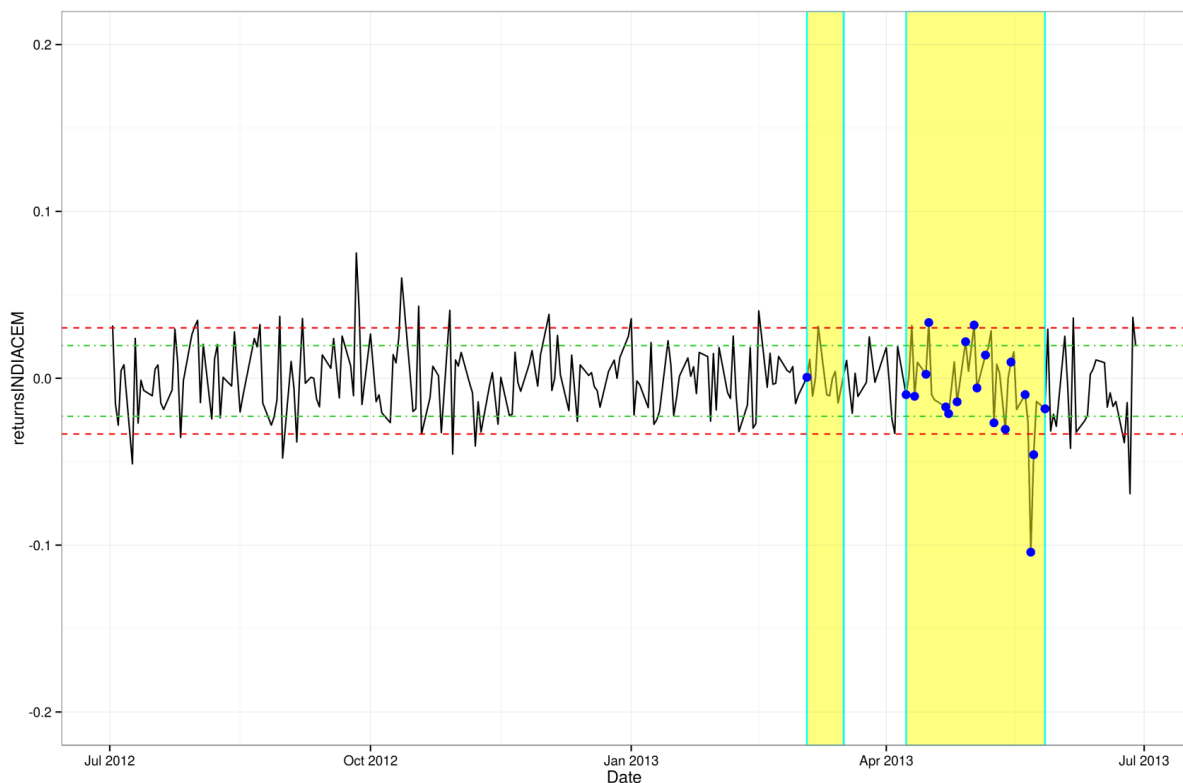
Involvement of CSK in the match-fixing scandal came to be known around the first hour of trading on 22nd May (and was likely to known to people close to the story the day before), and as is also visually clear, the abnormal return for that date is -0.11% (daily return) which is close to -28% annually (this despite having CSK won the previous match). This is more than the numerical abnormal return for *any date* in the entire sample under consideration. All the three formal tests also indicate an high level of statistical significance (with the null rejected at arbitrarily low size/significance level for that date).

With the heavy media exposure and heightened police activity, it is not unexpected that market participants would have got the wind of involvement of Mr. Gurunath Meiyappan in the scandal. In any case, after the police statement about on 25th May (weekend and non-trading date), the abnormal return for 27th May is numerically the second highest among all event dates for that year and also statistically significant. While the evidence is mixed, the SQ test indicates that even for the day in 'between the two announcements, the abnormal return is statistically negative indicating a 'correction' for the negative firm-specific news in the mind of the shareholders/investors (Fama, 1970 and Mackinlay, 1997).

Table 6

Event study results for the IPL year 2013

Sr	Code	Date	γ_s	pval	pvalBoot	H0_SQ	H0_Std	H0_Boot
1	2	4-Mar-13	0.024	0.200	0.197	Accept	Accept	Accept
2	0	8-Apr-13	-0.014	0.460	0.459	Accept	Accept	Accept
3	1	11-Apr-13	-0.014	0.448	0.446	Accept	Accept	Accept
4	1	15-Apr-13	-0.006	0.732	0.732	Accept	Accept	Accept
5	0	16-Apr-13	0.011	0.569	0.574	Accept	Accept	Accept
6	1	22-Apr-13	-0.012	0.518	0.516	Accept	Accept	Accept
7	4	22-Apr-13	-0.012	0.518	0.516	Accept	Accept	Accept
8	1	23-Apr-13	-0.017	0.354	0.336	Accept	Accept	Accept
9	1	26-Apr-13	-0.001	0.935	0.931	Accept	Accept	Accept
10	1	29-Apr-13	0.020	0.278	0.264	Accept	Accept	Accept
11	1	2-May-13	0.023	0.213	0.206	Accept	Accept	Accept
12	1	3-May-13	0.005	0.804	0.811	Accept	Accept	Accept
13	0	6-May-13	0.011	0.536	0.539	Accept	Accept	Accept
14	1	9-May-13	-0.029	0.115	0.113	Accept	Accept	Accept
15	0	13-May-13	-0.007	0.701	0.702	Accept	Accept	Accept
16	1	15-May-13	-0.008	0.665	0.673	Accept	Accept	Accept
17	0	20-May-13	-0.003	0.879	0.875	Accept	Accept	Accept
18	1@	22-May-13	-0.105	0.000	0.000	Reject	Reject	Reject
19	X#	23-May-13	-0.028	0.130	0.124	Reject	Accept	Accept
20	0/4@	27-May-13	-0.039	0.035	0.034	Reject	Reject	Reject

* SQminus = -0.028; SQplus = 0.028. These values indicate the threshold for the SQ test. For the 'loss' event date the SQminus statistic is used, and for the 'win' event dates the SQplus statistic is used.

The coding of results is as follows (column 'Code'): Loss = 0, Win = 1, Auction day = 2, Match abandoned = 3, Two consecutive matches before the return day = 4

@ Denotes trading dates post the announcement of CSK involvement in the match-fixing scandal and arrests.

X# There is no match corresponding to this trading date, and is only included to see the impact of reaction to the match-fixing news a day after the announcement.

6. Discussion and Conclusion

We use event study methodology to assess the impact of two unethical events – legal but potentially profitable act, and illegal act but does not impact the financial performance of the firm. In the first event in spite of the possibility of positive gains, we find that the stock

market returns for ICL were statistically negative. In the second case, when the unethical act was not related to the financial performance of the company, we again find that the stock market returns were negative and significant. This enables us to conclude that the shareholders are concerned about the ethical standards maintained by the company.

How can one interpret these results? The first event was the announcement that ICL acquired CSK. Acquiring a sports franchise could be viewed as an exercise that would boost ÍCL's image (through brand ambassadorship and exposure), or an outcome that would at best result in positive image building for ICL. Hence, a likely reaction from an investor would be to be optimistic about ICL's financial performance. The initial controversy surrounding the acquisition of CSK by ICL has been pointed out to be a clear case of conflict of interest, since the head of the BCCI is also among the top management of ICL (and hence, involved in CSK). Following the announcement, our results indicate that the shareholders penalized the firm resulting in negative abnormal stock returns.

As to our second event − match fixing scandal in 2013 − people related to the management of ICL were implicated. However, match fixing *per se* has no direct relation the performance of ICL. The prime accused in the match fixing scandal, Mr. Meyappan, was only related to the management of ICL, and does not hold any official position within either CSK or ICL. Yet, we find that the investors' reaction to be rather adverse. Definitely, the unethical behaviour with respect to match fixing, might have cast doubts in the investors' mind regarding the veracity of the statements Mr. Srinivasan makes, including about the financial health of the company. Therefore, the trust the investors of ICL would place on the ICL's management team (led by Mr. Srinivasan) could diminish leading to a loss in the share price. This leads us to conclude that the investors do care about the ethical persona of the management.

An alternative explanation for such results could be that CSK was the brand ambassador of ICL, and when the reputation of the brand is tarnished, it is likely that the company would lose investor confidence (Farrell et al., 2000). In order to check if this explanation is valid, we have looked at how investors have reacted to the performance of CSK on the cricket field. We find that their performance has had no impact on the stock prices. Even in the year 2009, when CSK has won the IPL, results from event study suggest no abnormal returns for ICL immediately after the win. Same thing holds true as well, for the games that CSK has lost. Further, while India Cements agreed to pay 91 million US dollars to operate the franchise (over the 10 years starting 2008; ignoring all the revenues it would receive from the league over that period), as of March 2013, the company was valued at a little over 400 million US dollars. Therefore, any 'damage' to the CSK franchise adversely affecting the valuation of ICL could be ruled out as well.

Therefore, from a managerial perspective the main message of the study is to recognize that the investors do care about the ethical image of a company, and it is important to maintain ethical standards even with regards to the activities that may not impact the company directly.

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