

CORPORATE CRIME ANNOUNCEMENT EFFECTS ON STOCK PERFORMANCE: AN EMPIRICAL STUDY IN MALAYSIA

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An in-depth investigation of the effects of announcement of corporate crime on firm performance focusing on stock market performance among public enterprises in Malaysia has been conducted. A sample of 7 large, established public companies charged for committing corporate crime by Securities Commission from the period of 1999 to 2005 in Malaysia were identified and examined. Using the event-study methodology proposed by Rao (1997), monthly average abnormal returns (AARs) and cumulative average abnormal returns (CAARs) for the sample of 8 announcements of separate crimes ranging from 12 months prior to and 6 months after the announcement dates are determined. Empirical result indicates that the stock market is informationally inefficient in Malaysia and investors do react to announcement of corporate crime.

1. INTRODUCTION

Corporate crime based on the cases reported each year is not new in Malaysia and, the rate is on the upward trends. According to KPMG Malaysia fraud survey (KPMG, 2005), it is found that there has been an increase of 33% of the respondents experiencing fraud in their organization, as compared to the 2002 survey. In Malaysia, white-collar crime has caused losses of exceeding RM3.93 billion from the year 1999 until 2002, with approximately 6,000 cases being reported yearly (Clarence, 2005). Additionally, 36% of companies have suffered a total

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losses between RM10,001 to RM100,000 to fraudulent conduct between January 2003 to December 2004, while 17% have suffered losses of greater than RM1 million (KPMG, 2005). On the other hand, assessing the company's risk to corporate crime is getting more complicated particularly when the transactions are performed electronically and operations are being done geographically separated from each other (Seetharaman *et al.* 2004). Therefore, it is anticipated that the corporate crime will become a serious corporate problem and the loss wrecked by economic crime goes exceedingly direct monetary loss.

The purpose of this study is to investigate the effects of announcement of corporate crime on firm stock's performance. Evidence from past literature argues that when the members of top management of a company are charged for misappropriation of fund, insider trading, financial manipulation, or corruption, such news will receive a wide coverage by the medias. However, to what extent such announcement will influence the performance of the company's share price in Malaysia is still subject to further empirical testing. As the Malaysian capital market continues to experience rapid development, the study of the effect of crime is highly relevant. At the same time, much of the discussions on the effect of firm performance have not considered corporate crime as a critical factor that would cause firm to become less competitive. It is hoped that this study will fill the gap by providing empirical evidence that explains the effects of such crime on firm's stock performance. Study on this subject become more urgent as the survey of the past literature reveals almost a complete lack of research done using the Malaysian data.

2. LITERATURE REVIEW

In the early years, corporate illegalities were regarded as corporate crime activities. Corporate crime was engaged mainly for the firm's benefits (Szwajkowski, 1985). Subsequently, Baucus and Baucus (1997) observed that illegal corporate behavior also include, illegal activities committed by members of a firm. Later, in KPMG (2005), corporate crime is considered as in the making if one tries to deliberately plan, deceit or con with the intention of to deprive other's property or rights, regardless of whether the perpetrator gain any benefit or not from the process. Within the same line of thought and the context of this study,

we define corporate crime as offences that involve inappropriate behaviors such as submission of false statement to Securities Commission or Bursa Malaysia, criminal breach of trust, abuse of one's power to gain personal benefit, market manipulation, and any negligence in complying with Securities Commission.

In terms of nature and type of corporate crime usually committed, KPMG Malaysia fraud survey (KPMG, 2001) revealed that the highest losses involved secret commission (43%), followed by expense account (29%), false invoicing (27%), and others include purchases for personal use, cheque forgery, price fixing, corporate surveillance and automatic teller machine fraud. Although corporate crime has been associated with members of top management team, however, the report showed that 78% of the frauds were committed by non-management category. Later, a separate study is conducted by PricewaterhouseCoopers (2005) and the results seem to be consistent with that of KPMG (2001). Both surveys revealed that most of the fraud incidents were committed by the employees of the convicted organizations. It is argued that employees tend to have a better understanding of the operation of the business. In short, the main culprits for committing a crime in an organization are non-management employees.

Why employees commit corporate crime? Goldstraw *et al.* (2005) found that greed, gambling, financial strain either personal or business, and feasibility of business under the influence of others are the major factors stimulating illegal behavior among employees. In fact, gambling related activity is one of the main factors that trigger corporate crime activity in Australia (Blaszczynski and McConaghy, 1994; Crofts, 2002). In Malaysia, factors such as poor management or internal controls (35%), conspiracy between employee and third party (27%), and type of business that is favorable for fraud to happen (21%) were responsible for corporate crime (KPMG, 2001).

The consequences of corporate crime are very serious. The finding in an economic survey by PricewaterhouseCoopers (2003) revealed that this activity leads to 'collateral damage' such as impact on reputation, brand image, and staff morale and they argued that these effects are more severe compared to financial loss. PricewaterhouseCoopers (2005) also announced that fraud causes major damages or setbacks to the

organization. The setback includes decrease of workforce motivation (58%), loss of reputation (43%) and impairment of business relationships (50%). Notably, the main reason why firm not reporting fraud was fear of negative publicity (31%) followed by no chance of financial recovery (23%) KPMG Malaysia fraud survey (KPMG, 2003).

In coping with ever increasing corporate crime activities, the organizations have tried several ways to uncover illegal behavior among the employees. The survey made by KPMG (2001) revealed that the majority of the fraud incidents were discovered through management investigation (30%), internal controls (27%), employee notification (23%) and internal auditor review (21%). However, Seetharaman *et al.* (2004) proposed that the most effective detection methods are internal audit review, specific investigation by management, employee notification and accidental discovery. Other suggested that fraud cases can be lessen with effective monitoring skills and controls, huge awareness of prevention and anticipation, and effective action when fraud happens (PricewaterhouseCoopers, 2005). Nevertheless, Jerry *et al.* (2003) pointed out that the ability of an auditor to accurately trace the risk of fraud is important. Most importantly, companies need to seriously review the risks of fraud within the organization, firmly declaring the company's stance to fight fraud and implementing it, strict and tight monitor on risky areas, encourage and protect people who are bold to report on fraud and have a good fraud counter act plan (PricewaterhouseCoopers, 2003).

Within the same line of thought, several researches have found that stock price performance is negatively affected by the announcement of antitrust activities of a firm. For example, Randall and Neuman (1979) discovered that stock prices fall in the week following the announcement of government prosecutions for antitrust activities. Besides, Strachan *et al.* (1983) also indicated that allegations of bribery, criminal fraud and other antitrust activities negatively affect a firm's stock price on the day prior to and the day of the announcement. Furthermore, the finding in the study of Wier (1983) is also consistent with the previous research. Wier found that the performance of stock market declines by an average of 2% after the announcement of penalties or final decisions for illegal mergers and acquisitions. In another study, Baucus and Baucus (1997) demonstrated the relationship between illegal corporate behavior and

long-term financial performance of convicted firm. They concluded that convicted firms experience immediate and prolonged decrement in revenues as the stakeholders exit the firms. Moreover, Cox and Weirich (2002) also pointed out that the stock market is significant in dollar terms with strong negative announcement effects the day before and on the day of fraudulent financial reporting.

Not only the announcement of corporate crime shows negative impact towards the stock price, but other negative announcements such as downgraded of Standard and Poor's ranking will also indicate significant abnormal returns on stock prices (Mulugetta *et al.* (2002). However, Marcus and Goodman's (1991) study showed that the market does not react significantly to announcement of a crisis such as scandal. This can be explained that it may take years before the actual impact of managerial actions can be truly understood. In addition, Rao (1996) and Rao (1997) found that the stock market is not reacting efficiently when the announcement concerning environmental pollution, bribery, scandal, white-collar crime and illegal payment activities by a firm is made.

3. DATA AND METHODOLOGY

This study identifies a specific development or event that is expected to influence stock prices classified as a corporate crime. Here, the event refers to the date when the announcement of an unethical behavior of the members of the company or the individual associated with the company is made public by the media whether or not the person is guilty. The assessment of financial performance of the company is made by means of stock's prices. Therefore, this study attempts to determine the stock market's reaction to a public announcement as a result of the crime. The secondary data will be gathered from the Securities Commission's website highlighting who and which companies have committed the crime while, information regarding the movement of the share prices of the related firms will be compiled from the daily stock market as reported in Bursa Malaysia.

This leads to the construction of the following hypotheses:

- H₀: The stock market is informationally efficient towards the announcement of corporate crime activity
- H₁: The stock market is informationally inefficient towards the announcement of corporate crime activity

If the stock price of the firm is affected after the announcement of corporate crime, causing a decrease in the return of investors, it is suggesting that H₀ of hypothesis will be rejected and H₁ should be accepted. On the other hand, if the stock price of the firm performs is not affected after the public announcement of an unethical conduct, it is suggested that H₀ of the hypothesis should be accepted and H₁ will be rejected.

For a firm to be included in the study, its stock has to be listed in the Bursa Malaysia. This is important because it ensures that the stock is traded frequently enough that market model parameters could be estimated. In addition, for the event to be included in the sample, this unethical conduct must be reported in the media as well as in the Securities Commission databases from 1999-2005 periods. Unethical conducts which is not reported in the Securities Commission's website will be excluded from the study. In order to determine the event dates correctly and to insulate announcements from other major corporate events around the same period, the corporate history, contained in the annual report obtained from Bursa Malaysia will be reviewed. Firms with concurrent major corporate events such as takeover bids, leveraged buyouts, or other sell-off and divesting activities for one month prior to and after the announcement date ($t = 0$) will not be included in the final sample.

Subsequently, the firms named in these announcements will then be checked for data availability. The monthly stocks price for each sample will be gathered for which these documents existed. The monthly stock prices will be gathered for the year prior to the announcement of the crime. This was to ensure that the firm governance conditions were those that coexisted with the crime. If a company committed a separate crime twice in the time window, they and their match were entered twice, once for each year (Schnatterly, 2003). Following this principle,

the final sample consists 8 occurrences of crime from 7 firms. This is because one of the firms has committed two crimes in the time window during the period under study. Table 1 depicts the filtering process in obtaining the final sample.

Table 1: Generation of the Crime-Firm Sample

Filter	Number Remaining
First Search	45 announcements of separate crimes, 36 companies
Corporate crime in Malaysia, public company	24 announcements of separate crimes, 21 companies
Data availability and reasonable match	8 announcements of separate crimes, 7 companies

After identifying the sample of firms needed in the study, the work of Rao (1997) will be used and put to test in this study. To measure the effect of corporate crime on firms' share prices, the holding period returns (*HPRs*) will be calculated on a monthly basis, for periods both before and after the announcement of corporate crime.

$$r_{j,t} = \hat{\alpha}_j + \hat{\beta}_j r_{m,t} + e_t \quad (1)$$

where $r_{j,t}$ = estimate of r for stock j , $\hat{\alpha}_j$ = estimate of alpha, $\hat{\beta}_j$ = estimate of beta for stock j , $r_{m,t}$ = *HPR* for market index for period t and e_t = residual error in period t .

The announcement of corporate crime is defined to occur in month 0 ($t = 0$), then $\hat{\alpha}_j$ and $\hat{\beta}_j$ are calculated using Equation 1. After that, these could be used to estimate *HPRs* for 12 months immediately prior to the announcement of corporate crime ($t = -12$ to -1) and the seven months ($t = 0$ to 6) after the announcement of corporate crime, including the month the event occurred. The *HPR* for each of these 19 months is estimated as shown in Equation 2 below:

$$\hat{r}_{j,t} = \hat{\alpha}_j + \hat{\beta}_j r_{m,t} \quad (2)$$

where $\hat{r}_{j,t}$ = estimate of *HPR* for stock *j* in period *t*, $\hat{\alpha}_j$ = estimate of stock *j*'s alpha, $\hat{\beta}_j$ = estimate of stock *j*'s beta and $r_{m,t}$ = actual *HPR* for market index for period *t*. The error or residual term, $e_{j,t}$, can be calculated for each period as in Equation 3.

$$e_{j,t} = r_{j,t} - \hat{r}_{j,t} \quad (3)$$

The residual is a measure of the abnormal performance of stock, also known as abnormal return ($AR_{j,t}$). If $e_{j,t}$ or $AR_{j,t}$ is less than zero, then the actual *HPR* is less than the estimated return. This suggests that after removing the influences of the market, stock *j*'s price decreased more than expected. An average residual for each month is calculated using all of the stocks in the sample. The average residual is the average deviation of returns from their normal relationships with the market. For example, if *n* stocks are included in the announcement of corporate crime so that the average residual for month $t = 6$ can be calculated as in Equation 4.

$$\bar{e}_{t=6} = \frac{\left[\sum_{j=1}^n e_{j,t=6} \right]}{n} \quad (4)$$

The above equation is then used to compute an average residual for each of the 19 months ($t = -12$ to 6), also known as Average Abnormal Return (AAR_t). A *t*-test is then used to determine the level of significance of abnormal returns for a given sample. The test uses the estimated standard error of the returns computed for the estimation period.

$$t = \frac{AAR_t}{\hat{s}(AAR_t)} \quad (5)$$

where $\hat{s}(AAR_t)$ is the estimated standard error of abnormal returns during the estimation period. This test statistic follows a Student *t* at $T - 1$ degrees of freedom. In order to test for the persistence of the impact of the announcement during the period t to $t + n$, the abnormal returns must be cumulated. The cumulated abnormal return in a period from period t to $t + n$ is given by:

$$CAAR_t^{t+n} = \sum_t^{t+n} AAR_t \quad (6)$$

The t -test is then defined by Equation 7 as below:

$$t = CAAR_t^{t+n} / \hat{s}(CAAR_t^{t+n}) \quad (7)$$

in which,

$$\hat{s}(CAAR_t^{t+n}) = n^{1/2} \times \hat{s}(AAR_t) \quad (8)$$

Finally, an analysis of the cumulated average abnormal returns for the months prior to and after the event is used to analyze the pattern and speed of the price adjustments to the event. The expected values of AAR and $CAAR$ are zero in the absence of abnormal performance.

4. RESULT DISCUSSIONS

After going through the filtering process, the final sample for this study comprises only 8 announcements of separate crime from 7 companies. The companies with reported corporate crime and the announcement date are shown in Table 2. Table 3 presents the results for the pattern of monthly average abnormal returns ($AARs$) for the 8 announcements of separate corporate crimes for the time intervals 12 months before and 6 months after the announcement date ($t = 0$).

Table 2: Companies Charged for Corporate Crime by Industry, Listing Board and Announcement Date of Corporate Crime

No.	Company Name	Industry	Listing Board	Announcement Date
1	Pilecon Engineering Berhad	Construction	Main	08/02/2001
2	Chase Perdana Berhad	Construction	Second	16/03/2001
3	Ganad Corporation Berhad	Trading/Services	Second	15/05/2001
4	Idris Hydraulic (M) Berhad	Finance	Main	28/06/2002
5	Kiara Emas Asia Industries Berhad	Industrial Products	Second	13/08/2004 16/09/2004
6	Pancaran Ikrab Berhad	Construction	Second	05/05/2005
7	Fountain View Development	Properties	Main	27/06/2005

The first column shows the time intervals in term of trading months in Bursa Malaysia relative to the announcement date. The second column

presents monthly *AARs* for every month within the time intervals for the 8 announcements of separate crimes. Meanwhile, the third column shows cumulative average abnormal performance returns (*CAARs*). Lastly, the fourth column contains *t*-statistics for the monthly *AARs* for 8 announcements of separate crime in this study.

Table 3: Monthly *AARs* and *CAARs* 12 Months Prior to and 6 Months After the Corporate Crime Announcement Date (Month 0)

Month Relative to Announcement Date	<i>AARs</i> (%)	<i>CAARs</i> (%)	<i>t</i> -value
-12	2.4341	2.4341	0.6162
-11	2.6334	5.0676	1.0961
-10	0.7573	5.8248	15.2366*
-9	-9.0294	-3.2046	-0.0590
-8	-2.2441	-5.4487	-1.6230
-7	10.0184	4.5697	0.0683
-6	-3.2471	1.3226	0.1882
-5	0.8263	2.1489	4.7213*
-4	-4.5796	-2.4307	-0.1739
-3	-3.8968	-6.3275	-0.6250
-2	-13.6228	-19.9503	-0.1613
-1	-7.1213	-27.0715	-0.8007
0	4.4024	-22.6691	-1.7545
1	3.1578	-19.5114	-2.9351*
2	1.9154	-17.5960	-7.1946*
3	11.6186	-5.9774	-0.0664
4	3.9183	-2.0591	-0.2012
5	4.0957	2.0367	0.1821
6	-2.0367	0.0000	0.0000

Note: Asterisk (*) indicates significant at 5% level.

The finding of this study indicates that on the announcement date (when $t = 0$), the *AARs* is 4.4%, while the *AARs* for the first month after the announcement of corporate crime has decreased to 3.16% and subsequently to 1.92% in the second month. Both the *AARs* values are statistically significant at 5% level. This indicates that shareholders do react to the announcement of corporate crime, as they expect Securities Commission might suspend the company charged for corporate crime from trading in national exchange in a short while. Suspension of a company would affect the reputation as well as the equity value of the

affected company. As a result, shareholders would react quickly after the announcement of corporate crime and sell off the share before any further loss incurs.

Furthermore, the *CAARs* for interval four months prior to and after the announcement date are all in negative values. A drastic decrease in *CAARs* from -19.95% (two months prior to announcement date) to -27.07% (one month prior to the announcement date) may indicate rumors or news regarding the corporate crime has leaked to the market. This is because before a company is charged by Securities Commission, query will be held by Bursa Malaysia Securities Berhad or Securities Commission. Consequently, some of the impatient stockholders will remove their investment from the affected stock. In sum, we construe with Rao's finding that the market is not reacting efficiently to the announcement of corporate crime.

5. CONCLUSION

Issue regarding corporate crime is getting more prominent among the public, especially investors, investment managers and also regulators. Corporate crime is a serious crime that related to the ethical behavior, which should not be taken lightly. Corporate crime not only has deep impact on the reputation of the company affected, but also causes great financial loss and loss of investors' confidence. By applying the event-study methodology proposed by Rao (1997), the performance for the sample was a decreasing positive *AAR* from 3.16% for the first month after the announcement date decreased to 1.92% for the second month after the announcement date. This finding indicates that market is informationally inefficient towards the announcement effect for the corporate crime. Before any announcement on corporate crime is made, Securities Commission usually will conduct query to the suspected company. As a result, some investors might have sold out their shares once they know about the news from press release. Therefore, we posit that the action taken by Securities Commission provide a signal to investors to take up further decision on their stocks.

Nevertheless, one shall take note that the samples used in this study were taken from certain and not all sectors or industries in Malaysia. The industries covered in this study are mainly construction, trading and

services, finance, industrial products and properties. As such, the findings will not represent the overall sectors of business entities in this country. Furthermore, inconsistency in terms of method used in detecting fraud due to different levels of awareness and sensitivity regarding corporate crime deferred between companies. In this study, we excluded the privately held companies as these companies are not listed in Bursa Malaysia. This has limit the scope or the size of our study as there are cases on corporate crime reported on these companies as well. Furthermore, using charge as an indicator of criminal activity could have led to the false recognition of perpetrators especially when the person charged in fact has not committed a crime, or found not guilty. To find out more evidence on corporate crime activities, a face-to-face interview with the top management of the companies would be an ideal approach, however, we have not found this to be permissible.

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