



Impression Management in Financial Reports during An Economic Recovery Period

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Abstract

Impression Management (IM) occurs when management selects the information to display in annual reports and presents that information in a manner that is intended to distort readers' perceptions of achievements. The Malaysian economy had undergone an economic crisis in the years 1997 to 1998 followed by a recovery period during in the year 1999. It is predicted that firms would have more incentive to engage in IM during a recovery period. As such, this study examines IM by Malaysian firms during an economic recovery period.. This study employs the graph discrepancy index (GDI) as it is considered the most reliable by prior research as a measure of IM. Two proxies of IM are used viz. GDI of the sales graph and GDI of the EPS graph. In examining the practice of IM during an economic downturn, we also investigate the influence of auditor reputation, size of the company and industry sector which have been shown in the literature to affect IM. In comparing differences between companies, the results do show significance. Cross-sectional variation in IM practices of firms reveal that only auditor reputation shows a significant negative association. This pilot study also found that the GDI of the sales graph is a better proxy to measure IM.

Keywords: Impression management; Financial reports; Economic crisis; Economic recovery period; Graph discrepancy index

1. Introduction

Impression management (IM) is a strand of the financial disclosure literature that examines management's attempt to manage the interpretation of financial reports. It occurs when management selects the information to display and presents that information in a manner that is intended to distort readers' perceptions of corporate achievements (Gibbins *et al.*, 1990; Neu, 1991; Graves *et al.*, 1996; Mather *et al.*, 2000). Management's incentives to manage interpretations of financial reports are manifold: e.g. in prospectuses during an Initial Public Offering (Mather *et al.*, 2000), during CEO changes, (Godfrey *et al.*, 2003), to increase compensation (Revsine, 1991) to earn bonus (Healy, 1985; Gaver, Gaver and Austin, 1995), to prevent debt violations (Beneish and Press, 1993; Sweeney, 1994; DeFond and Jiambalvo, 1994), and to avoid political visibility (Jones, 1991; Han and Wang, 1998). Thus IM is usually triggered during an event (Gibbins *et al.*, 1990). Although IM has been investigated in different contexts and settings, no study has been conducted during an economic recovery period. Hence this paper specifically examines IM by Malaysian firms during an

event that is an economic recovery period². Three different economic situations are identified (Zaleha *et al.*, 2005), viz: rapid economic increase (between 1995 to 1996), economic crisis (between 1997 to 1998)³ and recovering economic period (1999). The nascent literature in IM in other countries and the dearth of such literature in Malaysia has prompted the authors to conduct this pilot study in Malaysia on IM and economic climate. Thus, this adds to the knowledge of literature on IM.

In examining the practice of IM during an economic recovery period, we also investigate the influence of other variables, which have been shown in the literature to affect IM. These are: auditor reputation, size of the company, and industry sector e.g. the construction sector faced the worst growth rate compared to other industries due to the 1997 economic crisis (Bank Negara Report, 1999).

2. Problem Statement

² Rosenberger (2002, p. v), states that Asia's economic roller coaster shows no signs of stopping. The past five years have seen an economic crisis in 1997, recession in 1998, a bounce-back in 1999/2000 and a downturn and recession in 2001.

³ Malaysian public listed companies' combined value shrank by a mind boggling 53% to RM375.8 billion at end-December 1997. (Investors Digest, p. 8, January 1998)

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During an economic recovery period it is expected that managers will engage in IM to manipulate and enhance the message conveyed to users of financial reports. Auditor reputation, size of company and the industry sector will have an effect on IM practices.

3. Objectives of Study

The overriding objective of the study is to examine the relationship between IM and economic recovery period. The other sub-objectives are:

1. To determine the relationship between IM and auditor reputation (Big 4 and non-Big 4) during an economic recovery period.
2. To determine the relationship between IM and size of the company during an economic recovery period.
3. To determine the relationship between IM and industry sector during an economic recovery period.

4. Theory, Literature Review and Hypotheses Development

4.1 Economic Crisis

From early 1997, the Malaysian economy became very vulnerable as market confidence declined. This led to outflows of large portfolios, and equity and property value also declined substantially. Corporate incomes and cash flows also declined, leaving some corporations unable to service their debt. The Malaysian authorities responded by hiking interest rates and tightening fiscal policy in order to restore market confidence. However, it did not have the desired effect and in 1998, the stock market had fallen to its lowest level in recent history. During the last quarter of 1998, the Malaysian authorities launched a policy package designed to insulate monetary policy from external volatility. The authorities also pursued fundamental reforms in the financial and corporate sectors. These endeavours helped in Malaysia's recovery in 1999-2000. (Meesook et al, 2001). During an economic recovery period, the companies' financial performance is most likely to be adversely affected as it is still recovering from the impact of the economic crisis. The weak performance after a crisis is due to the aggregate shocks in terms of declining domestic and external demand, withdrawal of short-term capital flows, devaluation of currencies, an increase in domestic interest rates and also prior fundamental weaknesses (Claessens et al, 2000). The recovery will be delayed by the lack of confidence in the currency and the financial system. Capital flight in search of safer havens would exacerbate the difficulties, causing the currency to spiral downward and interest rates to soar upwards (IUJ Research Institute Working Paper, Asia Pacific Series No.3). According to an article on the period of vulnerability in Malaysia (Asiamoney, 1997), it is stated that the Malaysian

economy is seen as entering a period of consolidation in 1998 and 1999, which will prove a difficult environment for equity investors.

4.1 Impression Management (IM)

The organizational theory (Ashforth & Gibbs,1990; Liskey,1968; Zald ,1978) has focused on the perception that an organisation will be rewarded for having a legitimate reputation. Central to the legitimacy theory is the concept of a social contract, implying that a company's survival is dependent on the extent that the company operates "within the bounds and norms of the society (Brown and Deegan,1998, p. 22). Pfeffer & Salancik,1978 cited by Elsbach and Sutton, 1992, assert that legitimacy is conferred when stakeholders affected by organisational outcomes endorse and support the organisation's goals and activities. Dissatisfaction amongst the stakeholders may nullify the legitimacy of the organization and consequently lead to a reduction in the quantity or quality of their participation in the organization. To avoid this negative perception amongst stakeholders, companies may be forced into implementing impression management strategies in their financial reporting to gain the confidence of the users of the financial reports. Elsbach and Sutton (1992) explain how institutional theorists maintain legitimacy by adopting designs that disguises controversial practices. Furthermore, Schlenker (1980) states how impression management tactics are used to achieve legitimacy of organizations. Meyer and Rowan, 1977 cited by Elsbach and Sutton 1992; p700, propose

"by adopting visible structures that conform to social norms and by decoupling those structures from less acceptable core activities or goals, organizations can enhance the legitimacy conferred by powerful actors, even when their core practices and goals conflict with those desired by such actors."

Elsbach and Sutton (1992) emphasize on the blending of institutional and impression management perspectives to have a greater understanding on how organizations acquire and protect legitimacy.

According to the agency theory, it is assumed that under conditions of conflicts of interest and information asymmetries between agents and principals, agents act in a manner that favour their interests rather than the principal's interest. Conflicts of interest, information asymmetries, and concealment by corporate officers can arise when negative organisational outcomes occur (Abrahamson and Park, 1994). Thus managers, acting as agents, are motivated to act in their own self-interest, as for example compensation packages are generally linked to

company performance (Revsine, 2001). Thus during an economic recovery period it is expected that managers will be similarly motivated to engage in more IM to accentuate the healthy status of their organization after having gone through a crisis period.

A study by Subramanian et al (1993) revealed that the annual reports of good performers were easier to read than those of poor performers, in that the good performers used strong writing in their annual reports and did not use significantly more jargon or modifiers as compared to the poor performers. Sutton and Callahan's, 1987 study has identified strategies and revealed examples of concealments by corporate officers to safeguard images after a crisis period. A study by Starbuck, Greve and Hedberg (1978) noted that propaganda campaigns were launched by managers of organizations in crisis, to deny the existence of crisis.

The traditional, statutory formal communication vehicle between a publicly listed corporation and its interested constituencies is the corporate annual report, which provide the means by which management can report corporate achievements, and can facilitate/mould readers' expectations about the reporting corporation. For a corporation with poor or indifferent performance, there is opportunity to create an impression at variance with an overall reading of the report (Stanton et. al. 2004, p 57) Furthermore strong economic and social incentives exist for annual report preparers to display self serving behaviour, leading management to make discretionary financial reporting choices, concealing poor performance. In the absence of definitive regulation, this discretion can result in IM at best and information manipulation at worst (Beattie and Jones, 2000).

The impression management literature relating to corporate annual reports discusses on the accounting numbers management and presentation management concerned with the manipulation of accounting narratives or of presentational formats, such as graphs or pictures. (Beattie and Jones, 2000). The use of financial graphs is now widespread with graphs being positioned in favourable sections of the annual reports (Chevalier and Emile Roy, 1993). Numerous studies conducted on IM, using graphs in the UK, US and Australia.(Steinbart,1989; Beattie and Jones, 1992, 1997,1999,2000; Mather et al., 1996, Frownfelter and Fulkerson, 1998, 2001) reveal the presence of IM and company performance. Therefore this study attempts to identify if there is a relationship between company performance during a post economic crisis period and IM, using graphs, in a Malaysian context.

This motivates the first hypothesis, expressed in alternative form as follows:

H₁: There is more impression management during an economic recovery period.

4.2 Auditors

The main responsibility of an auditor is to attest the financial statements presented in corporate annual reports. Auditors are not required to corroborate or test additional financial information reported in corporate annual reports, such as data in ratios and graphs. (Burgess, 2002; Taylor and Anderson, 1986).

Malaysian Approved Standards on Auditing AI 720 'Other Information in Documents Containing Audited Financial Statements', states that an auditor must read the other information to identify material inconsistencies with the audited financial statements. Statement on Auditing Standards, No.8 also states that the auditor must read the other information and consider whether such information, or the manner of presentation, is materially inconsistent with information appearing in the financial statements (Taylor and Anderson, 1986).The absence of explicit guidelines on the auditors' responsibility on other information, that is graphical presentation in annual reports, encourages the use of such graphical presentation to carry out IM. Nevertheless auditors can assist their clients by pointing out the existence of graphical alterations in financial statements and thus help the companies avoid potential "earnings management" problems (Burgess, 2002)

Gibbins et al. (1990) state that professional advisers also may provide avenues to conform to industry norms and reap opportunities from disclosures.

Previous research by Becker, DeFond, Jiambalvo, and Subramanyam (1998), and Francis, Maydew and Sparks (1999) also provide evidence that Big 5 (now Big 4) auditors are more effective in constraining earnings management⁴ than their non Big 5 counterparts. Specifically, Becker et al (1998) report that earnings management is significantly lower for firms employing Big 5 (now Big 4) auditors.

Bachar (1989) states that high quality auditors exert more audit effort and are paid higher fees than low quality auditors. Thus it can be presumed that the Big 5 (now Big 4) auditors would be exercising more effort in identifying any discrepancies in the other information of the financial statements.

Hence the second hypothesis, expressed in alternative form is as follows:

⁴ In this study, the term impression management is used interchangeably with earnings management. Whilst earnings management is usually captured by the Modified Jones (1991) model, impression management is considered as an ancillary branch of the earnings management literature. Impression management is generally captured using the Graph Discrepancy Index mooted by Tufte (1983).

H₂: During an economic recovery period, there is a negative relation between impression management and auditor reputation.

4.3 Firm Size

Firm size is an important variable as larger firms have more political visibility and therefore tend to have more social disclosures (Belkaoui and Karpik, 1989). Larger firms with larger analysts following may face more pressure to cater for the analysts' expectations (Barton and Simko, 2002). Studies have also shown that larger firms tend to engage in more earnings management than smaller firms (Rangan, 1998). Gibbons *et al* (1990) states that size is one of the internal factors that influences corporate disclosures via corporate annual report which is a significant vehicle for image construction of a corporation (Lee, 1994). A study by Christie (1990) reports that firm size has a negative correlation with discretionary accounting choices of firms. These findings are supported by Becker *et al.* (1998) and DeFond and Park (1997). A study by Mather *et al.*' (1996) revealed that only smaller companies engaged in selectivity in presentation of graphs in annual reports of Australian companies. Lee and Choy (2002) identify company size to play a primary role in managing earnings. Gray *et al* (1995) have noted on a number of empirical studies that show strong association between disclosure and firm size. Furthermore, larger firms are usually audited by bigger audit firms and as discussed in section 4.3 bigger audit firms are more effective in constraining earnings management.⁵ The different views and results focus on the relationship between size and IM.

As such, this motivates the third hypothesis, expressed in null form as follows:

H₃: During an economic recovery period, there is no relation between impression management and the size of the company

4.4 Construction Industry

The construction sector faced the worst growth rate compared to other industries during the 1997 economic crisis (Bank Negara Report, 1999). The construction industry moves in tandem with the economic growth, whereby the growth in the economy will lead to a boost in the construction sector (Economic News Summary, Hong Leong Bank). Among the 3 major recessions in 1975, 1987, and 1998, the latter recession has been recorded as the worst. The year-to-year change in the construction industry indicator showed

that in 1996, it had a positive 20.57% growth, whereas in 1997 and 1998, it showed a negative -3.93% and -69.84% growth respectively.

The Malaysian construction industry fell for two straight years (-23.0% in 1998 and -5.6% in 1999). Due to this decline in the construction industry, we expect that industries in the construction sector will engage in more IM compared to other industries to conceal their discouraging performance. This motivates the fourth hypothesis, expressed in alternative form as follows:

H₄: During an economic recovery period, there is a positive relation between impression management and the construction industry sector.

5. Research Model

To answer the research questions above, the research plan is to examine the cross-sectional differences in impression management (IM) using an econometric analysis of the various determinants identified from the literature. Ordinary Least Squares (OLS) regressions, which specify the relation between two or more observable variables, are used for the purposes of the study. In the equation below, the dependent variable is IM. Diagnostic tests to check for normality and multicollinearity are done. The various measurements of the dependent and independent variables are summarised in Table 1. This table also displays the predicted sign of the relationship between the dependent and the explanatory variables.

To test whether there are cross-sectional differences in impression management (IM) during an economic recovery period, we investigate the influence of other explanatory variables such as size (SIZE), auditor's reputation (AUREP), and construction sector industry (IND), which have been found in the literature to be associated with IM.

Many research studies have shown that graphical presentations can be used for IM. Graphs being unconstrained by statutory regulation, allow preparers to judiciously select and manipulate the financial message conveyed (Beattie and Jones, 1999, p 49). Graphical presentations are effective because users rely heavily on immediate, at-a-glance perceptions for their understanding and even the most sophisticated reader can be misled by graphics (Gilles and Emile, 1993, p 44). It is also noted that graphs exploit basic human perceptual and cognitive abilities (Beattie and Jones, 1993) and improve effectiveness because the communication process is more direct and immediate (Beattie and Jones, 2000). Therefore it is seen that it is possible to impress upon the users of the financial reports by conveying the message through manipulation of the graphical presentation in the

⁵ Godfrey, Mather and Ramsay (2003, p.95), states "The impression created by graphical representation of the underlying performance in the annual report may be subject to 'impression management' as either a complement to, or a substitute for earnings management.

annual reports. Distortion can be viewed as a misrepresentation or alteration of certain events. Selectivity, measurement distortion, orientation distortion and presentational enhancement may each result in biased or ineffective communication of financial information (Beattie and Jones, 1999, p 50) in annual reports. The performance of companies can be misrepresented by portraying a favourable graphical picture which captures the attention of readers immediately as compared to the actual numerical financial data in the reports. For this preliminary study IM is defined in terms of graphical presentation. IM is operationalised by looking into the measurement distortion aspect of graphical presentation as the existence of measurement distortion is considered to be of prime significance (Beattie and Jones, 1992). Distortion in graphs takes place when the portrayed magnitude of change in graphs does not match the numerical magnitude of change (Steinbart, 1989). This can be measured using Tufte's (1983) "lie factor", adapted by Taylor and Anderson (1986) in the accounting literature as the Graph Discrepancy Index (GDI)⁶. Several studies have used the GDI successfully. Therefore the Tufte's GDI is also considered for this preliminary study.⁷

The GDI is estimated for Earnings Per Share (EPS), Dividends Per Share (DPS), and Sales (Sales). These three variables are selected as the performance indicators. The profit graph is not included for this study because there are many variants in the definition of profit and there is no standardisation in the profit measure graphed. A GDI of 10% and above is considered to be indicative of IM⁸

The multiple regression equation for IM takes the following form:

$$IM_{i,t} = a_1 + a_2 AUDREP_{i,t} + a_3 SIZE_{i,t} + a_4 IND_{i,t} + \varepsilon_{i,t}$$

6. Sampling

The Investors Digest of Bursa Malaysia is used to identify firms based on market capitalization. Top 100 Main Board and top 100 Second Board companies by market capitalization forms the initial sample. This sample is further reduced to 135 companies as some

⁶ Steinbart (1989, p.61) states that a "perfectly consistent graph would have a discrepancy index of zero. Positive (negative) values of the discrepancy index reflect the percentage by which the graph exaggerates (smooths) the trend in the data.

⁷ Further studies will be done using the Relative Graph Discrepancy index (RGD, Mather *et al.*, 2005) from the beneficial suggestion of the anonymous reviewer. This will be done in a separate research study.

⁸ Beattie and Jones (2002, pp. 561, 562, 559) strongly suggest that a 10% threshold is appropriate when assessing the practical significance of observed levels of measurement distortion. Their study also shows that users' perceptions of company performance are altered at levels of measurement distortion of approximately 10 per cent.

companies did not furnish the required information. Computing this index requires both graphical and numerical data. Thus to be included in the sample, firms must have at a minimum the Earnings per Share and Turnover graph in their corporate annual report for a period of five (5) years. Additionally, the corporate annual report should also contain the numerical data of the graphs for five (5) years). We also collected information on auditor, total sales and the industry sector. The above selection criteria resulted in a sample of 135 firms.

The year 1999 is used as the base year as the Malaysian economy entered a recovery phase in the second quarter of 1999 (7th Asian Construction Summary). It is predicted that there is more incentive to engage in IM in the year 1999 as managers wish to portray a healthy appearance of profitability to woo investors and to improve confidence of stakeholders. This is to allay their fears and show that the company has entered the recovery phase.

7. Preliminary Findings and Discussion

The main variable in this study is IM which is captured using three proxies; IM (EPS), IM (Sales), and IM (DPS) as shown in Table 2. The highest amount of IM is captured by the IM (Sales) proxy showing a positive GDI of 1136 and a negative GDI of 452, followed by IM (EPS) showing +465.84 and -159.75 and IM (DPS) showing a +418.97 and a -100.00 GDIs. The mean negative and positive GDIs are -45.78 and +59.39 for IM(Sales), -34.43 and +44.4 for IM(EPS) and -15.17 and 96.25 for IM (DPS) respectively. This shows that IM is prevalent during the economic recovery period, as the GDI index is above 10% (Beattie and Jones, 2002). Table 2 also shows the size of the sample firms are between RM4,840 and RM6,855,300 suggesting a combination of small and large firms.

7.1 Types of Graphs by Industry Sector

We then analysed the types of graphs (bar, line, or pie) selected by type of industry. The results are shown in Table 3. Three types of graphs (Sales, EPS and DPS) are analysed. For all sectors in the sample, bar graph is the most preferred method for graphing the sales graph. This is also evident in the EPS graph and DPS graph. A small percentage of firms in industry sector 10 (audio equipment, speaker systems and plastic moulding) have pie graphs.

7.2 Types of Graphs by Auditor:

Firms that are audited by Big 4 (Big Five) firms versus non Big 4 (Non Big Five) are fairly evenly distributed in terms of using bar graphs for sales (79%, 85%) and EPS (64%, 65%). However more firms (15%) that are audited by Big 4 (Big Five) firms versus non Big 4 (Non Big Five) have shown the DPS by using

bar graphs. In contrast, only 5% of non Big 4 (non Big Five) firms have chosen to graph the DPS variable. The results are shown in Table 4.

7.3 Types of Graphs by Size

The sales of sample firms is used as a proxy for size. The sample firms are partitioned into small firms (sales less than RM500,000), medium size firms (more than or equal to RM500,000 and less than RM1,000,000), and large firms (more than RM1,000,000). Irrespective of size, majority of firms chose to depict Sales, and EPS via bar graph. Generally most firms did not choose to graph the DPS variable. The results are shown in Table 5.

Bar graphs are preferred probably because it is easier to distort graphical presentation via the bar graphs. As is noted by Beattie and Jones (1992, p 293), the laws from sensory psycho-physics imply that the absence of common, aligned scales, with grid lines, will impair the judgement of magnitudes, and that graphs requiring judgements of length can be expected to be more accurately perceived than those requiring judgements of area, volume, angles or slopes.

7.4 IM between Companies

Firms were ranked by extent of IM and the results showed that 48% of the firms had a GDI of more than plus or minus 10% for IM (Sales), and about 33% of the firms had more than plus or minus 10% for IM (EPS), which indicates the presence of IM. To test whether there are significant differences between companies in the period of the study a 2-tailed significance test was employed for IM using both sales and EPS. Further analysis using IM(DPS) variable is not carried out as the sample size is too small. The results depicted in Table 6 show that there are significant differences between companies for the period of the study. Further analysis is conducted in Sections 7.5 – 7.7 to investigate whether cross-sectional variation in IM could be explained by size, auditor and the construction industry sector.

7.5 Cross-sectional Variation in IM Practices of Firms

Firms that are audited by Big Four (Big Five) auditors are predicted to have lower IM (Sales) as compared to firms audited by non Big Four (Big Five) firms. The results as shown in Table 7 are significant (p value < 0.05) and negatively associated with IM in the period of study. This provides support for H₂ in line with Becker et al. (1998), Francis et al (1999), Bachar (1989). Industry sector and size of firm do not show any significant relationship. The results for IM (EPS) and the independent variables auditor reputation, industry sector and size of firms do not show any significant relationship. Therefore hypotheses H₃ and H₄ are not supported.

7.6 Sample Partitioned by Presence of IM:

We further partition the sample into firms with no IM (GDI (Sales) less than plus or minus 10%) and firms with IM (GDI (Sales) more than plus or minus 10%). Further analysis of sample partitioned by presence of IM(EPS) and by size is not performed as the sample size is too small. Overall, we find that for firms with IM, auditor reputation is negatively related to IM (p value 0.05) as shown in Table 8. This again provides support for H₂. Therefore, firms, which are audited by high reputation auditor, have lower IM compared to firms that are audited by low reputation auditor.

7.7 Sample Partitioned by Size of Firms:

In order to determine whether firm size has an impact on IM practices of firms, we partition the sample into small firms (sales less than RM500,000) and larger firms (sales more than or equal to RM500,000). H₂ predicts a negative relationship between AUDREP and IM (Sales). Our results as shown in Table 9 provide support for this hypothesis, especially for small firms (p value 0.05).

8. Conclusion and Recommendations

This study is the first to examine IM in the context of economic climate. Although IM can be measured by examining different aspects of graph distortion (CICA, 1993), the GDI is considered most reliable by prior academic accounting research (Godfrey et al, 2003). Therefore this study employs the GDI as a measure for IM. Two proxies are used, *viz* the GDI of the sales graph (IM Sales) and the GDI of the EPS graph (IM EPS).

Bar graph is the most preferred method for graphing all the variables (Sales, EPS, and DPS) in this study. Only firms audited by Big 4 (Big 5) graphed DPS. Irrespective of size, auditor reputation and industry sector, most Malaysian firms prefer to use bar graph as compared to pie or line graph. This may be because as mentioned earlier, it is easier to distort graphical presentation via the bar graphs, because graphs requiring judgements of length can be expected to be more accurately perceived than those requiring judgements of area, volume, angles or slopes.

The results show that there are significant differences in IM practices between companies for the period of the study. Cross-sectional variation in IM practices of firms reveals that only auditor reputation helps to curb the extent of IM. Generally the other variables size and industry are not significant. In this pilot study, firms were ranked as practicing IM if the GDI index was more than 10%. Although the GDI has been used extensively to measure graph distortion in prior studies, it has been critiqued by some writers. Mather *et al* (2005) have suggested the

use of the Relative Graph Discrepancy index (RGD), which they say overcomes the limitations of the GDI. Further research can be done using this index and comparing the results with the GDI index. This comparison may provide further insights in the use of an appropriate measure for distortion.

This study used the Sales, EPS and DPS as the key variables to measure IM. Overall, for this preliminary study the sales appears to be a better proxy to capture IM. Users of Corporate Annual Reports pay more attention to the EPS and DPS graphs and as such firms would like to show a consistent pattern in these graphs. Therefore it can be expected that there would not be high IM in these graphs. However future research could focus on other key variables, such as the variants of profit.

This cross-sectional study focuses on one year only, that is the year of economic recovery. It would be interesting to conduct a longitudinal study on the engagement of IM practices in pre, during and post economic crisis periods.

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Table 1. Notation and Measurement of Dependent and Independent Variables in the Impression Management Model

Dependent variable	Denoted by	Measured as	Predicted sign
<i>Impression Management</i>	IM	Tufte's (1983) Graph Discrepancy Index = $100 * ((a/b)-1)$, where a = % change depicted in graph calculated as height of last column minus height of first column divided by height of first column, and b = % change depicted in numerical data calculated as ringgit value of the base year minus the ringgit value in the first year in the annual report divided by the ringgit value in the first year. This is computed for EPS, Sales and DPS respectively	
Explanatory variables			
<i>Auditor's reputation</i>	AUREP	Firms that employ Big Four (Big Five) auditors take the value of 1, and zero otherwise	Negative
<i>Size of firm</i>	SIZE	Log of total sales of the firm	
<i>Industry</i>	IND	Dichotomous variable 1=for construction sector and zero otherwise.	Positive

Table 2. Descriptive Statistics for Sample Firms

IM is the measure of impression management using Tufte's (1983) graph discrepancy index = $100 * ((a/b)-1)$, where a = % change depicted in graph, and b = % change in data. IM (EPS) is the earnings per share graph discrepancy index, (IM) Sales is the sales graph discrepancy index, and IM (DPS) is the dividend per share graph discrepancy index. SIZE is total sales in (RM thousands) of the firm.

	N	Mean	Std. Dev.	Skewness	Kurtosis	Min	Max
IM (EPS) -ve GDI	43	-34.43	41.79	-1.318	0.906	-159.75	-16
IM (EPS) +veGDI	40	44.4	103.2	3.095	9.559	0	465.84
IM (Sales) -ve GDI	52	-45.78	93.304	-3.486	12.747	-452.00	0
IM (Sales) +ve GDI	49	59.39	177.605	5.181	29.558	0	1136
IM (DPS) -ve GDI	8	-15.17	34.51	-2.76	7.67	-100.00	-19
IM (DPS) +veGDI	9	96.25	157.64	1.60	1.21	0.66	418.97
SIZE	116	950.81	132.64	2.31	5.67	4.84	6855.30

Table 3. Distribution of Graphs by Industry

The sample firms consist of 7 industry codes, industry code 1 is food seasoning, industry code 2 is aluminium sheet and foil extrusions, industry code 3 is steel products, pipes, industry code 4 is corrugated cartons, industry code 10 is audio equipment, speaker systems, plastic moulding, industry code 15 is ceramic tiles, industry code 20 is electrical products, and industry code 25 is chemical adhesives, chemical sealants.

Sect	N	Sales graph				EPS graph								DPS graph											
		Bar		Line		Pie		N/A		Bar		Line		Pie		N/A		Bar		Line		Pie		N/A	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	16	14	88					2	12	9	56	1	6			6	38	3	19					13	81
2	31	24	77	3	10			4	13	19	61	3	10			9	29	3	10					28	90
3	15	12	80	1	7			2	13	12	80	1	7			2	13							15	100
4	30	20	67	2	7			8	27	15	50	3	10			12	40	3	10	1	3			26	87
10	17	11	64	2	12	1	6	3	18	5	29	2	12	1	6	9	53	2	12					15	88
15	1	1	100								1	100					1	100							
20	15	13	87	1	7			1	7	9	60	1	7			5	33	1	7					14	93
25	10	8	80					2	20	9	90					1	10	4	40					6	60

Table 4. Distribution of Graphs by Auditor

Firms that employ Big Four (Big Five/Six) auditors take the value of 1, and zero otherwise

Aud	N	Sales graph				EPS graph								DPS graph											
		Bar		Line		Pie		N/A		Bar		Line		Pie		N/A		Bar		Line		Pie		N/A	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	96	76	79	6	7			13	14	61	64	7	7	1	1	27	28	14	15	1	1			81	84
0	20	17	85	3	15					13	65	3	15			4	20	1	5					19	95

Table 5. Distribution of Graphs by Size

Size of firms is proxied by sales. Size is partitioned into small firms with sales of less than RM500,000, medium size firms with sales of more than or equal to RM500,000 and less than RM1,000,000 and large firms with sales of more than RM1,000,000.

Size RM (m)	N	Sales graph								EPS graph								DPS graph							
		Bar		Line		Pie		N/A		Bar		Line		Pie		N/A		Bar		Line		Pie		N/A	
<0.5	63	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
>0.5	16	52	82	7	11	1	2	3	5	40	63	8	13	1	1	14	22	4	6	1	2			58	92
<1		15	94	1	6					11	69	1	6			4	25	4	25					12	75
>1	46	35	76	2	4			9	20	25	55	2	4			19	41	8	17					38	83

Table 6. Impression Management between Companies

IM is the measure of impression management using Tufte’s (1983) graph discrepancy index = 100* ((a/b)-1), where a = % change depicted in graph, and b = % change in data. (IM) Sales is the sales graph discrepancy index. IM (EPS) is the earnings per share graph discrepancy index. Where the coefficient has a predicted sign, a one-tailed significance test is used; otherwise, a two-tailed test is used. * denotes the coefficient being significant at the 0.1 level, ** denotes the coefficient being significant at the 0.05 level, and *** denotes the coefficient being significant at the 0.01 level.

	N	Mean Diff.	Sig. (2- tailed)
IM (Sales) -ve GDI	28	-82.16***	0.001
IM (Sales) +ve GDI	24	117.10***	0.027
IM (EPS) -ve GDI	22	-63.60***	0.000
IM (EPS) +ve GDI	11	116.08***	0.019

Table 7. Cross-sectional Variation in IM Practices (proxy IM (Sales))

IM is the measure of impression management using Tufte’s (1983) graph discrepancy index = 100* ((a/b)-1), where a = % change depicted in graph, and b = % change in data. (IM) Sales is the sales graph discrepancy index. LnSales is the proxy for size of firms. AUREP take the value of 1 if the firm employs Big Four (Big Five) and zero otherwise. IND is a dichotomous variable, which takes the value of 1 for construction sector and zero otherwise. Where the coefficient has a predicted sign, a one-tailed significance test is used; otherwise, a two-tailed test is used. * denotes the coefficient being significant at the 0.1 level, ** denotes the coefficient being significant at the 0.05 level, and *** denotes the coefficient being significant at the 0.01 level.

$$IM(Sales)_{i,t} = a_1 + a_2 AUREP_{i,t} + a_3 SIZE_{i,t} + a_4 IND_{i,t} + \epsilon_{i,t}$$

Dependent variable: IM (Sales)	
Independent variables	
Constant	162.52 (0.614)
LnSales	-2.094 (-0.106)
AUREP	-154.98 (-2.118)**
IND	36.660 (0.362)
R ²	0.09
N	95

Table 8. Sample Partitioned by Presence of Impression Management (Sales)

IM is the measure of impression management using Tufte’s (1983) graph discrepancy index = $100 * ((a/b)-1)$, where a = % change depicted in graph, and b = % change in data. (IM) Sales is the sales graph discrepancy index. IM(Sales) is partitioned into firms with no IM (GDI (Sales) less than 10%) and firms with IM (GDI (Sales) more than 10%). Where the coefficient has a predicted sign, a one tailed significance test is used; otherwise, a two-tailed test is used. * denotes the coefficient being significant at the 0.1 level, ** denotes the coefficient being significant at the 0.05 level, and *** denotes the coefficient being significant at the 0.01 level. White’s (1980) t-statistics are stated in parentheses.

< than 10% GDI (Sales)					
N	Const	Size	Auditor	Sector	R ²
46	1.62 (0.23)	-0.06 (-0.12)	-0.31 (-0.19)	-1.82 (-0.97)	0.02
> than 10% GDI (Sales)					
49	417.95 (1.04)	-14.33 (-0.63)	-263.32 (-1.74)* *	17.34 (0.23)	0.16

Table 9. Impression Management (Sales) Partitioned by Size

IM is the measure of impression management using Tufte’s (1983) graph discrepancy index = $100 * ((a/b)-1)$, where a = % change depicted in graph, and b = % change in data. (IM) Sales is the sales graph discrepancy index. Size is partitioned into small firms (sales less than RM500,000, and large firms with sales equal to or more than RM500,000. Where the coefficient has a predicted sign, a one tailed significance test is used; otherwise, a two-tailed test is used. * denotes the coefficient being significant at the 0.1 level, ** denotes the coefficient being significant at the 0.05 level, and *** denotes the coefficient being significant at the 0.01 level. White’s (1980) t-statistics are stated in parentheses.

Small firms < RM500,000				
N	Constant	Auditor	Sector	R ²
60	231.23 (1.54)*	-248.51 (-1.66)* *	-10.28 (-0.22)	0.15
Large firms > RM500,000				
N	Constant	Auditor	Sector	R ²
36	12.58 (0.31)	-9.86 (-0.25)	51.37 (1.03)	0.06