Provision of NAS and Auditor Independence:
An Analysis using Informativeness of Earnings

WORKING PAPER SERIES
Working Paper no. 26
2005

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Abstract

Econometric analysis – using panel data methods – of data on securities traded on the Dhaka Stock Exchange, Bangladesh, over the period 1995-99 indicates that audit quality may not necessarily increase with auditor size. However, choice of a large auditor does seem to alleviate any negative impact of non-audit services on the confidence of investors. A lesson from this seems to be that companies requiring a relatively large amount of non-audit services from their auditor should find it worthwhile to hire a big audit firm albeit with a fee premium. Another interesting result is that companies declaring negative earnings do not appear to suffer any detriment to their share returns as the link between earnings and returns is significantly weakened when announced earnings are negative.

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Introduction

Funds raised through the share market are one of the main sources of investment in the private sector of a modern economy. This process is facilitated by share prices reflecting the underlying company earnings, and independent auditing of company finances plays a vital role in determining the informative quality of those earnings. Auditor independence may be compromised, at least in appearance, when an auditor provides both audit and (non-audit) management advisory services to the same company. Any real or even perceived impact of non-audit services on auditor independence is also a matter of concern to policy makers and market regulators. Regulators in developed countries recently issued new rules and regulations on auditor independence and, in particular, restricted auditors from supplying certain types of non-audit services to their clients, assuming that provision of such non-audit services were likely to jeopardise independence of an audit.

A commonly used method of assessing any damage done to auditor independence by the supply of non-audit services is to investigate the impact of the relative size of non-audit services on the link between company earnings and returns to company shares. If this link – known as an ERC or earnings response coefficient – is weakened by a larger share of non-audit services, i.e. earnings become less informative for share returns, then independence of auditors is deemed to have been impaired. Results obtained by this method so far are inconclusive. Some studies (e.g. Frankel *et al.* 2002; Dee *et al.* 2003; Sami and Zhang 2003; Gul and Tsui, 2003) find that ERCs are

lowered by a larger share of non-audit services, while other studies (e.g. Chung and Kallapur, 2003; Ruddock *et al*. 2003; Ashbaugh *et al*. 2003) find no such evidence.

Most of the available studies on provision of non-audit services and auditor independence are on capital markets in 'developed' countries. However, in countries such as Bangladesh where traditional governance mechanisms like an independent board of directors, effective regulatory authorities, independent audit committees etc. are virtually non-existent, it will be very useful to find out whether the association between stock returns and earnings is weaker for companies that receive a relatively large amount of non-audit services from their auditors.

A World Bank report issued in November 2002 stated that the oversight function of the Institute of Chartered Accountants of Bangladesh (ICAB), which is responsible for regulating the accountancy profession, is inadequate and ineffective. The report observed that ICAB essentially operates as a body protecting and promoting the interests of its members, and attempts very little as a regulatory body. ICAB has not yet taken any initiatives to revise its code of ethics, perhaps for lack of any firm evidence on matters that impair independence of auditors, but a survey, conducted by the ICAB in 2003, revealed that some chartered accountants enter into undisclosed competition amongst themselves to under-cut each other in order to secure auditing work. Such competition can lead to auditors sacrificing objectivity in their reporting to some extent, at least. Since there is no capital market evidence to date regarding the impact of non-audit services on perceived auditor independence in Bangladesh, a prime objective of this research is to fill this gap in knowledge. Additionally,

evidence generated by this work should contribute towards resolving the inconclusive results obtained so far on the effect of non-audit services on independence in auditing.

Hypotheses and methodology

The rate of return to company shares, typically defined as the ratio of capital gains and dividends received per share to the share price, may depend on several factors. For example, announcement of higher earnings per share by a company is always a good news to their shareholders, and hence companies like that can expect to see higher returns to their shares. Several studies including Basu (1977) reported such a relationship between returns and earnings/price ratios as also done recently by Gul and Tsui (2003). Since risk-averse investors require a higher return for undertaking higher risks, riskier securities (those with larger 'betas') with the same earnings/price ratio can be expected to have a lower demand and hence lower returns. Size of company operations may also be influential, as economies of scale may allow larger companies to enjoy higher returns. For example, larger companies tend to have a greater ability to finance investment projects from external sources.

The effect of earnings on returns – earnings response coefficient or ERC in short – can itself depend on many other variables. Companies declaring losses may be considered riskier owing to uncertainty of cash flows. Hayn (1995) hypothesized that because shareholders have a liquidation option, reported losses are likely to be perceived as temporary, hence weakening the link between earnings and returns in the case of negative earnings. Results presented by Hayn (1995) and by Gul and Tsui

(2003) show that an ERC is indeed lower when earnings are negative. Larger changes in earnings can also reduce an ERC owing to diminishing returns.

Large companies typically release more non-accounting information between the usual earnings reports than small companies, making the earnings announcements relatively more informative for small companies (Atiase, 1985; Godfrey et al., 2000). On the other hand, people may have more confidence in earnings announced by the larger companies. Thus, company size may affect an ERC in opposing directions. However, Gul and Tsui (2003) find that ERC is smaller for larger firms.

Whenever a business is financed – partly at least – by funds raised through the stock market, agency problems associated with separation of ownership and management exist. The two parties do not share the set of information, and the managers may get away with actions that serve their own interests at the expense of those of the shareholders, hence shrinking the size of the share market as prospective but skeptical share buyers stay away. This problem – known as moral hazard – can be alleviated a great deal by competent and independent auditing as argued by Jensen and Meckling (1976) and many others. An attempt to close the gap between the managerial and shareholder interests by basing remuneration of managers on company earnings creates a new moral hazard of managers using discretionary accruals to enable announcement of very good earnings. Independent auditing can help in abating this type of hazard as well (Ng and Stoeckenius, 1979).

Current or new shareholders can therefore rely on the announced earnings in making their investment decisions if those earnings were certified by an audit of good quality

(i.e. one done competently and independently). The most commonly used proxy for audit quality is a dummy variable for big and non-big audit firms. There is some empirical support for this association (Moizer, 1997). Companies making initial public offerings (IPOs) with financial statements audited by high profile brand-name auditors (i.e. big audit firms) are seen to suffer less from under-pricing. Also, a change from non-big to a big audit firm tends to be viewed more favourably than otherwise. If an audit report is deemed to be more reliable when conducted by a big well-known firm, then the effect of earnings on returns (or ERC) may be higher in the case of auditing by a big firm as investors may have greater faith in the associated earnings announcements. This view has some support in the existing literature (e.g. Teoh and Wong, 1993; Godfrey et al., 2000), but Feltham et al. (1991) found that audit reports from higher profile auditors had no greater marginal effect on current market value than audit reports from lower profile auditors.

The audit report itself can have an impact on an ERC, since announced earnings may be less credible when the audit report has not been satisfactory. Capital market implications of qualified audit opinions have been analysed extensively in the accounting literature. For example, Choi and Jeter (1992, p.230) argued that qualified opinion can affect the market expectations as earnings numbers generated by firms receiving such opinion may be viewed as noisier or less persistent (or both) than previously assumed. If so, the responsiveness of returns to earnings may be weakened in the case of companies receiving a qualified opinion. Choi and Jeter backed up their hypothesis by reporting negative price reaction to qualified audit opinion.

Other aspects of auditing may also be relevant. The relative size of non-audit (or management advisory) services obtained from an auditing firm can have a significant influence on an ERC. Auditor independence may be compromised, at least in appearance, by a larger share of non-audit fees to total fees, hence weakening the informativeness of earnings for share returns. Preservation of reputation, fear of litigation by aggrieved shareholders, or of penalty imposed by regulatory institutions, may be sufficient to ensure integrity of auditing firms in certifying company earnings regardless of the extent of their management advising, but in the absence of such discipline, auditors may themselves succumb to the moral hazard of not reporting accounting breaches of those clients receiving a lot of management advisory services. As a result, earnings may be less informative in the case of companies with a larger share of non-audit fees. Wines (1994) offered evidence in favour of this hypothesis. More recently, Li et al. (2003) didn't find any evidence for loss of auditor independence owing to provision of non-audit services, but concede that there is a potential for such a loss at least in appearance.

Since the threat of litigation against an auditor and regulatory penalties are practically absent in Bangladesh, auditors in this environment may lack the motivation to be independent, especially if the offer of any strong resistance against the client's wishes could result in the loss of that client. In practice, auditors in Bangladesh are initially selected by the management of a company, and the shareholders 'appoint' the auditor merely by putting a 'rubber stamp' on the management selection at their annual general meeting. In such a situation, the appointed auditor may find it in its interest to negotiate any accounting disputes with management, and may come to a decision in line with management wishes, even if it is not consistent with its own belief.

However, the dampening effect of non-audit services on an ERC may be alleviated if the auditing firm happens to be one of those, typically the big ones, putting a high value on their integrity and reputation (Gul and Tsui, 2003). On the other hand, the dampening effect may be accentuated for large companies if they have a greater ability to influence auditor behaviour. This would be consistent with Sami and Zhang's (2003) suggestion of an "economic bond between the firm and its auditor".

There are additional factors that may influence an ERC. Earnings may be less informative for more risky companies if investors perceive a weaker connection between declared earnings and riskier returns (Easton and Zmijewski, 1989; Collins and Kothari, 1989; Warfield et al., 1995).

Variability of earnings can also matter, with a lower ERC being associated with more variable earnings, since announced earnings with a more volatile past may suffer from lower investor confidence (Jeter and Chaney, 1992, p.843). Similarly, persistent earnings, by signalling greater certainty about future earnings, may cause a higher ERC (Miller and Rock, 1985; Karmendi and Lipe, 1987; Easton and Zmijewski, 1989; Collins and Kothari, 1989).

A larger ratio of debt to equity may lower an ERC as higher earnings are expected to favour debt-holders more than the shareholders (Scott, 1997, p.113). Additionally, it may be argued that companies with a high debt to equity ratio provide incentives to management for showing higher financial performance (Jensen, 1986). This view is supported by Sweeny (1994), who found that managers of companies approaching

violations of debt covenant constraints try harder to manage earnings in order to give a picture of good performance. If so, earnings will be less informative for companies with higher debt to equity ratios.

One way to mitigate the agency costs associated with separation of ownership from management is to base managerial salaries on company earnings, but by so doing earnings may lose their value in properly transmitting information relevant to returns on company shares. Under a remuneration scheme like that, managers have an incentive to overstate earnings as much as allowed by the given accounting procedures. The extent of this new form of moral hazard will be larger the smaller the share of managers in the company ownership. Consequently, earnings may be less informative for returns the smaller the share of managers in the company ownership (Warfield et al., 1995). However, this effect may be moderated if auditing is carried out by a big well-known firm (Gul et al., 2001). Contrary to the above, it may also be argued that larger shareholding by directors may make the announced earnings less informative for returns if it is perceived that the directors are then in a better position to put a favourable gloss to the earnings, but this effect may also be moderated if auditing is carried out by a big well-known firm.

Finally, earnings may be more informative for returns in the case of companies with better growth opportunities as such earnings have a better prospect of being sustained. Typically, these are companies with a larger ratio of market value to book value of equity since the expected future incomes of a company are reflected in the market value of its equity. Hence, an ERC may be positively related to the ratio of market

value to book value of a company's equity. Collins and Kothari (1989) and Warfield et al. (1995) offer evidence in support of such a relation.

In view of the discussion above, a relationship between earnings and returns can be formulated as a function:

$$RETN = f(EPSP, BETA, SCALE, EPSP \times (NEG, \Delta EPSP, CBIG, ABIG, AUDQ, NAS, NAS \times ABIG, NAS \times CBIG, BETA, VARB, PERS, DEQT, DISH, DISH \times ABIG, MKTBK), and\ other\ determinants\ if\ any)$$

where: $RETN$ = rate of return to company shares, $EPSP$ = ratio of earnings per share to share price, $BETA$ = measure of systematic risk, $SCALE$ = scale of company operation, NEG = dummy variable for negative earnings, $\Delta EPSP$ = ratio of change in earnings per share to share price, $CBIG$ = dummy variable for company size, $ABIG$ = dummy variable for size of auditing firm, $AUDQ$ = dummy variable for audit qualification, NAS = share of non-audit service fees in total fees paid to the audit firm, $VARB$ = variability of earnings per share, $PERS$ = persistence of earnings per share, $DEQT$ = ratio of long-term debt to equity, $DISH$ = share of directors in company ownership, and $MKTBK$ = ratio of market value to book value of equity.

Data and construction of variables

Prior to 1994, under the old Companies Act of 1913, companies in Bangladesh were not required to disclose information about any non-audit services received from their auditors. The amended Companies Act of 1994 requires additional disclosures, including fees for non-audit services paid by a company to its auditor. Our study

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period begins from 1995 as information on non-audit fees became available from that year.

As on 31 December 1999, a total of 232 securities issued by 211 companies were listed on the Dhaka Stock Exchange (DSE). For the purpose of this study, we exclude banking, insurance and investment bank securities, and also debt securities, from the sample because they maintain different types of accounting records. This elimination prevents a problem of incompatibility with the conventional accounting system followed by a large majority of the listed securities. Furthermore, the study excludes companies whose securities were not traded on the DSE over the study period (1995-99) or whose price data were not available, and whose annual reports were either not published or not available after making all efforts to collect them. As a result, our final sample consists of 163 securities. However, we do not have a balanced panel over the years 1995-99 as some securities stopped being traded and some new ones began to be traded partway through the study period. A further reason for an unbalanced panel is that data on some of the explanatory variables were missing for some of the companies.

Data on earnings, audit and non-audit service fees, and other financial statement information were collected directly from the annual reports of the companies. Data on director share holding were compiled using the company annual reports as well as the Bangladesh Bank publication titled "Balance Sheet Analysis of Joint Stock Companies listed on the Dhaka and Chittagong Stock Exchanges". The share price indices for the period 1992-2000 were obtained from the Data Stream Advanced version 3.5 developed by Data Stream International Limited. Data for the period

1990-91 were taken from the daily price quotations (adjusted for bonus and rights issues) of the Dhaka stock exchange.

The variables used for regression were constructed as follows:

RETN: Annual returns for the years 1995-99 were calculated for each security as share price 3 months after the AGM notice date minus the share price 9 months before that date plus dividends paid per share divided by the share price 9 months before. The AGM notice date is chosen in defining this variable for several reasons. It is difficult to identify exact earnings announcement dates in Bangladesh, because there is no mandatory requirement for earnings to be announced, nor is there any requirement or system for filing records of announcement dates. Companies usually announce their proposed dividend rates at the end of the fiscal year, which is an earlier date than the AGM date, but the proposed rates – modified if necessary – are approved at the AGM. Another reason for choosing the AGM notice date is that annual reports, which are delivered at the AGM, are a more important source of information about companies in Bangladesh than in the more developed countries. Apart from annual reports, there are very few sources of information about the companies which tend to be much smaller than those in the developed stock markets. Investors can fully discover the earnings and other relevant information – like the use of non-audit services – only by looking at the annual report delivered at the AGM.

EPSP: Earnings per share divided by share price 9 months before.

NEG: Dummy variable for negative earnings, 1 if earning was negative, 0 if not.

ΔEPSP: Change in earnings per share divided by share price 9 months before.

SCALE: Scale of company operations was measured as natural logarithm of market value of equity.

CBIG: Dummy variable for company size, 1 if large (market capitalization in excess of 500 million taka), 0 otherwise. By this measure, approximately the top 10% of the companies ordered by market capitalization are categorized as large in 1999.

NAS: Ratio of non-audit services fees to total fees paid to the audit firm.

ABIG: Auditor size is typically defined as 1 if a firm is one of the local big auditors, and 0 otherwise. At present, none of the big international audit firms has an office in Bangladesh. However, six of the local audit firms have links with highly reputable international audit firms. Having a reputation for auditing large and multinational subsidiary clients, these audit firms are expected to devote more time and resources in conducting an audit. Because of the knowledge sharing that takes place between these firms and their international counterparts, these firms are considered to be more competent and independent. Financial statements certified by them carry more credibility, as they are expected to detect and report financial irregularities more readily in order to maintain their integrity and reputation. Hence, we define *ABIG* as 1 when earnings are certified by a local big auditor (i.e. one with an international link), or 0 if not.

AUDQ: Dummy variable for audit qualification, 0 if clean report, 1 if not.

VARB: Earnings variability was measured for each security as standard deviation of earnings per share using annual observations during the years 1990-98. The measure using data during the first five years (1990-94) was used to indicate earnings variability at the start of 1995. The earnings variability indicators for the years 1996-99 were constructed in a similar way, e.g. data during the first six years (1990-95) were used to measure the earnings variability indicator for 1996.

PERS: Earnings persistence was measured for each security as correlation between current and lagged earnings per share. The measure was calculated for each of the

years 1995-99 using annual observations during the years 1990-98 in a recursive manner as for *VARB*.

BETA: Betas were calculated for each security to indicate systematic risk by using 'market model' regressions of individual stock returns on the market return (as in Markellos and Mills, 2001, p.499). Monthly stock prices during the years 1990-98 were used for this purpose. Betas at the start of 1995 were calculated using stock prices during 1990-94. The betas for the subsequent years up to 1999 were obtained using the updating procedure as for *VARB* and *PERS*.

DEQT: Ratio of long-term debt to equity.

MKTBK: Ratio of market value to book value of equity.

Estimation and analysis of results

A linear version of the equation formulated in section 2 was estimated using panel methods of regression in order to take advantage of the panel structure of our data. In particular, fixed effects models − allowing a different intercept term for each security and for each time period − were estimated by the methods of within transformation and first differencing using the EVIEWS5 (2004) econometric program. These methods are equivalent to the use of dummy variables for each of the companies. Besides the economic and structural differences between the companies, differences over time may also need to be modeled. For example, our sample years 1995-99 spanned the stock market crash of 1997 and change of some policies by the SEC. Different fixed effects over time were therefore allowed by using time dummies for each of the periods.

We also include a lagged return, denoted RETN(-1), as one of the explanatory variables to control for any autocorrelation of returns. Negative auto-correlation can result from mean-reverting behaviour of returns, and/or positive auto-correlation from any returns persistence. Inclusion of lagged return as a regressor makes our panel data model dynamic, but the variable would be predetermined with respect to a non-autocorrelated error term.

The panel least squares estimation results – involving all the explanatory variables thought to be relevant as discussed in section 2 – are presented in table 1. The unbalanced panel in this case consists of 298 observations on 102 securities. Tests of hypotheses can be carried out by using Arellano's (2003) method of applying the standard tests with estimated variances and covariances that are robust to heteroscedasticity and autocorrelation of arbitrary forms. Absence of serial correlation appears to be indicated by a failure to reject this hypothesis by a Durbin-Watson test at the 5% level of significance. However, owing to the difficulties of applying a Durbin-Watson test in the presence of a lagged dependent variable as one of the regressors, a more general test of autocorrelation was carried out by a panel regression of the residuals on their lagged values and all the other explanatory variables of the model. A Wald test of autocorrelation in this regression indicated absence of serial correlation at the 5% level of significance. The standard errors reported in table 1 are robust to cross-sectional heteroscedasticity and cross-sectional correlation of errors of an arbitrary form. The *p*-values shown are two-sided. Hence, tests of null hypotheses about each coefficient at the 5% level of significance, against the relevant one-sided alternatives developed in section 2, may be carried out by comparing half of the reported *p*-values with 0.05.

As expected, earnings (EPSP) are positively related to returns, and higher risk (BETA) appears to cause lower returns at any given earnings. According to the coefficients of the relevant interaction terms, losses or negative earnings (NEG) are less informative (i.e. they lower the effect of earnings on returns as hypothesized), and diminishing returns seem to lower the effect of earnings in the case of larger changes in earnings (ΔEPSP). However, economies of scale are not indicated as returns are not significantly higher at a larger scale of operation (SCALE).

Contrary to the finding of Gul and Tsui (2003), but consistent with that of Atiase (1985), earnings appear to be more informative for big companies (CBIG=1). As pointed out previously, our result is of course plausible if investors have a greater faith in the earnings announced by the big companies. It is also worth pointing out that the big companies in Bangladesh – perhaps owing to the market power that they enjoy – do not voluntarily give out much more information than small companies between the releases of their annual reports, such that annual report earnings declarations by the big companies are not rendered less informative on this account.

Our hypotheses on audit related variables receive a mixed support. Auditing by a big firm itself doesn't appear to make earnings more informative for returns to company shares (as EPSP×ABIG has a significantly negative coefficient rather than a positive one), but it does seem to alleviate any negative impact of non-audit services on the confidence of investors in those earnings (as indicated by a significantly negative coefficient on EPSP×NAS moderated by a significantly positive coefficient on EPSP×NAS×ABIG). Audit qualification may lower the effect of earnings on returns

as hypothesized, but this effect (coefficient of EPSP×AUDQ) is found to be highly insignificant. As expected by theoretical reasoning, any loss of investor confidence in earnings caused by a larger share of non-audit services may be even higher in the case of big companies (shown by a negative coefficient on EPSP×NAS×CBIG).

Agency costs of ownership-management dichotomy do not appear to be alleviated in terms of a greater informativeness of earnings caused by a larger proportion of share-ownership by directors. On the contrary, earnings appear to become less informative (as shown by a significantly negative coefficient on EPSP×DISH) but with mitigation resulting from auditing by a big firm (as indicated by a positive coefficient on EPSP×DISH×ABIG).

As our theoretical reasoning indicated, earnings appear to be more informative when ratio of market value to book value of equity is higher (as the EPSP×MKTBK coefficient shows), but a higher debt to equity ratio may not make earnings less informative for returns (as shown by the insignificant EPSP×DEQT coefficient). It follows from the coefficient of EPSP×BETA that more risky returns make earnings less informative as expected, but the estimated effects of variability and persistence of earnings (given by the coefficients of EPSP×VARB and EPSP×PERS) are counter intuitive. As persistent earnings are less variable, a regression including only one of these variables (EPSP×PERS) was run. In this case, informativeness of earnings appeared to be unrelated to persistence of earnings.

The negative coefficient on RETN(-1), the lagged return, may indicate mean reverting behaviour as high returns tend to be pulled back to the level corresponding to an equilibrium with the other competing forms of holding assets.

The period specific fixed effects relative the base year 1995 were estimated to be 0.365, −0.122, −0.281 and 0.038 for the years 1996, 1997, 1998 and 1999 respectively. The stock market nose-dived in 1997 and the shell-shocked investors were very slow in regaining their confidence in stock returns. This must be the main reason for the period effects observed for the last three of our sample years.

In the absence of autocorrelation in errors − as found for the estimates in Table 1 − the lagged dependent variable is a pre-determined regressor. In this case, the within-transformation least squares estimator, used for the estimates in Table 1, is consistent for panel data over a large time dimension. As we have only up to five years of annual data for the various cross sections, a generalized method of moments (GMM) estimator is used in the first differenced version of our equation to obtain the coefficient values reported in Table 2. The GMM estimator is known to be consistent for a large number of cross sections over a fixed time dimension (Arellano, 2003. p.153). The differenced lagged dependent variable, now endogenous with respect to the differenced error, is instrumented by RETN(-2) following the Arellano-Bond (1991) procedure. Owing to the use of an extra lag for this instrument, the estimates in Table 2 are based on fewer observations, 196 of them for 77 companies. However, it is reassuring to note that the results discussed previously remain largely robust to the new method of estimation.

Conclusions

According to the results and analyses offered above – using data on securities traded on the Dhaka Stock Exchange over 1995-99 – audit quality may not necessarily be identified with auditor size, since auditing by a big firm itself doesn't appear to make audited earnings more informative in explaining returns to company shares. However, bigness of the auditor does seem to alleviate any negative impact of non-audit services on the confidence of investors in those earnings. Investors seem to have a lower confidence in the information content of earnings when a relatively large amount of non-audit services are obtained from the same auditor, but the loss of confidence is mitigated when the firm auditing the earnings is big. The lesson from this seems to be that companies need not worry about having their finances audited by a lower-cost non-big auditor if no non-audit services are obtained from the same auditor. On the other hand, companies requiring a relatively large amount of non-audit services from the same auditor certifying their accounts should find it worthwhile to hire a big audit firm albeit with a fee premium.

Companies declaring negative earnings do not appear to suffer from any detriment to their share returns as the link between earnings and returns is significantly weakened when announced earnings are negative. This may be an incentive for some companies to frequently declare losses for strategic reasons like tax benefits. According to section 38 of the Income Tax Ordinance 1984 of Bangladesh, business losses (excluding loss in respect of any speculation business or any loss under the head 'capital gains') can be carried forward to the next assessment year and so on for up to six years. Perhaps, this is why many listed companies in Bangladesh are observed to

report continuous losses. Owing to weak enforcement of company and securities laws, those companies hardly face any threat of bankruptcy or litigation, and many of them survive as a going concern, even with negative equity for several consecutive years, because their returns may be immune to announcement of negative earnings.

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TABLES

Table 1: Panel Least Squares Estimates
(Using a Within Transformed Equation)

Dependent Variable: RETN	Number of securities: 102 Number of observations: 298		
Independent Variables:	Estimated Coefficient	Standard Error	*p*-value
EPSP	10.115*	2.407	0.0000
BETA	-1.088*	0.306	0.0005
SCALE	0.173	0.124	0.1644
EPSP×NEG	-4.167*	1.152	0.0004
EPSP×ΔEPSP	-1.047*	0.575	0.0701
EPSP×CBIG	12.336*	2.990	0.0001
EPSP×ABIG	-5.732*	2.039	0.0055
EPSP×AUDQ	-0.446	0.718	0.5357
EPSP×NAS	-12.950*	2.823	0.0000
EPSP×NAS×ABIG	11.708*	3.468	0.0009
EPSP×NAS×CBIG	-10.309*	5.309	0.0538
EPSP×BETA	-4.077*	1.095	0.0003
EPSP×VARB	0.061*	0.013	0.0000
EPSP×PERS	-1.427*	0.669	0.0344
EPSP×DEQT	0.004	0.043	0.9285
EPSP×DISH	-0.094*	0.031	0.0028
EPSP×DISH×ABIG	0.102*	0.038	0.0075
EPSP×MKTBK	0.491*	0.084	0.0000
RETN(-1)	-0.213*	0.120	0.0769
Goodness of fit:	$R^2 \approx 0.76$, Adjusted $R^2 \approx 0.60$, DW stat ≈ 2.26		

* indicates significance at the 5% level by a 1-sided test

Table 2: Panel Generalised Method of Moment Estimates
(Using a First Differenced Equation)

Dependent Variable: RETN	Number of securities: 77 Number of observations: 196		
Independent Variables:	Estimated Coefficient	Standard Error	*p*-value
EPSP	10.920*	3.242	0.0009
BETA	-0.221	0.356	0.5350
SCALE	0.224	0.177	0.2081
EPSP×NEG	-5.264*	1.560	0.0009
EPSP×ΔEPSP	-1.098*	0.428	0.0111
EPSP×CBIG	7.864	6.058	0.1959
EPSP×ABIG	-6.472*	2.445	0.0089
EPSP×AUDQ	-0.914	1.531	0.5513
EPSP×NAS	-14.002	8.915	0.1181
EPSP×NAS×ABIG	13.199	9.028	0.1455
EPSP×NAS×CBIG	-11.014	11.988	0.3595
EPSP×BETA	-3.310*	1.344	0.0148
EPSP×VARB	0.061*	0.014	0.0000
EPSP×PERS	-0.189	1.017	0.8526
EPSP×DEQT	0.031	0.041	0.4486
EPSP×DISH	-0.111*	0.048	0.0221
EPSP×DISH×ABIG	0.114*	0.050	0.0235
EPSP×MKTBK	0.560*	0.215	0.0101
RETN(-1)	-0.056*	0.031	0.0725
Goodness of fit:	$R^2 \approx 0.60$, Adjusted $R^2 \approx 0.55$		

* indicates significance at the 5% level by a 1-sided test