

Signals from Balance Sheet of a Listed Company

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ABSTRACT

However complete and accurate financial statement might be, the information they contain is exclusively ‘historical’ for the simple reason that the accounts contain data pertaining to facts that can be proven to have happened. Not only balance sheet includes data from the past but also data that points to the future. We can characterize all balance sheet data as point measurements, a record of the source and use of wealth at a given date and as such, it is a static representation of economic information. This study hence explore some key signal from the composition of balance sheet accounts changes to facilitate investor, creditors, shareholder and user of the account for better decision making.

INTRODUCTION

Presently, Businesses are facing with unique and specific challenges caused by rapidly changing financial and market conditions, these conditions have signal and if signal are not read on time it can lead to business decline. Stock price is a forward looking measure, incorporating both the market’s information regarding past performance and its expectation of future performance. Historical earnings performance, book value of assets and liabilities, return on equity and other traditional financial measures may once have been reliable predictors of future earnings, but today, these measures imply do not tell the whole story. For example, the ability to increase market share through product innovation and/ or strategic alliances are intangibles that materially affect a company’s future profitability. While historical performance is an important measure of a company’s health, it is in itself insufficient to create wealth. Theory predicts that limited attention will affect market prices and trades in systematic ways. Investors’ valuation of a company therefore depend on how its transactions

are categorized and presented, holding information content constant. Reporting, disclosure, and news outcomes that highlight favorable aspects of the available information set imply overpricing, and therefore subsequent abnormal stock returns. Similarly, outcomes that highlight adverse aspects imply undervaluation, and positive long-run abnormal stock return.

RESEARCH PROBLEM

Information is vast, and attention is limited. People therefore simplify their judgments and decisions by rules of thumb, and by processing only subsets of available information. An investor who values a company based on its earnings performance rather than performing a complete analysis of financial variable is following such a strategy. Limited investor attention and processing power causes systematic errors that affect market prices. Systematic errors may derive from a failure to think through the implications of accounting rule changes or earnings management. Even if accounting rules and company’ discretionary accounting choices are held fixed,

some operating/reporting outcomes will highlight positive or negative aspects of performance more than others. Consider the credit ratings and market valuation of the common stock of the company in secondary markets. The shareholders will not, in general, know the efficiency of operations of the company. They utilize signals like financial wellbeing of the company.

OBJECTIVE OF THE RESEARCH

If company does not deliberately manage investor perceptions, investors with limited attention may fail to make full use of available accounting information. Thus, the objective of this paper is to investigate the interpretation of net some key changes in the balance sheet which serve as the useful signals to the various interest entity.

SCOPE OF THE STUDY

To investigate the possible signals from the balance sheet and suggesting better model for the signals evaluation. Three broad areas and perspective are being explored as follows:

- The role of the corporate balance sheet;
- The model predicting corporate bankruptcy; and
- The evaluation of the signals from the perspective of dividend signaling, changes in accrual, company's stock repurchase, earning and PE multiple of Enron and the effect of the investment decision by the company.

SURVEY OF LITERATURE

Borio, C. (2017) opined that balance sheet would give different signals when the possibility of delaying balance-sheet adjustment, such as by facilitating ever greening, by undermining the profitability of banks and by compressing interest margins. Nikolai Chuvakhin and L. Wayne Gertmenian, Grazadioa Business Report (2003) discussed that ratio would serve well as a predictor of bankruptcy. The critical breakthrough in bankruptcy prediction came in 1968 when 1148

Edward Altman built a comprehensive statistical model using a technique called multiple discriminant analysis (MDA) which allows a researcher to group observations into several predetermined categories to obtain a metric known as Z-Score. If the Z-score was below the cutoff line initially set at 2.675, the company was classified as bankrupt; and, if above, as non-bankrupt. Z-score model is able to withstand certain types of accounting irregularities. Consider the bankruptcy of WorldCom, in which management improperly recorded billions of dollars as capital expenditures instead of as operating expenses. Such a treatment would have a twofold impact on financial statement: (1) overstating earnings, and (2) overstating assets. Overstated earnings would increase the X3 ratio in the Z-score model, while overstated assets would actually decrease three ratios, X1, X2 and X5. Therefore the overall impact of these accounting improprieties on the company's Z-score is likely to be downward.

Evans, M. E. (2016) stated that consistency and timeliness are salient features of firms' disclosure behaviour that have predictable and robust relations with capital market outcomes. Eric Melse (2004) argued that the relevant of the balance sheet information is material if its omission or misstatement or nondisclosure could influence the economic decisions of users taken on the basis of the financial statements. The author uses 3M Company to study trends in balance sheet data as a whole and expose its latent structure through exploratory data analysis. Spectral map analysis is a statistical application of the algebra of eigenvalues and eigenvectors to the factor analysis of multivariate data that is able to give a strong indication of balance sheet dynamics. It also shows which balance sheet items turn out to be the most responsible for this trend. It can reveal an aspect of time series that is not possible with scatter plot analysis. The author strives to

determine how much variance, present in balance sheets, is traceable to one or more trends in time.

Caruana, J. (2013) pointed out that unusually accommodative and protracted monetary conditions can delay the necessary balance sheet repair and misallocate resources. Philip Scott Scherrer (2003) shared that ignoring the signals of decline which go often unobserved are the reasons of business failure, there are stages to the failure which is also a reflection of core elements internally attached to signals. The failure can have three stages such as early, midterm, and late decline. Signals from early decline includes: cash shortage, liquidity strain, decreases in working capital, ROI decreasing 20-30 percent, late financial information; overdue account receivable, stretched account payable, increase in customer complaints and flat sales. For mid-term decline, signals are increase in inventory, decrease in margins, increase in bank advances, violation of loan covenants, bank in sued to cover payroll, erosion of customer confidence and overdrafts made at bank. Signals from late decline are decrease in inventory turnover, no liquidity, overdrawn bank account substitutes for line of credit, cut-off of supplies and depleted working capital when the balance sheet is burdened with inventory and account receivable that are inaccurate, obsolete, or uncollectible, a company has problems.

Said Elfakhani (1995) examined whether changes in financial statements and dividends can together provide a better information transmittal system to deliver missing private information on the company. The dividend signal draws its value from three sources: its expected content favorableness, sign of dividend change, and type of signaling role. The signaling system can involve three corporate attributes: Capital investment, financing, and agency decisions, all of which contribute to the company's future cash flows. The share price response to dividend signal is jointly determined by three factors: (1) the

expected content favorableness from the dividend signal, (2) the sign of dividend change, and (3) the dividend signaling role. The findings show that the strength of market reaction to dividend announcement depends on the role of the dividend signal where the components involves (1) content favorableness (good or bad); (2) sign of dividend change (+,0 or -) and (3) role of dividend signal (confirmatory, clarificatory, or unclear). The results also reveal that the market is more concerned with the news favorableness than with the sign of dividend change. The testing methodology considers balance sheet information followed by dividend change signals as to resolve most of the uncertainty about the company's future. In particular, the more the market understands about the company's sources and uses of funds before the dividend announcement, the clarifying role of dividend becomes minimal. Dividend signal sending good news to cause larger price movements than those involving bad news. This suggests that bad news may be discounted long before the dividend announcement, so later dividend may carry little information.

Susan Parker, Gary F. Peters and Howard F. Turetsky (2002) argued that financially distressed company that replaced the CEO with an outsider were nearly two and half time more likely to experience bankruptcy, corporate governance and financial characteristics of a company may have the most immediate and direct impact on company survival. Three areas of corporate governance namely insider turnover, creditor involvement and ownership structure are associated with company in financial distress. The departure of manager and insider directors' decreases firm-specific knowledge at the top levels of the company lowers organization morale and increase uncertainty. Creditors increase both their direct representations on the board and their indirect control through stock ownership during financial distress. Creditors may not act in the best interest

of the shareholders since their first priority is their own claim and not that of the shareholders. All these may be an early warning of increasing financial distress.

Fathi Elloumi and Jean Pierre Gueyie (2001) stated that when a company's business deteriorates to the point where it cannot meet its financial obligations, the company is said to have entered the state of financial distress. The first signals of distress are usually violations of debt covenants coupled with the omission or reduction of dividends. Companies that have experienced long run negative earnings per share are considered financially distressed. An insider dominated board may be a potential explanation of distress whereby studies found that the percentage of insider directors is higher on board of declining company. On the other hand, accounting indicators related to the probability of bankruptcy revolve around six dimensions of the company: (1) financial risk; (2) operating risk; (3) size; (4) liquidity; (5) profitability; and (6) market perception.

Amy K. Dittmar (1999) showed that stock repurchase activity is negatively correlated with prior stock returns, indicating that company repurchase stock when their stock prices are perceived as undervalued (signal undervaluation) and having the excess cash to distribute. Generally, the decision to repurchase stock is said to impact by the company's distribution, investment, capital structure, corporate control, and compensation policies. Company also repurchases stock to distribute excess capital and alter leverage ratios. However, repurchases are not a replacement for dividends since repurchasing company do not pay lower dividends. Company also repurchases stock to fend off takeovers and counter the dilution effects of stock.

David Hirshleifer and Kewei Hou (2004) illustrated that accounting outcomes such as when cumulative accounting value added (net operating income) over time outstrips cumulative cash value

added (free cash flow), then it become hard for the company to sustain further earnings growth. And if investors have limited attention, then accounting outcomes that saliently highlight positive aspects of a company's performance will encourage higher market valuation. The normalized level of net operating assets (defined as difference on the balance sheet between all operating assets and all operating liabilities) is therefore a measure of the extent to which operating/reporting outcomes provoke excessive investor optimism. And if an accumulation of accounting earnings without a commensurate accumulation of free cash flow raises doubts about future profitability. In this circumstance, investors have limited attention and fail to discount for this unsustainability tends to overvalue the company, because earnings-based valuation disregards the company's relative lack of success in generating cash flows in excess of investment needs.

Charalambos T. Spathis (2002) discussed that many business failures are mainly caused by fraud. These frauds are also result of primarily manipulating elements by over sating assets and understated liabilities. A total of ten variables were found to be possible indicators of False Financial Statement (FFS). These include the ratios: debt to equity, sales to total sales, net profit to sales, accounts receivable to sales, net profit to assets, working capital to total assets, gross profit to total assets, inventory to sales, total debt to total assets, and financial distress (Z-score). Most techniques for manipulating profits can be grouped into three broad categories:- changing accounting methods, fiddling with managerial estimated of costs, and shifting the period when expenses and revenues are included in the results.

Euromoney (2013) mentioned that increase in large-scale mergers signal growth in consumer confidence, and the deleveraging of corporate balance-sheets after acquisition or merger. Shai Levi and Benjamin Segal (2005) examined the change in company' financing behavior for

different debt-equity reporting classification regimes. The results indicate that manager prefer securities that can be classified as equity in the financial reports, and that the change in hybrid securities' classification from equity or mezzanine into liabilities will cause company to reduce the frequency and alter the circumstances in which they issue these securities. This has affected company' decision to issue mandatorily redeemable preferred share (MRPS) where MRPS are preferred shares whereby the issuer commits to redeem the amount invested by shareholders at a specific future date. From a reporting standpoint, a hybrid security can have features of debt and still be reported as equity on the balance sheet, or be classified as liability although it has equity characteristics. Company generally prefer to classify new financing as equity in order to avoid the violation of debt covenants and to meet the capital requirements specified in operating contracts.

Vives, Xavier.(2014) discussed that a solvency and a liquidity ratio are required to control the likelihood of insolvency and illiquidity. Merrill Lynch (2005) argued that companies across the globe are awash with liquidity. While the past two years of balance sheet repair reassured bondholders, for equity investors, these high levels of corporate liquidity brought relatively few benefits. Presently the trends are companies to increasingly use both balance sheet cash and future free cash flow to boost shareholder value. The trend means equities offer more compelling risk-adjusted return relative to their bond counterparts, particularly in the high quality corporate and emerging market areas. Cash on the balance sheet is at historically high levels across the globe and among both large cap and small cap company. Corporation's share price will be penalized for holding too much cash because it will lower long-term returns on assets.

Philip Lowe and Thomas Rohling (1993) mentioned that the importance of balance sheets in

the evolution of the macro-economy has generated significant interest over recent years. Changes in the structure of the balance sheets of corporations and financial institutions can alter the response of the economy to aggregate demand and asset price shocks. The link between balance sheets and business cycle has its roots in asymmetries in information between borrowers and lenders, and between owners and managers. The asymmetries lead to distortions in decision making, and these distortions impose certain costs.

G. Bennett Stewart (2002) stated that the main cause for the debacle of Enron was management's "laser focus on earnings per share (EPS)." Their EPS mania drove management to over-invest capital in their business for inadequate returns, to over-leverage their balance sheet, and to use "over-the-top accounting. What's needed is nothing less than a wholesale blackballing of the entire "earnings management" game. By comparison with EPS, Economic Value Added (EVA) is a far better way to keep score, a more challenging and meaningful goal, a more useful decision guide, and a truly superior metric for determining incentive compensation. Because EVA sets a high, market-competitive hurdle, far higher than just the borrowing cost, companies that increase their EVA will also necessarily increase their EPS.

Chatterjee, Ujjal K. (2016) identified that liquidity creation in the balance sheet forecasts recessions four quarters into the future. Yee (2005) explored on the liquidity of the financial system as a whole, where "liquidity" refers to the funding conditions for current and potential borrowers. For existing borrowers, rising asset prices strengthen their balance sheets making them more creditworthy. For potential borrowers, the stronger balance sheets of financial intermediaries play to their advantage, since these financial intermediaries are more willing to extend new credit on easier terms. Strong balance sheets induce banks to increase their lending. In turn, increased lending raises

property prices, leading to stronger balance sheets. Stronger balance sheets imply a larger marked-to-market equity for the bank. The feedback from increased debt to stronger balance sheets has to do with how quickly the increase in asset prices is reflected in visibly stronger balance sheets.

While discussing role of big data in financial accounting, Warren Jr et al. (2015) stated that big data will improve the quality and relevance of accounting information, thereby enhancing transparency and stakeholder decision making. Ernst and Young (2002) stated that financial theory suggests that cash belongs in the hands of shareholders, and companies should not hold on to more than is required by their immediate financing needs. Bond ratings and total shareholder returns (TSR), defined as combined returns through share-price appreciation and dividends, as measure of value for bondholders and equity investors. To determine the value of cash for bondholders, EY compare the average amounts of cash and cash equivalents on balance sheet (as a percentage of total assets), the ratio for interest coverage (cash flow divided by interest payments), current ratio (current assets divided by current liabilities), percentage of EBITDA paid out as dividends, and the percentage EBITDA invested in R&D and capital expenditures. For equity investors, the bursting of the technology bubble has caused such massive flows between industry sectors that one-year TSR is largely driven by industry sector provenance rather than by management decisions on how to use cash. During the bull market, some companies leveraged themselves to buy their own shares as a tax efficient way to return cash to shareholders or to increase their earnings per share. Companies with strong balance sheets significantly outperformed their peers. Investors were often willing to pay a premium for companies with less risky capital structures.

JV da Costa Jr et al. (2016) highlighted that funds in excess ("financial slack") have value because

they prevent managers from giving negative signals to the investors. Derek Oler (2008) showed that acquisitions where the acquirer has a high cash balance are likely to underperform. The market does not appear to fully recognize the bad news inherent in a high pre-acquisition cash balance around the announcement day, because post-acquisition returns for high-acquirer-cash acquisitions are significantly negative. This suggested that although a relatively simple accounting signal (the ratio of cash to total assets at the announcement date) has significant implications for future performance in an acquisition, the market fails to fully incorporate this signals into the stock price of the acquirer around announcement. This is because the implications of acquirer cash are not well understood by the market. Not all public information appears to be quickly impounded into stock price at announcement of an acquisition. Acquisitions are complex events, and so it should not be surprising that markets do not immediately and fully comprehend the implications of all information revealed at the announcement. Thus, research on acquisitions that only consider announcement period returns may miss the full economic implications of the acquisition.

Gary Klein and Asokan Anandarajan (1999) found that in the presence of financial distress, non financial cues play an important role in auditors' choice. There are some qualitative variables which are also salient as indicators to develop going concern opinion models. These qualitative indicators of potential solvency problems include default on debt, entering reorganization proceedings, consecutive years' losses and other bad news of the company.

Czarnitzki et al (2014) found that patents may only be "noisy" signals that do not really affect the expectations of public investors. Malcolm Smith and Richard J. Taffler (2005) argued that the chairman's statement is highly associated with the event of a company failure, reinforcing the

argument that such unaudited narrative disclosures contain important information associated with the future of the company and are not just reporting on past performance. The keyword ratio variables for each chairman's statement, used in subsequent statistical analysis to provide an indication of the perceived importance of each word or phrase to the narrative is $\text{word variable} = \frac{\text{number of common occurrences}}{\text{total number of words in the narrative}}$. The chairman's statement is able to classify company as subsequently bankrupt or non-failed with a very high degree of accuracy since it would still retain real information content, in the manner that a fundamental analysis of financial accounting numbers can reveal decision useful insights despite a high level of creative accounting being practiced.

Eccles et al. (2014) stated that the growing base of intangible assets that are not measured on the balance sheet yields price signals in the market. John C. Groth and Ronald C. Anderson (2004) argued that capital structure reflects the manner of financing a company.

M. Adnan Aziz and Humayong A. Dar (2006) mentioned that past attempts of corporate bankruptcy prediction have primarily used statistical models, particularly MDA, logit and Artificially Intelligent Expert System (AIES) approach. AIES models employed the characteristics of both univariate and multivariate methodologies, as they are developed using

human intelligence that has learnt problem solving mainly with the help of statistical techniques. Overall, AIES approach reflects marginally better predictive accuracies than statistical or theoretic approaches. However, superiority of this approach becomes questionable when it comes to predictive powers of individual models. On this account, MDA and logit models (statistical approach) provide consistently better predictive accuracies. Balance Sheet Decomposition Measure (BSDM) is characterized with a major flaw whereby it only focuses on the change in balance sheet structure not caring for the direction of this change. This fact limits the theory to distinguish between a company whose balance sheet changes are not due to failure but due to growth.

RESEARCH METHODOLOGY

The information and data of the research project were gathered from various sources of secondary data. The internet search engine like Google, Lycos, Emerald and Proquest offered excellent article and journal for the research material. The sources collected from the secondary data have already incorporated primary data such as sampling and data processing. Hence, this provided user of the information more sophisticated quantitative model for further analysis and eliminate time required to carry out the survey and pilot studies. The framework of the research methodology is developed as follow:

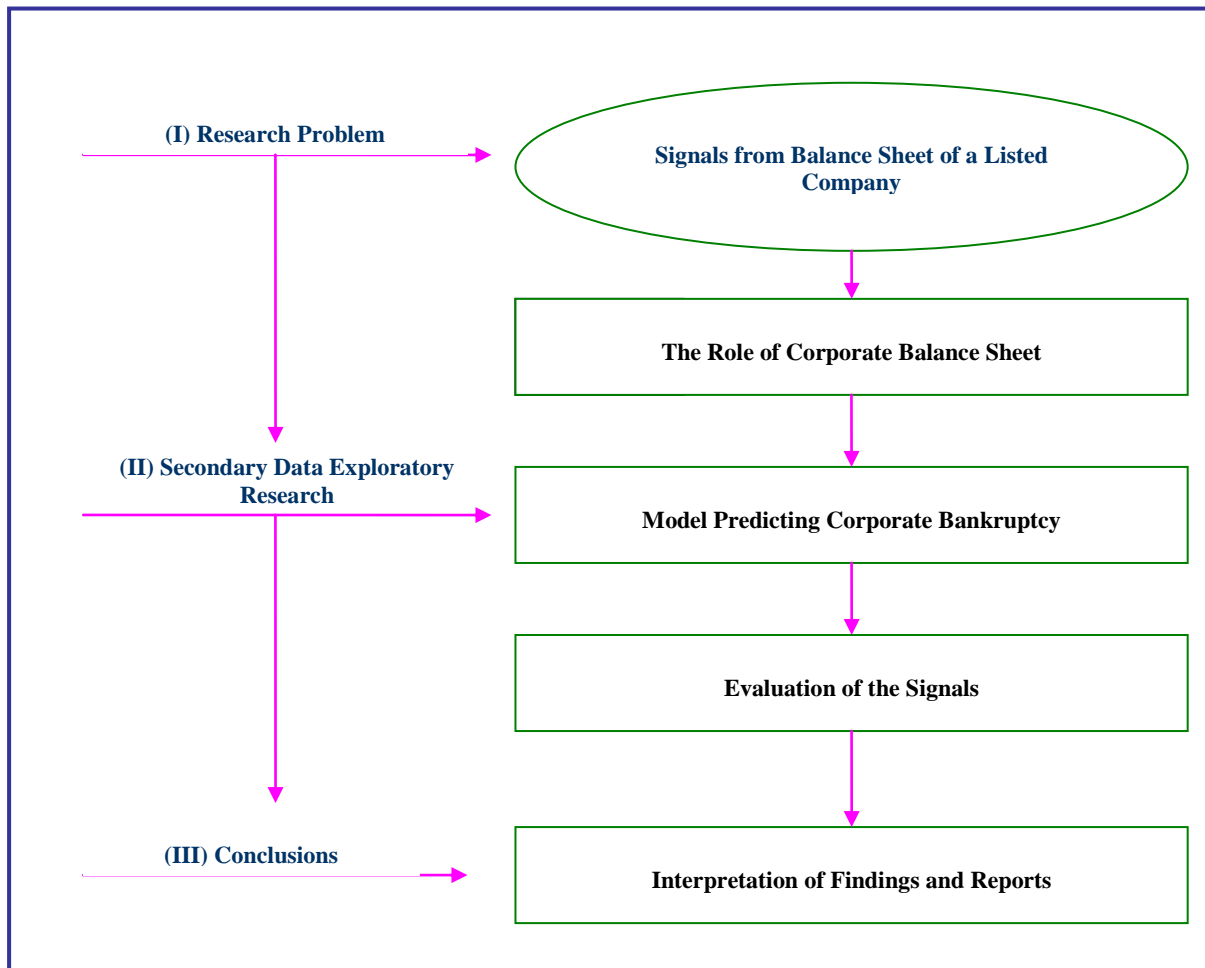


Figure 1: Research Methodology Framework

DISCUSSION, ANALYSIS AND FINDING

The Role of Corporate Balance Sheet

Financial statements as a body of information provide an overview of the company during a certain period of time. Balance sheets, in their turn, show the financial position in a given specific date, the last day of the period considered. Since long term asset account aggregates three accounts (investment, net fixed assets and deferred charges accounts), two consecutive balance sheet statement account analyses will show the new capital spending effectively incurred in this account between these two moments. New source investment in these long term asset account is aimed at generating additional benefits for the company, besides those offered by the already existing productive and operational corporate structure and considering that managers are wealth maximizes (Eric Melse, 2004).

Balance sheet also on the other hand provides measures of solvency and liquidity. Solvency measures the liabilities of the business relative to the amount of owner equity invested in the business. It provides an indication of the ability to pay off all financial obligations or liabilities if all assets were sold. If assets are not greater than liabilities, the business is insolvent (Terry Callahan, 2002). Liquidity on the other hand measures the ability of the business to meet financial obligations as they come due without disrupting the normal operations of the business. Liquidity measures the ability to generate cash needed to pay obligations. Liquidity is generally measured over the next accounting period and is a short-run concept.

The balance sheet provide a snapshot of a company's financial health and serve as a starting

point and feedback for analysis and assessments for company performance and prospects. Analysis providing credit ratings have a high interest in information about a company's financial flexibility, liquidity, and its ability to meet its obligations, including contingent liabilities. Their interest in balance sheet information is stronger than that of equity analysts, who tend to use selected balance sheet measures (for example, days of inventory and of receivables) primarily as warning signals or checks on earnings quality and revenue recognition concerns (Paul A. Decker, 2000).

Model Predicting Corporate Bankruptcy

Zhou, L. (2013) analyzed that Corporate Bankruptcy prediction is very important for creditors and investors. Most literature improves performance of prediction models by developing and optimizing the quantitative methods. There are other ways of see the decline of accompany apart from balance sheets are the models with qualitative explanations of bankruptcy. (M.Adnan Aziz Humayon A. Dar, 2002). Ratio analysis, for example, provides an insight into the financial health of a company by looking into its liquidity, solvability, profitability, activity, and capital and market structure. Balance sheet comprises the two compositions of the two characteristics of wealth- the use and source of capital. Data presented on the balance sheet are a measurement at a given point in time. It reflects the financial status quo of an enterprise, which we could also understand as the then current summation of accounts that shape the value cycle (Vaassen, 2002). At the liability side, shareholders invested capital and, at later points, dividend was distributed back, reducing residual interest or net equity. Meanwhile, management uses capital to acquire semi permanent assets as to enable the production of goods or the delivery of services to customers. At the assets side, their value is accounted with other probable future economic benefits obtained or controlled by the enterprise because of past

transactions or events. Accounts like debtors and creditors increase and decrease following the dynamics of business. The most popular models predicting are summarized as following:-

Linear Discriminant Analysis (LDA)

LDA model utilized both financial and market data concerning a company by using the following formula

$$Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.999X5.$$

A particular set of ratios appears to have the predictive power and they are:

- ***X1 (Working capital/ Total Assets)***
Working capital is refers to the excess of current assets over current liabilities. A company with a negative working capital is very likely to experience problem meeting its short-term obligations.
- ***X2 (Retained Earnings/ Total Assets)***
Retained earnings is the sum of past years' profits the firm did not pay back to its shareholders in dividends. Significant retained earnings mean a history or profitable operation and ability to withstand periods of losses.
- ***X3 (Earnings before interest and Taxes/ Total Assets)***
EBIT is an estimate of the size of the cash pool available for distribution between three major groups of claimants: creditors (interest and principal), government (taxes), and shareholders (dividends).
- ***X4 (Market value of equity/ Book value of total liabilities)***
If a company has significant market capitalization, it should be perceived as an indication of the market's belief in its solid financial position. If a company has significant market capitalization and begins to experience temporary financial difficulties, it could resort to issuing more common stock at relatively high prices. Although the resulting cash infusion dilutes the existing shareholders' interest,

it would be beneficial to creditors because it would improve the company's chances to repay its outstanding obligations.

▪ *X5 (Sales/Total Assets)*

This ratio shows how efficiently the company uses its assets to generate sales.

The groupings of these financial variables are interconnected, as weak (or strong) financial performance in one area will impact on another. The initial problem is to select a quality set of model inputs from a wide array of possible financial ratios, and to combine these ratios using suitable weighting in order to construct a high quality classifier.

Statistical Models

○ Univariate analysis

Univariate analysis interpreting financial statements using company's financial ratios. These ratios serve as explanatory variables or the bankruptcy predictors, which are likely to exhibit significant differences across the failing and non-failing company. Variables are observed and examined one after the other and there is no allowance for an analysis capturing an integrated effect of any two or more variables together on financial health of the company. After careful analysis of these ratios, researchers would provide certain inferences about company's financial health (M.Adnan Aziz and Humayon, 2002).

○ Multivariate analysis - Multiple Discriminant Analysis (MDA)

It is a type of multivariate technique that allows differentiating between two or more groups of objects with respect to several variables simultaneously. MDA is used to classify an observation (the company) into one of several a priori groupings (the bankrupt and non-bankrupt) dependent

upon the observation's individual characteristics (M.Adnan Aziz and Humayon, 2002).

○ Logit Model

Under logit, the dichotomous dependent variable is simply the logarithm of the odds that a particular event (fail/non fail) will occur. The probability of the failure of

$$P = \frac{1}{1 + e^{-(\beta_1 + \beta_2 x_i)}}$$

company is given as

Whereby, assuming that 0 indicates bankruptcy, the greater the resulting decimal fraction is above 0.5 (which implies an equal chance of a company being a failure or non-failure), the less chance there is of the subject company going bankrupt (M.Adnan Aziz and Humayon, 2002).

○ Partially Adjustment Process

Application of partial adjustment model can be explained by using cash management behavior of the company as an example. Cash management behaviour of a company is different models of demand for money. The most popular approach to the demand for money is by following the inventory cash management approach, where demand for money by a company is assumed to depend on the volume of transactions (M.Adnan Aziz and Humayon, 2002).

Balance Sheet Decomposition Measure (BSDM) is another way of identifying the signaling effect from a company. If a company's financial statements reflect significant changes in their balance sheet composition of assets and liabilities over a reasonable period of time, it is more likely that the company are incapable of maintaining the equilibrium state that ensure sustaining existing company's structure. Since

these changes are likely to become uncontrollable in future, one can foresee financial distress in this company (M.Adnan Aziz and Humayon, 2002).

The Evaluation of the Signals

Dividend Signaling

The investments and financing decisions are made at the management’s discretion. In a world of corporate asymmetric information, managers cannot directly reveal all private information related to these decision without incurring some costs. Investors are not always satisfied with the speeches of the company’s management. Knowing the investors’ perception, managers use the release of earnings announcements to validate some of their verbal declarations. Nonetheless, investors are more interested in the financial statements with the details leading to the revealed earnings figures. Financial statements can be subject to manipulation. Thus, the release of balance sheet constitutes the first phase of the information transmittal process (Patti Cybinski, 2001).

In the first phase outsiders, including marginal shareholders, use balance sheet changes to infer the meaning and direction of the company’s attributes. These changes can be clear, with little

uncertainty. Therefore they may point to potentially good, bad, or flat news. In this circumstance, the conjecture is that discretionary dividend changes can only confirm market understanding of already released information. In other occasions, changes in the balance sheet do not improve certainty about the meaning and direction of released information. In such case, dividend change signals can be valuable if they can provide clear information about the firm’s future success.

Investor evaluate the prescribed signaling mechanism by considering three components (1) the expected content favorableness from dividend signal (flat, good, bad, or ambiguous), (2) the sign of dividend change (+ or -) and (3) the role of dividend signal (confirmatory, clarificatory or unclear). Resolving some or all the uncertainty about the firm’s state can occur right after the balance sheet announcements. Hence, the role of dividend signals is summarized as follows: (Said Elfakhani, 1995).

Phase One: balance Sheet Announcement		Phase Two: Dividend Announcement		Signaling Evaluation	
News Favorableness	Attribute Clarity	Expected Favorableness	Attribute Clarity	Signaling role	Expected Market Response
Flat	Clear	Flat	Clear	Confirmatory	No Reaction
Potentially Good	Clear	Good	Clear	Confirmatory	Low/Med Positive
Potentially Bad	Clear	Bad	Clear	Confirmatory	Low/Med Negative
Ambiguous	Unclear	Good or Bad	Clear	Clarificatory	Med/Hi Positive/Neg
Ambiguous	Unclear	Ambiguous	Unclear	Unclear	Low/Med Net Pos/Neg

Figure 2: The Role of Dividend Signals

If the market interpretation of balance sheet changes reflecting the firm’s attributes is simple

and straightforward, a consensus firm value can then be reached. In this case, reassured investors

react based on their appreciation of the revealed attribute. This dividend signal is labeled confirmatory. A confirmatory signal occurs if a single attribute can project one value about the revealed attribute of the firm both before and after the dividend announcement. For example, a firm that has undertaken a new positive NPV project financed by debt and has had an increase in liquidity. An increase in dividend would reinforce the expected positive news released to the market.

For balance sheet changes that include more than one attribute may carry conflicting news (both negative and positive news) may give a clarificatory signal. For example, a debt for equity swap not accompanied by any new investment can be a capital restructuring decision (reflecting a financing attribute) or a transfer of wealth (reflecting an agency problem), both of which can result in positive share price reaction. Sometimes the dividend signal fails to clear uncertainty or is not efficient. In this case, it might take the market longer to capture the net effect of the released information in share price and the dividend signaling role is unclear. This signal would have the same value as a clarificatory signal.

The conjecture is that a confirmatory signal is expected to cause little positive market response to good news and small negative market response to bad news. Clarificatory signals bring strong positive (negative) market reaction to good (bad) news. Unclear signals usually do not eliminate all uncertainty surrounding conflicting news. Thus, they provoke lesser market movements than clarificatory signals. Thus, the three types of dividend signaling role ranks from most to least valuable. A clarificatory signal has the highest value and a confirmatory signal has the lowest value.

In a case of equity for debt swap with no new investment undertaken, the swap can be simply a refinancing decision about positive or negative news depending on the tradeoff between leverage risk and interest expense tax savings.

Alternatively, it can also reflect a worsening liquidity, with this level of uncertainty, a dividend decrease does not improve clarity. Yet, it is consistent with observed lack of liquidity. Thus, the effect of this signal is expected to be net positive. One major conclusion in this study is that integrating balance sheet changes with dividend change signal can result in a more inclusive evaluation of dividend announcements. Thus, dividend policy is so complex that any model specification must integrate (Frank Packer and Philip D Wooldridge, 2004).

There is always a possibility that the shareholders of a firm experience information asymmetry with respect to the efficiency of its decision making process. In such situations, they evaluate the performance of the firm through proximate and visible signals like the dividend payments and investments in capital assets. This is because they cannot assess the efficiency of the operations of the firm directly. Under these conditions, there is a possibility of the firm misleading the shareholders by announcing higher dividend payment out of profit generated. They may also jeopardize the profit generating potential of the firm by reducing inventories and channeling resources for fixed capital formation (Said Elfakhani, 1995).

Changes in Accrual

Reported earnings are frequently too optimistic or pessimistic, based on assumptions embedded in accrual accounts. To the extent a company borrows from the future to meet today's threshold with adverse implications for the stock price. Changes in accruals are a signal to look for evidence that a company is borrowing from future earnings, saving earnings for a rainy day- or raiding its rainy-day fund.

Balance sheet accrual accounts may also signal whether the company is deploying its capital wisely or otherwise. About 16% of the high-accrual growth companies in US had completed a

merger of acquisition in the recent past. Such companies, on average, performed worse than the broader universe of companies with high Balance Sheet Accruals (BSAs). The BSAs captures mergers after they are completed and the balance sheet is reported on a combined basis, which is typically several quarters after the deal is announced. In the case of divestitures or share repurchases, the BSAs may be signaling that management is ridding itself of a distraction or that giving money back to shareholders often turns out to be a good thing. In the case of write-offs, it may signal the beginning of the end of a large retrenchment.

A firm's net operating assets are equal to the accumulation over time of the difference between net operating income and free cash flow (Penman 2002). Thus, net operating assets are a cumulative measure of the discrepancy between accounting value added and cash value added, an effect known as "balance sheet bloat". An accumulation of accounting earnings without a commensurate accumulation of free cash flows raises doubts about future profitability. Hence, it was argued that high normalized net operating assets is a positive indicator of past earnings performance, but is also an indicator of declining future earnings performance. If investors have limited attention and fail to discount for this unsustainability, then firms with high net operating assets will be overvalued relative to those with low net operating assets.

Net operating assets can also be interpreted as the cumulation over time of the firm's operating accruals and investment in operations. It is equal to the summation of operating income after cash flow from operation (equivalent to operating accruals) plus the summation of all investment made. High cumulative accruals provide a warning signal about the profitability of investment. Thus, high net operating assets tends to be associated with heavy investments when prospects for profitable growth are limited. This

equation is therefore a better return predictor as it derives from the current year balance sheet, rather than being calculated as a difference across years in balance sheet numbers. A possible reason why high net operating assets may be followed by disappointment is that high level is a result of an extended pattern of earnings management that must soon be reversed (Barton and Simko, 2003).

Past research has shown that there is information in operating accruals that makes earnings more highly correlated than cash flow with contemporaneous stock return (Dechow, 1994). This may explain why in practice, valuation based on earnings comparables (such as P/E and PEG ratios) is common. Nevertheless, a pure focus on earnings leads to systematic errors, as it neglects the incremental information contained in cash flow value-added.

The level of net operating assets can help identify those operating/reporting outcomes that highlight the more positive versus negative aspects of performance, thereby provoking investor errors via the cumulative measure of the discrepancy over time between accounting value added (earnings) and cash value added (free cash flow). Cumulative net operating income measure the success of the firm over time in generating value after covering all operating expenses, including depreciation. Similarly, cumulative free cash flow measures the success of the firm over time in generating cash flow in excess of capital expenditures

Certain types of problems in the firm's operation will tend to increase the cumulative levels of operating accruals, and therefore will increase higher net operating assets. For example, high levels of lingering, unpaid receivables will increase the cumulative accruals component of net operating assets. Therefore, when high cumulative accruals increase net operating assets, an investor who fails to discount for adverse information about low quality receivables will overvalue the firm. High deferred revenues

indicate that future earnings will be realized, they contain favorable incremental information about future earnings. So when high cumulative cash advances increase net operating assets, an investor who fails to take into account the favorable information contained in the high deferred revenues will tend to undervalue the firm. Hence, high cumulative accruals that derive, for instance, from high unpaid receivables or low deferred revenues increase net operating assets, contain adverse information about future earnings prospects, and contribute to overvaluation. This implies that high net operating assets are associated with low subsequent stock returns.

Generally, the increase in earnings per share is good news because it means that profitability has improved. An increase in the current ratio signals good news because the company improved its ability to meet maturing short-term obligations. The increase in the debt to total assets ratio is bad news because it means that the company has increased its obligations to creditors and has lowered its equity "buffer." A decrease in cash debt coverage is bad news because it means that the company has become less solvent. The higher the cash debt coverage ratio, the more solvent the company.

Signal from Stock Repurchase

A repurchase may be preferred to dividends for two reasons. First, in open market repurchases, the firm does not have a commitment to repurchase. Additionally, unlike a dividend, there is no expectation that the distribution will recur on a regular basis. Thus, a repurchase is a more flexible means of distributing capital since a penalty is incurred if dividends are subsequently reduced (Denis, Denis and Sarin, 1994). Firms may therefore choose to repurchase to distribute excess capital.

Stock repurchases offer flexibility not only in the choice to distribute excess funds but also when to distribute this funds. This flexibility in timing is

beneficial because firms can wait to repurchase until the stock price is undervalued. The undervaluation hypothesis is based on the premise that information asymmetry between insiders and shareholders may cause a firm to be mis-valued. If insiders believe that the stock is undervalued, the firm may repurchase stock as a signal to the market or to invest in its own stock and acquire mis-priced shares. According to this hypothesis, the market interprets the action as an indication that the stock is undervalued. Assuming that an optimal leverage ratio exists, firms may use a stock repurchase to achieve this target ratio (Opler and Titman, 2001). A firm is therefore more likely to repurchase stock if its leverage ratio is below its target leverage ratio. Thus, a company's capital structure will affect its decision to repurchase.

Repurchases may also impact the relationship between the company and outside parties. A potential target for take over can increase the cost of an acquisition by repurchasing stock. Stock repurchases increase the acquisition price because shareholders selling in a stock repurchase are those with the lowest reservation values. Thus, a repurchase can be used as a takeover defense because a repurchase can increase the lowest price for which the stock is available (Bagwell, 2004). According to this hypothesis, company that are at a higher risk of becoming takeover targets are more likely to repurchase stock.

Signal from Earning and PE multiple, Case Taken from Enron

Enron was laser-focused on earnings per share (EPS). Growth in earnings per share is admittedly a seductive corporate goal. For one thing, EPS is the accepted "bottom line" in the accounting view of things. It also appears as if the market reacts strongly to a management's ability to meet its quarterly EPS targets. It states that a company's stock price is the result of multiplying its earnings-per-share by its price-to-earnings (P/E)

multiple (Price = EPS x P/E). This accounting valuation formula suggests that if EPS increases, the stock price will go up and if EPS decreases, the stock price will come down (Derek Oler, 2005).

The underlying assumption in the accounting model is that the P/E multiple will remain the same regardless of what is driving EPS up or down. That is a highly theoretical proposition, and it happens to be dead wrong in practice. P/E multiple change all the time. They change in the wake of new corporate strategies and investments, in reaction to shifting returns on capital and growth rates, and in response to new financial structure and reporting practices. P/E ratio are always on the move to reflect a change in the quality of a company's earnings, and that fact alone makes the mere quantity of EPS an extremely unreliable gauge of corporate performance and stock market value (Reint Gropp and Jukka, 2001).

For example, a hypothetical high tech company that increases spending on promising research and development. Accounting rules dictate that the stepped-up research outlays be immediately charged to earnings, making the company's EPS lower than it otherwise would be. According to this accounting treatment, it never makes sense to boost research, no matter how promising it may be. When a company borrows funds it commits to making relatively fixed interest payments out of its uncertain operating profits. The remaining profits available to the shareholders become more volatile and less predictable. Investors will react by using a higher cost of capital to discount the riskier EPS, or they will pay a lower multiple for a less certain stream of earnings. By setting the P/E ratio lower, the company's earnings will provide a higher yield, a higher return, on the price the investors pay for the stock. value (Reint Gropp and Jukka, 2001).

The most disturbing outcome of Enron's EPS mania was tempting management to catch up in a

vicious EPS management cycle that they resorted to deceitful accounting to hide much of the debt they were using to finance their EPS growth. They sold underwater assets at overvalued prices to off-balance sheet corporations whose debt was secretly secured by Enron stock, and they connived with their auditors not to disclose the substance of these transactions to investors. This financial strategy violated one of the most basic principles of sound corporate finance policy, whereby risky growth should be financed with equity, not debt.

Enron is hardly alone in manipulating accounting rules to keep earnings growth on track. Almost every company favorably interprets accounting principles in order to boost and stabilize its reported profit, even if not to the fraudulent degree of Enron. In the post Enron world, however, such practices are coming under withering scrutiny. Bankers and rating agencies are taking a stern look at off-balance-sheet financings. Security analysts also have a renewed interest in getting behind and beyond the superficial reported numbers, particularly for hard-to-penetrate conglomerate company like Tyco and GE that now suffer a credibility gap. Wall Street analysts are now more inclined to measure company by the size of their return in relevant cash flow terms than by the rate of their earnings growth.

Signal from Investment Decision

The results obtained by Chan (1995) show that the market perceives investment decisions as a company's future expectation signals and responds to the decisions according to these signals. They have come to the conclusion that the market responds: (1) positively when announcements convey positive information on the company's future cash flow, (2) negatively when announcements convey unfavorable information in future investment opportunity of the companies. Empirical evidence is consistent

with the premise that companies' growth expectations determine market reaction to decisions regarding corporate investments. The studies found that (1) announcements of an increase in corporate investments by companies having projects with an expected positive NPV result in positive changes in stock prices and (2) announcements of a decrease in corporate investment by companies having projects with an expected negative NPS result in negative changes in stock prices (Hyun Song Sin, 2005).

For a very efficient market, announcement will only cause stock re-pricing if shareholders trust that managers will execute their disclosure decisions. But if shareholders have any doubt about the execution of the informed investments they will wait for a better or else a second signal to be shown on balance sheet. A positive (negative) reaction to positive (negative) investment (divestment) decision made through accounting figures variations. Long term assets variation and fixed assets variation were considered as costly signals of corporate investment decisions made by managers, in order to investigate the effects of these signals in bringing about a revaluation of market expectation and, consequently, of stock prices (Cooley Godward, 2002).

Model for Better Evaluation

Economic Value Added (EVA)

A new economic management model was developed to better measure the profit of a company. Economic Value Added (EVA) is a company's net operating profit after taxes, less a charge for using all capital, equity as well as debt. Unlike conventional accounting profit, in which only the after tax cost of borrowing money is subtracted, EVA starts to register "earnings" only after the shareholders have also been rewarded with a fair return on their investment. The EVA capital charge is determined by multiplying the amount of 'capital' a company employs by an interest rate factor known as the "cost of capital". In economics, that interest cost is not a cash cost. It is an opportunity cost equal to the rate of return that a company' investors could expect to earn by investing in a stock and bond portfolio of equal risk (Stern Stewart, 2002).

Because EVA sets a high, market-competitive hurdle, far higher than just the borrowing cost, companies that increase their EVA will also necessarily increase their EPS. There is no conflict between producing more EVA and delivering more EPS. It is easy for a company to misallocate or over-invest capital, increase its sales, gain market share, add to its earnings and EPS, and yet reduce its EVA, and its stock price.

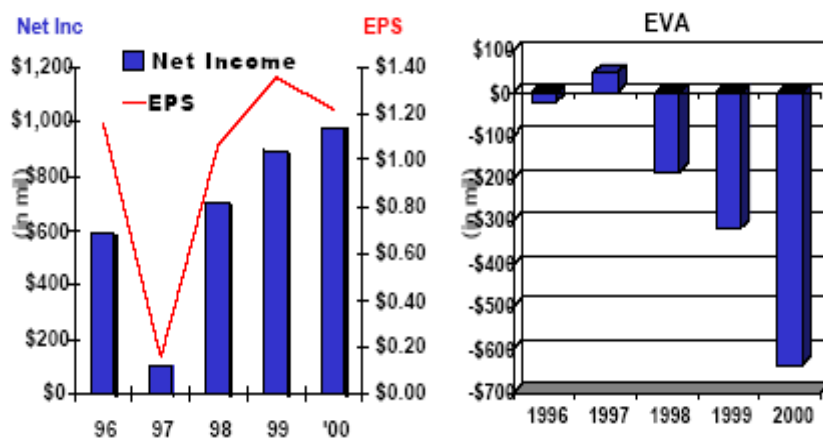


Figure 3: Comparison between the evaluation based on EPS and EVA

Compared to EPS, EVA makes it clear that capital is expensive to use, and that all companies are

really in the same business-the business of allocating, managing and re-deploying capital

resources of all kinds. EVA discourages over-leveraging the balance sheet in three way. First, the mix of debt and equity capital employed in determining the cost of capital is not the actual blend the company uses. The cost of capital should be based on a “target” capital structure that balances reducing the overall cost of capital with the need to maintain prudent financial flexibility (Stern Stewart, 2002).

Second, the amount of capital a company is considered to use for EVA measurement purposes will include all significant off-balance-sheet assets, such as those obtained through synthetic leases or special purpose financing vehicles. This treatment removes a high incentive to over-leverage the business off-the-balance sheet because managers

know they will be held accountable for earning a decent return on all of the assets they employ, no matter how those assets are financed.

EVA also discourages managers from using over-the-top accounting and overreacting to conventional accounting indicators. It does so by invoking an alternative set of accounting rules that enable managers to measure their EVA profit more accurately. One rule is that, instead of charging research and brand building outlays to earnings, they are added to a new balance sheet account for “intangible assets.” The intangible asset is written off as an earnings charge over the future time periods when the benefits from such spending are expected to increase profit (Stern Stewart 2002).

Corporate Turnaround and Recovery

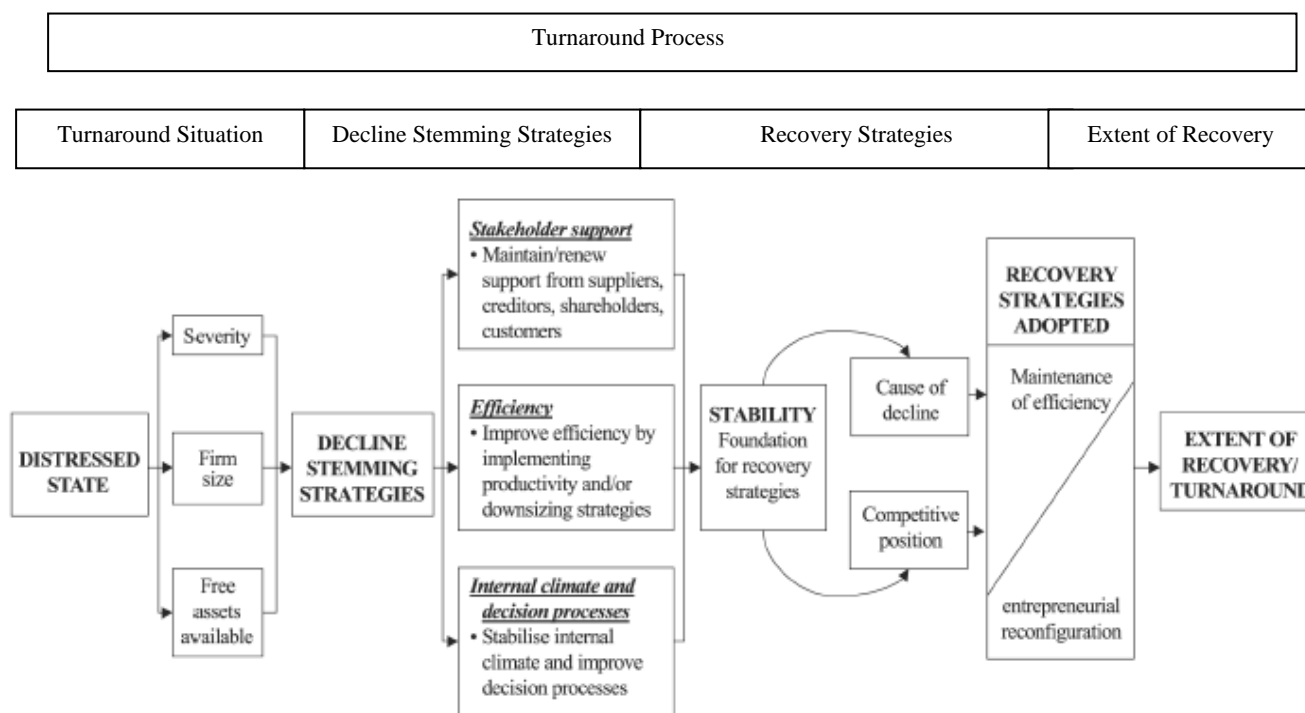


Figure 4: The Stages of Corporate Turnaround and Recovery Process

(Source: The Turnaround Process Model, Corporate Turnaround and Financial Distress, 2005)

Turnaround process can be classified into two stages, namely decline stemming and recovery strategies. The first stage is through action such as gathering stakeholder support, eliminating efficiencies. Once that is established they further

act on the recovery by analyzing if they can sustain the profitability stage. They can also play an important political role in winning back stakeholder support and help raise external

resources to fund other strategies (Malcolm Smith and Christopher Graves, 2005).

The role of senior management turnover in the turnaround process is also an important step towards enacting a successful recovery. Changes to the senior management team are seen as a means of restoring stakeholders' confidence in the future viability of the organization, thereby ensuring their continued support. Also, the higher management are able to offer relevant insights into the causes of decline and also to bring about the positive change. (Malcolm Smith and Christopher Graves, 2005).

In addition, EY suggested that the key drivers' of shareholder value now lie "beyond balance sheet" in comprehensive performance management and reporting that includes recognition of substantial intangible. Research conducted by EY showed that non-financial performance constitutes 40% or more of the value of electric and gas companies. This would suggest that there is a significant gas companies that need to close in order to achieve the full value of their companies. EY highlighted that nine non-financial performance areas on which investors most reply and are listed as follows:-

- Quality of corporate strategy
- Execution of corporate strategy
- Quality of management
- Quality of employees
- Quality of customer base
- Innovativeness
- Quality of corporate communication
- Commitment to the environment
- Quality of risk management practices.

LIMITATIONS

Accounting literature is replete with quantitative models that use financial ratios to identify the probability of a going concern qualification of a company and also to conduct valuation of a company. Hence, these studies ignore qualitative cues that we use to identify going concern

problems and mitigating factors such as sound financial plans. Non-financial cues such as prior debt default, consecutive years' losses, number of bad news items, number of mitigating factors, a company applying for reorganization, and the lever of financial distress help to provide support for the company's tactical and strategic decision making. Balance sheet variables provide us with only traditional numerical indices but qualitative indicators raise issues of perceptions such as how to evaluate the potential obsolescence of a product; whether loss of key personnel or turnover of personnel is an indicator of a company in decline or an opportunity for renewal and how are employee or supplier concessions to be interpreted. Therefore, this study ignores the uses of empirical evidence to test the importance of non-financial cues in the choice of report. Quantitative content analysis and other forms of traditional historical research are complementary methods rather than competing methods. Hence, inferences and generalizations are limited by a methodology that I have adopted.

CONCLUSIONS

Prediction of corporate bankruptcy is a phenomenon of increasing interest to investors, creditors, borrowing firms, and government alike. Timely identification of firm's impending failure is indeed desirable. Global economies have become cautious of risks involved in corporations' liabilities, especially after the demise of giant organizations like WorldCom and Enron. Corporate bankruptcy is certainly not desirable and an early detection of impending distress in a corporation is always enviable. Identification of financially distressed firms and taking corrective measure is better than protection under bankruptcy law. Signals from balance sheet provide some predictive value if the information disclosed are with comprehensive transparent. It is not an end in itself but is intended to provide information that is useful in making business and economic decisions. Signal from balance sheet

serves the needs of external users who lack the authority to prescribe the information they want and to help present and potential investors and creditors and other users in assessing the management's performance, estimate net worth of the company, evaluate riskiness of the company and to reject earlier distress predictions of the company.

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