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From the Editor's Desk

Prime Minister Manmohan Singh had declared the calendar year 2012 as the "National Mathematical Year" - a tribute to the uncanny mathematical manipulative ability of Srinivasa Ramanujan. Mathematics, as Manmohan pointed out, is the "mother science", the universal language of truth through numbers, touching daily use, technology and life - working out time, distance, calendar, the grocery prices and passenger air craft navigation, from algorithms in Internet search engines, to creating secure credit card transactions and planning national budgets.

Where there is civilization, there are numbers. GDP in India grew at 5.3% in the first quarter of 2012, its slowest quarterly pace since early 2003. It was not only the slowest pace in almost a decade but also well below economists forecast of 6.1% and much lower than the 8% levels registered in recent years. Asia's third-largest economy has been hit by a confluence of factors. Every other macroeconomic indicator of importance has tumbled. In the preceding two years, interest rates were hiked 13 times to arrest inflation which still remains stubbornly high at around 8% all through this year; policy inertia has hurt direct investment and industrial output collapsed to 2.8% from the previous year's 8.2%; Rupee has hit an all-time low at 57.12 against US Dollar on June 12th; and the burgeoning fiscal deficit at 5.6% is way above the original target of 4.6%.

The economy may be facing tough and challenging times, but it is not all doom and gloom. The RBI has announced a slew of measures to curb rupee depreciation and improve the market sentiment. During the first five months of 2012, foreign portfolio inflows in equity and debt at \$ 11.89 billion had been the highest since 2001. FIIs investment in G-Securities has been enhanced from \$15 billion to \$20 billion. Domestic companies in the manufacturing and infrastructure sectors having foreign exchange earnings can avail external commercial borrowings (ECBs) for repayment of outstanding rupee loans. The overall ceiling for such ECBs would be \$10 billion. We have also uncovered in 2012 the mother of all scandals - Coalgate (coal mining) scam and Karnataka Wakf Board (land) scam involving around \$70 billion.

Two hundred years after the death of Charles Dickens, we are reminded of his famous quotation "It was the best of times, it was the worst of times.....it was the season of light, it was the season of darkness".

*Dr A Srihari Krishna
Consulting Editor*

Guidelines for Authors

Auroras Journal of Management (AJM) invites original papers from scholars, academicians and practitioners pertaining to management, business, and organizational issues. *AJM* also welcomes articles dealing with the social, economic and political factors that influence the business and industry. Papers, based on theoretical or empirical research or experience, should illustrate the practical applicability and/or policy implications of work described.

The Editorial Board offers the following guidelines which are to be followed while contributing papers for publication in *AJM*:

Manuscript

The Author should send three copies of the final manuscript. The text should be double-spaced on A4 size paper with one-inch margins all around. The Author's name *should not* appear anywhere on the body of the manuscript to facilitate the blind review process. The Author may send a hardcopy of the manuscript to Aurora's Business School or e-mail the MS Word Document at ajm@absi.edu.in. The manuscripts should be submitted in triplicate and should have been proof-read by the Author(s) before submission.

The paper should accompany the following on separate sheets (1) An **executive summary** of about 500 words along with five **key words**, and (2) A brief **biographical** sketch (60-80) words of the Author describing current designation and affiliation, specialization, number of books and articles in refereed journals, and membership on editorial boards and companies, etc. along with their contact information.

AJM has the following features:

- **Research Articles** which present emerging issues and ideas that call for action or rethinking by managers, administrators and policy makers in organizations. Recommended length of the article should be limited to 7,500 words.
- **Book Reviews** which covers reviews of contemporary and classical books on Management.
- **Articles on with social, economic and political issues** which deal with the analysis and resolution of managerial and academic issues based on analytical, empirical or case research/ studies/ illustrations.

Headings/Sub-Headings

The manuscript should not contain more than 2-3 headings. It is suggested that lengthy and verbose headings and sub-headings should be avoided.

Acronyms, Quotes and Language

Acronyms should be expanded when used for the first time in the text. Subsequently, acronyms can be used and should be written in capitals only. Quotes taken from books, research papers and articles should be reproduced without any change. British English is recommended as compared to American English. Keeping the diversity of the readers in mind, it is suggested that technical terminologies should be explained in detail while complicated jargons may be avoided.

Tables, Numbers and Percentages

All tables, charts, and graphs should be given on separate sheets with titles. Wherever necessary, the source should be indicated at the bottom. Number and complexity of such exhibits should be as low as possible. All figures should be indicated in million and billion. All graphs should be in black and not in colour. The terms 'and' and 'percentage' should not be denoted by their symbols (& and %). Instead the complete word must be used. All figures/numbers <10, mentioned in the text, should be written only in words.

Notes and References

The notes and references shall be presented at the end of the text, with notes preceding the list of references. Both, the notes and references should be numbered in their order of appearance in the text.

Endnotes, italics, and quotation marks should be kept to the minimum.

References should be complete in all respects:

(a) **The reference for journals shall be given as :**

Hannan M T and Freeman J (1977), "The Population Ecology of Organizations", American Journal of Sociology, Vol.82, No.5, pp.929-964

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Hooda R P (1998), Indian Securities Market, Excel Books, New Delhi.

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Review Process

The Editorial Board will share the manuscript with two or more referees for their opinion regarding the suitability of the papers/articles for publication. The review process usually takes about 3 months. *Auroras Journal of Management* reserves the right of making editorial amendments in the final draft of the manuscript to suit the journal's requirements and reserves the right to reject articles. Rejected articles will not be returned to the Author. Instead, only a formal communication of the decision will be conveyed.

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The Author is advised to send an electronic version of the manuscript in MS Word once the paper is accepted for publication.

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PERFORMANCE APPRAISAL SYSTEM IN EDUCATIONAL ORGANIZATIONS – AN OVERVIEW

Dr Ravi Paturi

People make or break organizations. Building sustainable organizations starts with attracting the right talent. However, to get the best out of every employee, a robust appraisal system holds the key. Even in the old economy, there doesn't seem to be any consensus among management thinkers and practitioners on one best method of performance appraisal. You can't improve what you don't measure. As the new economy is driven by the services sector, measuring performance of intangibles becomes an issue. To make matters worse, group performance is more relevant than individual performance. Performance appraisal in educational institution poses a more serious challenge as both individual and group performance becomes critical.

Introduction

Performance appraisal is an integral part of any collective human effort in pursuit of a well-defined goal. The performance appraisal process has been researched for many decades the world over, but no common consensus has yet been arrived at the one best way of conducting performance appraisal. According to anecdotes, most people who have been evaluated at work find the experience uncomfortable and unproductive. In spite of this, performance appraisals are used in all leading organizations. Organizations use different tools and have a number of goals for performance appraisals, often resulting in some confusion as to the true purpose of performance appraisal. However, at its core, the performance appraisal process allows an organization to measure and evaluate an individual employee's behaviour and accomplishments over a specific period of time. (DeVries et al., 1981)

As an organization scales up and adopts professional management, a more formal performance appraisal system serves as an asset in administrative decision-making. Regardless of the system in place, decisions regarding salary administration and career progression must become part of personnel management and this purpose is well served by the performance appraisal process. The performance appraisal system assists in monitoring and evaluating an employee's progress and allows for an intra-organizational comparison of individual performance. According to Murphy and Cleveland (1995), there are many advantages to using a formal system if performance appraisals are designed properly. It facilitates organizational decisions such as reward allocation, promotions/demotions, layoffs/ recalls, and transfers. It may also help the managers to develop employees, increase employee engagement and satisfaction, and improve organizational communication as a result of performance appraisal.

The acceptability of the performance appraisal system in an organization largely depends on the tools and goals of the performance appraisal process. If these are incongruent with organizational goals, the

resulting performance appraisal may, in fact be detrimental to effective organizational functioning (Barrett, 1967). Critics have expressed apprehensions about the effectiveness of performance appraisals. Some of these apprehensions are:

- In a team environment, individual performance appraisal system interferes with teamwork by overemphasizing the individual.
- An ineffective performance appraisal system may result in mixed messages concerning which aspects of performance are most important and which are least important.
- Due to differing and often conflicting needs of stakeholders (the organization, appraiser, and employee) the process itself is the source of unmet expectations for all concerned (Murphy and Cleveland, 1995).

An Overview of the Evolution of Performance Appraisal Process

Historical evidence indicates that performance appraisal has been in vogue in different formats since time immemorial. For instance, merit exams were given for selection and promotion decisions during the rule of the Hun Dynasty as early as in 206BC- 220 AD (Wren, 1994). “Imperial Raters” were employed by emperors of the Wei Dynasty to rate the performance of official family members. Commentaries on the appraisals of the “Imperial Raters” mirror the sentiments of today's critics, stating that “Imperial Raters of Nine Grades seldom rate men according to their merits but always according to his likes or dislikes” (Patten, 1977).

It is believed that the early 1800s marked the beginning of performance appraisals in the industry with Robert Owen's use of “Silent Monitors” in the cotton mills of Scotland (Wren, 1994). Silent monitors were blocks of wood with different colours painted on each visible side and placed above each employee's work station. At the end of the day, the block was turned so that particular colour representing a grade (rating) of the employee's performance was facing the aisle for everyone to see. Anecdotal evidence indicates that this practice had a facilitating influence on subsequent behaviour.

Formal performance appraisal is believed to have begun in the United States in 1813 when an Army General submitted an evaluation of each of his men to the U.S. War Department. He had used a global rating, with descriptions of his men as “a good-natured man” or “a knave despised by all” (Bellows and Estep, 1954). In the late 1800s, the Federal Civil Service of the United States began giving merit ratings (efficiency ratings) (Graves, 1948; Lopez, 1968; Petrie, 1950). In response to the public concern for economy and efficiency, a Division of Efficiency was created within the Civil Service Commission in 1912 (Van Riper, 1958). In the late nineteenth and early twentieth century, performance appraisals were used primarily by the military and government organizations – due to their large size, hierarchical structure, geographical dispersal, and the need to promote the top talent. On the other hand, most private organizations used informal measures to evaluate individual performances and make subsequent administrative decisions. The formal introduction of performance appraisal in industry was marked by the introduction of man-to-man rating developed by industrial psychologists at Carnegie Mellon University (Scott, et al, 1941). This system was used during World War I to assess the performance of officers and researchers associated with the refinement of man-to-man appraisals helped the industry in adopting the same. In 1922, Donald Paterson introduced the graphic-rating scale to the general psychological community (Landy and Farr, 1983). This paved the way for development of numerous innovations in the type of rating scales and techniques for scale construction (see Likert, 1961), leading to the increased popularity of the graphic or trait-rating scale (Patten, 1977; Van Riper, 1958).

Historically, performance appraisals have been used for administrative purposes, such as retention,

discharge, promotion, and salary administration decisions (DeVries et.al., 1981; Murphy and Cleveland, 1995; Patten, 1977). In the early era, with weak human resource management departments and a lack of understanding of the performance appraisal systems, administrative decisions were often made independently of and even ran counter to, performance appraisals (Whistler and Harper, 1962). This state of affairs can partly be ascribed to supervisors who did not take the performance appraisals seriously and partly to pressure from the unions advocating seniority-based decisions over performance-based decisions. Commonly used tools for performance appraisals were global rating or global essays (DeVries et. al., 1981). In global ratings, the rater provided an overall estimate of performance without distinction across different performance dimensions and rated the performance as "outstanding," "satisfactory," and "needs improvement". For global essays, the rater responded to a question such as, "What is your overall evaluation of this person over the last year?" The subjectivity of both methods and variability of the essay method made it difficult to use these tools to make quality decisions. The other tool used was the man-to-man ranking procedure, developed by the U.S. Army in 1914 (Scott and Clothier, 1923). It used five scales to rank the officers: physical qualities, intelligence, leadership, personal qualities, and general value to the service. The scales for man-to-man rating were evolved by a rater by choosing 12 to 25 officers of the same rank as the officers being rated. These selected officers were then rated from highest to lowest based on one of the five scales and selected five officers to be used as the standard for judgment (1. highest, 2. middle, 3. lowest, 4. between highest and middle, 5. between middle and lowest). The values are assigned to each of the five "standardized" officers and the ratee (appraisee) is assigned a value by comparing him with these officers. Since each rater devised the scales intuitively, it resulted in a complex system that failed to account for individual differences in the scale construction.

The man-to-man system was later refined to evolve the judgmental rank order procedure (DeVries et. al., 1981). In this system the rater provided an overall evaluation of performance by ticking a box that placed each ratee in a certain percentage of all ratees (top 25 per cent, top 50 per cent, bottom 50 per cent, and bottom 25 per cent). These qualitative methods of force ranking made it difficult to judge the actual difference in the performances of different employees.

Another tool that gained popularity during this time was the graphic- or trait-rating scales. Benjamin, (1952) reported that 87 per cent of a sample of 130 companies used these type of rating scales and they continue to be one of the most common tools in use today. These are numerical scales on which the rater indicates the degree to which the ratee possesses certain personality traits. The application of this tool generally encountered the difficulty that the performance dimensions were ill-defined (and difficult to measure) traits such as leadership, initiative, cooperation, judgment, creativity, resourcefulness, innovativeness, and dependability. Further, these vague performance dimensions necessitated the rater to link the observed behaviour with the appropriate personality trait, making rater error prevalent (Bernardin and Buckley, 1981). However, the positive aspect of using the trait-rating scales were that these were inexpensive and easy to develop and administer, the results were quantifiable, and since more than one standardized performance dimension were rated, the results were comparable across individuals and across the division (Cascio, 1991).

During the World War II period, in order to meet the specific requirement of the US Army, psychologists developed forced-choice and critical-incident methods (Sisson, 1948; Flanagan, 1954). In the forced-choice method, a number of sets of statements, phrases or words describing the job performance were presented to the rater. In each set of four statements, two appear favourable and two appear unfavourable, out of which only one of the favourable statements adds to the score and only one of the unfavourable statements detracts from the score. The value addition and subtraction

were determined on the basis of prior research on successful and unsuccessful performances. These values are not revealed to the rater and he/she is required to choose the statements which best described the characteristics of the employee. This was primarily done to reduce rater's bias and create more accurate ratings. This method was also intended to make the rater focus on observed behaviour rather than personality traits or overall evaluations. Additionally, it established objective standards of comparison amongst individuals (Richardson, 1949; Sisson, 1948). However, raters resented when they were to choose one of the very negative statements, forcing them to make a derogatory comment about an employee (Barrett, 1967). The raters were also not very appreciative of the secrecy and the returned scores being just numbers without any true explanations supporting them. Further, forced-choice method was a poor tool for individual development in performance appraisal interviews. This method had inherent drawbacks of being expensive to develop, the tendency of the rater to lose objectivity in trying to determine the scores, and it just provided a global indication of merit, rather than rating of specific dimensions of performance (Casico, 1991; Patten, 1977). Berkshire and Highland (1953) noted, "Ratees may resent a rating system that really rates. Whatever the cause, forced-choice has not won wide acceptance in industry or government."

During the same period when forced-choice method came into existence, the other technique that evolved was the critical incident method which was originally intended to train pilots in take-off and landings. The behaviours that were crucial to success or failure were observed and meticulously collected during World War II. In order to use this technique in performance appraisals, supervisors recorded the positive and negative behavioural events (incidents) that occurred during a given performance period. These observations were then used to evaluate the employee's performance and the observed behaviour related to the job contributed to the accuracy of the technique. Critics of the method felt that these results were misleading because only the extreme and unusual elements were reported at the expense of steady day-to-day performance, which was the real substance of an employee's effectiveness (Barrett, 1967). However, although the forced-choice and critical incident methods were methodologically and substantively better than earlier tools, their complexity and difficult application to individual development preclude their use today (Flanagan, 1954).

Most organizations by early 1950s had instituted performance appraisal (Spriegal, 1962). The primary tool was trait-rating system which focused on past actions, using a standard, numerical scoring system to appraise people on the basis of a previously established set of dimensions (DeVries et.al., 1981). This method came under severe criticism as it used a static measure of performance, did not relate to employee development, and caused the manager to play the role of judge, which was inconsistent with the role of a leader and coach necessary to focus on achieving both the employees' and the organization's goals (McGregor, 1957). Recognition of these limitations subsequently led to the development of a performance appraisal system based on management by objectives. It was suggested that the purposes of performance appraisal system should be employee's development and feedback (see Fedor, 1991). It has been observed that individuals are motivated to seek feedback (if it is seen as a valuable resource) to reduce uncertainty and to provide information relevant to self evaluation (Ashford, 1986). There is evidence that if performance feedback is given appropriately, it can lead to substantial improvement in future performance (Guzzo et.al., 1985; Kopelman, 1986; Landy et.al., 1982).

Douglas McGregor applied the Management by Objective (MBO) approach proposed by Peter Drucker in *The Practice of Management* in 1954, to performance appraisals in 1957 in his article "An uneasy look at performance appraisal." McGregor recommended that employees be appraised on the basis of short-term goals, rather than traits, which are jointly set by the employee and the manager. The goals

set are required to be specific, measurable, time bound and joined in action plan (McConkie, (1979). The typical cycle of MBO approach to performance appraisal involves setting of objectives, negotiation to arrive at achievable goals, performing for accomplishment of objectives, discussion, changing directions (if required), and eventual measuring of accomplishment or failure (Kindall and Gatzka, 1963).

The MBO approach to performance appraisal, according to McGregor offered many advantages. Firstly, it redefined the role of the manager from judge to guide in personal development. Secondly, the focus was shifted to results achieved and had wider acceptance as compared to performance appraisal based on traits. Thirdly, it shifted the orientation towards future actions instead of past behaviour. MBO was an accepted practice in private industry in 1970s and was primarily used for managers (Hay Associates, 1976). However, performance appraisal based on MBO demands high level of management commitment and reorientation of thinking of employees (Patten, 1977). Further, a high degree of job analysis and inferential skills are needed to determine appropriate performance dimensions for measurement and the goal achievement standards to use. For the method to be effective, objectives have to be set as output-centered rather than as activity-focused. It needs to be borne in mind that at times the factors which are beyond the control of the individual in accomplishment of the objectives are ignored, leaving the employee responsible for goal completion in spite of external influences (Goodale, 1997). In addition, an individual may be held accountable for outcomes requiring interdependent employee efforts (Levinson, 1970; Schneire and Beatty, 1978). These are only a few of the common problems associated with MBO (Kleber, 1972), but they help to illustrate the complexity of this performance appraisal method.

The various approaches to performance appraisals described above either suffered in terms of reliability, validity, and discriminability or were often resisted by raters (Cascio, 1991). In an attempt to produce a tool that was psychometrically sufficient (valid, reliable, discriminating and useful), as well as accepted by raters, Smith and Kendall (1963) devised the Behaviourally Anchored Rating Scales (BARS). Its development was a long and arduous process, involving many steps and many people. In this process, the performance dimensions were defined more clearly and were based on more observable behaviour. For example, a very high rating for a teacher in the lecture performance dimension might be "lecture uses concrete examples to clarify answers", a higher than average rating might be "lecturer's response repeats a point in the lecture" and very low rating might be "lecturer insults and verbally attacks questioner" (Murphy and Constans, 1987). Despite the time and expense of development of BARS, research has not shown that this method is more accurate than graphic-rating scales (Schweb et. al., 1975). Thus, the goal of having sound psychometric properties was not achieved.

Blanz and Ghiselli (1972) designed the Mixed Standard Scale (MSS), using the behavioural example. Each scale was designed to measure two performance dimensions, instead of one (as in BARS). For example, in a six-item grouping for a lecturer/teacher, items 1, 4 and 5 might refer to behaviour that represent a "response to questions" performance dimension and the items 2, 3 and 6 might refer to behaviour that represent the "speaking style" performance dimension (Murphy and Constans, 1987). For each performance dimension, there was one item each describing good, average and poor performance and the rater was required to indicate whether the employee's performance was better than, about equal to, or worse than the behaviour described in each item. While it made the task of rater filling the form easy, the scoring system was so complex that results might not be understood, just as in forced-choice method (Murphy and Cleveland, 1995). However, neither method alone fulfilled the needs of performance raters – accuracy, ease of use, employee needs for information and

development. This led to the development of behaviour observation scales that intended to improve on BARS (Latham and Wexley, 1977). This scale used the same class of items as the MSS, but asked the rater to describe how frequently the specific employee behaviours or critical incidents occurred over the appraisal period (Murphy and Cleveland, 1995). It was observed that it failed to remove the subjectivity (Murphy et. al., 1982, Murphy and Constans, 1988). The other tools that attempted to reduce rater errors were the distributional measurement model (Kane and Lawler, 1979) and the performance distribution assessment. Though, the main focus of research remained the reduction of rater error and despite great amount work being done, the progress in improving performance appraisals has been lacking. In fact, the beginning of the shift away from rater error reduction research was a classic article by Bernardin and Pence (1980) which, demonstrated that the decreases in rater error were accompanied by decreases in the accuracy of performance evaluation. Further, the appraisal system was being questioned for discrimination by the legal experts. Experts offered guidance to protect organizations from legal considerations and the structure of performance appraisal changed (Bernardin and Beatty, 1984) – performance appraisal should be based on specific dimensions, defined in terms of behaviour, which have been established as relevant through job analysis. Raters should receive training or instruction, have adequate opportunity to observe the performance they are evaluating and appraise their employees frequently. Feedback should be given to the ratee and an appeal process should be in place. If possible, multiple raters should be used to avoid rater bias and extreme rating should be supported by documentation.

Current Status of Performance Appraisals in General

Performance appraisals were initially intended for large organizations that were organized hierarchically, operating under relatively stable market and organizational environments, employed relatively well-qualified and homogenous workforce, and when long-term employment was the norm (Murphy and Cleveland 1995). For the present day organizations, both internal and external environments are dynamic, organizations are becoming more decentralized and the ratio of managers to non-managerial employees is shrinking, social, political, and technological environments are becoming more turbulent, and the workforce is no longer homogenous and switches jobs frequently. This calls for the performance appraisal system to be made adaptive to suit ever-changing environments. The performance appraisal system would have to focus on the strengths and weaknesses of the individual, and it would have to be used to identify a feasible set of quality workers or candidates, instead of the best person in the organization. The performance appraisal goals would have to become more comprehensive – goals that are beneficial to both the individual and organization.

The fact of the matter is that performance appraisal has become an integral part of work life in both private and public sectors. It is surprising, therefore, that performance appraisal has remained one of the most under-researched aspect of literature (Boswell and Boudreau, 2002, McCarthy and Garavan, 2001), resulting in processes that have not changed fundamentally in 40 years (Wessel, 2003). Therefore, managers in many organizations do not provide much guidance in the area of career management and development (Larson, 2002).

Performance Appraisal in Educational Institutions

According to Mackay (1995), until 1970s, universities and educational institutions adopted a very casual approach to performance appraisal. They operated on “high trust” basis within an ethos that emphasized independence of thought and scholarship, academic freedom, and collegiality. It meant that academic staff were not closely monitored or assessed. Instead, those in senior positions operated on a collegial rather than a managerial basis, and worked with junior colleagues within the

ambit of personal relationships. However, in the 1980s, with the changing socio-economic environment, increased emphasis on accountability towards the society, and demand for the "value for money," universities were expected to acknowledge these realities. (Jarrett Report, 1985).

In her 1995 paper, Mackay identified clear pressures for HR practices in the changed environment in which the universities were expected to function. Moreover, influential government reports emphasized the need for greater consistency in teaching and quality standards across the whole university sector. However, recent research has questioned this view of progression towards greater uniformity in higher education performance appraisal practice (Shelley, 1999). Shelley and other commentators (Jackson, 2000) have found evidence of some so-called elite institutions typically having a more collegial and development approach to performance appraisal compared with the result-oriented and evaluative stance of other 'non elite' institutions.

The long standing performance appraisal dilemma of how to reconcile organizational concerns for control and compliance on the one hand, with employee expectations of professional development and personal aspirations on the other is recognized by many writers on performance appraisal (e.g. Hendry et al., 2000). As Bratton and Gold (1999, p. 219) indicate, the challenge is to achieve, "... an accommodation of the value of control combined with values which argue for the development of people and gaining of employee commitment and trust." Contemporary performance management systems and perspective literature in performance management emphasize the "control" aspect of appraisal by specifying and measuring the individual employee's contribution to the organization as a whole (e.g. Armstrong and Baron, 2000; McAfee and Champagne, 1993). In this way, the performance appraisal system and individual contributions within them are "vertically integrated" with corporate strategy (e.g. Schuler and Jackson, 1987). So, the performance appraisal philosophy and practice derives from, and contributes to the organization's business objectives. However, adoption of this philosophy of performance management by academic institutions has been strongly challenged by a number of writers, especially those utilising the labour process perspective (Braverman, 1974).

A labour process view of performance appraisal links to the rationalization and codification of the work process. In universities and colleges, this is achieved through the use of perspective curricula, greater specificity of contractual obligations, external and comparative assessments of teaching and research, and by on-going resource constraints (Barry et al., 2001). All these combine to erode academic freedom and independent scholarship. Performance appraisal is seen as one component of a human resource management rhetoric that seeks to inculcate among the academic staff strong corporate cultures based on individual contribution and commitment. A range of sources (Gratton et al., 2000; Michie and Sheehan, 2000; Patterson et al., 1997) – some explicitly and some implicitly – recognize a robust, performance enhancing and equitable performance appraisal system which gains the commitment of professionals as a key factor in achieving an appropriate return for an organization's "intellectual capital." Moreover, they and others (e.g. Iles et al., 2000; Mayo, 2000; Petty and Guthrie, 2000) suggest that the added value accruing from motivated knowledge workers with 'hard to imitate' skills is likely to be the only sustained source of long-term competitive advantage. However, in spite of these claims regarding performance appraisal's potential contribution to an organization's effectiveness, the situation 'on the ground' in many organizations is far less positive. Comments on performance appraisal in the chapter of a 1999 published HRM textbook and the blunt conclusion of a research paper are illustrative of this perceived difference between rhetoric and reality: *"Of all the activities in HRM, performance appraisal is arguably the most contentious and least popular among those who are involved. Managers do not appear to like doing it, employees see no point in it, and personnel and human resource managers as guardians of the organization's*

appraisal policy and procedure have to stand by and watch their work fall onto disrepute” (Bratton and Gold, 1999, p. 214). *“Rarely in the history of business can such a system have promised so much and delivered so little”* (Grint, 1993, p. 64).

The anecdotal evidence from many universities and colleges, literature on performance appraisal in knowledge-based organizations (e.g. Fletcher, 1997), specially within universities and colleges (Cardno, 1999; Adams, 1994; Townley, 1990, 1992), together with continued controversy about what shape performance appraisal should take in secondary education (Cooper, 2000; Healy, 1997) suggest that performance appraisal currently falls short of expectations in educational institutions.

John Simmons (2002) has highlighted the two issues that often come up for researchers and HR practitioners involved in appraisal system design for universities and colleges are the choice between “best practices” and “contingency” approach and between “Managerial and individualistic” and “developmental and collegial” approach. These are summarised in the succeeding paragraphs.

“Best Practice” versus “Contingency” Approach: Some writers have put forward prescriptions for human resource management which they believe have a beneficial impact on organizations regardless of context (Pfeffer, 1998; Arthur, 1992) and seek to demonstrate the extent to which these prescriptions explain the variation in profitability and performance level of a company. Contrary to this, other writers have put forward the argument that universal and rigid prescriptions fail to acknowledge organizational differences in size, competitive strategy, and structure – all of which imply contingent approaches to appraisal design and system operation. The “one size fits all” approach is a useful tool for guidance (Marchington, 1996) or as providing broad principles or “system architecture” of HRM (Purcell, 1999), but the view that all organizations should adopt “best practice” personnel and development approach is strongly questioned. Further, the traditional form of appraisal system based on hierarchical authority and direction would be inappropriate for knowledge-based organizations like educational institutions that traditionally have flatter hierarchies, enjoy high level of autonomy and independence of judgment, self-discipline and adherence to professional standards, power and status based on specialist knowledge and skills, and conduct guided by a code of ethics.

“Managerial and Individualistic” or “Developmental and Collegial” Approach: While contemporary appraisal systems ensures that each employee's performance objectives derive from and contribute to those at departmental, divisional, or corporate level, the traditional approach of exercising control by stipulating and assessing individual employee's contribution to the organization continues to coexist alongside (Armstrong and Baron, 2000; McAfee and Champagne, 1993). However, a number of commentators – especially those within the education sector – regard this managerial approach to performance appraisal as unwarranted, unworkable and unacceptable in knowledge-based organizations such as universities and colleges. They variously describe this as antithetical to the self-governing community of professionals, an infringement of academic freedom, based on a top-down approach to research and teaching which severely restricts creativity and self development, or a covert means of introducing greater control (Barry et al., 2001; Holley and Oliver, 2000; Henson, 1994; Townley, 1990). Instead, they advocate a developmental approach to performance appraisal in academia giving professionals themselves the primary responsibility to identify aspects of their roles in which development is possible and desirable. This developmental and collegial system of appraisal based on trust, self-evaluation and peer review is deliberately separated from processes of reward and promotion.

One method of developing effective and ethical performance is found in the recent study by

Winstanley and Stewart-Smith. Their method achieves “stakeholder synthesis” by involving key stakeholders in development of performance objectives and measures (Winstanley and Stewart-Smith, 1996). The “robust and ethical” approach was used successfully at the British School of Osteopathy (BSO) as an effective means of responding to both traditional and radical critiques of performance appraisal. This view of effective performance appraisal management raised the vital issue of how to achieve stakeholder consensus on performance measures that are acceptable to the various interest groups involved (Fisher, 1995, 1994).

Simmons (2002) provides an “expert witness” perspective of performance appraisal in universities and colleges. In his opinion, it can be concluded that *“firstly, notwithstanding the significant body of opinion critical of performance appraisal, the practice is not going to disappear. It is interesting that those who put forward trenchant criticisms of appraisal are less forthcoming as to how key decisions on performance would be made in its absence.... Second, there is significant evidence that traditional forms of performance appraisal are less appropriate for knowledge-based organizations which need to maximize the flexibility and innovation of professionals in order to compete effectively.... Third, the stakeholder synthesis approach is an effective way of developing robust and equitable performance management system that recognizes stakeholder interests while giving particular importance to the concern of those knowledge-based workers whose commitment is central to organizational success.”*

Conclusion

It is evident from the literature survey that no consensus has been arrived at for an ideal approach to performance appraisal system either in the corporate sector or in the educational sector. While it may be perceived that measuring performance in an industrial establishment may not pose serious problems barring that it may be difficult to separate individual performances from group or team performance as the output cannot be identified with a particular individual, the case is not the same with regard to performance appraisal of teaching faculty.

In case of educational institutions, measuring performance is likely to prove more challenging and can be attributed to one or more of the following:

- 1 The definition of the role of teachers may considerably differ from institution to institution depending on the vision and mission of the institution.
- 2 The attributes for measuring performance may not only differ but may have varying weights assigned in evaluating performance from institution to institution due to differences in their vision and mission.
- 3 All attributes being assessed may not lend themselves to objective assessment. For example, any kind of student performance in examination cannot be totally ascribed to the teaching proficiency of the teachers.

Hence, the way forward for the researchers is to focus on the evaluative perspective of the faculty appraisal system.

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DEATH OF PORTFOLIO DIVERSIFICATION

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A cardinal principle of investment management is to *identify* and *diversify* risk. Contrary to popular belief, diversification may not be a useful risk management tool during a financial crisis. All equity markets seem to be moving in the same direction erasing the gains of diversification and agreeing with King and Wadhvani's idea of market contagion. While the global investors have been knowledgeable about this phenomenon since the early nineties, they would look at historical correlation coefficients across markets while building an optimal portfolio. Hence, most financial institutions suffered deep losses because of the happening of unexpected events on a grand scale. Thus paper throws light on the changing correlation coefficients across equities for local and global benchmark indices from the standpoint of a UK-based investor. It will enable them to know how bad can be bad when the market scenario changes from bad to worse.

Introduction: Diversification is defined as the “art of dividing investment funds among a variety of securities with different risk, reward, and correlation statistics so as to minimize unsystematic risk. However, concentration is the exact opposite of diversification and is defined as “risk related to lack of variety in investing”. “Don't put all your eggs in one basket”. Dropping the basket will break all the eggs. Placing each egg in a different basket is more diversified. There is more risk of losing one egg, but less risk of losing all of them. In finance, an example of an undiversified portfolio is to hold only one stock. This is risky; it is not unusual for a single stock to go down 50% in one year. It is much less common for a portfolio of 20 stocks to go down that much, even if they are selected at random.

Diversification across asset classes makes financial planning more reliable and predictable by reducing the variations in portfolio performance from year to year. That approach has its roots in the principles of Modern Portfolio Theory (MPT). Yet when MPT is misapplied, it does not provide the roadmap to secure investing and leaves investors vulnerable to substantial risk. MPT was developed in the early 1950's by Nobel Prize winner Harry Markowitz. His principles were simple to understand and striking by their implications: diversification can eliminate the risks that don't provide returns, while retaining the risks that do provide returns. Dr. Markowitz along with Merton Miller and William F. Sharpe further developed these principles into the Capital Asset Pricing Model (CAPM).

From Jonathan Burton's interview with Dr. Sharpe, he reports: “*Every investment carries two distinct risks, the CAPM explains. One is the risk of being in the market, which William Sharpe called systematic risk. This risk, later dubbed "beta," cannot be diversified away. The other— unsystematic risk—is specific to a company's fortunes. Since this uncertainty can be mitigated through appropriate diversification, Sharpe figured that a portfolio's expected return hinges solely on its beta—its relationship to the overall market. The CAPM helps measure portfolio risk and the return an investor*

can expect for taking that risk." He studied how diversification reduced the risk of a financial portfolio while increasing the overall average return. His theories revolutionized investing and formed the foundation of portfolio management as it is practiced today (Lowther, 2011).

Diversification can come in many different forms. Markowitz only dealt with the big picture asset classes of stocks, bonds and cash. Later variations expanded the number of assets and even broke each into sub-asset classes. Stocks, for example, can mean large, medium or small company stocks. They can also include foreign or domestic, growth or value, dividend or non-dividend paying stocks. Other asset classes include tax-free bonds, commodities, real estate, precious metals, natural resources, junk bonds, special situations - the list goes on. Harry Markowitz called diversification one of the economic world's rare "free lunches." It provides risk reduction without a corresponding return diminution.

Markowitz (1952) showed that instead of investing all of an investor's money in one single stock, it is better to buy several stocks to decrease portfolio risk. The idea is that some stocks are not strongly correlated with others and the poor performance of one stock may be offset by positive performance of another. When examining a complete portfolio it is imperative to consider fully the important factors that comprise core investable assets. Dr. David Swensen, the Nobel Prize winner in economics, who averaged returns of 16% over two decades for the Yale Endowment Fund has identified three characteristics of core assets that should be part of our evaluation to help reduce systematic or market risk.

1. Use assets to hedge the market risk of other assets. For example, real estate is a good hedge against the ravages of inflation, while bonds offer protection from a financial crisis. By recognizing these inherent characteristics of our core assets, we can hedge some of the market risk inherent in an investing portfolio.
2. There should be fundamentally based market returns from the asset class. If we are depending only on active management of the asset class, we are increasing the risk of losses by not being invested in the market.
3. Rely on liquid markets where there is a ready market to buy and sell our core asset. Assets that cannot be immediately priced and sold are subject to sudden and deep losses. Liquid markets give us the opportunity to employ stop loss techniques should the market turn against us as in a recession.

Literature Review:

For most investors, the risk they take when they buy a stock is that the return will be lower than expected. In other words, it is the deviation from the average return. Each stock has its own standard deviation from the mean, which Modern Portfolio Theory calls "risk". Although a portfolio consists of certain assets, it is a specific entity with measurable qualities as there is a relationship between the assets in question. Therefore, a portfolio is not simply a sum of the assets it includes (Ceylan, Korkmaz, 1998). The basic motive behind portfolio construction is risk dispersion. Since the returns on the assets constituting a portfolio do not move in the same direction, the risk of the portfolio will be lower than that of a single asset. From this principle it follows that the traditional portfolio management approach is based on the rule of increasing the number of assets in a portfolio. This approach could be described as "not to put all the eggs in the same basket" (Fisher, Jordan, 1991).

The traditional portfolio approach is treated as an art with its own specific rules and principles in portfolio management. The ability to use these rules and principles as well as other theoretical tools depends on the accumulated information and experiences that change from person to person

(Christy, Clendenedin, 1974). Considered as the father of the modern portfolio approach, Henry M. Markowitz demonstrated that risk could be reduced without giving up the expected returns by taking into account the relationship between the financial asset returns and combining in the same portfolio the assets that are not in a completely positive relationship (Markowitz, 1959). Markowitz's MPT has made a new paradigm of portfolio selecting for investors in order to form a portfolio with the highest expected return at a given level of risk tolerance (Markowitz, 1952; Oh, Kim, Min, Lee, 2006).

Though there were references to the concept of risk in portfolio management up until the 1950s, there were no specific tools to measure it. Markowitz was the first to suggest that changes in the actual returns on a portfolio and the standard deviation or the variance of the new portfolio could be used to measure the risk of the portfolio (Markowitz, 1959). In the Markowitz approach, selecting the most appropriate portfolio requires calculating the correlation between all assets and all possible combinations of assets, along with the expected returns and risk of each asset included in the portfolio (Karaşin, 1986).

In a case with N number of stocks, the number of the covariance and correlation coefficients to be known is $N*N-1/2$. To put it another way, one needs to know the covariance or correlation between any two stocks that could be included in the portfolio (Sang, Lerro, 1973). Consequently, in order to construct an efficient portfolio in the Markowitz model could be summarized as follows, one needs to (Fabozzi, 1999):

- ✓ Calculate the expected return rates for each stock to be included in the portfolio,
- ✓ Calculate the variance/standard deviation (risk) for each stock to be included in the portfolio,
- ✓ Calculate the covariance/correlation coefficients for all stocks, treating them as pairs.

Ballestero and Pla'Santamaria (2002) discuss the essence of mean-variance theory by stating that it is a normative or descriptive model suggesting that investors appetite for risk is low and compatible with the expected profitability based on past returns, mean values and variances. The authors further describe that obtaining the optimal portfolio along the efficient frontier from the feasible portfolios is a challenge as the variances and the means generally move together, therefore through the investors preferences optimal portfolios can be selected. Alcock and Hatherly (2007) distinguish between the mean-variance and the asymmetric efficient frontiers, with the later providing economic value as a result of a reduction in the erosion of return compared to the former. Moreover, the researchers argue that portfolio construction using the mean-variance portfolio theory tends to lower the risks and the diversification capabilities of the portfolios, thus lowering the potential returns. However, using the copula theory to portfolio management separates the correlation structures and marginal returns and thus significantly improves the investment decision-making process.

Further insight in the composition of portfolios is provided by the Generalised Autoregressive Conditional Heteroskedasticity (GARCH) model which has been widely used to reduce the time-varying characteristics of variances and correlations and improve the resultant portfolio optimization processes, especially when unrestricted diversification into emerging markets is to be achieved (Cha and Jithendranathan; 2007).

Later studies by Sharpe (1964), Lintner (1965) and Mossin (1966) on portfolio construction further investigated the trend of prices in case all savers invest in financial assets and particularly in share certificates in accordance with the modern portfolio theory (Zorlu, 2003). On the topic of strategic asset allocation, we have been seeing more writings on the various versions of risk-based asset allocation approaches applied to a global universe of assets, especially in cases of pension and

endowment management. See Allen (2010) and Foresti and Rush (2010), for examples. A common finding among these studies is the superior risk-adjusted return of a portfolio that is constructed in such a way that assets are expected to contribute equal risk to the whole portfolio — an approach commonly labeled as Risk Parity. In a Risk Parity approach, only risk forecasts are used as inputs and no forecasts of returns are required.

In a study covering the period between August 1999-September 2003, Ulucan (2002) applied the Markowitz Quadratic Programming model on the 50-month returns of the companies enrolled in ISE-30 index. This two-step study first constructed portfolios yielding the same risk-returns as the index, and then continued in the second step with constructing portfolios with the same returns as but with lower risks than the index. Drawing upon the fortnightly, monthly, and tri-monthly return values of the companies enrolled in the ISE-100 index as recorded between January 2003-July 2004, the study by Yalçın, Ataner, Boztosun (2005) applied the Markowitz Quadratic Programming model to calculate the portfolio weights with return levels equal to the index but with lower risks and those with risk levels equal to the index but with higher returns.

If we simply choose a period of history, and calculate 'optimal portfolios' with the benefit of perfect hindsight, we can find some combination of investments which have generated high returns with low risk. This is the problem with 'portfolio optimization' on historical data: you end up estimating 'optimal portfolio' returns that are not achievable in real life. Forward-looking models compensate for these effects by generating statistical outlooks for portfolio performance that account for the uncertainties in the future.

One of the most enduring puzzles in investment management is so-called “home bias”- tendency for investors to disproportionately weight their asset portfolios towards domestic securities and thereby forego gains to international diversification. Errunza *et al* (1999) argue that domestic US investors need not go to foreign markets to obtain international diversification. Rather, they can implement home-based foreign diversification using foreign stocks and other foreign risks in the US. At the same time, the betas of foreign stocks cross-listed in the US increase in the US after the cross-listing, as documented in the literature surveyed by Karolyi (2006).

Prior research finds that many institutional investors deviate from holding the market portfolio (e.g., Brown and Goetzmann, 1997; Daniel, Grinblatt, Titman, and Wermers, 1997). Institutions have incentives to systematically tilt away from the market index when they face stringent fiduciary responsibilities (Del Guercio, 1996) or when they adopt investment styles (e.g., growth, small-cap) as a competitive strategy to attract a stable investor base (O'Barr and Conley, 1992).

In recent years, we have witnessed an alarmingly large and growing amount of literature on portfolio construction approaches focused on risks and diversification rather than on estimating expected returns. Numerous simulations applied to different universes have been documented in support of these approaches based on their apparent outperformance versus passive market capitalization-weighted or static fixed-weight portfolios. Many studies attribute the better performance of these risk-based asset allocation approaches to superior diversification. Given the absence of clearly defined investment objective functions behind these approaches as well as the metrics used by these studies to evaluate ex post performance, Lee puts these approaches into the same context of mean-variance efficiency in an attempt to understand their theoretical underpinnings.

In doing so, he hopes to shed some light on what these approaches attempt to achieve and on the characteristics of the investment universe, if indeed these approaches are meant to approximate mean-variance efficiency. Rather than adding to the already large collection of simulation results, Lee uses some simple examples to compare and contrast the portfolio and risk characteristics of these approaches. He also reiterates that any portfolio which deviates from the market capitalization-weighted portfolio is an active portfolio. He concludes that there is no theory to predict, *ex ante*, that any of these risk-based approaches should outperform.

One of the most enduring puzzles in international macroeconomics and finance is the tendency for investors to disproportionately weight their asset portfolios towards domestic securities and thereby forego gains to international diversification. The puzzle in international macroeconomics has focused upon the tendency for consumers to be underinsured against aggregate shocks that could otherwise have been hedged by holding foreign assets (Backus, Kehoe and Kydland; 1991). In the financial economics literature, the puzzle has been based upon the observation that investor portfolios hold less foreign securities than implied by predictions of standard mean-variance optimization principles (Pastor, (2000).

According to Lewis (1999), in both the macroeconomics and financial economics frameworks, the underlying source of diversification arises from the relatively low correlation in asset returns across countries. A number of explanations have been proposed to explain this phenomenon, including the transactions costs of acquiring and/or holding foreign assets. The transactions may be in the form of outright brokerage type costs or more subtle information costs. On the other hand, Errunza *et al* (1999) have argued that transactions costs cannot be very high for stocks of foreign companies that trade in the United States on exchanges since they are not substantially more expensive to acquire than domestic stocks. Also, the foreign stocks traded on the New York Stock Exchange (NYSE) must go through the same disclosure requirements as domestic companies, including provision of the US-based accounting and financial statements. It therefore seems less likely that the information costs are significantly higher for these stocks. Interestingly, Errunza *et al* (1999) find that domestically traded stocks can span the risks of foreign markets. They dub this effect “home-made diversification.”

Since domestic investors need not go to foreign capital markets to diversify internationally. This international “home-made” diversification depends critically on sustained low correlations between the cross-listed foreign stock returns and the US stock market. However, there are at least two reasons to doubt the stability of this relationship over time. First, a number of studies have found that foreign stocks become more correlated and/or have higher betas with the US market after cross-listing. Second, foreign stocks have a strong country risk component. The growing impression in recent years, however, is that the returns from international stock markets have become more correlated over time due to a general integration of markets.

Traditional asset pricing theories suggest that only non-diversifiable risk is priced. In solving for equilibrium where investors are able to diversify all risks except market risk, these models often rely on strong assumptions (e.g., homogenous beliefs, perfect markets). In the case of CAPM, such assumptions allow for a simple expression of expected returns as a function of a firm's market risk. One possible explanation for deviations from the CAPM is that investors are constrained in some way from holding diversified portfolios (e.g., Levy, 1978; Merton, 1987; Malkiel and Xu, 2006; Fama and French, 2007). For example, Fama and French (2007) conclude that distortions of expected returns away from the theoretical models can be large when investors with “asset tastes” account for substantial invested wealth and take positions much different from the market portfolio. If a firm's

investors are unable or unwilling to diversify away a particular type of risk, then the firm's exposure to this risk should be related to its expected returns.

The Present Study:

Rational investors are concerned about maximizing returns while minimizing risk. Hence, a UK-based institutional investor with primary exposure to domestic equity markets also invests in the most liquid equity markets of the world such as USA and Japan to achieve portfolio diversification. For this purpose, the correlation between FTSE100 with that of S&P500 and Nikkei225 has been chosen as equity benchmarks for the USA and Japanese markets respectively. This study tries to determine: Whether geographical diversification across equities in UK and abroad (USA and Japan) helps in reducing concentration risk?

This study looks at the correlation patterns across equity market indices for the review period 1st January, 2006 through 31st December, 2010 with special focus on the correlation coefficient during the crisis situation of 2008. This is being done in order to determine the impact of a diversification strategy on an investment portfolio. The quantitative analysis of correlation for this study is restricted to: FTSE100 Vs S&P500; and FTSE100 Vs Nikkei225. Correlation values are a good indicator of the degree of integration between two financial markets. Ideally, if two markets are negatively correlated, we can reap the full benefits of diversification and construct an optimal portfolio as suggested by Markowitz. However, if correlation is positive, there is less scope in betting on diversification.

Findings of the Study:

A) *Equity Market Review:*

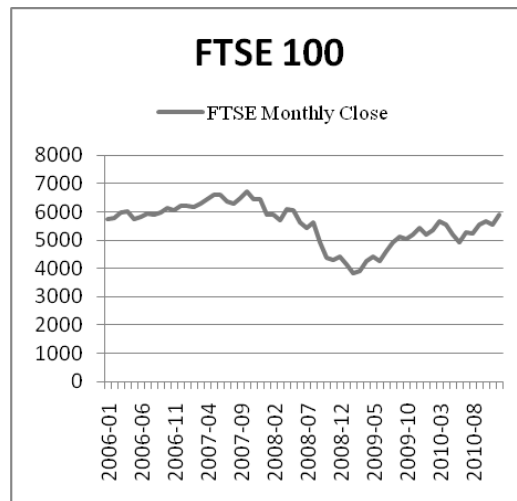
During the review period of five years, the global equity markets have gone through turmoil and exposed investors to a high degree of risk. In two out of the five years, they generated returns lower than the risk-free rate. If an investor were to hold the benchmark indices for a five year period, they would have earned low returns in case of UK (6.33%) while in case of the USA and Japan they would have got returns of 6.09% and -2.22% respectively. It doesn't mean that the markets were lackluster all through these five years.

Table – 1

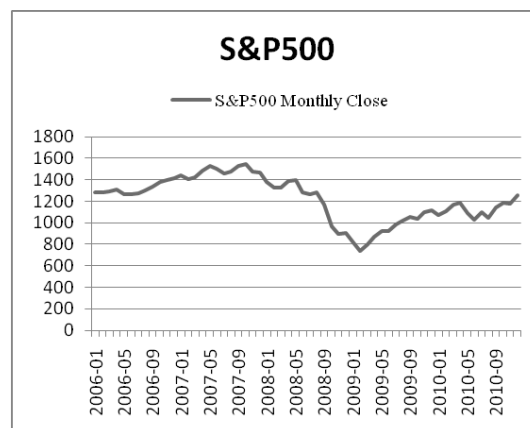
	FTSE100	S&P500	NIKKEI225
Years	Annualized Returns (%)	Annualized Returns (%)	Annualized Returns (%)
2006	8.00	10.78	3.46
2007	4.09	2.09	-11.94
2008	-24.59	-34.52	-34.82
2009	30.43	34.99	31.92
2010	13.70	17.13	0.30
2006-10	6.33	6.09	-2.22

Equity markets had gone through a roller coaster ride exposing investors to greater volatility and thereby higher risk. The statistical range for the UK (55.02%), the USA (69.51%) and Japan (66.74%) indicates that the American market had been extremely volatile. It is in this context, portfolio diversification strategy plays a key role as each market is risky in isolation but becomes relatively stable across geographical markets within the same asset class.

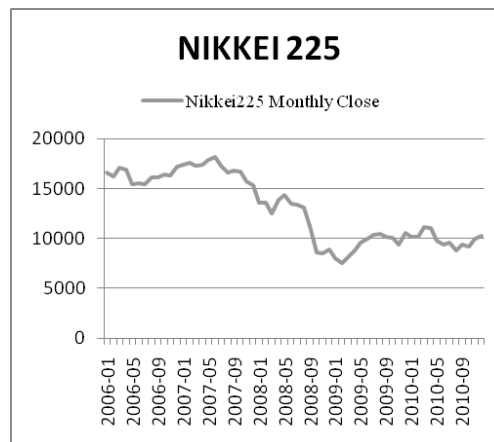
UK Markets: In UK, the FTSE had provided 8.00% for 2006 this is despite a dip of -3.15% during Q2. Markets remained dull during most part of 2007 when FTSE fell sharply in Q4 and wiped out the gains of the preceding two quarters. Eventually, it posted returns of 4.09% for the whole year. As the year 2008 started on a bearish note, the markets tanked 3 out of the 4 quarters and registered -24.59% for the whole year. Despite starting again on a weak sentiment in 2009 and clocking -5.39% in Q1, the year ended with positive gains of 30.43%. Another sharp dip was witnessed in Q2 of 2010 when markets corrected by 11.46% but the year ended on a positive note with gains of around 13.70%. Overall, FTSE generated 6.33% returns on an annualized basis.



USA Markets: In USA, the S&P had generated higher returns of 10.78% for 2006 this is despite a dip of -2.74% during Q2. Markets remained insipid for most part of 2007 when S&P dropped by 5.35% in Q4 and wiped out the gains of the preceding quarter. In aggregate, it posted returns of 2.09% for the whole year. The year 2008 was the worst year as the markets were in red all the four quarters and registered -34.52% losses for the whole year. The next year was the best year ever with gains of 34.99% and wiping out the loss of the previous year. The positive sentiment hit a roadblock in Q2 of 2010 when the markets retreated by -13.44%. However, the year ended with healthy gains of 17.13%. Overall, S&P generated 6.09% returns on an annualized basis.



Japanese Markets: In Japan, relative to other markets the NIKKEI posted the lowest returns of 3.46% for 2006 because of a sharp fall of -8.29% during Q2. Markets remained bearing during most part of 2007 when NIKKEI fell in 3 out of the 4 quarters. Fall was the steepest in Q4 when the losses of -8.54% was higher than the quarterly losses of 2006. Eventually, it posted returns of -11.94% for the whole year. If the year 2007 was bad, 2008 was worst as markets witnessed a free fall during the first 3 quarters and posted marginal gains of 3.29% in Q4 to record -34.82% for the whole year. In 2009, markets consolidated around Q1 and posted the highest ever gains of 12.80% in Q2 and closing the year with smart gains of 31.92%. However, this market mood was short lived as Q2 of 2010 witnessed deepest correction of 15.15% ending the year with a flat growth of 0.30%. Overall, NIKKEI generated -2.22% returns on an annualized basis.



The annual correlation coefficients of equity markets tell a different story altogether. As we can observe from the Table-2, the correlation based on monthly % change in index values between FTSE100 and S&P500 is high and rising for the past 5 years. This kind of a trend severely curtails the benefits of diversification.

Table - 2
FTSE100 CORRELATION with S&P500 and NIKKEI225

Year	FTSE100 vs S&P500	FTSE100 vs Nikkei225
2006	0.52	0.26
2007	0.55	0.36
2008	0.53	0.50
2009	0.66	0.18
2010	0.68	0.34
2006-10	0.84	0.64

Data Source: EconStats.com

If we were to focus on select periods and check the correlations across the indices. The first major period was the 2008 Great Recession (December 2007-June 2009). Over this 18 month period, correlations for the indices with the exception of the FTSE 100 were higher than the general 5 year period. It appears that correlations are increasing, which makes a global basket of equities more volatile than with lower correlations. This analysis did not look at whether volatility was increasing as well but assumes that it remains at least approximately the same. It also appears that correlations increase even more now during extreme events.

Table - 3
Correlations to S&P 500 for the Great Recession

Index	Correlation to S&P 500
S&P 500	100.0%
Nikkei 225	87.5%
FTSE 100	86.8%

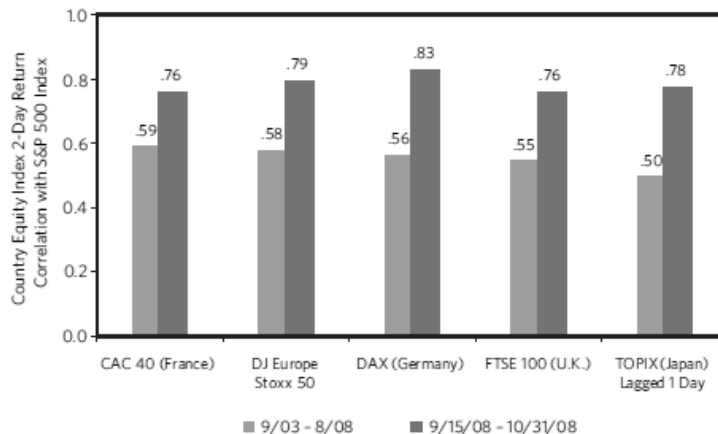
These correlation coefficients are in line with the historical trends and getting increasingly converged. If we were to look at 5-year trend for both FTSE and Nikkei with S&P, it appears that correlations among these indices are increasing over time. However, the correlation between the FTSE 100 and the S&P 500 was much higher in the late 1980s than during the 1990s, which suggests that the correlations can shift over time. Instead of staying focused on equity markets in UK, it pays to bet on UK and USA markets. However, a better alternative would be to invest in UK and Japan as this combination is less risky because of lower correlation. It is abundantly clear that investors with a 5-year horizon should not be looking at diversification of equity across geographical markets because the correlation coefficient is not only positive but also high and growing.

Table - 4
Correlations of Major Indices to S&P 500

Period	S&P 500	FTSE 100	Nikkei 225
April 2006 - April 2011	100%	87.9%	74.9%
April 2001 - April 2006	100%	85.8%	45.8%
April 1996 - April 2001	100%	74.6%	52.0%
April 1991 - April 1996	100%	56.5%	22.8%

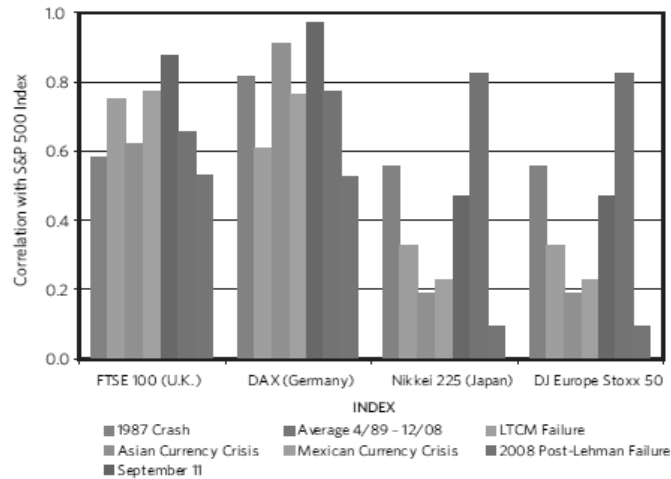
Source: Yahoo!Finance for Indices level.

If we have to look at other equity markets within Europe in the aftermath of the failure of Lehman Brothers, correlations have increased across the board indicating that diversification strategy is least effective during the crisis situation. The response of all the markets had been the same in all crisis situations. As the correlation coefficients of all the leading equity markets with that of USA is reflected in the below histogram.



Source: Bloomberg

Irrespective of the nature of the event be it the 1987 Stock market crash, 1997 Asian currency crisis, 1994 Mexican currency crisis, 1998 LTCM failure, 2001 terrorist attacks, or 2008 Lehman Brothers collapse the correlations had been significantly on the higher side indicating that diversification across equities is also not a solution to concentration risk.



Source: Bloomberg and Mellon Capital Management

Conclusion:

Diversification is a great risk management tool during bull markets (2007) due to its ability to reduce volatility, smooth portfolio returns, and help mitigate individual asset risk. When investment is restricted to an index, it helps eliminate individual security risk. This means that in a properly diversified portfolio, some indices will outperform the market, some will underperform, but overall the portfolio should provide more consistent returns as opposed to the sometimes wild fluctuations inherent in any one index. While proper diversification is beneficial, over-diversification may not add value and may even hinder performance.

As the world becomes smaller because of economic integration, correlations should be expected to increase across all markets. At one point in time Japanese equity markets offered negative and low correlation. But as people invest in a greater number of markets in search for low-correlation assets, these sought-after markets become more correlated as a result of increased interest. Over time, investors have gained greater access to international markets, which were hitherto difficult to invest. So when investors liquidate entire portfolios, they are likely to be selling in many different markets in search of liquidity. This is the reason for negative returns across the board in the year 2008.

Markets are not only inter-dependent making diversification an ineffective strategy but are also impacted by a financial contagion. The chain reaction can be felt across all financial markets and asset classes. During Bear markets (2008-10), many assets tend to correlate more highly and can defeat the general purpose of the diversification strategy. This is because asset prices increase primarily on fundamentals. For example, countries with rapidly expanding economies will see their stock indices grow faster, and commodities with especially high demand will see their prices increase more than others.

However during bear markets, institutional investors liquidate holdings to meet investor redemptions and other liquidity needs, rather than selling for fundamental reasons, which can cause asset prices to drop across the board. Overall, there seems to be growing inter-dependency across financial markets leading to the contagion as discovered by King and Wadhvani. This is defeating the very purpose of a portfolio diversification strategy as we are not able to build an efficient portfolio that can weather the storm in all market scenarios.

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AURORA'S BUSINESS SCHOOL
HYDERABAD



Admissions for the Batch of 2013-15

Financial Assistance from the Institution

Facilitating Loans

The school will help the students in the procedure of getting educational loan from the banks. The educational loan will cover the tuition fee and also the accessories supporting the process of learning.*

Teaching Assistance

Students with expected skills and expertise are chosen to assist the professors in the process of teaching. The honorarium in the form of reduction in the tuition fee will be provided up to 35% of the tuition fee.#

Fee Waiver

The school also provides partial fee waiver on the tuition fee based on the academic background, extracurricular activities and the score in the qualifying examinations. The fee waiver can extend up to 50% of the tuition fee.#

Programmes Offered

- 2 year full-time PGDM (**General**)
- 2 year full-time PGDM (**Marketing**)
- 2 year full-time PGDM (**Hospital Management**)
- 3 year part-time PGDM

* Aurora's Business School will only facilitate the educational loan.

The amounts sanctioned either as teaching assistance or fee waiver can only be redeemed from the fee or will not be paid the students in cash or cheque.

www.absi.edu.in

SUSTAINABLE ENERGY DEVELOPMENT IN INDIA

Mrs. Safia Binte Omer

Energy is a necessity and sustainable renewable energy is a vital link for industrialization. At 500W per capita, the consumption of energy in India is one of the lowest in the world. However, this figure is expected to rise sharply due to high economic growth and rapid industrialization. Due to erratic supply of power and acute energy scarcity, industrial growth is hampered. There is an urgent need for transition from petroleum based energy systems to one based on renewable resources so as to decrease reliance on depleting reserves of fossil fuels and to mitigate climate change. Additionally, renewable energy has the potential to create plethora of employment opportunities at all levels, especially in rural areas.

INTRODUCTION:

India is facing an acute energy scarcity which is hampering its industrial growth and economic progress. Setting up of new power plants is inevitably dependent on import of highly volatile fossil fuels. Thus, it is essential to tackle the energy crisis through renewable energy resources, such as biomass, solar, wind and geothermal energy. India is heavily dependent on fossil fuels for its energy needs. Most of the power generation in India is through coal and mineral oil-based power plants which contribute heavily to greenhouse gas emissions. The average per capita consumption of energy in India is around 500 W which is much lower than that of developed countries like USA, Europe, Australia, and Japan.

However, this figure is expected to rise sharply due to high economic growth and rapid industrialization. Energy is a necessity and sustainable renewable energy is a vital link in industrialization and development of India. A transition from conventional energy systems to those based on renewable resources is necessary to meet the ever-increasing demand for energy and to address environmental concerns.

Renewable Energy Sources in India:

India has a vast supply of renewable energy resources, and it has one of the largest programs in the world for deploying renewable energy products and systems. Indeed, it is the only country in the world to have an exclusive ministry for renewable energy development, the Ministry of Non-Conventional Energy Sources (MNES). Since its formation, the Ministry has launched one of the world's largest and most ambitious programs on renewable energy. Based on various promotional efforts put in place by MNES, significant progress is being made in power generation from renewable energy sources.

With a commitment to rural electrification, the Ministry of Power has accelerated the Rural Electrification Program with a target of 100,000 villages by 2012. The Ministry of Power has set an

agenda of providing Power to All by 2012. In recent years, India has emerged as one of the leading destinations for investors from developed countries. This attraction is partially due to the lower cost of manpower and good quality production. The expansion of investments has brought benefits of employment, development, and growth in the quality of life, but only to the major cities. This sector only represents a small portion of the total population. The remaining population still lives in very poor conditions. The following are the renewable energy sources:

Solar Energy: A clean and renewable resource with zero emission. It has got tremendous potential which can be harnessed using a variety of devices. With recent developments, solar energy systems are easily available for industrial and domestic use with the added advantage of minimum maintenance.

Wind energy: It is one of the most efficient alternative energy sources. There has been good deal of development in wind turbine technology over the last decade. It could be combined with solar energy, especially for a total self-sustainability project.

Hydro Electric Power: India has huge hydro power potential out of which around 20 % has been realized so far. New hydro projects are facing serious resistance from environmentalists. Resettlement of the displaced people with their lands becomes a major issue.

Biomass Energy: It can play a major role in reducing India's reliance on fossil fuels by making use of thermo-chemical conversion technologies. In addition, the increased utilization of biomass-based fuels will be instrumental in safeguarding the environment, creating new job opportunities, sustainable development and health improvements in rural areas.

Power sector in India:

India has the world's fifth largest installed capacity at 185.5 GW as of November 2011. Thermal power plants constitute 65% of the installed capacity, hydroelectric about 21% and the rest being a combination of wind, small hydro, biomass, waste-to-electricity, and nuclear. In terms of fuel, coal-fired plants account for 65% of India's installed capacity, compared to South Africa's 92%; China's 77%; and Australia's 76%. In December 2011, over 300 million Indian citizens had no access to electricity. Those who did have access to electricity in India, the supply were intermittent and unreliable. About 70% of India's energy generation capacity is from fossil fuels. India is largely dependent on fossil fuel imports to meet its energy demand. By 2030, India's dependence on energy imports is expected to exceed by 53%.

Problems faced by Power Sector in India:

Electricity distribution network in India is highly inefficient compared to other networks in the world. India's network (Transmission & Distribution) losses exceeded 32% in 2010, compared to world average of less than 15%.

- Government giveaways such as free electricity for farmers, partly to curry political favor, have depleted the cash reserves of state run electricity distribution system. This has financially crippled the distribution network, and its ability to pay for power to meet the demand.
- Despite abundant reserves of coal, India is facing a severe shortage of coal. The country is not producing sufficient coal to meet the demand of power plants. India is facing problems in expanding its coal production capacity as most of its coal lies under protected forests or designated tribal lands. For mining activity or land acquisition India faces political and litigation problems.

- Shortage of natural gas domestically.
- India's nuclear power generation potential has been slowed down by political activism since the Fukushima disaster in Japan.
- Lack of clean and reliable energy sources causing about 800 million people in India to continue using traditional energy sources like fuel, wood, agricultural waste and livestock dung for cooking and other domestic needs.

Energy Poverty:

Energy poverty is one of the challenges faced by India. Approximately 300 million people in India live without access to electricity. India's power sector is also facing problems like project management and execution, ensuring availability of fuel quantities and qualities, land acquisition, environmental clearance at state and central government levels, and training of skilled manpower to prevent talent shortages for operating latest technology.

Demand Estimate- Working group on Power

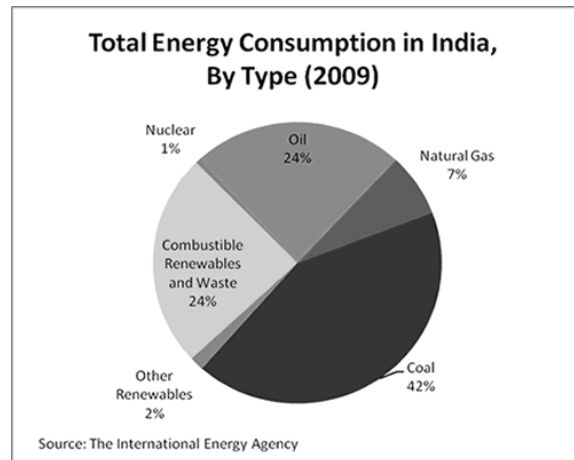
Year	GDP- 8%		GDP-9%	
	Requirement (MW)	Addition Requirement (MW)	Requirement (MW)	Addition Requirement (MW)
2006-2007	140000	-	140000	-
2011-2012	206000	66000	215000	75000
2016-2017	303000	97000	331000	116000
2021-2022	445000	142000	510000	179000
2026-2027	655000	210000	785000	275000
2031-2032	962000	307000	1207000	422000

Source: Infrastructure Leasing and Financial Services

Energy Consumption and Production of India:

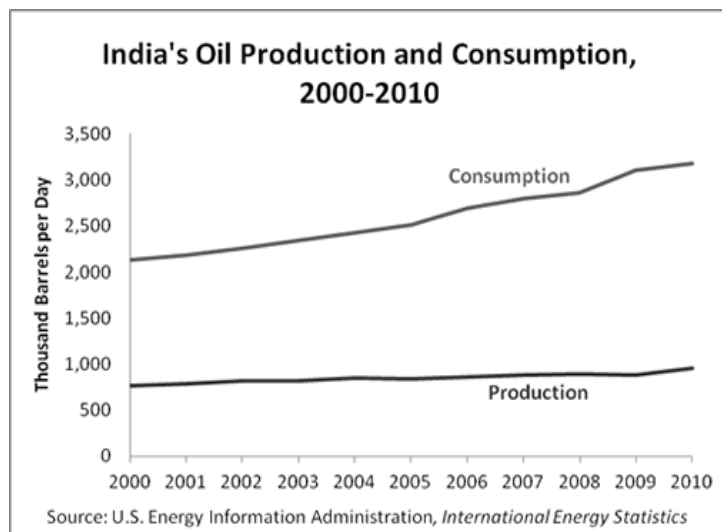
Since the 1980's, India has encountered a negative balance in overall energy consumption and production. This has resulted in the need to purchase energy from outside the country to supply and fulfill the needs of the entire country. India has voracious appetite for energy as it houses 15% of the world's population and enjoys a decent rate of economic growth rate of around 7%. This increases the aspiration of its people to better quality of life. But the country lacks sufficient domestic energy resources, particularly of petroleum and natural gas, and must import much of its growing requirements. Currently, about 35% of India's commercial energy needs are imported.

India consumes 3.7% of the world's commercial energy making it the 5th largest consumer of energy globally. India boasts a growing economy, and is increasingly a significant consumer of oil and natural gas. According to the International Energy Agency (IEA), hydrocarbons account for the majority of India's energy use. Together, coal and oil represent about two-thirds of total energy use. Natural gas now accounts for a 7% share, which is expected to grow with the discovery of new gas deposits.



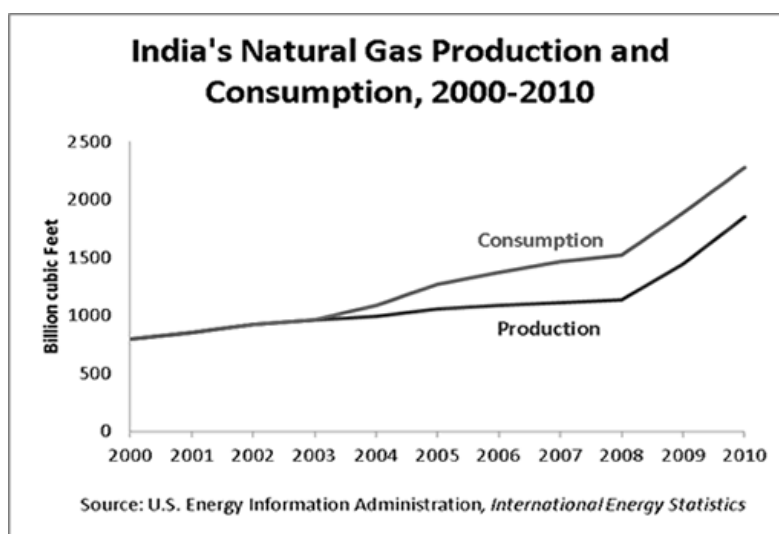
Oil Production and Consumption:

The Indian government continues to hold licensing rounds in an effort to promote exploration activities and boost domestic oil production. According to oil and Gas Journal (OGJ), India had approximately 5.7 billion barrels of proven oil reserves as of January 2011, the second-largest amount in the Asia-Pacific region after China. India produced roughly 950 thousand barrels per day (bbl/d) of total liquids in 2010, of which 750 bbl/d was crude oil. The country consumed 3.2 million barrels per day (bbl/d) in 2010. The combination of rising oil consumption and relatively flat production has left India increasingly dependent on imports to meet its petroleum demand. In 2010, India was the world's fifth largest net importer of oil, importing more than 2.2 million bbl/d, or about 70 percent of consumption. A majority of India's crude oil imports come from the Middle East, with Saudi Arabia and Iran supplying the largest shares. Iranian oil's share of Indian imports has decreased in recent years, largely due to issues with processing payments.



Natural Gas Production and Consumption:

Despite major new natural gas discoveries in recent years, India continues to plan on gas imports to meet its future needs. According to Oil and Gas Journal, India had approximately 38 trillion cubic feet (Tcf) of proven natural gas reserves as of January 2011. International Energy Agency (IEA) estimates that India produced approximately 1.8 Tcf of natural gas in 2010, a 63 percent increase over 2008 production levels. The bulk of India's natural gas production comes from the western offshore regions. Natural gas demand is expected to grow considerably, largely driven by demand in the power sector. The power and fertilizer sectors account for nearly three-quarters of natural gas consumption in India. Natural gas is expected to be an increasingly important component of energy consumption as the country pursues energy resource diversification and overall energy security.



Electricity Generation:

In 2008, India had approximately 177 gigawatts (GW) of installed capacity and generated 761 billion kilowatt hours. India also imports marginal amounts of electricity from Bhutan and Nepal and has signed an agreement to begin importing power from Bangladesh. India suffers from a severe shortage of electricity generation capacity. According to the World Bank, roughly 40 percent of households in India are without electricity. In addition, blackouts are a common occurrence throughout the country's main cities. Further, to make matters worse, the aggregate demand for electricity in the country is on the rise and is outpacing increases in installed capacity. Additional capacity has failed to materialize in India in the light of stringent market regulations.

Need for Renewable Sources:

India currently suffers from a major shortage of electricity generation capacity, even though it is the world's fourth largest energy consumer after United States, China and Russia. The IEA estimates India needs an investment of at least \$135 billion to provide universal access of electricity to its population. The International Energy Agency estimates India will add between 600 GW to 1200 GW of additional new power generation capacity before 2050. The technologies and fuel sources which India adopts may make significant impact to global resource usage and environment.

Renewable Energy in India

India Renewable Capacity: 78.7 GW renewable capacity to be added during the period from 2007 –2012
Wind: 10.5 GW added 2007–2012
Small hydro (< 25 MW): 1,400 MW added 2007–2012
Biomass cogeneration: 1,700 MW added 2007–2012
Waste-to-energy: 0.4 GW added 2007–2012
Solar hot water: 15 million m ² (10.5 GWth) by 2017; 20 million m ² (14 GWth) by 2022
Solar PV: 12 GW by 2022, including 10 GW grid-connected and 2,000 MW off-grid
Rural lighting systems: 20 million by 2022

Source: Renewables 2011 : Global Status Report

Drivers for Renewable Energy:

- A large untapped potential
- Concern for the environment
- The need to strengthen India's energy security
- Pressure on high-emission industry sectors from their shareholders
- Rising prices of oils and gases
- Ample resources and sites available
- Abundant sunshine
- Increased financing options
- Government incentives
- Benefits of renewable energy
- Avoid the high costs involved in transmission capital expenditure.
- Avoid distribution losses
- Avoid recurring fuel cost
- Boost the rural economy

Future of power sector in India:

Due to the growth of industries in India, the demand for energy has grown at an average of 3.6% per annum over the past 30 years. During the tenth plan, only 23,000MW of capacity was added against the original target of 41,000 MW. During the 11th plan, a target of 78,000 MW has been set. Recognising the importance of energy poverty, the Government of India had initiated and implemented various policies and programmes, notably "Power for All by 2012" initiative by the Ministry of Power, to provide access to and promote modern and cleaner energy in the rural areas under the 11th Five Year Plan (2007-2012). This mission would require installed generation capacity of at least 200,000 MW by 2012 from the present level of 144,564.97 MW. Power requirement will double by 2020 to 400,000MW. As growth in the manufacturing sector picks up, the demand for power is also expected to increase at a faster rate. Renewable source of energy which is clean source of energy usage is on the upswing and would contribute heavily in the times to come.

Capacity addition- Targets and achievements

Five year plan	Year	Target (MW)	Achievement (MW)
Eighth Plan	1992-1997	30538	16423
Ninth Plan	1997-2002	40245	19105
Tenth Plan	2002-2007	41110	21180
Eleventh Plan	2007-2012	78577	N.A

Source: IL&FS: Infrastructure Leasing and Financial Services

Total Installed capacity (sector wise)

Sector	MW	Percentage
State Sector	83605.65	45.07
Central Sector	57072.63	30.77
Private Sector	44818.34	24.16
Total	185496.62	

Source: Ministry of New and renewable energy

Could India meet all energy needs with renewable energy?

India is blessed with vast resources of renewable energy in solar, wind, biomass and small hydro. In fact, the technical potential of these renewables exceeds the present installed generation capacity. Extending the electric grid between all states, and ultimately between neighbor nations will expand international trade and co-operation on the subcontinent.

Financing Sources and Incentives:

To promote renewable energy technology in the country, the Government of India provides subsidies and fiscal incentives. Indian Renewable Energy Development Agency (IREDA) has been set up under ministry for non-conventional energy sources and is a specialized financing agency to promote finance to renewable energy projects. New measures by the Government include - income tax breaks, accelerated depreciation, duty-free import concessions, capital /interest subsidy, incentives for preparation of Detailed Project Reports (DPR) and feasibility reports.

What consumers can do to develop and support power sector:

It is the duty of the citizens of the country to help the nation to strengthen its power infrastructure. Following are few points to be noted by the consumer to support the country.

- Explore all possibilities to set-up an independent power plants making use of renewable resources like solar, wind and biomass.
- Usage of government/utility electricity supply only in case of emergency.
- Energy savings by using low wattage / high luminous lamps.
- Regular maintenance and servicing of electrical equipment.
- Avoidance of inverters and large storage batteries (except in case of emergency) etc.

Conclusion:

There is an urgent need for transition from petroleum-based energy systems to one based on renewable resources. This decreases our dependence on depleting reserves of fossil fuels and mitigates climate change. Additionally, renewable energy has the potential to create many employment opportunities at all levels, especially in rural areas. India is currently experiencing strong economic growth, while at the same time attempting to extend modern power services to millions still in poverty. Expanding electrical capacity is essential. Renewable energy remains a small fraction of installed capacity, yet India is blessed with over 150,000MW of exploitable renewables. Tapping India's wind, solar, biomass, and hydro could bring high quality jobs from a domestic resource. India has the only Ministry that is dedicated to the development of renewable energies: the Ministry of New and Renewable Energy. This ministry can do well for the acceleration of renewable development throughout the nation.

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- U.S. Energy Information Administration (EIA)
- http://mospi.nic.in/mospi_energy_stat.htm
- Global Energy Network Institute (GENI) www.geni.org
- www.eai.in/ref/ae/sol/pfc
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- The international energy agency

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AURORA'S BUSINESS SCHOOL
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**Admissions for the Batch of 2013-15**

At ABS, our focus is to create globally sensitive individuals capable of taking on the challenges of the next generation. The curriculum is designed to foster the spirit of leadership, entrepreneurship and excellence among the students. The following are the takeaways that a student gets from the college:

Programmes Offered

- 2 year full-time PGDM (**General**)
- 2 year full-time PGDM (**Marketing**)
- 2 year full-time PGDM (**Hospital Management**)
- 3 year part-time PGDM

Learning Booster Kit

- Apple MacBook will be provided to all the students
- Course Material of over 10,000 pages* covering all the major topics of management
- Courses on creativity and communication skills

Grooming Kit

- Contains a student backpack, cap, four t-shirts and a notepad designed to help the students in the learning beyond the classroom
- A blazer, tie and cuffs that will help the student transform attire and outlook

Experience Enhancement Tours

- Outbound training for the students during the first semester
- Adventure tour for the students during the third semester

Career Enhancement Kit

- Two professional certifications of choice will be provided
- Membership in the professional bodies and clubs of choice#

Guaranteed Placement

- Guaranteed placement suiting the ability and the competence of the student

Post-Placement Support

- The students can visit the campus and can have counseling sessions with their faculty even after the completion of the course.

* 10,000 Pages or equivalent amount of information either in electronic, audio or visual formats

the counseling is provided regarding the membership and the institute also monetarily supports the student to apply for one within the set monetary limits

STOCK SPLITS – DO THEY CREATE OR ERODE SHAREHOLDER WEALTH?

Dr A Srihari Krishna

A corporate action is an event initiated by a public company that affects the prices of its securities. Some corporate actions such as a dividends or interest payments may have a direct financial impact on the shareholders or bondholders respectively. But in some cases, corporate actions do not involve any potential future positive benefits to the company as is the case with bonus issue and stock splits. For the past five years, there has been number of corporate actions affecting stock prices on Bombay Stock Exchange (BSE). These actions may merely be cosmetic and is done only when the company wishes to increase or decrease the stock price. A stock split/stock dividend is nothing but slicing the cake and hence, should neither create wealth nor destroy it. This research paper analyzes the market response to stock split announcements to know whether investors gained/lost from stock split decisions. In the Indian context, the euphoria surrounding stock splits do not seem to last beyond three months which signals long-term investors to stay away from betting on such corporate actions.

Introduction

In India, until recently, bonus issues were hugely popular with investors, who used to treat it as a sign of a company's strong fundamentals. However, in case of bonus issues, the equity capital of a company (in absolute terms) increases. This then had implications associated with bloated equities. Stock splits generate an excitement in the market resulting in price appreciation in anticipation of the announcement. But often at times, during days before or after stock split and bonus shares, there are irregular phenomenon found related to abnormal returns, liquidity, and volatility. Most equity investors don't have a clear understanding of what bonus issue means to them and what happens when stocks split.

Bonus Issue: In a bonus issue, a company gives free shares to its existing shareholders on a pro rata basis. For instance, if a company declares a bonus of 2:1, the investor gets two additional shares for each share he holds. This, however, does not mean that the company has raised additional capital. Instead, it converts some of the free reserves (accumulated profit over the years that has not been distributed as dividends) into share capital and issues it to shareholders as additional shares. The net impact is that the reserves decline and the share capital increases. And that's exactly the logic behind giving bonus: it converts some of the excess reserves into share capital. A bonus issue increases the number of outstanding shares of a company and, therefore, its earnings per share (EPS) declines. Theoretically then, the share price should also fall by the same factor as the decline in EPS, making it negative for investors. However, as investors get newly issued shares, their overall wealth remains the same. In a nutshell, a bonus issue doesn't impact investors' wealth. Hence, it is wrongly seen as a reward to shareholders.

Stock Split: It is the division of a share into multiple shares. For example, if a company splits its shares in the ratio of 2:1, it divides one share into two. So, if the face value of a share is Rs 10, it becomes Rs 5 following the split. In effect, by breaking the face value of share, the company tries to boost the liquidity of its shares. As in the case of bonus shares, following a stock split, the number of outstanding shares increases and EPS declines. Therefore, the price also falls (theoretically, in the example above, the market price of the share will be halved). But as investors have more shares after a stock split, their wealth remains unaffected. Broadly, there are three dimensions to stock splits:

- **Pricing:** In some ways, an increase in the value of a company's stock is a good thing. It reflects that investors see the stock as a good value based on the company's performance and future prospects. If a stock becomes too expensive, it can prevent smaller investors from purchasing it and the price might even be a discouragement to some other investors or fund managers. Therefore, a stock often splits to keep it affordable.
- **Liquidity:** When a stock is priced so high that many investors look at other options, it makes that stock harder to move in the marketplace. For example, investors could shy away from buying blocks of stock, such as 100 shares or more, if the price is £50 per share or more because they might have trouble coming up with the initial cash needed.
- **Future Performance:** Some companies split stocks as a signal to investors that the management is comfortable with the company's position in the marketplace. Traditionally, investors have reacted favorably to stock splits. Entrepreneur Magazine cited research from Prudential Securities showed that 9 out of 14 stocks in the S&P 500 that split in 1996 outperformed the overall average index after two years. No increase in value is guaranteed, however.

Lakonishok and Lev (1987) refers to the stock splits as just a finer slicing of a given cake, and therefore, should have no effect on the market behavior around stock splits. Yet, empirical evidence in the US and some other markets concludes that splits tend to impact the share price beyond the theoretical expectation. The most important thing about stock splits is that there is no effect on the shareholder wealth of the company. A stock split should not be the deciding factor that entices an investor into buying a stock. While there are some psychological reasons why companies will split their stock, the split doesn't change any of the business fundamentals.

Stock Split & Bonus Share Trends in India:

Emerging capital markets such as India had witnessed a bull run in the new millennium. A lot of retail investors and market operators started chasing small cap and mid cap companies as they rise faster in a rising market. Retail investors chase price and not value and this is reflected in the abnormal growth of sectoral indices — BSE Mid-Cap and BSE Small-Cap. These indices have outperformed the Sensex in the first half of 2010 by 22.7 per cent and 25.3 per cent, respectively. This is obviously driving the top management of small and mid cap companies to take up both stock splits and bonus shares with gusto. These corporate actions not only make the small investors feel valued but also bring down the price of the stock in secondary markets. Splits and bonus are like a divided corporate pie whose sum is larger than the original pie.

Year	Stock Splits	Bonus Issues
Apr-Oct '09	38	30
Apr-Oct '10	69	58
Apr'09-Mar'10	82	62

Source: BSE India

Literature Review:

Stock Splits and Bonus Issues continue to generate interest as none of them have any direct valuation implications. As such these events are sometimes described as 'cosmetic' events as they simply represent a change in the number of outstanding shares. The reason for the interest is therefore to understand why managers would undertake such (potentially costly) cosmetic decisions. Empirical research has shown that the markets generally react positively to the announcement of a stock split/bonus issue (Foster and Vickrey (1978), Woolridge (1983), Grinblatt *et al* (1984), McNichols and Dravid (1990), Masse *et al* (1997), Lijleblom (1989), Bar-Yosef and Brown (1977)).

Across the world, various researchers have tried to decode as to why stock splits are issued by companies when they are cosmetic accounting changes in reality. Two complementary approaches have been followed to learn about what motivates the stock split decision. The first approach is to get an insight into managements' view regarding stock splits and the second is to study as to how the issuing company's stock reacts to stock splits in terms of returns, liquidity and volatility. Management surveys have been conducted to gain insight about stock splits and manager's motives for issuing them. The survey research on stock splits dates back to the early twentieth century. Dolly (1933) surveyed managers of eighty-eight companies issuing stock splits; the finding of the survey was that the main motive for issuing stock splits is to widen the distribution base among the shareholders. This leads to increased marketability of the share and enhanced advertising value of the company. Corporate managers believe that a wider distribution of shares leads to a steadier volume of trading. The other reasons for issuing stock splits are to receive higher effective dividend rates, to facilitate the sale of stocks, to permit listing of the stocks and to create goodwill in the stock market.

Baker and Gallagher (1980) surveyed 100 chief finance officers on their perceptions about stock splits. The conclusion drawn from the 63 responses received was that stock splits serve to keep the stock price in an optimal range, thereby, increasing liquidity and the number of shareholders. Baker and Powell (1993) surveyed 251 New York Stock Exchange and American Stock Exchange firms that issued stock splits. The responses of 136 firms reveal that the primary motive for issuing a stock split is to move the share price to a better trading range, resulting in improved trading volumes. Some other important motives include signaling better future prospects to attract potential investors. The respondents also expressed the view that the preferred trading range for their stocks is \$20 to \$35.

In order to test certain hypotheses about the effects of stock splits, it is important to be able to understand the timing of clientele changes as well as investor characteristics. Empirically, the market reaction to these decisions, in the form of changes in stock returns, trading volumes and volatility of stock prices, has been investigated by various researchers (Fama *et al.*, 1969; Copeland, 1979; Reilly and Drzycimski, 1981; Murray, 1985; Ohlson and Penman, 1985; Lakonishok and Lev, 1987; Dravid, 1987; Sloan, 1987; Brennan and Copeland, 1988; Dubofsky, 1991; Kryzanowski and Zhang, 1991; Wiggins, 1992; Masse *et al.*, 1997; Wulff, 2002; Dennis and Strickland, 2003; Reborredo, 2003; Ariff *et al.*, 2004; Mishra, 2007; Kalotychou *et al.*, 2008). On the theoretical front, four major hypotheses have been put forward to explain the motives for and the impact of issuing stock splits. They are the *Signaling hypothesis*, the *Trading Range hypothesis*, the *Liquidity hypothesis*, and the *Small Firm hypothesis*. These hypotheses are not mutually exclusive (Baker *et al.*, 1995).

Dhar, Satyajit and Chhaochharia, Sweta (2008) analyzed the impact of the information relating to the announcement of stock split and bonus issue on stocks listed on National Stock Exchange (NSE) by employing event study. Both the events that are stock split and bonus issue reflect significantly positive announcement effect. For bonus issues, the abnormal return was about 1.8% and for stock splits it was

about 0.8%. Numerous studies in India have dealt with the information content of various types of announcements (Ramachandran (1985), Obaidullah (1992), Rao (1994), Rao and Geetha (1996), Srinivasan (2002), Budhrajai I, Parekh P and Singh T (2004), and Mishra (2005)).

Notable studies from India on market reactions to stock split include that of Jijo and Rao (2002), Budharaja et al., (2003) and Gupta and Gupta (2007). Rao (1994) estimated cumulative abnormal return of 6.31 per cent around the three days of Bonus announcement. He reported that Indian stock market responds in an expected direction to corporate announcement and it supported the semi strong form of efficient market hypothesis. Jijo and Rao (2005) while analyzing the post bonus issue performance statistically found significant positive abnormal return of 11.6 per cent for five days.

A.K.Mishra (2004) found significant positive abnormal returns for a five-day period prior to bonus announcement within the developed stock markets; the results provide stronger evidence of semi strong market efficiency of the Indian stock market. Contrary to above Rao and Geetha (1996) analyzed Bonus announcement and concluded that one could not make excess money in the stock market by studying that patterns of abnormal returns of announcements made earlier.

The Present Study:

Corporate actions initiated by top management have significant impact on shareholder value. This study aims to understand whether the market response was positive or negative to stocks splits/bonus shares. If corporate actions such as stock splits and bonus issues get the stamp of approval of the investor fraternity, then the market response would be positive and the Cumulative Abnormal Returns (CAR) before and after split will be high. To measure the market response, three price points of stock has been considered – stock price before the split, stock price on split date, and the stock price after the split date. In order to ascertain the market reaction around stock splits, this study considers the event as split execution date, defined as day 0. The estimation window is 50 day period, for pre-split it is from -50 to 0 trading days. The post-split period examined in this study runs to 50 trading days after the split.

The benchmark index chosen for estimating the abnormal returns is the BSE Sensex. This index represents around 65% of total market capitalization as on November 2010. The significant CAR around stock splits would need further probing in order to explain the market reaction to stock splits. Based on the past literature, an attempt is being made to determine which factors can explain the significant CAR. Benchmark market returns had been deducted from gross stock returns to arrive at CAR. If the impact is positive, it would generate cumulative abnormal returns after market adjustment.

The scope of research covers all the stock splits that were announced during the period, January 1st – October 31st 2010 on the BSE. During this period 45 companies had announced stock splits in the ratio ranging between 2:1 to 30:1. The higher stock split ratio was made possible because some companies have announced stock dividends along with stock splits.

Findings of the Study:

Analysis of all the 45 companies that announced stock splits is reflected in Table – 1. The stock price movement has been mixed with 24 out of 45 companies showing negative performance when adjusted for market movement. If we were to look at the pre-split window, only 4 out of the 45 companies registered losses. During the same period, the Sensex lost only 6 out of the 45 windows. As regards the post-split performance, 26 out of the 45 companies registered losses. During the same period, the Sensex lost only 8 out of the 45 windows. This clearly shows that most of the split stocks rise before the announcement and fall after the announcement.

Companies that have announced stock splits could create the necessary hype in the marketplace. During the run up to the stock split announcement, there was lot of market fancy to the scrip as 41 out of 45 companies appreciated in price. Murali Industries leads this pack with a phenomenal gain of 55.15% followed by South Indian Bank 50.58% and Bhushan Steel 49.52%. The laggards were Nissan (-21.76%), Sterlite (-11.97%) and Resurgere (4.62%) respectively. Nevertheless, the gross returns for all the 45 stocks combined is a healthy **18.29%** in a 50 day window across the ten-month rolling period indicating that investment in stock-splits is beneficial for the investors.

However, after the announcement of the stock split, there doesn't seem to be much action in the counter as only 18 out of the 45 companies gained in a 50 day window. Losses had been substantial in scrips like CCCL (-68.37%), Resurgere Mines (-63.55%) and Sezal Glass (-51.91%). This is despite the fact that some companies gained such as Murali Industries (39.66%), Lupin (39.61%) and Kabra Extrusions (36.86%). It is abundantly clear that investment in a stock is not advisable after the announcement of post-split as the gross returns during this window was **-3.94%** across the aggregate 45 companies.

Table – 1

Company	Stock Returns (%)			Market Returns (%)			Abnormal Returns (%)		
	Pre-split	Post-split	Total	Pre-split	Post-split	Total	Pre-split	Post-split	Total
APOLLOHOSP	10.31	21.57	34.11	-3.25	21.24	17.30	13.56	0.33	16.81
AQUALOGIS	15.76	-29.97	-18.93	17.40	0.12	17.53	-1.64	-30.08	-36.47
ASTRALPOLY	31.91	6.93	41.06	11.19	2.31	13.75	20.73	4.63	27.31
BAJAJELEC	13.57	28.15	45.54	1.90	16.98	19.21	11.67	11.17	26.33
BHUSANSTL	49.52	6.81	59.71	11.86	0.61	12.54	37.66	6.20	47.16
BLKASHYAP	32.58	-32.45	-10.44	16.77	0.57	17.43	15.82	-33.02	-27.87
BRITANNIA	39.86	-18.95	13.36	12.86	3.41	16.71	27.00	-22.36	-3.36
CCCL	18.82	-68.37	-62.41	-4.14	6.12	1.73	22.96	-74.49	-64.15
EDELWEISS	45.09	5.44	52.99	5.41	13.94	20.11	39.68	-8.50	32.88
EMAMILTD	25.35	11.18	39.37	2.46	11.98	14.74	22.89	-0.80	24.63
GENESYS	34.41	31.32	76.51	0.97	13.06	14.16	33.44	18.27	62.35
GENUSPOWER	16.64	-26.72	-14.53	12.67	-6.57	5.27	3.97	-20.15	-19.79
HDFC	20.51	3.30	24.48	11.39	6.43	18.56	9.11	-3.13	5.93
INDIANHUME	11.59	-7.35	3.39	6.05	10.46	17.14	5.54	-17.81	-13.76
IPCALAB	28.93	9.90	41.69	1.28	1.75	3.05	27.65	8.15	38.65
JAYSREETEA	23.87	10.61	37.02	6.90	10.38	17.99	16.98	0.23	19.03
KABRAEXTRU	29.96	36.86	77.86	3.36	8.18	11.81	26.61	28.67	66.05
KALPATPOWR	0.85	-22.27	-21.61	12.86	3.41	16.71	-12.01	-25.68	-38.32
KCP	15.95	-14.96	-1.39	-3.25	21.24	17.30	19.20	-36.20	-18.70
KMSUGAR	-2.02	-23.53	-25.07	1.78	-1.00	0.76	-3.79	-22.53	-25.83
KOTAKBANK	23.50	-1.45	21.70	11.59	2.34	14.19	11.91	-3.79	7.51
LITL	23.88	-6.72	15.56	4.86	12.44	17.91	19.02	-19.16	-2.35
LUPIN	0.16	39.61	39.84	-4.41	8.26	3.49	4.57	31.35	36.35
M&M	3.45	13.77	17.71	1.42	0.63	2.06	2.03	13.14	15.64
MAGMA	35.20	0.31	35.61	6.90	10.38	17.99	28.30	-10.07	17.62
MMTC	17.57	-29.86	-17.54	1.76	12.11	14.08	15.81	-41.97	-31.62
MUNDRAPORT	14.52	-11.40	1.46	13.06	0.14	13.21	1.46	-11.54	-11.75
MURLIIND	55.15	39.66	116.68	5.89	1.70	7.69	49.26	37.96	109.00
NISSAN	-21.76	-21.95	-38.93	13.11	-0.40	12.67	-34.87	-21.56	-51.60
PARSVNATH	4.95	-24.95	-21.23	11.46	-5.03	5.86	-6.52	-19.92	-27.09
PRATIBHA	6.54	-6.07	0.08	4.00	12.52	17.02	2.54	-18.59	-16.94
RAINBOWPAP	27.56	15.49	47.31	5.11	11.52	17.22	22.45	3.96	30.09
REDINGTON	10.78	-1.25	9.39	11.77	6.97	19.56	-0.99	-8.22	-10.17
RESURGERE	-4.62	-63.55	-65.23	11.23	1.38	12.76	-15.84	-64.93	-77.99
SEZALGLASS	46.33	-51.91	-29.64	10.91	-5.38	4.94	35.42	-46.53	-34.58
SINTEX	6.33	-26.96	-22.34	10.65	-7.41	2.44	-4.32	-19.55	-24.78
SOUTHBANK	50.58	-0.81	49.36	0.00	13.22	13.22	50.58	-14.03	36.14
STERLITE	-11.97	-3.36	-14.92	1.95	12.35	14.54	-13.91	-15.71	-29.46
SUPREMEIND	39.24	-7.09	29.37	11.46	-5.03	5.86	27.78	-2.06	23.51
TATAGLOBAL	24.45	2.32	27.33	-2.64	17.27	14.17	27.09	-14.95	13.16
TULIP	2.80	4.16	7.07	-2.78	16.28	13.05	5.58	-12.12	-5.98
UNICHEMLAB	26.17	-17.87	3.63	10.91	-3.39	7.15	15.26	-14.48	-3.52
UNITY	10.95	-13.55	-4.09	0.99	-0.35	0.64	9.96	-13.20	-4.73
VIPUL	13.32	-19.07	-8.29	8.21	6.35	15.08	5.10	-25.42	-23.37
WINSOMYARN	34.97	-29.55	-4.91	0.42	16.26	16.75	34.55	-45.81	-21.66
AGGREGATE	18.29	-3.94	13.62	6.10	5.83	12.29	66.66	-48.02	9.82

As regards the stock market index movement during the pre-split period, Sensex has appreciated by **6.10%** on an aggregate. But in certain 50-day windows it had shot up by as much as 16.77% and dropped as much as 4.41%. However, BL Kashyap lost 32.58% when the going was good for the market and Lupin rose marginally by 0.16% when the Sensex experienced its worst phase. It means shareholders were rewarded handsomely by companies that announced stock split at the most opportune time as these shares have beaten the market comprehensively. If we observe the Sensex movement for the post-split period, the market gained **5.83%** as it had only 9 windows that were unfavorable out of the 45 windows of 50 day periods. There were some windows that offered opportunities with gains as much as 21.24% and Apollo Hospitals swam with this tide and shot up 21.57% while KCP dropped by 14.96% during the same period.

Overall, if we were to look at the net returns for all the 45 stock split companies (after adjusting for the market movement) during the 101 days period (50+1+50), the gains are marginal at **1.33%** (13.62% - 12.29%). This is because split stocks appreciated by **13.62%** while the market inched up by **12.29%** reflecting that there are no real gains because of stock splits for the shareholders. Nevertheless, if we look at individual companies, Murali Industries gained as much as 109.00% while CCCL lost -64.15%.

Specifically, if we were to look at the companies that announced stock splits and stock dividends simultaneously, 4 out of the 5 companies have lost. Edelweiss Capital was the lone winner with cumulative abnormal return of 32.88% and rest of the pack suffered deep losses – BL Kashyap (-27.87%), MMTC (-31.62%), Resurgere (-77.99%), and Sterlite (-29.46%). Resurgere (-4.62%) and Sterlite (-11.97%). Interestingly, these 4 companies had suffered even during the pre-split phase when 41 out of 45 companies had actually gained. It's no wonder that all these 4 companies had lost during the post-split phase when 19 out of the 45 companies suffered losses. There is a strong message for the top management not to go for stock dividends and stock splits simultaneously as this dampens the stock price and results in mighty losses.

Conclusion:

Stock splits are cosmetic corporate actions initiated to grab attention more so when the stock had become unaffordable to retail investors. By reducing the face value of the stock, corporates expect improved liquidity and greater market fancy. It also shows that management intends to send a powerful signal to the investing community that there is enough business strength to make the stock rise to current levels in spite of the split. Some corporates go an extra mile and make a combo offer of stock splits and stock dividends simultaneously.

Theoretically, the face value drops below 1 Re which is the lowest denomination of Indian currency. Rational investors cannot ignore this rising trend in Indian markets. They are in a Hamletian dilemma – to invest or not to invest in a stock split. The present research of 45 companies which announced stock splits in Indian markets between 1st Jan – 31st Oct, 2010 highlights the fact that stock splits are a neutral corporate action and one should not get enticed into buying a stock because of this event. Investors love stock splits as it creates the necessary excitement in the marketplace resulting in volatility of share price.

Playing stock splits is an art and every player gets dangerously attracted to stocks that have great momentum because of a corporate announcement. The uncertainty surrounding the timing of the split as well as the split ratio makes it a very hot stock to be getting a wide coverage in the media. Generally, trading volumes pick up before the announcement making the stock price march northwards and the interest wanes after the event resulting in a drop in price. Most investors –

individual and institutional seem to be equally bad guessing the share price and suffering badly because of their exposure to stock splits.

The situation gets worsened in case of companies that make combo offer of stock splits and stock dividends as these stocks have fallen very sharply resulting in serious erosion of shareholder wealth. As long-term investors cannot live with this volatility they should stay away from these stocks. In the end, whether we have two Rs 50 notes or one Rs 100 note, we have the same amount in the pocket. Empirical evidence showed overwhelmingly that stock splits do indeed increase in price during specific times but in the long-run they do not add any wealth to shareholders.

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Post Graduate Diploma in Management - Hospital Management



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There has been a revolution in Indian healthcare sector. Hyderabad is considered as the capital of hospital industry. In the past one decade, there has been a phenomenal growth in the number of corporate hospitals across all the major cities. Proper administration is the key to success for any corporate hospital in this era of intense competition. Trained personnel in hospital management are highly preferred by all the corporate hospitals. PGDM (Hospital management) emphasizes on applying general management to the hospital industry.

Duration: 2 years full time

Certification

The PGDM (Hospital Management) course offered by ABS is deemed equivalent to MBA by All India Council for Technical Education (AICTE), Ministry of HRD.

Unique features of ABS

- Live projects in public and private healthcare
- Tie up with top corporate hospitals
- Hands on experience in hospitals of repute
- Teaching by dedicated IIT and IIM alumni
- Teaching through experiential learning platform
- Proven placement record

Eligibility

Graduates from any recognized college or university with 50% and above marks or equivalent grades in Medicine / Pharmacy / Engineering (Bio-medical or Biotechnology)/ Science graduates (preferably in Biochemistry / Nursing / Life Sciences /Microbiology / Genetics / Biotechnology) are eligible to apply. However, final year students completing their courses and examinations by June-2013 may also apply. Scores of CAT/ XAT/ MAT/ GMAT will be considered for the selection and subsequent short-listing. Shortlisted candidates will be further screened through GD and PI.

How to apply

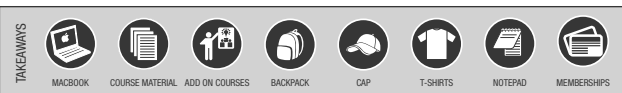
Prospectus and application forms are available at Aurora's Business School on payment of Rs.500/- either in cash or DD in favor of "Aurora's Business School" payable at Hyderabad. Filled in application form should reach Aurora's Business School with payment and relevant documents to Admissions Office, Aurora's Business School, Dwarakapuri Colony, Punjagutta, Hyderabad.

Important Dates

- Commencement of issue of application: **4 February 2013**
- Submission of completed application forms: **28 March 2013**
- Group discussion and personal interviews: **24-27 April 2013**
- Commencement of classes: **17 June 2013**

We also offer:

- 2 year full-time PGDM (General)
- 2 year full-time PGDM (Marketing)
- 3 year part-time PGDM



AURORA'S BUSINESS SCHOOL

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