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# **EARNINGS MANAGEMENT AND THE BANKING CRISIS OF THE 1990S: EVIDENCE FROM NIGERIA**

**Akinloye Akindayomi, University of Massachusetts Dartmouth**

## **ABSTRACT**

*The objective of this study is to investigate whether there is evidence of earnings management during the Nigeria banking crisis of the 1990s. I hypothesize and find that Nigeria banks generally show a positive association between earnings before taxes and provisions for loan loss and loan loss provisions; indicating earnings smoothing. Also that healthy banks have smoother earnings than distressed ones, even as the latter continue to deliberately under-provide/understate loan loss provisions to inflate profitability, thus benefiting from the naivety of Nigerian public to 'fixate' on profits as a measure of banks soundness. This trend enables those banks to continue to attract deposits and banking businesses from unsuspected banking public until their eventual collapse and belated regulatory interventions.*

*Keywords: Income smoothing; earnings management; audit quality; loan loss provisions; banking crisis; emerging economy.*

## **ACKNOWLEDGEMENTS**

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August, 2009

# **CUSTOMIZED ASSESSMENT GROUP: A DIFFERENT APPROACH TO STUDENTS LEARNING**

**Akinloye Akindayomi, University of Massachusetts Dartmouth**

## **ABSTRACT**

*The purpose of this study is to inculcate into my students the importance of group dynamics that emphasize cooperative team building through Customized Assessment Group (CAG). The strategic significance of 'teammanship' at work places in the contemporary business world cannot be overemphasized. Corporations are increasingly relying on the mutual coexistence of their most important resources (human) to achieve corporate goals and objectives in the ever-increasingly competitive corporate environment. It is therefore important to respond to this contemporary reality by equipping new generations of business students with this valuable resource. Using a sample of sophomore students in the Principles of Accounting II, an introduction to management accounting course, I administer CAG in a five stage process. The findings indicate CAG substantially improves students' performances. The process also produces three unintended positive effects. I strongly believe that the findings of this study suggest that CAG could be promising to business students as well as other areas of a university where there is emphasis on 'teammanship' and not just group membership, thus improving the scholarship of teaching and learning.*



## **USING EARNINGS VERSUS CASH FLOWS TO MEASURE ABNORMAL ACCRUALS: PROBLEMS**

**Thomas T. Amlie, The Pennsylvania State University at Harrisburg**

### **ABSTRACT**

*Managerial manipulation of earnings, and the resultant issue of “earnings quality”, has been a topic of accounting research for decades. In many situations it is reasonable to assume that managers may have incentives to manipulate reported accounting earnings, either upwards or downwards. Research in this area has focused on how well reported accrual earnings represent the underlying economic earnings of the firm, and whether there is evidence that earnings management is taking place. The critical issue in this research has been how to detect and/or measure earnings management or earnings quality.*

*It is commonly assumed that managers will attempt to manage earnings through the manipulation of accruals. In attempting to identify instances of earnings management through accruals manipulation, two separate issues need to be addressed: how are accruals to be measured, and how can normal accruals be differentiated from abnormal accruals. Several different models have been developed over the years which attempt to capture evidence of earnings management. One of the more widely used measures of accruals has been the difference between operating income and operating cash flows. One of the more enduring models for measuring abnormal accruals was established by Jones (1991).*

*The purpose of this paper is to highlight some of the problems inherent in the use of this measure of accruals. Data for the period from 2001 through 2007 is analyzed, and several extant published research studies are replicated to illustrate potential problems.*

# EVALUATING A TREND ANALYSIS OF FRAUD FACTORS

**Kimberly Bales, McLane Group, L.P.**  
**Terry L. Fox, University of Mary Hardin-Baylor**

## ABSTRACT

*The Sarbanes-Oxley Act of 2002 was established primarily as an attempt to combat an increasing level of corporate fraud and to hold executives accountable. However, the level of fraud and the cost of fraud continues to increase. This paper provides a trend analysis of fraud factors in an attempt to evaluate the factors that are most prevalent so as to assist in the identification of fraudsters and the reduction of fraud occurrences.*

## INTRODUCTION

A 2003 survey by KPMG indicated that organizations are working hard to combat fraud and believe they have made great strides on the problem. It is generally understood that the key to effective fraud detection and prevention is first understanding the early signs of fraud and second, establishing effective compliance programs. Seventy-five percent of the organizations surveyed had evaluated their compliance programs within the past 12 months. These organizations also planned to implement new programs or procedures to help combat fraud and misconduct specifically as a response to the Sarbanes-Oxley Act of 2002 (SOX). As a result of these reviews, more than one-third of the organizations believed that fraud would decline in the next few years, while almost two-thirds of the organizations believed fraud levels would stay the same. History has shown that the latter group was more correct, but actually underestimated the increasing severity of fraud, post-SOX. (KPMG, 2003)

## A DEFINITION OF FRAUD

Fraud can be defined as “*all multifarious means which human ingenuity can devise, and which are resorted to by one individual to get an advantage over another by false suggestions or suppression of the truth. It includes all surprises, tricks, cunning or dissembling, and any unfair way which another is cheated*” (Black’s Law Dictionary). Fraud is defined in the Statement on Auditing Standards (SAS) 99 as “an intentional act by one or more individuals among management, those charged with governance, employees or third parties, involving the use of deception to obtain an unjust or illegal advantage.”

Unintentional fraud does not exist. What separates error from fraud is intent, the accidental from the intentional (Peterson, 2004). Assume a company’s financial statements contain material false statements. An auditor must determine if they were caused by error or fraud. The difficulty with proving intent is that it requires determining a person’s state of mind. As a result, intent is

usually proven via circumstantial evidence, supported by the discovery of motive, opportunity, repetitive acts, witness statements, and concealment (Lawrence and Wells, 2004).

What causes managers of successful businesses to manipulate their financial statements? How can investors, auditors, accountants, managers and regulators detect manipulations? Dealing with these questions when they occur is critical to maintaining organizational integrity. For a business owner or investor it can lead to improved returns; for an auditor it can mean avoiding costly litigation; for an accountant it can mean avoiding a blemished reputation; and for a regulator it can lead to enhanced investor protection and fewer investment catastrophes, like those we've observed in recent years. The primary focus of this article is to provide an analysis of fraud factors and events over the past twelve years and to examine fraud trends for the purpose of better understanding the world in which we now find ourselves, and to better prepare our organizations to recognize the propensity towards fraud and thus identify areas in which stronger controls are necessary.

A 2007 survey by Price Waterhouse Coopers reveals that fraud remains one of the most problematic issues for businesses worldwide, with no abatement regardless of the organization's country of operation, industry sector, or size. In 2007, over 43 percent of businesses reported suffering one or more significant economic crimes during the previous two years. This is very similar to the results in 2005 and an increase of six percentage points over 2003. Considering the significant investment many businesses have made in fraud controls over the previous two years, it is often questioned why levels of economic crime seem only to have stabilized in that time rather than shown a dramatic decrease. This may, in part, be due to a fraud controls paradox. This is the idea that when controls are implemented in an organization, the number of frauds detected increases almost immediately. However, their deterrent effect takes time to become visible. Potential fraudsters need to see that there is a greater likelihood of detection and that those in breach of a business's ethical, regulatory, and legal guidelines will be consistently subject to sanctions that fit the offence (PriceWaterhouseCoopers, 2007).

There may be other explanations for these consistently high figures. Certainly, over recent years there has been an increase in corporate transparency and a greater willingness by businesses to admit that fraud has been uncovered, but we also experience a feeling among some executives that the self-report and remediate program encouraged by many regulators may subject them to a high and unfair cost burden relative to businesses that take an alternative approach to dealing with fraud. The threat remains problematic regardless of the size of the business.

Seventy-five percent of businesses surveyed report they experienced an instance of fraud which is an increase of 13 percentage points more than in 1998. While employee fraud is the most prevalent type of fraud experienced by organizations, financial reporting fraud and medical or insurance fraud are the most costly. In fact, financial reporting fraud more than doubled its rate of occurrence since 1996. The greatest percentage point increases since 1998 are in theft of assets and expense account abuse (KPMG, 2003).

A vast majority (eighty-nine percent) of the fraudsters were employees committing fraudulent acts against their own employer, whereas 20 percent involved complicity with an external fraudster, resulting in the conclusion that in only eleven percent of all profiles the businesses were attacked purely by externals. Members of senior management and board members represent 60 percent of all fraudsters. Over 25 percent of profiled fraudsters involve management level employees, bringing the total to over 85 percent of the profiled fraudsters are at some level of

management. This result highlights a risk that every business faces: executives are entrusted with sensitive business information and yet are also often in a position to override internal controls. In 36 percent of profiles the fraudster worked for their business for two to five years before committing fraud. In 22 percent of profiles the fraudulent employees registered more than 10 years of service at the victim's organization. In just 13 percent of profiles the fraudster was with the business for less than 2 years prior to committing fraudulent acts. The internal fraudster most often works in the finance department followed by operations and sales or as the CEO (KPMG International, 2007).

Misappropriation of money was the most common type of fraud. In 83 percent of those profiled, the fraudsters acted against an organization within their own country. Over 90 percent of fraudsters committed more than one fraudulent transaction, over one third of the fraudsters in this survey acted more than 50 times. These fraudulent acts were prevalent in Europe, South Africa, India and the Middle East. In 24 percent of fraudsters profiled the frequency of fraudulent acts by the same fraudster was less than one year. In 67 percent of the profiled fraudsters, the fraud acts occurred within a one to five year period until they were exposed or ceased their fraudulent activities. (KPMG International, 2007)

Fraud is very much a human nature issue, and as such has sometimes been considered an indefinable enemy. Therefore, as quickly as we can build a trap to catch a particular fraudster, they will find new methods to commit fraud. Some business owners may give up and feel defeated by the fraudsters, particularly by those who employ and exploit technology in their fraud attempts. However, that same technology can be used to help combat the fraudsters and their tactics. Business owners and managers must understand that technology alone will not stop fraud; it only offers a means to better detecting it. Technology should be combined with the appropriate knowledge to create an optimal solution to detecting fraud in organizations.

American entrepreneurship places a large emphasis on taking risks and maintaining the course no matter how unsteady it becomes. People who are willing to take that kind of risk are also the same people who refuse to heed warning signs of potential fraud. A senior manager who takes excessive or deceptive risks with a large corporation may put at risk the financial lives of thousands of employees, investors, suppliers, and stakeholders of the business. Given that nearly half of all Americans now own stock in some type of organization, this kind of daring behavior affects more people than ever before.

It may be too large of a task for the corporate governance to govern a sense of morality throughout the entire organization. Newly enacted reforms, such as separating the role of chairman from that of CEO as a way of discouraging certain kinds of conflict of interest, are positive, but they would not have prevented the Enron case. There should be greater emphasis placed on certain aspects normally outside the scope of corporate governance. The corporate culture within an organization is vitally important to the overall integrity of everyone associated with the organization. Certain reward systems need to be carefully prepared and examined. A significant example of this is an operations manager or sales manager who is rewarded only for hitting his numbers, while likely putting the integrity of the organization at risk.

The laws of most countries prohibit most types of fraud including theft, corruption and financial statement misstatements (Akin, 2004). Globally, governments have enacted rules and regulations which penalize and prosecute businesses and individuals who participate in fraud

methods at the corporate level, and civil settlements brought by shareholders of public businesses who loose enormous wealth by the actions of a few dishonest fraudsters.

### **A TREND ANALYSIS OF FRAUD FACTORS**

The American Certified Fraud Examiners (ACFE) publishes what is now a biannual Report to the Nation on Occupational Fraud and Abuse, published by the American Certified Fraud Examiners (ACFE). Starting in 1996, with continuing reassessments in 2002, 2004, 2006, and 2008, the ACFE presents a compilation of surveys pertaining to the elements and factors associated with fraud.

Each Report is based on approximately one thousand cases of occupational fraud over a two year or longer period which have been investigated by a Certified Fraud Examiner (CFE) (AFCE, 2008). The goals of these reports are to summarize the opinions of experts, examine the characteristics of the fraudsters, determine the types of organizations being victimized, and categorize the ways serious fraud occurs. These reports combine the methods that are used to commit fraud into three categories. Those categories are asset misappropriation, corruption, and financial statement fraud, and are important when creating a profile for a fraudster.

There are additional statistics in each report which may help to detect current fraud and deter future fraud. One important factor in detecting fraud is to know the length of time that the fraud scheme lasts. These reports take a look at the average time it takes for fraud to be detected. Detection methods are also included in the reports. These methods range from internal audits, external audits, and employee hotlines. These methods are examined to determine which method is more effective for detecting fraud (ACFE, 2006).

Creating a profile for the fraudster is another goal of the Report to the Nation on Occupational Fraud and Abuse. There are several characteristics that are discovered in each fraud investigation that help to create a profile of the fraudster. Some of those characteristics are gender, age, education level, and length of service in current position. These characteristics not only help investigators in creating a profile for the fraudster, but also serve as precursors for the total cost of the fraud that is committed.

Using reports from 1996, 2002, 2004, 2006, and 2008, I will summarize the data from each report and illustrate the trends over the past twelve years. These trends will show what affects SOX has on the profile of the fraudster as well as what, if any, impact SOX had on the propensity to commit fraud. The data gathered from these reports will be used to make assumptions as to the profile of the fraudster and the level of fraud that each type of fraudster may commit. These assumptions will aid the reader in identifying potential fraudsters within an organization as well as gaps in internal controls which will help deter fraud in organizations.

The annual cost of fraud has grown steadily over the past twelve years. As Figure 1 shows, the cost of fraud in the United States has increased from \$400 billion in 1996, remained relatively stable between \$600-\$660 billion between 2002 and 2006, but rose to over \$990 billion in 2008. This represents an increase of over 148 percent over the past twelve years.



Figure 1 Annual Fraud Cost to US Organizations  
(Report to the Nation on Occupational Fraud and Abuse, 1996, 2002, 2004, 2006, 2008)

In this same time period, businesses have spent billions in compliance systems and fraud prevention, which has seemed to have little effect on the tendencies towards lowering the cost of fraud to businesses. Simply looking at the total annual cost of fraud, these results could be interpreted in several ways. First, it may be that as the techniques of fraud improve, there are not necessarily more fraudsters, but larger payouts for the same number of fraudsters. Another perspective on these results might lead one to believe that technology has given potential fraudsters the ability to participate in fraudulent activity at a greater rate than in previous years.

Another interesting trend from the review of the Report to the Nation on Occupational Fraud and Abuse over the past decade is the stunning difference in gender of fraudsters. Figure 2 shows that in all years reviewed, men commit fraud more often than women, and this trend appears to be widening.

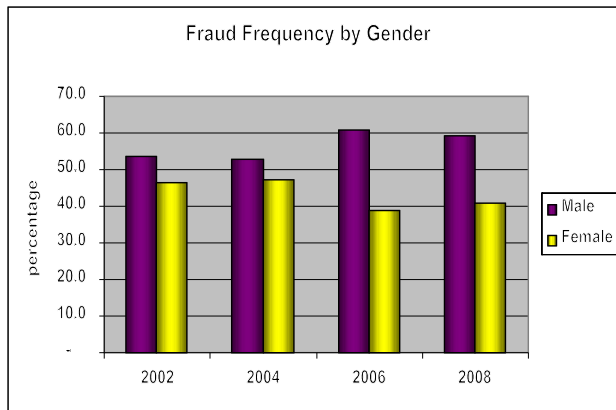


Figure 2 Fraud Frequency by Gender  
(Report to the Nation on Occupational Fraud and Abuse, 1996, 2002, 2004, 2006, 2008)

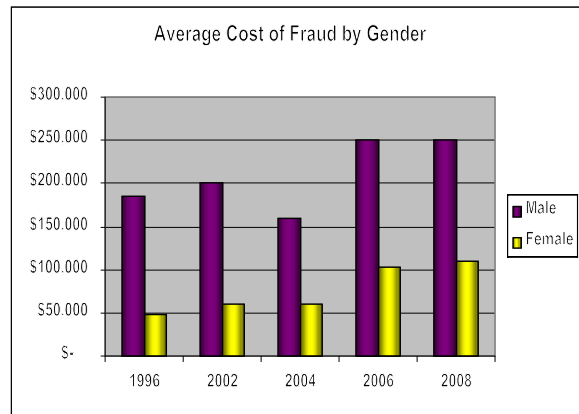


Figure 3 Average Cost of Fraud by Gender  
(Report to the Nation on Occupational Fraud and Abuse, 1996, 2002, 2004, 2006, 2008)

There are several potential explanations for the differences in gender as it relates to fraudulent activity. The most obvious is the glass ceiling effect. Since there are relatively fewer women in higher positions within organizations, the propensity to commit fraud is automatically

lower based on position within the business. There are also relatively fewer women in the workforce, which may explain the difference in gender of fraudsters.

In addition to men committing the majority of fraud, they also cost the businesses more when they do commit the fraud, indicated in Figure 3. This again may be explained by the difference in gender based on the position within the business. There are fewer women senior and middle managers, making the opportunity to commit a large dollar fraud less likely.

The impact relating to the role of an individual within the organization has changed slightly over the past twelve years, as shown in Figure 4. In 1996, 12 percent of the fraudsters were owners. 2002 data was reported with owners and managers combined, however the relative percentage of owners committing fraud has steadily increased over the period studied. In 2008, that percentage had grown to 23 percent. While the percentage of managers committing fraud has remained steady over the past twelve years, fraud committed by non-managers, or the typical rank and file employees, have declined considerably. Internal controls have had an obvious impact on the non-manager role, but these controls need to be improved to reduce overrides by managers and owners.

Figure 5 indicates that the cost of fraud by owners far exceeds the cost of managers and non-managers. The cost of fraud committed by owners has remained considerably higher than managers and non-managers over the past twelve years (2002 was not reported separately).

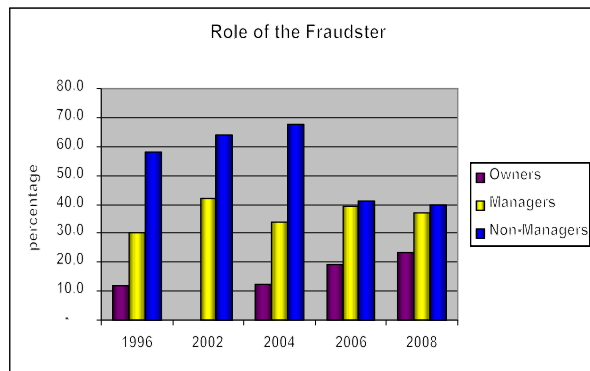


Figure 4 Role of the Fraudster

(Report to the Nation on Occupational Fraud and Abuse, 1996, 2002, 2004, 2006, 2008)

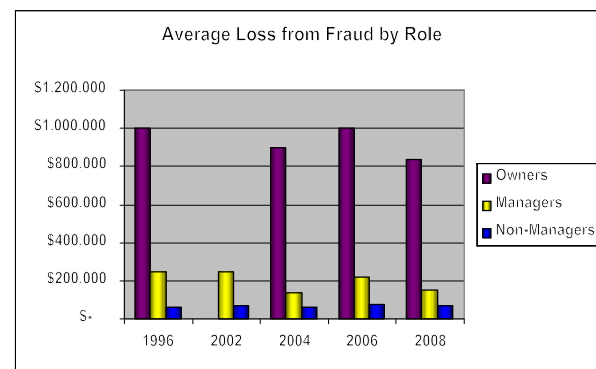


Figure 5 Average Loss from Fraud by Role

The difference in cost is likely related to the level of authority and responsibility that fraudsters have within the organization. For example, a standard control is that large invoices must have two signatures for approval, as would checks which exceed a specified amount. These internal controls may make it difficult for managers and non-managers to commit large dollar fraud without collusion. This is a clear instance where SOX is the solution for certain roles within an organization, but not a solution for all roles.

The education level of the fraudster is also an important factor to consider when identifying the fraudster. Since 2002, the majority of fraudsters have a high school education, with possibly some college, but no college degree (see Figure 6). The percentages of each education level have remained relatively consistent over the past six years.

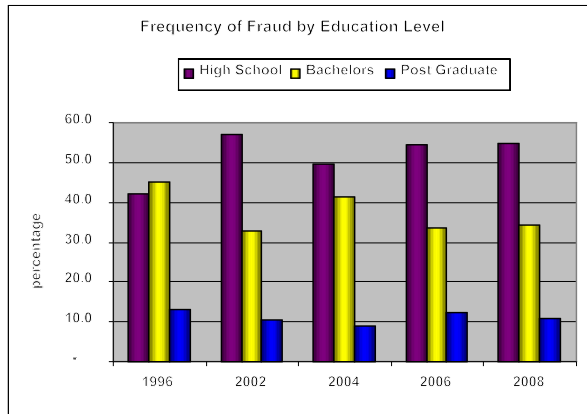


Figure 6 Frequency of Fraud by Education Level

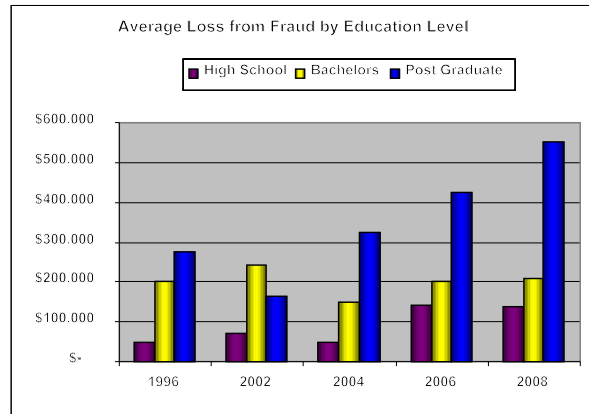


Figure 7 Average Loss from Fraud by Education Level

(Report to the Nation on Occupational Fraud and Abuse, 2002, 2004, 2006, 2008)

The cost of fraud for each education level varies greatly. The greatest cost results from a fraudster with a post graduate degree, both in terms of frequency of fraud occurrences and with respect to the average loss. The variances in fraud cost by education level may be directly attributable to their role within the business. Most fraudsters with post graduate educations will likely have a role as a manager or owner of the business. This cost of fraud for fraudsters in these roles almost directly corresponds to the fraudsters within the higher education levels.

## CONCLUSION

The lack of governance of internal controls by owners, upper management and board of directors is one of the main contributors to fraud (AFCE, 2008). This is evident from the trends in the survey results from the Reports to the Nation on Occupational Fraud and Abuse. Sarbanes-Oxley was implemented in 2002 with the specific purpose of addressing instances of fraud. However, as this study has shown, the level of fraud has continued to increase.

Detection through education is an important factor to help reduce the occurrences of fraud. Colleges and universities must include more detailed fraud and auditing courses in the general accounting programs in both undergraduate and graduate level programs. As technology becomes more embedded into businesses, it will become imperative for the internal technology experts to have knowledge of detecting and preventing fraud using technology. Accountants with experience in technology will become more and more valuable to fraud prevention as fraudsters become more technology savvy.

Developing a strong ethics and fraud policy is one important step to prevent fraudsters from committing acts of fraud within an organization. Internal auditors should also conduct a risk assessment to determine the risks and vulnerabilities of the internal and external controls that are in place. Examining fraud variables and factors as presented in this paper will help with this assessment.

Fraud will likely never be eradicated in its entirety. The information provided in this paper and other sources should help promote an understanding as to who fraudsters are and why they commit fraudulent acts, which will hopefully help to detect, deter, and prevent these acts.



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# CUSTOMER SERVICE MANAGEMENT AMONG ENTREPRENEURIAL ACCOUNTANTS IN OKLAHOMA

**Shawn M. Carraher, Cameron University**  
**Greg Treadwell, Cameron University**  
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## ABSTRACT

*In the current paper we examine customer service management systems among a sample of 771 entrepreneurial accountants. In order to be successful private accountant the customers have to have a reason to continue utilizing the services of the organization. In some cases good service can be more important than the product itself as if customers do not feel that they are treated well they shall likely go to your competition. While the typical dissatisfied customer in retail establishments tell an average of 8 other individuals in the private accounting field current research indicates that they tell between 11 to 12 others.*

## INTRODUCTION/CONCLUSIONS

A model of how to study customers is developed and the importance of better equipping private accountants to collect and handle customer service oriented information is developed. It is found that personality is important with the personality variables being important for accountants differs from that of other jobs. Typically Agreeableness, Extroversion, and Conscientiousness have been found to be important for predicting customer levels. In the current study it was found that Conscientiousness (beta = .381), Openness to Experience (beta = .216), Extroversion (beta = .176), and Emotional Stability (beta = -.089) were found to be able to explain 30.9% of the variance in customer service ratings provided by customers. Suggestions for future research are provided. Future research is suggested based upon prior research (Buckley & Associates, Carland & associates, and Carraher & Associates).

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# **THE IMPACT OF MULTIPLE WORK ARRANGEMENTS ON LABOR PRODUCTIVITY**

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## **ABSTRACT**

*Measuring productivity is an important performance measure for decision making and resource allocation in managerial accounting. One factor which may affect labor productivity is the use of multiple work arrangements (MWAs) such as fulltime employees, contract workers and independent contractors. Most of the prior research in accounting on MWAs focused on the behavioral aspects of different work scenarios. There has been limited research in managerial accounting about the impact of MWAs on the economics of labor productivity which is the focus of this study.*

*This paper examines the economic impact of MWAs in long haul trucking companies. Specifically, we investigated the use of independent contractors (owner-operator drivers) versus fulltime company drivers and their impact on labor productivity. In a managerial context, owner-operators represent soft capacity and company drivers represent hard capacity. Our results indicate that owner-operators will improve the productivity of the company. There is a significant and positive association between the use of owner-operators and labor productivity. Prior studies did not find this positive relationship. Our results indicate that owner-operators can influence the variance of labor productivity either positively or negatively. However, there is more variability associated with the performance of owner-operators than there is with company drivers.*

# DO MUTUAL FUND MANAGERS TAKE MORE RISK TOWARD YEAREND?

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## ABSTRACT

*This study finds evidences for both the tournament hypothesis, mutual fund managers who are possible “losers” in the final tournament tend to take greater risk than possible “winners” in the latter part of a year, and the alternative hypothesis, mutual fund managers with higher interim returns are more likely to take greater risk toward the end of the year than those with low interim returns. This behavior aggravates agency problem between mutual fund companies and investors. Results vary with different fund categorizations and over time, which indicate that mutual fund managers’ behavior is inconsistent, and explain why researchers report different findings.*

## INTRODUCTION

Most mutual fund managers receive compensation in proportion of the assets under their management. Unlike hedge funds or pension funds, the mutual fund industry seldom uses rewards based on investment performance (Elton et al. 2003 and Golec 2003). Thus, mutual fund managers have incentive to attract more new investment inflows because larger assets under their management increase their income. Researchers have found that mutual funds earning the highest returns receive greater increase in new capital (Ippolito 1992, Sirri and Tufano 1998). Sirri and Tufano (1998) also find that funds performing poorly do not have a large outflow of capital. This asymmetry between reward and penalty may provide mutual fund managers with an incentive to take greater risk for their funds in order to maximize their own benefits. Since mutual fund managers’ behavior is not directly observable and may conflict with the goal of investors, such excessive risk taking aggravates the agency problem between mutual fund companies and investors.

How fund managers adapt their investment behavior to the incentives has been of interest to researchers. One theory views the mutual funds as in a tournament in which the funds outperforming the peers win and receive higher rewards. Brown et al. (1996) argues that investors respond to the annual rankings of funds published by business magazines and services at the end of the calendar year. To win the annual tournament, managers with poor relative year-to-date returns tend to change the risk of their funds before the end of the year. Why would the managers gamble? Grinblatt and Titman (1989) argues that the long-run income of the fund manager is a convex function of his current performance. The gains from outperforming the peers exceed the losses from performing poorly, especially for new managers with smaller assets under management.



In this study we apply Arrow's (1965) theory of risk aversion and utility values to examine the fund managers' risk-taking behavior. Arrow (1965) advances the hypothesis that the absolute risk aversion is a decreasing function of wealth. He argues that a risky asset is a normal good and the willingness to engage in small bets of fixed size increases with wealth, in the sense that the odds demanded diminish. In other words, risk aversion is decreasing with wealth. This implies that funds with higher year-to-date returns may have stronger incentives to increase risk at the end of the year. The theory of decreasing risk aversion offers the opposite prediction about the relation between risk adjustment and interim returns.

The empirical evidence of managers' risk-changing behavior is mixed in the past studies. Using monthly returns of growth-oriented mutual funds from 1976 to 1991, Brown et al. (1996) find support for the tournament hypothesis that mid-year "losers" tend to increase fund volatility in the latter part of a year more than mid-year "winners." Similarly, Koski and Pontiff (1999) find a negative relationship between a fund's performance in the first half of a year and its change in risk in the second half of the year using monthly data. However, Busse (2001) does not find the same behavioral pattern using daily return data. Chevalier and Ellison (1997) finds that funds that perform best have the strongest incentive to gamble, using monthly data of a sample of mutual funds from 1982 to 1992.

The goal of this paper is to provide new evidence of fund managers' risk-adjusting behavior. We test the hypotheses of tournament theory and Arrow's utility theory using monthly returns of 438 growth-oriented mutual funds over the period of 1990-2000. We analyze the relation between interim performance and fund risk changes using both contingency tables and regression analysis. The results indicate that funds with positive interim returns are more likely to increase risk at the end of the year than funds with negative returns. The results are consistent with the prediction of Arrow's theory. We also relate risk adjustment to interim fund performance in a multivariate analysis. The pooled regression results lend support to the theory of risk aversion and utilities values as risk adjustment and interim returns are positively related.

## **HYPOTHESES**

Brown et al. (1996) shows that higher returns earned in the assessment period lead to larger increases in new investment inflow. These new investments, in turn, increase compensation to the mutual funds' managers as their rewards typically are determined as a percentage of the assets under management. Assume that investors base their investment decision on the annual report of the funds. Then rational managers may change the volatility of their portfolios depending on their relative performance during the year.

Tournament Hypothesis: Funds most likely to be "losers" in the final tournament results will increase their risk levels relative to the group of probable "winners" in the latter part of a year. Assume that fund managers maximize their expected utility and assume fund managers are risk-averse. According to the theory of risk aversion and utility values, a risk-averse agent prefers getting the expected value of a lottery to participating in it. Hence, utility is a concave function of fund returns. Risk-averse investors penalize the expected rate of return of a risky portfolio by a certain percentage to account for the risk involved. Each investor can assign a welfare, or utility,

score to competing investment portfolios based on the expected return and risk of those portfolios. The marginal utility decreases with fund returns. Figure 1 illustrates this idea.

Arrow (1965) defines the absolute risk aversion as:

$$R_A(Z) = -\frac{W''(Z)}{W'(Z)}$$

Where  $W(Z)$  is the utility function and  $W'(Z)$  and  $W''(Z)$  are the first and second derivative of the utility function. Arrow advances the hypothesis that  $R_A(Z)$  is a decreasing function of  $Z$ , where  $Z$  refers to final wealth at the end of the period for which the investment decision is binding. This implies that when wealth is larger, the willingness to take risks of fixed size will be larger. In other words, risk aversion decreases as wealth increases. Fund managers with higher interim returns also expect higher returns at the end of the year. The theory of risk aversion implies that fund managers with higher interim returns may be more willing to take risks than fund managers with low interim returns.

Hypothesis of Decreasing Risk Aversion: Fund managers with higher interim returns are more likely to increase risk at the end of the year than fund managers with low interim returns.

## DATA AND METHODOLOGY

The data for this paper consists of monthly returns for 438 growth-oriented mutual funds contained in 2002 Morningstar Database. We restrict our analysis to funds which is categorized as either “growth” or “growth and income” in the prospectus objective, or “growth” in the Morningstar category. We select this category of funds because they are the most widely followed and ranked, and are likely to have risk-taking tendency (see e.g., Brown et al., 1996 and McDonald, 1974). We first adopt the method of Brown et al. (1996) to construct two variables, returns (RTN) and risk (RAR). We pick August as the division point to break the year into two periods, the first 8 months and the last 4 months. RTN is the compound total return through the first 8 months of one calendar year. RTN helps to measure whether a fund is performing relatively well or poorly at the end of August.

$$RTN_{jy} = [(1 + r_{jy1})(1 + r_{jy2}) \cdots (1 + r_{jy8})] - 1 \quad (1)$$

where  $RTN_{jy}$  stands for compound total return for fund  $j$  in the first eight months of year  $y$  and  $r_{jy1}$  is return for fund  $j$  in year  $y$  and month 1.

RAR is the ratio of standard deviation of return in the last 4 months (SD2) to standard deviation of return in the first 8 months (SD1) of each year. RAR measures whether a fund changes its risk in the latter part of a year.

$$RAR_{jy} = \frac{SD2_{jy}}{SD1_{jy}} \quad (2)$$

$$\text{where, } SD1_{jy} = \sqrt{\frac{\sum_{m=1}^8 (r_{jym} - \bar{r}_{jy(1-8)})^2}{7}} \quad \text{and} \quad SD2_{jy} = \sqrt{\frac{\sum_{m=9}^{12} (r_{jym} - \bar{r}_{jy(9-12)})^2}{3}}$$

The two standard deviations are computed relative to the mean return over the corresponding sub-period. According to the hypothesis of risk aversion, this ratio should be significantly larger for funds that performed well at mid-year than for funds that performed poorly.

We create a (RTN, RAR) pair for every fund in each year between 1990 and 2000, where RTN is the compound return in the first eight months and RAR is the standard deviation in the last four months. We classify a RAR that is above the median RAR value as “high”, and below the median value as “low.” Also, we classify a RTN that is above the median RTN value as “high”, and below the median value as “low.” We also try an alternative way to categorize RTN’s. We classify a RTN as “low” if it is negative and “high” if it is positive. We do this because investors tend to identify a fund as “loser” if the fund’s return is negative while other funds’ returns are positive. We still categorize RAR by median.

We construct a two-by-two contingency table in which we put each fund into one of four cells: (high RTN, high RAR), (high RTN, low RAR), (low RTN, high RAR), and (low RTN, low RAR). We count the number of funds in each of the four cells aggregating over 11 years. If we classify RTN’s by median, the percentage of funds in each cell should be 25% if there are no differences in risk among those funds. Hence, the null hypothesis is that the percentage of all observations falling into each of the four cells is the same, i.e. equals to 0.25.

In the above analysis we measure the total risk of each fund by standard deviation. We next measure the systematic risk by calculating the beta of each fund relative to the entire sample. To test the relation between prior fund performance and risk adjustment, we estimate the following equation:

$$BETA_{jy2} - BETA_{jy1} = \alpha + \gamma PERF_{jy1} + \phi BETA_{jy1} + \varepsilon_{jy} \quad (3)$$

Where  $PERF_{jy1}$  is the difference between the compound return of the fund and the average of compound returns of all funds in the sample during the first eight months of the year.  $BETA_{jy2}$  and  $BETA_{jy1}$  are the estimates of risk for fund  $j$  in two sub-periods within one year. We calculate these two variables by running two time-series regressions for each fund in each year, one from January through August, and the other from September through December:

$$\begin{aligned} R_{jym} &= \alpha_{jy1} + \beta_{jy1} R_{Mym} + \varepsilon_{jym}, & m = 1 \text{ to } 8, \\ R_{jym} &= \alpha_{jy2} + \beta_{jy2} R_{Mym} + \varepsilon_{jym}, & m = 9 \text{ to } 12, \end{aligned} \quad (4)$$

where  $R_{Mym}$  is the return of the Standard and Poor’s 500 Index in year  $y$  and month  $m$ , and  $R_{jym}$  is the return of fund  $j$  in year  $y$  and month  $m$ .

## EMPIRICAL RESULTS

We first report the contingency tables. Table 2 shows cell frequencies for two different designs. Panel A of Table 2 lists results for winners and losers categorized by the median value of RTN. We find that the frequency in the cell (low RTN, high RAR) is significantly higher than 0.25 (P-value = 0.009). This is consistent with the tournament hypothesis. Panel B of Table 2 lists results for winners and losers categorized by positive or negative RTN. The frequency in the cell (high RTN, high RAR) is significantly higher than that in the cell (high RTN, low RAR), indicating that funds earning interim positive returns may increase their risks toward the end of the year. The frequency in the cell (low RTN, high RAR) is significantly lower than that in the cell (low RTN, low RAR). This indicates that the interim “losers” do not necessarily increase their risks in the last few months of a year.

We then run regressions according to equations (3) and (4) for a pooled cross-sectional regression over the entire sample period (1990-2000). By the tournament hypothesis, there should be a negative relation between prior performance and the risk change, i.e. the coefficient of the variable PERF should be negative. Contrarily, by the hypothesis of decreasing risk aversion, the relation should be positive. Table 3 reports the results of the pooled cross-sectional regression over 1990-2000. The results show a significantly positive relation between interim performance and risk changes. These results lend support to the hypothesis of decreasing risk aversion, or fund managers with higher interim returns are more likely to increase risk at the end of the year than fund managers with low interim returns.

We also run regressions for each year from 1990-2000 which totals 11 regressions. Table 4 shows mixed results. Among eleven regressions for each year, five show negative coefficient of PERF, and three of them are significant (years 1990, 1992, and 1998), which is consistent with the tournament hypothesis. The remained regressions show positive coefficient of PERF, and three of them are significant (years 1993, 1994, and 2000), which is consistent with hypothesis of decreasing risk aversion.

# **MARGIN DEBT BALANCE V.S. STOCK MARKET MOVEMENTS AND EXPECTED GDP GROWTH**

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## **ABSTRACT**

*Changes in margin debt balance at both the New York Stock Exchange and the NASDAQ stock market follow the movements of major stock indexes and expected GDP growth. This indicates that margin debt borrowers increase positions in their margin accounts after they see stock prices and expected GDP growth rise and reduce their positions after they observe stock prices and expected GDP growth decline. Margin debt balance at the NYSE increases when interest rate rises and decreases when interest rate falls, which reveals that cost of margin debt does not weaken margin debt borrowers' focus on following stock market trends.*

## **INTRODUCTION**

Changes in the amount of margin debt may reflect certain investors' behavior and may well be related to stock market movements, which should provide investors and regulators with useful information. Initial margin requirements are set by the Federal Reserve, maintenance margin requirement is determined by individual brokerage firms.

Most margin debt borrowers are believed to be individual investors or noise traders (Kofman and Moser, 2001). Therefore, the level of margin borrowing activities may indicate individual investors' sentiment. De Long et al. (1990) report an unclear causal relationship between noise trader behavior and stock market prices. Gervais and Odean (2001), Brown and Cliff (2004), and Wang et al. (2006) show evidence that stock market returns and volatility significantly affects investor sentiment, while the reverse causal effect is not significant. However, Fisher and Statman (2000), Baker and Wurgler (2006) find that investor sentiment can predict stock market.

The relationship between margin borrowing and stock returns is a key issue in the literature. The "pyramid" theory as described in Bogen and Krooss (1960) argues that margin debt increases stock market volatility. In periods of rising stock markets, investors borrow more margin loans and buy more stocks in their margin accounts, inducing higher stock prices and subsequently qualifying the borrowers for additional margin loans. Reversely, when the stock markets are declining, the margin loan borrowers are forced to sell stocks following margin calls, inducing further decreases in stock prices and more subsequent sales. However, it is not clear whether margin debt is a cause of the stock returns or just an indicator of the market (Fortune, 2001). Domian et al. (2006) and Zhang (2005) show evidence that margin debt responds to previous stock returns rather than vice versa.

Interest rates on margin debt represent the cost for margin debt. Brokerage firms set their margin debt interest rates based on call rate, which is in turn based on the prime rate. Domian and Racine (2006) find that margin borrowing is negatively related to short term interest rate. However,

margin debt borrowers may not consider this cost when they borrow because they expect significant return from buying stocks and want to use the leverage.

Economic growth is a closely watched indicator by stock investors because economic growth is closely positively related to stock market returns, although the timing is uncertain. Investors buy more stocks when they expect higher economic growth and sell stocks when they expect economic declines.

In this study we further research the relationship between margin debt and stock returns. We use both regression and Granger causality tests to examine whether stock market movements lead margin debt changes, or vice versa. We also examine whether the level of interest rate on margin debt affects margin loan borrowing. Finally, we try to find whether margin loan borrowers' behavior is affected by expected macro economic growth.

## DATA

Data of outstanding margin debt balances are obtained from the New York Stock Exchange (NYSE) and the NASDAQ, respectively. Only monthly data of margin debt balances are available. Data of the prime rate and GDP growth rate are from International Financial Statistics that is published by the International Monetary Fund. Since only quarterly GDP growth data is available, we convert the quarterly data into monthly data by calculating the geometric monthly average. The S&P 500, NYA (the New York Stock Exchange Composite), Russell 2000, DJIA (the Dow Jones Industrial Average), NASDAQ Composite, and NASDAQ 100 indexes are from finance.yahoo.com. The sample period is from January 1997 to September 2008 for NYSE and January 1997 to June 2007 for NASDAQ due to margin debt data availability. Summary statistics for the data are reported in Table 1.

Following Domian and Racine (2006), we calculate the percentage changes in margin debt balances and prime rate. Most economic models imply that interest rates are stationary (Ang and Bekaert, 2001). We use the growth rate of output as did Fama and French (1989), Chen (1991), and Marathe and Shawky (1994). Consistent with prior findings, our test show that the growth rate of output for the sample time period is stationary, or that the output is a difference stationary series. Results of Dickey-Fuller tests and Augmented Dickey-Fuller tests are in Table 2 and 3, respectively. The tests support the stationary of each series in our sample.

## METHODS AND RESULTS

First, we run regressions using the basic model:

$$MD_t = \hat{a}_0 + \hat{a}_1 IR_{it} + \hat{a}_2 PR_t + \hat{a}_3 GR_t \quad (1)$$

Where,  $MD$  = percentage change in margin debt,  $IR$  = index return,  $PR$  = percentage change in prime rate,  $GR$  = GDP growth rate, and  $i$  = stock index: S&P 500, NYA, R2000, DJIA, NASD 100 and NASD Composite.

We present the regression results in Table 4. Panel a and b show the results using the NYSE and NASDAQ margin debt as the dependent variable, respectively. The independent variables for index

returns include the S&P 500 index, the NYA, the Russell 2000 and the DJI. All the variables are for  $t = 0$ .

The regression results show significantly positive relationship between percentage change in margin debt at the NYSE and changes in all the stock indexes. For example, a 10 percent increase in the S&P 500 index is related to a 4.6 percent increase in margin debt at the NYSE. A 10 percent increase in NYA, Russell 2000 and DJIA are related to 2.2 percent, 4 percent and 3.7 percent increase in margin debt at the NYSE, respectively. The evidence indicates that margin debt borrowers borrow more and buy more stocks in their margin accounts as stock markets rise, and sell stocks in their margin accounts to reduce their margin debt when stock markets decline. Some of them are forced to sell their stocks after margin calls. However, changes in margin debt at the NASDAQ stock market are significantly related only to returns of the NYA, and the relationship is negative. Further research is needed to explain this phenomenon.

Figure 1 shows a clear pattern that margin debt moves in the same direction with the stock market. This pattern is very prominent in the strongest bullish market trend from September 1998 to March 2000 when both the stock market and margin debt increased significantly; and in the biggest bearish market trend from March 2000 to October 2002 when both the stock market and margin debt declined sharply. Also, margin debt at the NASDAQ stock market is much more volatile than margin debt at the NYSE as shown in Table 1 and Figure 1.

The regressions show statistically significant positive relationship between percentage change in margin debt at the NYSE and percentage change in prime rate. This indicates that margin debt borrowers' borrowing decision is not affected by the cost of borrowing. They borrow more and buy more stocks even as the interest rate rises and borrow less as the interest rate declines. Or, stock return is the dominate factor for their borrowing decisions, they increase their borrowings in bullish periods and reduce their borrowings in bearish periods. Here we use percentage change in prime rate as an approximation for percentage change in margin debt interest rate which measures the cost for borrowing margin debt.

Margin debt interest rates are different among brokerage houses who charge some percentage points above the call rate, which is based on the prime rate. It is well known that interest rates are positively related to long-term stock market growth, generally, the prime rate and call rate is low during recession time and high when the economy is booming. It is also well known that stock prices decrease before and in recession time and increase before and when the economy is booming, and stock markets move ahead of the economy by inconstant number of months.

The regression analyses reveal some weak positive relationship between percentage change in margin debt at the NASDAQ stock market and macro economic growth measured by GDP growth rate. This may indicate that margin debt borrowers borrow more and buy more stocks in their margin accounts when the economy grows. However, the relationship is significant only in the regression using returns of NYA.

The relationship between percentage changes in margin debt at the NASDAQ and current month NASDAQ indexes' returns, the percentage change in prime rate, and GDP growth rate is not significant. Further research is required in order to find the explanation.

In order to identify possible lead-lag relationship between percentage change in margin debt and the independent variables we conduct regressions with different time lead and lag, i.e., we

estimate the model for all combinations of lead lag lengths  $t = -3, -2, -1, 1, 2, 3$ . The optimal results are presented in Table 4, panel c and d.

$$MD_t = \hat{\alpha}_0 + \hat{\alpha}_1 SR_{i,t-1} + \hat{\alpha}_2 PR_t + \hat{\alpha}_3 GR_{t+3} \quad (2)$$

Regressions using Equation (2) provide improved results compared to Equation (1), as measured by the adjusted R-squared. As shown in Table 4, panel d, returns of the NASDAQ indexes in the previous month have a significant positive impact on margin borrowing at the NASDAQ stock market in the current month. This reveals that margin debt borrowers respond to market trends, or they buy more in their margin accounts after they observe stock prices rise, and sell stocks in their margin accounts, repay their margin debts after they see stock prices fall.

The regression results of Equation (2) also reveal that expected output growth has a statistically significant positive relationship with percentage change in margin debt at the NYSE. As shown in Table 4, panel c, coefficients for the independent variable GDP growth rate  $t+3$  are statistically significant in all regressions except for the one with returns of Russell 2000. This indicates that margin borrowers buy more stocks on margin when they expect output growth increase in the next quarter and sell their margin account stocks when they expect output growth decline in the next quarter. Assuming rational expectation, we use the reported GDP growth rate of the following quarter as an approximation for the expected output growth rate because there is no reliable and consistent data for expected GDP growth. However, the relationship is not significant for margin debt at the NASDAQ stock market.

In order to confirm the lead – lag relationship between the variables discussed above, or whether stock market and expected output growth lead margin debt, we conduct Granger causality tests. Granger (1969) proposed a test to determine whether or not a series  $x_t$  “causes” changes in the series  $y_t$ . A critical implication of Granger causality tests is that they do not prove causality in the general sense; rather they illustrate Granger-causality, i.e., they reveal whether or not current and/or lagged values in the series  $x_t$  improve our ability to forecast changes in  $y_t$ . The standard bi-variate Granger causality test is based on OLS regressions of the following two equations:

$$y_t = \alpha_0 + \alpha_1 y_{t-1} + \alpha_2 y_{t-2} + \dots + \alpha_p y_{t-p} + \beta_1 x_{t-1} + \beta_2 x_{t-2} + \dots + \beta_p x_{t-p} + u_t \quad (3)$$

$$x_t = \alpha_0 + \alpha_1 x_{t-1} + \alpha_2 x_{t-2} + \dots + \alpha_p x_{t-p} + \beta_1 y_{t-1} + \beta_2 y_{t-2} + \dots + \beta_p y_{t-p} + u_t \quad (4)$$

The test is based on the results of an F-test on the joint hypothesis:

$$H_0 : \beta_1 = \beta_2 = \dots = \beta_p = 0$$

If the null hypothesis is rejected for equation (3), we conclude that  $x$  Granger-causes  $y$ . The same test also applies to equation (4) to check whether  $y$  Granger-causes  $x$ . From the above regressions there are four potential outcomes:  $x$  Granger-causes  $y$ ,  $y$  Granger-causes  $x$ , causality runs in both directions, and causality runs in neither direction. Perhaps the most useful results would be where causality runs in only one direction, which implies that, for example, by knowing past values



of  $x$ , we can improve the forecasts of  $y$ . We use lag  $p = 1$  for index returns and lag  $p = 3$  for GDP growth to see whether results from the Granger-causality tests confirm the results of regressions on Equation (2).

Results of the Granger-causality tests are reported in Table 5. The null hypothesis that the stock index returns do not Granger-cause margin debt is rejected in 7 out of 10 tests. This indicates that returns of S&P 500 Index, NYA, Russell 2000 and DJIA Granger-cause changes in margin debt balance at the NYSE; and returns of NASDAQ Composite Index, NASDAQ 100, and Russell 2000 Granger-cause changes in margin debt balance at the NASDAQ stock market. For each of the pairings the direction of Granger-causality runs in only one direction. These results confirm the results from regression equation (2) and further indicate that margin debt borrowers follow market trends, i.e., they buy more stocks in their margin accounts after they see stock prices rise, and sell stocks in their margin accounts to pay back the margin debts after they observe stock prices decline. The null hypothesis that margin debt does not Granger-cause stock return cannot be rejected in any of the regressions, which indicates that margin debt borrowers' behavior does not lead stock market trends.

The Granger-causality tests also reveal that expected output growth leads changes in margin debt borrowing during the sample period. As shown in Table 5 panel b, the null hypothesis that expected output growth does not Granger-cause changes in margin debt is rejected. The causation is statistically significant for margin debt balances at both the NYSE and the NASDAQ stock market. For each of the pairings the direction of Granger-causality runs in only one direction. The tests confirm the results from regression equation (2) and further indicate that expected output growth has a significant impact on margin debt borrowers behavior, i.e., they increase their positions in their margin account when expected GDP growth increases, and reduce their margin account positions when expected GDP growth declines.

## CONCLUSION

In this study we find that margin debt balances at both the New York Stock Exchange and the NASDAQ stock market increase as major stock indexes rise and decrease as the indexes decline. This indicates that margin debt borrowers follow stock market trends, i.e., they borrow margin debt and buy more stocks after they see stock prices rise, and sell stocks to repay their margin loans after they observe stock prices fall. However, margin debt borrowers' trading activities do not lead market trends.

Margin debt borrowers may not consider the cost of margin debt when they make their investment/borrowing decisions. Changes in margin debt balance at the NASDAQ stock market do not have statistically significant relationship with the interest rate. Margin debt balance at the NYSE increases when interest rate rises and decreases when interest rate declines, which reveals that cost of margin debt does not weaken margin debt borrowers' focus on following stock market trends.

Expected GDP growth also has a significant impact on margin debt borrowers' behavior. They borrow more margin debt as expected GDP growth rises, and reduce their borrowing as expected GDP growth falls.

Further research is required to find the difference between the behaviors of individual investors who prefer the companies listed on the NYSE and those who prefer the companies listed

on the NASDAQ stock market. It is also interesting to find if individual investors learn from experience and make improvements over time, i.e., whether they can buy into trends more quickly and reduce margin calls on them.

## **NEW STANDARDS AVAILABLE FOR PRIVATE COMPANIES: AT LAST A LITTLE GAAP?**

**Nancy L. Christie, Virginia Tech**  
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### **ABSTRACT**

*In July 2009 the International Accounting Standards Committee published a single comprehensive standard for non-public companies. This was a culmination of a five year endeavor to address the needs of small to medium sized entities. The Small and Medium-sized Entity Standard (SME) provides a simplified set of rules for companies with no public reporting responsibilities. The entire self contained standard is under 250 pages compared to the International Financial Reporting Standards (IFRS) at over 2500 and US GAAP at over 25,000 pages of detailed guidance. This is the first official 'Little GAAP' ever created that could be used by U.S. entities. In the US the need for a little GAAP has been debated for decades with small firms wanting relief from onerous reporting requirements that large public firms face and regulators not wanting to actually create a second set of US GAAP rules for small firms. In recent years small enterprises have been given limited relief in each new standard but no comprehensive small enterprise standard has ever been created. Now for the first time we actually have an official 'Little GAAP'. As the IASB has been recognized by the AICPA as an official rules maker, their SME standard is an official standard that can be audited against by AICPA members. The simplified nature of the standard should make it of considerable interest to small to medium sized firms seeking relief from onerous reporting requirements in US GAAP. Adoption of the new standards may also service as a transition into full IFRS for those firms where that might be an issue.*

# AN EXAMINATION OF ANTICIPATORY SOCIALIZATION AND PROFESSIONAL COMMITMENT: AN ANALYSIS OF DIVERSITY AMONG ACCOUNTING STUDENTS

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## ABSTRACT

*Professional commitment and socialization are important factors in determining whether accounting professionals will remain in the profession and whether they will adopt the values and beliefs of the profession. Socialization and professional commitment are related to organizational commitment and professional commitment is related to turnover and turnover intentions. Therefore socialization and professional commitment are not only important for the profession but also for organizations employing accounting professionals.*

*Minority turnover in the accounting profession gives us cause for concern. When minority accounting professionals leave the profession and leave or intend to leave the organization, the likelihood of fulfilling the goal of diversity in the accounting profession decreases. The changing demographics in the U.S. render diversity an important issue when investigating attitudes and beliefs of the workforce. Generally, we expect personnel in an organization or members of a profession to reflect the population where they are located. Interestingly, diversity in the accounting profession continues to lag behind the racial and ethnic composition of the U.S. population.*

*This study examines the attitudes of accounting students before they enter the accounting profession (anticipatory socialization) and investigates whether measured differences can enlighten us to why minorities leave the profession. We measured auditing students' anticipatory socialization and professional commitment; however, the results did not show significant differences in the relationship between anticipatory socialization and professional commitment when taking ethnicity into consideration. Other attributes were also analyzed. In addition to affective professional commitment (measured in this study), future research should consider using other dimensions of professional commitment.*

# **SPREADSHEET SIMULATION IN ACCOUNTING WITHOUT ADD-INS**

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**Johnnie Mapp, Norfolk State University**  
**Jim Chen, Norfolk State University**

## **INTRODUCTION**

Simulation is widely used in accounting practice to analyze risk. It is employed in managerial accounting practice for (1) financial forecasting and budgeting, (2) replacement and maintenance of machinery/equipment, (3) analyzing capital investment, (4) make or buy decisions, (5) planning and controlling the budgetary process, (6) planning and implementing revisions in accounting systems, (7) inventory analysis and control, and (8) production planning and control (O’leary, 1983). It is also heavily used in auditing practice. For example, parallel simulation is used frequently for controls testing and substantive testing (Turney and Watne, 2003). Realizing the importance of simulation in accounting, when addresses the functional competencies in the AICPA Core Competency Framework for Entry into the Accounting Profession, AICPA states that individuals entering the accounting profession must be able to build appropriate models and simulations using electronic spreadsheets and other software (AICPA, 2009). Developing a simulation model on an electronic spreadsheet has several advantages: (1) the elimination of the need for learning a programming language, (2) the wide spread availability of and familiarity with spreadsheet software, (3) the availability of many built-in statistical functions for generating random numbers and data summarization, (4) the capability of displaying information in detail and in easy-to-read format, not just the final results, and (5) the ease of experiments for different values of the parameters. This paper is organized as follows. At first, it provides a discussion of random number generators in the electronic spreadsheet environment. Next, it demonstrates the use of Microsoft Excel to develop a working simulation model without third-party add-ins.

## **RANDOM NUMBER GENERATORS**

One of the requirements of almost any simulation model is some facility for generating random numbers. Microsoft Excel provides two uniform random number generators in the form of functions: RAND() and RANDBETWEEN(a,b). However, other theoretical distributions – such as normal, exponential, gamma, and Poisson distributions – are encountered more frequently than is the uniform distribution. In many cases, an empirical distribution is used. The inverse transformation method is a general method for transforming a standard uniform deviate into any other distribution, especially, when the distribution is an empirical one. In this section, we briefly discuss procedures for generating random numbers from empirical and frequently used theoretical distributions based on the inverse transformation method. Our emphasis is on procedures that can

be coded in a single statement. The procedures for generating random numbers are well discussed in many simulation books. We refer the interested readers to Random Number Generation and Monte Carlo Methods by James Gentle (Gentle, 2004).

### Empirical Distribution

Using the inverse transformation method for a general discrete distribution is essentially a table lookup. To generate random numbers from an empirical distribution, we can use either the LOOKUP, VLOOKUP, or HLOOKUP functions provided by Excel. The vector form of LOOKUP function is discussed here. The syntax of the vector form is

=LOOKUP(lookup\_value, lookup\_vector, result\_vector)

The values in the lookup vector must be in ascending order. LOOKUP compares the lookup\_value to each cell in the lookup\_vector until it finds a cell larger than the lookup\_value. It then moves up one cell and returns the content of the corresponding cell in the result\_vector as the answer. For example, assume the relative frequency of sales in unit per month for laser printers is as follows:

TABLE 1  
Unit Sales of Laser Printers

Unit Sales Per Month	Relative Frequency
350	0.1
450	0.1
550	0.5
650	0.3

To generate monthly unit sales, say, for six months in cells E2 through E7 from the above empirical distribution, at first, convert Table 1 into a cumulative-relative-frequency table as shown in Columns A and B of Table 2. Then, type =LOOKUP(RAND(),\$B\$2:\$B\$5, \$A\$2:\$A\$5) in cell E2. Finally, position the mouse pointer over the fill handle and drag it to cell E7 to extend the LOOKUP function from cell E2 to the range E3:E7. Suppose the numbers generated by RAND() are 0.22, 0.04, 0.39, 0.78, 0.23, and 0.16, the unit sales generated will be 550, 350, 550, 650, 550, and 450, respectively.

**TABLE 2**  
**Illustration of Empirical Random Number Generation**

	A	B	C	D	E
	Unit Sales Per Month (Bin)	Cumulative Relative Frequency		Month	Unit Sales
1					
2	350	0		1	550
3	450	0.1		2	350
4	550	0.2		3	550
5	650	0.7		4	650
6				5	550
7				6	450

### Exponential Distribution

The cumulative distribution function (CDF) of an exponentially distributed random variable is

$$F(x) = 1 - e^{-\beta x}, x > 0$$

where  $1/\beta$  equals the mean of the exponential random variable. The inverse of F is then

$$F^{-1}(a) = -\ln(1-a)/\beta$$

Thus, an exponentially distributed random number can be generated by the simple Excel formula  
= -LN(1-RAND())/beta

Because RAND() is uniformly distributed, 1-RAND() is also uniformly distributed, and the above Excel formula can be further simplified as

$$= -\text{LN}(\text{RAND}())/\text{beta}$$

The distribution of time that elapses before the occurrence of some event often follows an exponential distribution.

### Normal Distribution

The closed-form functional representation of the inverse of the CDF for the normal distribution does not exist. Fortunately, Excel has a built-in function NORMINV(probability,mean,std\_dev) which returns the inverse of the normal cumulative

distribution for the specified mean and standard deviation. So, to generate a normal random number in Excel, we can use the simple formula

=NORMINV(RAND(), mean, std\_dev)

### Gamma Distribution

There are two ways of writing (parameterizing) the gamma distribution that are common in the literature. EXCEL uses

$$f(x | \alpha, \beta) = \frac{1}{\beta^\alpha \Gamma(\alpha)} x^{\alpha-1} e^{-\frac{x}{\beta}} \quad \text{for } x > 0 \text{ and } \alpha, \beta > 0$$

Excel provides a built-in function GAMMAINV(probability,alpha,beta) which returns the inverse of the gamma cumulative distribution. Thus, we can use the following formula to generate a gamma distributed random number in Excel.

=GAMMAINV(RAND(),alpha,beta)

Because an exponential distribution with parameter beta is the same as a gamma distribution with parameters alpha and beta where alpha = 1, the GAMMAINV function can also be used to generate an exponentially distributed random variable.

The distribution of time that elapses before the alpth occurrence of some event often follows a gamma distribution. Gamma distribution also provides the most common best fit to lead-time demand for a variety of inventory items (Bagchi et al, 1986).

### A CAPITAL BUDGETING EXAMPLE OF SPREADSHEET SIMULATION

A simple capital budgeting problem is listed in Table 4. The net present value (NPV) spreadsheet model for the capital budgeting problem is presented in Table 5. After the formulas are entered into the cells C15, C16 and C17, the range C13:C17 can be copied to the columns on the right to generate additional simulations. For example, to generate additional 50 simulations, we can copy C13:C17 to D13:BA17. Statistics such as total, average, maximum, and minimum can be obtained easily with SUM, AVERAGE, MAX, and MIN functions, respectively. Additional runs for the same values of parameters can be carried out easily by simply pressing the CALC NOW (F9) key. Experiments for different values of the parameters can also be executed easily by entering their values into their respective cells.



**Table 4**  
**A Capital Budgeting Problem**

	Expected Value	Probability Distribution	
Hurdle rate	10%	Held constant	
Old machine:			
Remaining useful life	5 years	Held constant	
Disposal value, now	\$20,000	Held constant	
Disposal value, end of Year 5	\$0	Held constant	
Overhaul required, end of Year 2	\$10,075	Empirical distribution	
		Cost	Probability
		9,000	0.1
		9,500	0.15
		10,000	0.35
		10,500	0.3
		11,000	0.1
New machine:			
Cost	\$56,000	Held constant	
Useful life	5 years	Held constant	
Disposal value, end of Year 5	\$0	Held constant	
Annual operating savings	\$10,000	Normal distribution with mean 10,000 and standard deviation 1,000	

**Table 5**  
**NPV Simulation Model**

	A	B	C	D	E	F
1	Hurdle Rate	10%				
2	Project life (years)	5				
3	Overhaul Cost	Cost	Cumulative Probability			
4		\$ 9,000	0			
5		9,500	0.1			
6		10,000	0.25			
7		10,500	0.6			
8		11,000	0.9			
9	Annual Operating Savings					
10	Mean	\$ 10,000				
11	Standard Deviation	\$ 1,000				
12			PV			
13	Cost of new machine		\$ (56,000.00)			
14	Disposal value of old machine		\$ 20,000.00			
15	Recurring cash operating savings		=-PV(\$B\$1,\$B\$2,NORMINV(RAND()),\$B\$10,\$B\$11))			
16	Overhaul avoided, end of Year 2		=-PV(\$B\$1,2,,LOOKUP(RAND()),\$C\$4:\$C\$8,\$B\$4:\$B\$8))			
17	Net present value of replacement		=SUM(C13:C15)			

## CONCLUSION

Simulation is widely used in accounting practice to analyze risk for a variety of types of problems. Developing and experimenting a simulation model on an electronic spreadsheet not only eliminates the need for learning a programming language and simplifies the model building process but also eases the experiments for different values of the parameters. This paper discusses the procedures for generating random numbers in the electronic spreadsheet environment and demonstrates the use of Microsoft Excel to develop two working simulation models without third-party add-ins. It clearly shows that spread simulation is useful, inexpensive, and easy to learn.

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# **DO CEOS AND PRINCIPAL FINANCIAL OFFICERS TAKE A "BATH" SEPARATELY OR TOGETHER? AN INVESTIGATION OF DISCRETIONARY ACCRUALS SURROUNDING APPOINTMENTS OF NEW CEOS AND PFOS**

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## **ABSTRACT**

*This study presents the first targeted examination of changes in financial reporting surrounding the appointment of both new CEOs and Principal Financial Officers (PFOs). We identify companies that appoint new CEOs and PFOs in the period 1995 to 2002 and find that the change in discretionary accruals is negative and significant in the year of hire (from  $t-1$  to  $t$ ) for firms appointing a new CEO or both a new CEO and PFO (i.e., the "big bath"), but not for firms appointing only a new PFO. We also find that firms appointing both executives in the same year report significant increases in discretionary accruals in the subsequent year (from  $t$  to  $t+1$ ) and for the combined two-years surrounding the joint appointments (from  $t-1$  to  $t+1$ ). However, similar increases are not found for firms hiring only one of these executives. Additional analyses indicate that our results are robust when examining other discretionary financial reporting choices (i.e., special items, extraordinary items and discontinued operations), and that the type of compensation contract offered by the firm (i.e., having a high bonus component) is not significantly related to the changes in discretionary accruals surrounding these appointments. Our findings contribute to the corporate governance and executive turnover literature and provide evidence of a heightened financial reporting effect when firms concurrently appoint both new CEOs and PFOs.*

# **ACCOUNTING FOR UNPROFITABLE LONG-TERM CONTRACTS: A TEACHING NOTE**

**John Hathorn, Metropolitan State College of Denver**

## **ABSTRACT**

*The fact that a long-term contract results in an overall loss should not result in a change in the framework that we use to calculate the gross profit under the percentage completion method. The proposed method captures the economic consequences of the contract using the same framework developed for profitable contracts. This is achieved by disclosing the actual costs incurred as the costs of construction and then recognizing a provision for future losses. It is argued that the any provision for future losses should be separately disclosed as this is viewed as important information regarding management's performance.*

*Whether a contract is estimated to make a profit or a loss, the methodology is the same. If the contract is estimated to make a loss then the proposed framework is overlaid with the conservatism constraint. This method is conceptually consistent in that the costs of construction under both scenarios include only the costs actually incurred during the period.*

# **EARNINGS MANAGEMENT AND LONG-RUN STOCK UNDERPERFORMANCE OF PRIVATE PLACEMENTS**

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**David C. Yang, University of Hawaii at Manoa**  
**Liming Guan, University of Hawaii at Manoa**

## **ABSTRACT**

*The study investigates whether private placement issuers manipulate their earnings around the time of issuance and the effect of earnings management on the long-run stock performance. We find that managers of U.S. private placement issuers tend to engage in income-increasing earnings management in the year prior to the issuance of private placements. We further speculate that earnings management serves as a likely source of investor over-optimism at the time of private placements. To support this speculation, we find evidence suggesting that the income-increasing accounting accruals made at the time of private placements predict the post-issue long-term stock underperformance. The study contributes to the large body of literature on earnings manipulation around the time of securities issuance.*

Key words: Financial reporting, Earnings quality, Private placement, Stock market anomalies.

## **SUSTAINABILITY REPORTING**

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### **ABSTRACT**

*The purpose of the paper is to explore the importance of sustainability reporting and identify its impacts on the firm, shareholders, customers, the public, and the environment. The effect on sustainability reporting in the U.S. of the shift from Generally Accepted Accounting Principles (GAAP) to International Financial Reporting Standards (IFRS) is also discussed. Literature relevant to sustainability reporting from both the scholarly and popular press is reviewed and summarized. Research findings indicate that sustainability reporting is necessary, but differing methodologies present dilemmas. Further, implementation faces many obstacles.*

*Accounting for the full value of natural capital inputs and for the full impact of business outputs on society and the environment is crucial to the reputation and long-term success of the firm. Further, comprehensive accounting is increasingly demanded by the full range of stakeholders. This research provides a synopsis of previous studies that identify successful implementation of sustainability reporting systems and the perceptions of a range of stakeholders.*

# TESTING THE TRADE-OFF THEORY OF CAPITAL STRUCTURE

**John S. Howe, University of Missouri-Columbia**  
**Ravi Jain, University of Massachusetts Lowell**

## ABSTRACT

*We test the trade-off theory of capital structure in a setting in which a crisis suddenly changes the probability of bankruptcy. In this setting, the trade-off theory of capital structure predicts that the optimum level of capital structure would shift to a lower level of debt, and thus would lead to a negative market reaction for a firm at its optimum level of debt. Because the optimum level of debt is unobservable, we predict that the level of debt affects the market reaction. We use stock price declines after the terrorist attacks of 2001 to test this prediction. Findings of the study support this prediction: firms with high level of debt (especially long-term debt) and a lower capacity to service debt experienced higher negative abnormal returns in the three days after the terrorist attacks.*

# **STOCK SPLITS AND WHEN-ISSUED TRADING: A TEST OF THE SIGNALING THEORY**

**Kevin L. Kemerer, Barry University**

## **ABSTRACT**

*This study investigates empirically the presence/absence of when-issued trading in a sample of firms announcing stock splits in 2005 and 2006. The findings indicate that the operational performance of when-issued traded and non-when-issued traded firms differs prior to and after the stock split announcement. When-issued traded firms outperform when-issued traded firms with respect to EPS and ROTC after the stock split announcement suggesting that the existence of when-issued trading might be useful in identifying the better performing firms. Thus, the firms trying to mimic the signal of those firms with better future expectations may be recognized by investors and the opportunity to trade those shares on a when-issued basis may be foregone.*





## **HOW DOES PRIOR INFORMATION AFFECT ANALYST FORECAST HERDING?**

**Michele O'Neill, University of Idaho  
Minsup Song, Sogang University  
Judith Swisher, Western Michigan University**

### **ABSTRACT**

*Market response to analyst forecasts suggests that analysts are viewed by investors as knowledgeable information intermediaries. However, herding by analysts can reduce the information conveyed by their forecasts since analysts who herd may not fully use their private information. We test the empirical implications of a few theoretical models with a sample of individual analysts' annual earnings forecasts. A better understanding of the relation between prior information and analyst herding will allow investors to better interpret analyst forecasts. Results indicate the probability of herding among analysts is greater with large information shocks. Evidence also shows that analysts are more likely to herd in their earnings forecast revisions when their current outstanding forecasts deviate more from the consensus mean and in the presence of strong observable signals. In general, analysts with current outstanding forecasts that are optimistic are more likely to issue revised forecasts that are also optimistic.*

## **DO FIRMS MANIPULATE EARNINGS WHEN ENTERING THE BOND MARKET?**

**Sangshin (Sam) Pae, Arkansas State University  
Tina Quinn, Arkansas State University**

### **ABSTRACT**

*This paper examines whether firms issuing bonds engage in earnings management via either accrual-based or real activities. Based on a sample of bond issuers from 1992 through 2002, we document that bond issuers increase their accruals prior to the issuance then decrease their accruals subsequent to the issuance year. In addition, we also find some evidence that bond issuers engage in real earnings management. Overall, the findings in this study suggest that firms issuing bonds not only manipulate earnings using accruals but also use real operating decisions.*

# **A STUDY OF THE FINANCIAL CHARACTERISTICS OF EUROPEAN AND US COMPANIES LEADING UP TO THE RECESSION OF 2008/2009**

**Samuel Penkar, University of Houston Downtown  
Prakash Deo, University of Houston Downtown**

## **ABSTRACT**

*This study will examine the similarities and differences in the financial characteristics of large corporations operating in Europe and the United States. Financial data is used from year end 2005 and 2008 for large corporations to examine if there are major differences in how businesses operate, the profitability of their operations, how they are set up and how they raise capital. It will also be instructive to examine what if any steps the corporations might have taken in the midst of the global recession and the companies that have been relatively unaffected by the recession.*

# MUTUAL FUND PERFORMANCE AND BOARD CHARACTERISTICS RELATING TO MANAGER TERMINATIONS

Steve A. Nenninger, Sam Houston State University

## ABSTRACT

*This study examines mutual fund performance around fund manager replacement and the timing of the decision to replace mutual fund managers. The study includes data from 507 instances of replacement of an individual fund manager or the entire management team. While results match previous findings that returns improve and standard deviation falls following a manager change, several important new findings are also presented. In using a unique control sample of funds matched on prior period performance, net assets, and investment objective, it is shown that poorly performing managers who retain their positions actually improve fund performance to as great a degree as the new managers hired after a termination. Both groups experience improved returns and lower standard deviation of monthly return after the replacement date. Further, evidence indicates that for boards which decide to replace poorly performing managers, stronger boards are more likely to complete the replacement early in a period of underperformance. That is, boards which have a larger percentage of independent directors and which are smaller tend to be associated with early terminations.*

## INTRODUCTION

Mutual funds experiencing poor performance often replace the fund manager in an effort to improve returns. While previous studies have found that performance improves after a manager termination, this paper tests whether performance also improves for funds which retain poorly performing managers. This study is unique in determining a control group of funds with similar performance rather than comparing the "change" funds to a much broader control group based solely on investment objective. Therefore, the first question addressed is whether credit should be given the new manager or if there is a general mean reversion that occurs in underperforming funds over time. Secondly, since prior studies have shown that a manager replacement is a positive event for a struggling fund, the timing of the decision to replace mutual fund managers is examined. Finally, I test whether an early replacement decision is associated with stronger board governance characteristics. If directors assume that changing a manager can boost performance, then stronger boards may be more likely to replace a manager early.

## RELATED LITERATURE

Performance around manager changes has been the focus of several studies. Chevalier and Ellison (1999) find that firing a manager who has performed poorly may reduce outflows by 45%

compared to a control group. Khorana (1996) finds that departing managers tend to have higher fund turnover and higher expenses, and growth is also much slower for funds before a manager replacement compared to a control group.

In a later study, Khorana (2001) finds that after a manager replacement, underperforming funds experience significant improvement in returns relative to past performance, and that changes are preceded by decreasing net flows. Underperforming fund risk is higher pre-replacement, then declines. In a study of Australian equity mergers from 1994 to 2000, Gallagher, Nadarajay, and Pinnuck (2006) find that after replacement, poorly performing funds improve performance primarily through decreased momentum investment strategies and decreased portfolio concentration.

There have been few studies into the effectiveness of mutual fund boards. Khorana, Tufano, and Wedge (2007) find that fund mergers are more likely when the board is composed of a higher percentage of independent directors, and mergers are less likely when relatively higher paid boards govern the merger target. Tufano and Sevick, (1997) find that shareholder fees are lower when boards are smaller and have a greater fraction of independent directors. They also find some evidence of better paid directors setting higher fund fees.

## HYPOTHESES

I examine performance around a fund manager change, the timing of the replacement decision, and the relation between replacement timing and board characteristics in the following three hypotheses. The sample funds are compared to the control sample for H1 and H2, while early and late replacements are compared to H3.

- H1: Following a forced turnover a fund will demonstrate: 1) increased performance, 2) reduced risk, and 3) increased net flows.*
- H2: Post replacement performance, risk, and net flows are different for late and early replacements.*
- H3: The probability of an early termination increases with stronger board governance characteristics.*

## METHODOLOGY

To construct the sample, I examine the CRSP mutual fund database to identify all changes of a sole manager or the replacement of an entire management team for domestic equity funds for the period of January 2002 through December 2005. To be included in the sample, a fund must have at least two years of pre- and post-turnover performance data and only one manager change during the sample period. The sample includes 507 funds meeting the selection criteria. I compare this "change sample" to a control group matched on investment objective, excess objective return, asset flows, and total assets.

Three areas of fund performance are examined: return, net flows, and risk. Return is measured using fund excess objective return. Net flow is the percentage change in assets over and above the change in value of fund assets at the beginning of the period. Risk is determined by calculating the standard deviation of monthly returns for twelve-month periods surrounding

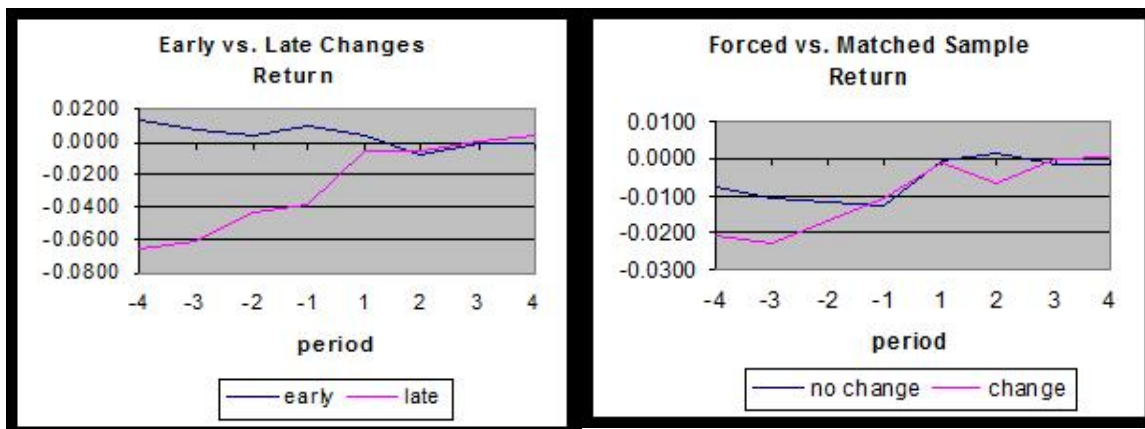
replacement. To test hypothesis 3, I examine the board characteristics of the sample funds, including board size, compensation, independent board, independent chair, retirement pay for directors, director age, and chair age. Data concerning the boards of directors are collected from the SEC for all the funds in the sample. This is published in forms 485APOA and 485BPOS, and is available on the SEC website at [www.sec.gov](http://www.sec.gov).

## RESULTS

Both the control group and the sample exhibit poor performance before the manager change, as expected. Further, *both* groups also exhibit excess returns not significantly different from 0 after the replacement date. While one may expect a new manager to be able to improve performance, it appears that those managers who remained also improved performance – at least up to the mean for their fund objective.

Those funds with an early manager change outperform those with a late change by 99 basis points for the first 6 months after the change date. Performance is similar for the next 18 months, then those funds which replaced the manager late outperform by 50 basis points, but the difference is only marginally significant. Also, performance over the full 24-month period is not significantly different for the two groups. This suggests that the timing of a manager change does not significantly impact post-replacement returns.

The results are shown in the figure below, which demonstrates the convergence to 0 of the excess objective return of both the replacement and control groups for all three categories of comparisons.

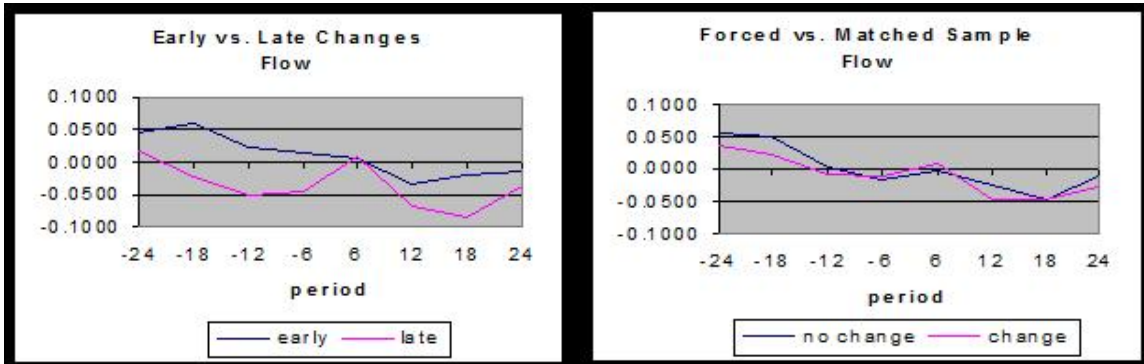


Flows are not significantly different for the replacement group and the matched sample before replacement, and were generally falling and approaching 0 net flows by the time of replacement. Flows continue to fall after the replacement date for both groups and are very similar for the sample and control.

Flows are higher for the early changes after replacement, which suggests that an early change can better stop the trend of decreasing cash flows. Also, since late replacement funds demonstrate

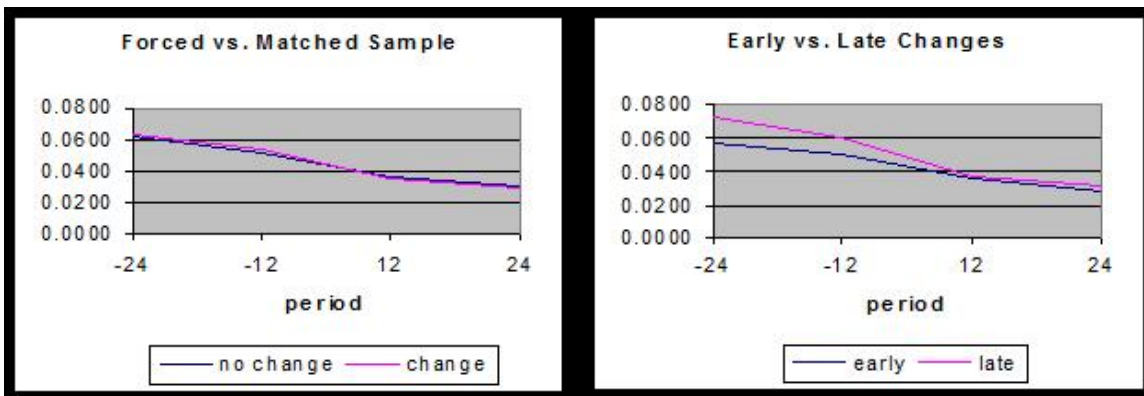
lower flows prior to replacement as well, an early replacement may mitigate some of the negative flows associated with retaining a poorly performing manager longer.

The results are shown in the figure below. As with returns, the flows for both groups are similar except for the early vs. late changes.



The standard deviation of monthly returns is similar for both the sample and the control group. Each group also experiences lower standard deviation across time. This supports Chevalier and Ellison (1997) in that standard deviation declines, but I also find a decline for those funds which did not change their manager. Results are very similar for late replacements.

The results are shown in the figure below, which shows the decreasing standard deviation around the replacement, as well as the very similar pattern for both the change and control groups.



Examining board characteristics reveals that chair age, the percentage of board members which are independent, and board size are all significant predictors of whether a change in fund manager will be an early change. Coefficients for chair age and percentage independent are positive and significant, indicating that the probably of a change being an early change are higher when the chair is older and the board is more independent, while a negative coefficient for board size implies that early changes are more likely for smaller boards.



## CONCLUSIONS

While results match previous findings that returns and flows improve and standard deviation is reduced following a manager change, several important new findings are also presented. Most past studies compare funds with a manager change to all other funds with the same investment category without matching on performance. In using a unique control sample of funds matched on prior period performance, assets flows, net assets, and investment objective, I have found evidence suggesting that poorly performing managers who retain their positions actually improve fund performance just as well as those funds in which the manager is replaced. Both groups experience improved returns and lower standard deviation of monthly return.

Regardless of the lack of evidence supporting improved performance due to manager replacement, I also find evidence that stronger boards are more likely to replace a manager early in a period of underperformance. Boards which have a larger percentage of independent directors and which are smaller tend to be associated with early replacements.

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## **HOW DOES PRIOR INFORMATION AFFECT ANALYST FORECAST HERDING?**

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## **EDUCATION EXPENSES: HOW SEVERAL TAX POLICIES CAN EASE THE STRAIN**

**Steven R. Ferraro, Pepperdine University**  
**Richard W. Powell, Pepperdine University**

### **ABSTRACT**

*College costs have been on the rise. But because education is favored as a social goal, Congress has responded by enacting various tax policies to ease the strain of paying for high education expenses. The special tax provisions include exclusions from gross income, tax deductions, and tax credits. A taxpayer can analyze the various tax opportunities to determine a best strategy. The choice is subject to a clientele effect because the optimal choice depends on various factors such as the income level of the taxpayer, the marginal tax bracket, the availability of scholarships and grants, the sums available for investment, and assumptions concerning future investment performance. The purpose of this paper is to help citizens design their plans for covering education costs.*

## WHY STILL DEFINED BENEFIT PLANS?

**Tae Ryu, Metropolitan State College of Denver**  
**Barbara Uliss, Metropolitan State College of Denver**  
**Chul-Young Roh, East Tennessee State University**

### ABSTRACT

*Pension plans are designed to provide income to individuals during their retirement years. This is accomplished by setting aside funds during an employee's working years so that at retirement the accumulated funds plus earnings from investing those funds are available to replace wages.*

*In general, pension plans are divided into two basic types: defined benefit (DB) and defined contribution (DC). DB plans promise a specified benefit at retirement, whereas DC plans are based on contributions into individual accounts, with benefits being determined by the value of the fund at retirement. Thus, employers are at risk with DB plans because they must contribute enough to meet the cost of benefits that the plan defines.*

*According to a recent survey conducted by the U.S. Government Accounting Office, the number of private DB pension plans has declined substantially over the past two decades. For example, about 92,000 DB plans existed in 1990 compared to just under 29,000 plans in 2009. At the same time, the number of DC pension plans, such as 401(k)-type plans, has grown dramatically and resulted in a shift from DB plans to DC plans. Also, 55 firms in the Fortune 100 offer only DC plans to new hires in 2009, a jump from 46 at the end of 2007.*

*The primary reason for the shift is that government regulations make DB plans cumbersome and costly to administer. DC plans often cost no more than 3 percent of payroll, but DB plans can cost 5 to 6 percent of payroll. Also, employers bear the burden of any investment losses, in the form of increased funding requirements, because DB plans guarantee a certain benefit.*

*In this study, we investigate the financial characteristics of firms that still sponsor DB plans. These firms are expected to be large in size and have stable or growing earnings and cash flows.*

## IS THERE LIFO AFTER IFRS?

**Diane Satin, California State University East Bay**

**Robert Lin, California State University East Bay**

### ABSTRACT

*Given the rapid move toward globalization in the business world, the accounting profession has also recently seen many changes including adoption of international financial reporting standards (IFRS) by the EU and other countries, the move toward international convergence by US GAAP, and most recently the expectation that US firms will adopt international standards soon. Some of those standards differ significantly from current US standards. This paper addresses IAS 2, the standard for inventory, which prohibits the use of LIFO. We ask the question, will the US ask for a carve-out to allow the use of LIFO once the IFRS are adopted? We ask this question, via survey, of both accounting faculty and accounting practitioners, to investigate the current thinking of the professional accounting community. This is a serious issue for both academics and practitioners, since LIFO for financial reporting is strongly tied to LIFO for tax purposes, and removing LIFO for tax purposes would release a large collective LIFO reserve with tremendous one-time tax consequences. Also, teaching LIFO is a major part of the inventory curriculum in academics, so losing LIFO would significantly affect how inventory valuation is taught at every level of financial accounting.*

### INTRODUCTION

As the business world rapidly moves more and more toward globalization, the accounting profession has also recently seen many similar changes. These include adoption of international financial reporting standards (IFRS) by the European Union and other countries, and the implementation of timelines to adopt IFRS by China, India, Japan, and others (Hamilton 2008). In the United State these changes include the move toward international convergence by US GAAP, and most recently the expectation that US firms will adopt international standards in the near future.

There are two issues that arise from the widespread adoption of international standards. One is that, when a country in process of adopting these standards dislikes a particular rule or portion of a rule, it asks for a modification or exception to that rule. This is known as a carve-out. The most notable carve-out is the exception to IAS 39 by the European Commons, dealing with hedge accounting, with the argument that IAS39 creates too much volatility.

In response to these exceptions, the International Accounting Standards Board { IASB } announced in 2008 that they would work to eliminate carve-outs and in fact were trying to remove the IAS39 carve-out afforded the EU (Taub 2008, Hamilton 2008). However, a country that disagrees with a rule or part of a rule to the extent they demand an exception may otherwise refuse to adopt the international standards altogether.

The other issue, specific to the United States, is that some of the international standards differ significantly from current US standards. Some of these differences have been addressed in the plan for convergence by the Financial Accounting Standards Board (FASB) issuing new standards such as those on fair value (FAS 157 and 159) or that which disallows amortization of goodwill and instead establishes an impairment test (FAS 142). One difference which has not yet been resolved and possibly not even yet addressed is that posed by IAS 2, the standard for inventory, which specifically prohibits the use of the last-in, first-out (LIFO) valuation method.

In this paper we ask the question, will the US ask for a carve-out to allow the use of LIFO once the IFRS are adopted? In fact, we ask this question, via survey, of both accounting faculty and accounting practitioners, to investigate the current thinking of the professional accounting community. This is a serious issue for both academics and practitioners, since LIFO for financial reporting is strongly tied to LIFO for tax purposes, and removing LIFO for tax purposes would release a large collective LIFO reserve with tremendous one-time tax consequences. Also, teaching LIFO is a major part of the inventory curriculum in academics, so losing LIFO would significantly affect how inventory valuation is taught at every level of financial accounting.

In the next section we describe the survey, the population to whom we submitted the survey, and our response rate. In the third section we discuss the responses themselves. Finally, we express our conclusions regarding this survey and its importance to the field of accounting education.

## OUR SURVEY

We chose to examine this matter by asking three questions of a variety of practitioners and accounting educators. We originally planned to survey accountant practitioners and faculty randomly chosen from the list of participants at the last American Accounting Association annual meeting. Given time constraints, we sent the survey to only about 30 practitioners and 30 accounting professors. Our response rate for practitioners was 30%, which is reasonable for a survey, but for professors we only got two responses (under 7%), so we enlarged our scope to include our own colleagues at CSU East Bay and other personal friends. We then ended up with seven responses out of 35, or a 20% response rate. Although this is a small data set, it is interesting to see the results.

The survey itself was open-ended, and comprised of the following three questions: 1. Given that US GAAP allows the use of the LIFO inventory method but IFRS does not, do you think US firms will switch from LIFO or will ask for a carve out (exception) to the IFRS inventory regulation IAS2? 2. If firms switch from using LIFO, what inventory method do you think will most likely replace LIFO? 3. Should we (academics) continue to teach LIFO inventory in our basic Financial Accounting course? At the bottom of the survey we included a space for additional comments. Results of the survey are reported in the following section.

## ANSWERS TO THE SURVEY

With respect to the first question, 100% of the accounting faculty responding to the survey believe the US will ask for a carve-out, although two mentioned that asking does not necessarily mean it will happen, and one tempered the answer by saying it depends on what happens with tax



regulations. However, the practitioners split evenly on this question, with 50% expecting US firms to ask for a carve-out and the other 50% expecting IAS2 to be adopted as-is.

Are these results surprising? It depends on whom one believes has an ear to the ground, so to speak. Remember that, as pointed out by more than one of the practitioner respondents, the current rule for financial reporting is that if LIFO is used for tax purposes, it must also be used for financial reporting. How will doing away with LIFO for financial reporting then affect taxes? About a year ago Congress examined the possibility of disallowing LIFO for taxes because they feel that the LIFO method yields an unfair tax advantage. Will the move toward IFRS cause this proposed tax change to resurface? It seems there are more questions than answers to this topic.

Regarding the second question, which method would replace LIFO if necessary, about 44% of both the practitioners and the academics chose FIFO. 28% of academics and 11% of practitioners chose the average method, and the other 28% of academics and 44% of practitioners expressed, in a variety of ways, that it would depend on which method gave the firm a better advantage either for reporting or tax purposes. (Percentages do not sum to 100% due to rounding.)

How do we interpret these results? Frankly we were surprised that more respondents did not choose the average method for two reasons. First, if firms are gaining a tax advantage by using LIFO, then they would be likely to lose less of that advantage by switching to a moderate method like average rather than choosing FIFO which would give them totally the opposite effect they had been employing. Second, research shows that the current trend in inventory is to move from LIFO to average, not FIFO, even prior to any requirement by IASB or FASB to do so (Satin and Jan 2008.)

The final question, should we continue to teach the LIFO method, is of course the most relevant for us as academics. A resounding 78% of the practitioners said yes, citing the following as reasons: knowing LIFO will allow students to understand the differences in valuation methods, LIFO may still exist for tax purposes and thus be necessary to know, LIFO may still be used by smaller firms not bound by SEC rules, and the AICPA may still test over LIFO until several years after the IFRS are implemented in the United States. However, only 28% of the academics said yes, and 57% said it depends on what happens in the future. Only one person said no outright, and that was a practitioner. We interpret these results to mean that, regardless of what happens to LIFO in the short term, at least the practitioners find that understanding LIFO is very important, and thus we should continue to teach it.

## **CONCLUSION**

We find from the above that, in spite of the IASB getting tough on carve-outs, the majority thinking is that US firms will ask for an exception to the disallowment of LIFO. Whether they will succeed is another matter, but they will most likely try. If they do not, there may be serious tax consequences at least in short term, which is a topic for another paper.

We also find that we, academics, should continue to teach LIFO regardless of the fate of that inventory valuation method, as it not only may still exist for tax purposes, and may still be used by small firms, but will remain an invaluable lesson for students who want to understand the differences in inventory valuation methods.

We also would like to redo this study using a wider sample of both practitioners and academics. We would like, among other things, to see if the results hold in the larger sample, to see if there is any difference based on location (as most of this sample came from California,) if there is any difference amongst the academics based on amount of practical experience, and if there is any difference in both groups based on length of time in the accounting profession. Unfortunately, given our small sample for this paper, we were not able to partition our respondents along those parameters.

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## **VARIABLE PREPAID FORWARD CONTRACTS AND CONSTRUCTIVE SALES LEGISLATION**

**N. Anna Shaheen, Sam Houston State University  
Valrie Chambers, Texas A & M University-Corpus Christi**

### **ABSTRACT**

*During the last ten-fifteen years, wealthy taxpayers were taking advantage of a growing arsenal of Wall Street techniques to delay or entirely avoid taxes on their investment gains. The tax law has been struggling to keep up as the sophistication and spread of the use of financial products increased. One such instrument sold for years but only now getting its day in court is a Variable Prepaid Forward Contract (VPFC). Debate among tax professionals hinges on what circumstances make VPFCs taxable at execution under Internal Revenue Code Section 1259 (constructive sales legislation). A brief review of events that prompted this legislation and the tax treatment of VPFCs will be covered in this paper, followed by a discussion of subsequent IRS positions found in Revenue Ruling 2003-7 and TAM 2006-04033. The tax positions will then be compared to the U.S. generally accepted accounting principle (GAAP) treatment, as explained by the new FASB Accounting Standards Codification. Finally, a recent court case decision is discussed in light of this historical framework followed by a conclusion.*

# **TAX ISSUES WITH A FAMILY LIMITED PARTNERSHIP**

**Ken Snow, Kaplan University**  
**Natasha Snow, Kaplan University**  
**Ana Machuca, Kaplan University**  
**William R. Whitley, Kaplan University**  
**Bryan Kennedy, Kaplan University**  
**Karin Torres, Kaplan University**

## **ABSTRACT**

*The authors of the paper discuss the advantages and disadvantages of a Family Limited Partnership and how potential laws could affect future estate planning. No original research was conducted by the authors of this paper.*

## **INTRODUCTION**

The Internal Revenue Service (IRS) allows individuals to create a Family Limited Partnership (FLP) to eliminate or decrease the estate and gift taxes while allowing the individual to control the assets. However, there are challenges to an FLP if the rules are not followed. This paper will discuss the advantages and disadvantages of an FLP.

## **ADVANTAGES OF AN FLP**

There are two major advantages to creating an FLP: 1) tax saving by decreasing estate and gift taxes through the use of discounts for lack of marketability and for fractional interest (Jurinski, 2004) and 2) the creator or original owner of the assets retains control of the assets (Fiore, 2001). Easy to value assets are contributed to the FLP, which converts the assets into more difficult to value assets (Burnett, 2006). For example, the owner of the asset (rental property) contributes it to the FLP for a unit in the partnership. The rental property has an active market to easily value it. However, once in the FLP comingled with other assets, the FLP unit is difficult to value since it is not traded on the open market like the housing market (Jennings, 2008).

The second advantage is that the owner of the asset becomes the general partner and the descendants become limited partners of the FLP. The general partner has control of the assets, liquidation of assets and distribution of profits while alive. Then at the time of death the limited partners have the right to sell their units at a discount any time (Jurinski, 2004). This is a great way to transfer the assets of the deceased because it avoids going through probate and/or any other legalities normally required when there is a will involved.

## **DISADVANTAGES OF AN FLP**

An FLP also has several disadvantages, which include the following: failure to fund the FLP, failure to involve “business” assets only, liability of a parent as the general partner, limit creditor’s access to the FLP’s assets, and limit the percentage of the assets placed in the FLP. The main disadvantage is the failure to fund the FLP by not including business assets to protect them from estate and gift taxes (Fiore, 2001). Investors invest time and money in creating an FLP but do not put the correct assets in the FLP (Jennings, 2008). Failure to properly set up the FLP will result in inability to use the FLP at the time of death to its full potential.

One misconception of the FLP’s is that personal assets, including the home you are living in, should not be included in the FLP. On the other hand capital assets generating income are left out of the FLP. Investors should identify the business related assets to convert to an FLP (Givner & Kaye, 2009).

Another FLP disadvantage is the liability created by having the parent as the general partner. For example if there is a lawsuit involved, depending on the state where the FLP was created and the type of lawsuit, the parent acting as the general partner can be forced to distribute income generated from the FLP to pay for the lawsuit judgment (Jennings, 2008).

Typically an FLP should only be funded with 25% of the client’s assets unless the individual’s estate is small. In that case up to 40% of the assets can be placed in the FLP. The investor needs to be aware that the FLP is not pay for personal expenses.

## **GUIDELINES TO CREATING AN FLP**

The FLP should be used in estate planning and asset protection. The client along with the tax professional should be aware of the tax consequences of not following the rules of an FLP set forth by the IRS. The following guidelines should be followed to receive the greatest benefits of an FLP: ensure that there are valid non-tax reasons for establishing an FLP, such as asset protection and business succession planning; structure the FLP to limit liability exposure, such as re-titling all assets in the name of the FLP; diversify FLPs by limiting the amount invested, create trusts to manage FLP and treat FLP as a business not a trust (Schiller, 2003).

## **CONCLUSION**

The future of FLP’s benefits is quite uncertain at this time. A recession and debt spending by the federal government, has put pressure on the government to increase tax revenue (Givner & Kaye, 2009). Within President Obama’s first six months, his administration has doubled the national debt. United States Representative Earl Pomeroy (D) has introduced House Resolution 436 (H.R. 436) to freeze the lifetime transfer exclusion at 3.5 million per person and a 45% tax rate for the estate. H.R. 436 will also allow the IRS to appraise individual assets with an FLP, possibly eliminating most tax benefits (Givner & Kaye, 2009).

Future tax professionals will need to keep informed of possible tax law changes. Future estate planning may be narrowed or eliminated in an effort to raise taxes on the wealthy. As political winds change so will estate planning.

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# **THE SHORT-TERM EFFECT OF PRE IPO EARNINGS MANAGEMENT ON POST IPO OWNERSHIP STRUCTURE**

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## **ABSTRACT**

*The purpose of this study is to investigate whether IPO firms engage in earnings management before IPO to increase institutional ownerships after IPO. Using a sample of 302 IPO's over six-year period (1997-2002), we find that IPO firms with high discretionary accruals, a measure of aggressive earnings managements, have greater institutional ownerships one quarter after IPO than IPO firms with low discretionary accruals. This result holds after controlling for other influencing factors such as initial offer price, underwriter reputation, and offer fraction. This result is robust across different measures of variables and testing methods.*

# **CORPORATE FINANCE ASSESSMENT RESULTS: STUDENT PERFORMANCE ACROSS MULTIPLE LEARNING OBJECTIVES**

**Neil Terry, West Texas A&M University  
Jean Walker, West Texas A&M University  
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## **ABSTRACT**

*This paper examines assessment results for principles of corporate finance at a regional institution. Results are derived from 91 students taking a comprehensive final exam in corporate finance in the spring of 2009. The assessment tool is a twenty-four question course embedded exam created by the programs four finance faculty members. Three questions considered easy, moderate, and hard are distributed across the eight course learning objectives. The learning objectives state students will develop and demonstrate knowledge of the following areas: (1) Financial markets and efficiency; (2) Financial statement analysis; (3) Time value of money; (4) Stocks and bonds; (5) Risk, return and diversification; (6) Capital budgeting and the cost of capital; (7) Capital structure of a firm; and (8) Multinational financial management.*

*Assessment results indicate learning objectives 1, 3, and 5 are concepts with clear student understanding, with final exam averages surpassing 70% on all three learning objectives. Learning objectives 2, 4, 6, 7, and 8 are areas of moderate concern, with class average less than 70% correct. Although several learning objectives did not exceed 70%, no learning objective scored below 60%. The results indicate students struggle with most learning objective areas in corporate finance but no specific topic is an area of extreme weakness. Future research avenues include an exploration on the correlation of student performance on the corporate finance assessment exam with performance on the principles of economics and accounting assessment exams.*



# **ROBUSTNESS OF THE BLACK-SCHOLES MODEL IN PRICING INDIAN STOCK OPTIONS**

**Sankaran Venkateswar, Trinity University**

## **ABSTRACT**

*Options' trading was introduced in India in the year 2000 through trading in index futures contracts, and later in the year 2001 index and stock options trading were introduced.*

*The robustness of the Black-Scholes model as it applies to pricing options in the Indian options market was evaluated by (a) assessing the validity of its assumptions as it applies to the Indian options market, (b) assessing its predictive ability, and (c) assessing the distributive characteristics of the residuals.*

*The results of the study on a sample of options prices for the period 2008 indicate that for the most part the assumptions of the Black-Scholes model are applicable in the Indian options market. The robustness of the model was tested by assessing the predictive ability of the Black-Scholes model and analyzing the distributive characteristics of the residuals.*

*An analysis of the mean absolute and percentage errors indicate the Black-Scholes model does not statistically do a good job in pricing stock options in India. It was also found that the residuals were not normally distributed and had fat tails.*

*As the Indian options market is a nascent market, further work needs to be done to assess the mechanism involved in pricing stock options in India and the robustness of such a mechanism.*

# SMALL AND MEDIUM-SCALE ENTERPRISES AND INSTITUTE AND FOUNDATION SUPPORTING SMES FINANCIALLY: TURKISH CASE

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**Yucel Ayricay, Kahramanmaraş Sutcu Imam University**

## ABSTRACT

*Business enterprises, described as SME, constitute the basic elements of production, employment and development all over the world. These kinds of enterprises are not only crucial for each country in the world but also indispensable for Turkey. With this study the situation of these enterprises called SME in Turkey and public sector and private sector enterprises which support financially these enterprises and the support which these enterprises give to SME.*

*Key Words: SME, Financial Support of SME.*

## INTRODUCTION

Small and medium-size enterprises are the enterprises which consist of 250 employees and not exceed 25 million TL as sales revenue annually. The importance of SME opening to foreign markets has increased in globalization world. With this study, the description of SME and the description of used globally and the importance in economies, advantages and disadvantages and institutions and foundations supporting SME in the implementation process of Turkey.

There is no concept of SME which generally accepted. Identifications of SMEs can vary according to each country, economical positions of the countries, even the different sectors in the same country.

Developed countries uses one or several of the criterias such as the number of employee, total size of assets, the independence level in the partnership and market share in the description of SMEs. For example European Union describe SMEs as the enterprises having maximum 250 employees, the annual total sales of which is below 27 million Euro and total size of assets of which doesn't exceed 27 million Euro (Muslumov, 2002:5).

In Turkey, SMEs are referred as the economical units which employ less than 250 workers, are classified as micro company, small and medium sized enterprise in bylaws, the annual net selling output and financial balance sheet of which doesn't exceed 25 million Turkish Liras (Percin, 2006:118).

The characteristic features of SMEs have to be identified to simplify the description and set a conceptual frame work. From this point of view, the follow-up of related laws and other national or international regulations and application of these activities necessitate the employment of

qualified personnel and source allocation. SMEs in source difficulty can have problems because of not allocating resource to activity directly and instantly and miss the opportunity.

In order to simplify identification and facilitate the creation of a conceptual framework, SME is required to determine the characteristic features. Moving from this point, to be taken into consideration in defining SMEs, it is possible to talk about this characteristic features.

SMEs generally have simple organization structure and they are not managed by professional managers, but personally managed by enterprises owners or partners. SMEs owners or managers act independently by making business decisions and they are not subject to any independent audit. SMEs have relatively small market share in markets they operate (Simsek, 2002:3).

### **SME'S ENTERPRISES AND THE CRITERIA USED TO DEFINE**

Criteria in the following are used in defining SMEs (Erdogan etc., 2006:9-12).

**Labour:** The number of employees in the enterprises is one of the preferred factors in determining the scale of the enterprises sizes. Along with fixed assets of enterprises, labour is accepted as a first criteria in assessing size of enterprises thanks to be second potential factor of scale size or volume of activities of enterprises and be easily measured quantitatively.

**Number Of Machine:** Despite the fact that the number of machines stalls and establishment are accepted as the potential production factor at the first sight, the machines loses the feature of impoundability in case there are more production processes than one.

**Production Capacity:** Even though capacity size and enterprises size are used synonymly, the concept of capacity is out of meaningful criteria in this respect as it doesn't have an objective identification like enterprise size.

**Value of Fixed Assets:** Fixed assets in enterprises are accepted as one of the fundamental dynamics which sustain the enterprises.

**Machinery Park:** Plants and machinery constitute the most important part of fixed assets in industrial enterprises. In spite of some disadvantages of value of Machinery Park for expressing scale size in the industrial enterprises, determination of scale size of enterprise has to be based on as second criteria besides the number of employee especially in the industrial enterprises.

**Sales Revenue (Turnover):** Besides labour and machinery park, sales revenue is one of the most referenced quantitative criteria in assigning the scale sizes of enterprises.

**Added-Value:** Added-value is accepted as an indicator of scale size of enterprises.

However, in the following criteria are often used to describe SME (Erdogan etc., 2006:12).

- Independent management,
- To keep working as local business,
- To be owned entire capital or a large part of it by enterprises owner,
- To have small place in business segment which enterprises operate,
- Share that enterprises operate, market power in the relation with buyers and sellers,
- Cooperation and level of proficiency.
- Limited and insufficient capital,
- Non-application of the management techniques and insufficiency.

One of the major criteria is the number of the employee working in the enterprises while identifying SME in the world. While some countries classify SME as very small, small or medium size, there is no classification like this in some countries. While the enterprises that between 1-100 workers are employed in Brazil is accepted as SME, the ultimate limit is up to 500 in the USA and Germany (Erdogan etc, 2006:17).

### **Member State of the European Union**

Country	Number of Employee
Belgium	1-50
Denmark	6-50
France	10-500
Germany	6-500
Ireland	1-50
Italy	1-500
Holland	1-100
England	1-200

When a general classification is made, this figure is seen. The enterprises having between 1 and 9 employees are micro enterprises. The enterprises having between 10 and 499 are Small and Medium sized enterprise. The enterprises having more than 500 workers are big enterprise (Simsek, 2002:8).

### **The United States of America**

The enterprises owning 100 employees is accepted as small industry ,in some situation the limit is enhanced by 500 employees .For medium sized enterprises, the limit generally accepted is 1000 employees. Also small enterprise organization having been operated in America since 1920 approves sale amount in addition to the number of employees as a quantitative criteria (Simsek, 2002:8).

### **Holland**

In this country, the quantitative criteria attained in law text and statistics about SME is the number of employees. According to this, the enterprise owning employees beneath 10 is expressed as small industry but the enterprise owning employees between 10 and 100 is stated as medium sized industry. The principal criterion for SME in Holland is that the simplicity of enterprise organization and the functions of enterprise are undertaken by enterprise owner (Simsek, 2002:9).

### **England**

The identification of SME in England isn't made officially. The definition of small enterprise made by Research Committee of small industrial enterprise is in the following.

- Fewer than 25 employees in manufacturing industry
- Fewer than 25 employees in building trade
- The mining trade annual sale quantity is less than 50 thousand pound.
- Annual sales less than 200 thousand pound in retail trade
- Less than 200 workers in wholesale trade
- Annual sales should be less than 100 thousand pound in motor vehicle maintenance and repair (Simsek, 2002:9).

### **Japan**

The number of workers and capitalization are taken into consideration as identifying SME in Japan. According to detailed definition in manufacturing sector, the enterprises with fewer than 5 employees as “micro”, those with fewer than 20 employees as “too small” and those between 20-299 employees as SME. SME’s capital in manufacturing sector is not more than 100 million Yen. In trade, the number of employee in SME should not exceed 100 and the capital should not exceed 30 million Yen. In service sector also employees should not exceed 50 and SME’s capital should not exceed 10 million Yen (Yalcin, 2006:6).

### **Arab Countries**

Defining SME in these countries is seen some differences parallel to the development level of the country. Small industry include the enterprises employing between 1 and 49 in the group in which Iraq, Jordan, Kuwait, Saudi Arabia and Syria. small industry comprise the enterprises which employ the workers between 10-100 and whose machinery value does not exceed 500 thousand Egypt Pound are regarded as small industry (Simsek, 2002:10).

## **HISTORICAL DEVELOPMENT OF SME’S ENTERPRISES IN THE WORLD**

It is seen that small enterprises have an important place in history and based on very old times. Small enterprises have served as the basic milestone of economies until the mass production comes into prominence by help of machines after the industrial revolution. After industrial revolution, the occurrence of big enterprises making massive production and gaining cost advantage by this way affected small enterprises in a negative way, so these not adopting to new rivalry conditions had to be closed. Until economic crises which seen in 1970’s in the industrialized countries big enterprises had indisputable superiority by production and employment but with these crises they had difficulty by adopting economic, social and technologic changes. But, SME complied with new changes by using labor-intensive technologies effectively in industry, due to their dynamic and flexible structure.

By the end of 1960, changes in the world economy began to eliminate the indifference which sense against SME. Because during this period, it was seen that SME can act more flexible and successful than big enterprises in response to changes in market, production and other activities. Especially entrance to a period of economic stagnation after the oil crisis emerging in 1973, dismissal has dramatically been observed besides big enterprises got into financial straits,

bankruptcy and close. In the same period it has been emerged that SMEs are more durable in the face of economic stagnation and overcome the crisis with less cost, moreover SMEs which fill the discharged market place increase their efficiencies and employ much more people. Nowadays, SMEs have an important place in national economies in the respect of their numbers, their share of industrial production and their contribution to national income as well (Simsek, 2002:15).

### **THE PLACE OF SME IN THE FINANCIAL SYSTEM AND ITS IMPORTANCE IN ECONOMICS**

The employment SMEs provided, added value, the investments they made; their shares in total tax have a great importance on economy of a country. The definition of SMEs differs according to size of country economy. For instance, an enterprise taken out of SMEs classification according to definition of a country can be regarded as a big sized in another country. However the emphasis that the large part of enterprises is consisted of SMEs according to classification evaluated in the conditions. Nonetheless, it will not be false to highlight that the big majority of enterprises in every countries-which evaluated in their unique circumstances- are generally SMEs. SMEs just like other large scale enterprises are affected in positive way during the time of economic rise and buoyancy. Recession period, however, has significant advantages on large scale enterprises. It can adapt easier due to its flexible structure.

Because of their structure and being more careful about the relation with banks, SMEs are influenced less from economic fluctuation and adapt easier to demand changes and diversities. This, also, shows the flexibility of SMEs. Another contribution giving from SMEs to economy is having an incentive role on arising new entrepreneurs. Using way of workers who learn and perform the work in workplace and then establish his/her own business; there are so many new enterprises established in every year. Thanks to this; it creates its own employment and entrepreneurship effect which supports it (Yalcin, 2006:22).

SMEs become preferential purpose for the countries which wants to benefit from advantages and the opportunities for having portion on World commerce or developing market and not to be apart from the global and also globalizing world.

### **ADVANTAGES AND DISADVANTAGES OF SME**

Holding important part of national economy by SME is not a historical coincidence. This situation is not the fact constituted neither from helpful politics which composed by large scale enterprises nor government's benefit program for SMEs. SMEs have more advantages than big companies in many occasions. A great many of big companies were becoming big companies by their dynamic leaders' well management when they were SME (Akgemci, 2001:15).

SMEs are adapted easier to changing market situations by their structure which is smaller than large scale companies. It can realize changes occurred in customers' choices about the goods or services that produced in time and by taking the precautions it can protect itself about the potential loss or risk of decline in profit.

Although, they do not have the opportunity of having professional market research facilities, SMEs are the part of the market that they are related. They have greater chance of realizing excess

demand, market cavity and the expectation of customer in time and producing at that scale. Dynamism of SME involves the dynamism of general economic activity. Indeed, dynamism of economy yields on only elimination of new entries and weak enterprises (Yalcin, 2006:24).

In global economy, enterprises should make collaboration to integrate each others. To need each other to live is unquestioning fact for enterprises. In global competition environment, large scale companies' effort in supplying or producing the basic needs and raw materials just on its own is not profitable. For this reason SMEs provide needed input by relieving them from quality and enterprise cost.

For this reason SMEs provide needed input by relieving them from quality and enterprise cost (Erdogan etc., 2006:28).

SME has a very important advantage making innovation as a consequence of their flexible and dynamic structure. Being close to market and customer enable them to notice the hiatus in demand and demand changes and turn them into opportunity.

At the present time, contribution of information-based economies to the innovation of SME by increasing the importance of financial capital besides human capital can not be denied (Yalcin, 2006:27).

As investment expense which requires for SME to employ a person is less when it is compared to big enterprises, the contribution of these enterprises to employment is big. The other important aspect of SME is their contribution which it provides to human resources. As being the places where the technical and vocational personals are trained and as a result of these trainee personals having job in other enterprises as qualified workers especially in big enterprises, the need for human resource is met (Erdogan etc., 2006:28).

Small enterprises have to use their limited sources effectively. It can be understood that SME does not have sources to waste.

Communication is directly and inefficient bureaucracy process and cost are avoided in SME due to their relatively small structure. Close relationship between employee and employer and alienation to work more efficiently and productively (Yalcin, 2006:27).

It is impossible to talking about a feasible economical market system in this respect, SME if competitive market conditions aren't available the asset and service markets. In this respect, increasing the weight of SMEs in economy helps free market economy as it is expected by preventing unique and group monopolization as well (Erdogan etc, 2006:35).

SME is quicker in the process of making decision and putting into practice, because of the fact that the management and ownership belongs to the same people by the small organization structure. This accelerates the development and minimizes the cost caused by waste of time.

SMEs are generally out of the tight bureaucratic rules with public arrangements assumed for the purpose of providing to protect all partners' right in the publicly-held company (Yalcin, 2006:28).

In a wide organization net, chamber of artisans which spread through the economic geography of SMEs are observed to have the chamber of trade and industry majority of whose members consist of small enterprises, businessman associations established around the cities and the potential to be the most efficient pressure group of the country. The lack of coordination and solidarity between organizations of SME and partially political constraint prevent SME to compose an effective pressure group which perform a radical change (Erdogan etc., 2006:35).

In addition to some advantages, there are some disadvantages of SME. They are the problems about management and organization financial problems, production, marketing, rivalry stuff, education, exporting and research-development.

In general a professional organization and management structure of SME aren't available. Basic business functions such as management, marketing production, financing procurement are not occurred. The smallness activity doesn't make professional organization structure economize. The functions which are the responsibility of one or several people are tried to be fulfilled. With this kind of organization and management structure, proficiency can't be provided so the effectiveness of activities can't be fulfilled as expected. Financial problem generally starts in the foundation process of SME and effects activities and development during their existence. The lack of independent financial department in SME causes financial alternatives and credit conditions not to be measured enough.

Financing problems for SMEs always start in the beginning of foundation and these problems affect SMEs throughout the process negatively. As SMEs don't have an independent financial department, this causes inadequate evaluation of financial alternatives and credit provisions (Erdogan etc., 2006:37).

SMEs have more unfavorable conditions than big enterprises. The enterprises giving credit don't take into consideration of performance and ability to pay, instead they evaluate personal property of employer and also they seem to give credit not to enterprises, but they seem to give it to the personal property (Akgemci, 2001:16).

It is difficult for SME to having benefit from cost-cutting affects of scale economies because of producing for smaller scale markets. The limitation of opportunities has prevented production technology to be used, so even though there is a high average unit cost, the less qualified product is attained the craft production (labour-intensive manufacture) especially to order division of labor degree, doesn't progress and business varies by force of production in batch (Yalcin, 2006:29). In SMEs, generally intense production techniques are used. Because of the fact that they produce goods made to order, division of labor degree don't go advanced levels and by force of in batch-production the work continually changes (Akgemci, 2001:16).

It isn't possible for SMEs to maintain a professional marketing activity as the big enterprises do. A different marketing unit isn't available in this kind of small enterprise.

Marketing function is combined with sale activity and tried to serve with amateur effort. For this purpose, participation to business exhibition large masses oriented advertisement and after sales services are maintained a limited scale (Yalcin, 2006:29).

It is known that SMEs particularly remain incapable of marketing planning of technical based enterprise owners. They carry on the activities by developing tactic plans according to the emerging markets. Instead of long term plans the SMEs produce small markets with under developed production techniques. The SME's opportunities are limited in rivalry components such as after sale services in addition to qualification and price

SMEs generally make small market oriented productions and they make these productions with underdeveloped production techniques. This production cause average unit cost to rise and cause unit to be substandard. Besides components like quality, cost and after sale service, in other rivalry elements SMEs' opportunities are more restricted.



In today's globalization of world, training and counseling aids with other financial supports are crucial directed to increasing rivalry qualifications of SME and fulfilling of the problems (Yalcin, 2006:30).

Due to the reasons of the restricted employment opportunities and their not being appealing for qualified labor force and the risk about the consistency of difficulties it is too difficult for SMEs to employ qualified personnel needed. In addition to this, they can't protect their trained labor force in their structure against big companies.

The SME educations are maintained in the dimension of in-service training. The novice trained by a certain limit in the mentor system it doesn't go beyond this stage.

Enterprises have problems while changing shell stage due to required knowledge and experience doesn't occur with limited education possibility for having new stage. Sometimes because of not keeping pace with new developments liquidation can occur (Yalcin, 2006:31).

SMEs confronted with difficulties by following and obtaining technological developments. Production activities that are explained by average unit cost called "Scale Economy" has shown inversely proportional development with output, these activities generally exceed SMEs scale. Therefore, SMEs have difficulties while obtaining technology which associated with SME even its cost and size are lower.

In our days, disadvantages of SME on using information source which abundant, cheap and widespread is not resolved. For example in a statistical study made for USA while the usage rate of internet, accepted the most important information source, by big enterprises is 99%, the usage rate of it is 79% for SME.

Due to the lack of qualified personnel for processing and utilization of data, information disadvantage of SMEs about information will continue even if the levels of obtaining information are same (Yalcin, 2006:32).

All functions of big enterprises generally can be examined economically, interpret by analyses and by this way some economic results can be revealed. Contemporary communication techniques and scientific data are used on the study of research-development and new production of goods and services. SME doesn't have neither research department nor source for following industrial development, change, pleasure and habit of consumer and this kind of developments as well.

Exporting activity which is special expertise field generally doesn't seem as SME activity. SME activity process doesn't compatible with export which embodied complicated and long process, due to activity process of SME designed as relatively small and simple organization.

The absence of SME's qualified personnel for export besides knowledge and financing constraints, not having international standards on good and services prevent export activities of SMEs to reach required level. SME's export activities are calculated about 8-9% interval in our country. This rate is the lowest rate after bank credits for SME (Yalcin, 2006:37).

The follow-up of related laws and other national or international regulations necessitate the qualified personnel and resource allocation for the application of these activities. SMEs in the shortage of resource miss the opportunity as they can't allocate enough resource for the transactions, so as a result they face with serious problem (Yalcin, 2006:38).

## THE INSTITUTE AND ASSOCIATION SUPPORTING SME'S IN TURKEY

There are many corporations and association which are supporting the development of Small and Medium size Enterprises (SME). These corporations and associations provide so many supports to SME in terms of finance. Thanks to these corporations, today SMEs go forward about a lot of issues.

The portion of SME loans in total loans has at most 5 % percentage. Those loans are consigned by some banks in Turkey. The banks which consign loans to SMEs are Halkbank, Vakıflar Bank, Ziraat Bank, and Eximbank – which consign loan on export. Apart from these banks, there are some other trade, investment and development banks which have some loans for SMEs (Basarmis, 2000:3).

### Ministry of Industry and Trade

About SMEs in the act of establishment of Ministry of Industry and Trade; to plan in terms of construction plans of Planned Locations of Industry and Industrial Zones, to prepare construction plans, to control construct and other activities, to service SBEs about reorganization, education, treatment, advertising and marketing, technical and economical issues, to protect and develop the being, to make arrangements about management and law issues are the commitments and missions of SME (Cımat and Lacınel, 2002:48).

### Turkey Halk Bank

Turkey Halk Bank established in 1938 for financing bank for SMEs. By the time, the mission zone expanded and then took in hand like consigning medium and long term project loans, development of small and medium sized industry enterprises, development of major industry enterprises and to give the enterprise consultancy service to reach large scale industry, supporting with the project and technical information flow (Cımat and Lacınel, 2002:48).

Halkbank is a bank which specialized especially in small and medium size industry. Thanks to specialized staff, by giving consultancy service to entrepreneurs about their investments, it consigns some loans to SMEs. These loans are as follows (Yalcin, 2000:3-5);

**Industry Loans:** The industry loans which are separate in seven are dedicated for industrial enterprises. From these industry loans, it is wanted collateral dept, besides bail and/or letter of guarantee may be needed.

**Supporting SME Loans:** They are the resources of investments of Turkish treasury and Foreign Exchange Earnings Incentive Fund. These are the loans for supporting the service investments of SMEs, supporting the purchase of machinery and equipment and leasing.

**Supporting Export Loans:** The goal of export loans is to correspond financial needs which may occur during the production of goods and exporting. These loans are consigned by Eximbank.

**Tourism Credits:** These are the credits enterprises having touristic certificate benefit from. This certificate has to be obtained by Tourism Minister, Provincial Tourism Directorate and

Municipal. It shows different qualifications for SME. Facility or Enterprise credit is taken in the purchase of machinery and equipment.

**Incentive Development Credits:** These are the credits that encourage new SMEs being important for economy of country and develop the existing ones.

### **Presidency Of Development And Support Of Sme's Administration (KOSGEB)**

The purpose of organization is "to fulfill the economical and social needs of the country, to increase the share and effectiveness of SMEs, raise the power and level of rivalry and implement integration in industry in accordance with economical developments." (Cimat and Lacinel, 2002:50).

### **Turkish Vakiflar Bank**

Vakıfbank aims to provide economic support for SMEs and give data, information and financial support for the purpose of increasing efficiency and competitiveness in the adjustment process to customs union (Cimat and Lacinel, 2002:51).

Vakıfbank allocate project based credit in addition to the activities of commercial bank. World Bank fund raising to Vakıfbank for the use of SMEs as a need of agreement between Turkey and World Bank. Vakıfbank lets SMEs making new or replacement modernization investments in one of the areas such as manufacturing, repair, mining, industrial services to use credits allocated for SMEs (Basarmıs, 2000:5)

### **Development Organization Of Small Industry (KUSGET)**

Küsget was founded to provide employment, increase efficiency, organize training programme improve entrepreneur, develop backward region, contribute to provision of income, make small and big industry into sub-industry unit (Cimat and Lacinel, 2002:50).

### **Undersecretariat Of Treasure**

96/8615 numbered judgment about Supports of state in the investments of SMEs is published in the official gazette dated on 16.10.1996 and numbered 22789. Application conditions are facilitated in the encouragements of SMEs assign Halk bank to implementer and supervisory unit. Applications are made in branch of Halkbank and suitable projects are involved in the financial support range. Halkbank delivers the suitable projects to UNDERSECRETARIAT OF TREASURE encouragement implementation Directorate and encouragement certificate of general directorate is drawn up (Demir, 2007:42).

### **Eximbank**

-Preshipment export credit for SMEs: SMEs having employees between 1 and 1200 benefit from this credit. Credit limit is 600 billion, maturity date is 120 days.

-Preshipment foreign currency credit: the maturity rate is 180 days and company limitation is 10 million \$

Priority Region for Development Pre-shipment Export Credit: Manufacturer, manufacturer-exporter and exporter companies in the Priority Region for Development took advantages of these credits.

EXIMBANK, stipulated to banks arbitrating for their credits to use 30% percent of these credits on SME since 01.03.1999 (Demir, 2007:44).

### **Turkish License Institute**

Turkish License Institute helps SMEs for obtaining industrial design, license, utility model and brand (Demir, 2007:46).

### **Turkish Standard Institute**

Turkish Standard Institute helps SME for obtaining documents needed current standard in national and international level (Demir, 2007:47).

### **Credits of Ziraat Bank**

Ziraat Bank allocate source only for SME which operate in agriculture sector, due to their proficiency field is agriculture. They don't let the credits available for any SME except these SME (Yalcin, 2000:5).

### **Credit Guarantee Fund**

The aim of credit guarantee fund is to warrant SME to use credits when these enterprises don't have enough assurance (Yalcin, 2000:5).

## **CONCLUSION**

In our days effects of crisis felt by all around the world, the importance of enterprises units has emerged in an open manner. Big enterprises bankruptcy which because of having all negation comes by their magnitude carried SME which move faster into more advantageous position. SMEs are the candidate of futures big enterprise. Importance of those enterprises which have significant effect and functions in production measure and process will be emerged more apparent when rise on potential gross national produced and real national income, amount of tax that collected and power of creating employment are noted. These enterprises confronted with many problems while financing.

At the same time all countries also provide this kind of enterprises financial opportunities via institutions and associations because of the importance of those enterprises. With this study, financial backer institutions which provide this kind of enterprises called SME in Turkey investigated and examined the supports which provided those institutions. Moving with obtained

finding here, other countries support types which provided by financial backer institutions and associations can be investigated mutually. All successful and failing aspect of Turkey example can be evaluated.

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