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# CPAs' POLITICAL IDEOLOGY AND RULE-BASED MORAL REASONING

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**Kevin L. Ennis, Mississippi State University, Meridian**

## ABSTRACT

*Certified Public Accountants (CPAs) have been shown to exhibit a tendency to exercise rule-based moral reasoning when faced with resolving an ethical dilemma. That is, the CPA will tend toward following rules to resolve an ethical issue. Lampe and Finn (1992) suggested that professional accountants and auditors may resort to rules more, relative to other professional non-accounting groups, when resolving ethical issues due to the rule-oriented nature of accounting and auditing practice. In other studies, it has been determined that political conservatives tend to be more rule-oriented in their ethical reasoning than do political liberals, the latter being more principled in their moral reasoning process.*

*Based on coupling the results of the prior subject research, the present study addressed the relationship of CPAs' rule-oriented moral reasoning to their political ideology to determine if perhaps an alternative explanation to Lampe and Finn's as to why CPAs tend to be rule-oriented in their moral reasoning may be found in the CPA's political ideology. The results of this study show that CPAs who are more rule-oriented in their moral reasoning tend to be conservative in political ideology as compared to CPA moderates and CPA liberals. This finding is highly significant to the CPA profession because it may indicate that the profession is attracting folks into college accounting programs who are more conservative in their political ideology relative to those with more liberal political orientations. That is, it may not actually be the rule-oriented nature of accounting and auditing that is responsible for CPAs tending to be rule-oriented in their moral reasoning, but rather that political conservatives are more attracted to entering the profession versus political moderates and liberals.*

*The CPA profession has been deeply concerned in recent years over its ethical image due to it being tarnished by numerous accounting and auditing scandals. It has sought to become more principled in its ethical approach over depending on rules and regulations to guarantee its ethics. This study may highlight that at least part of the problem is that the profession is not attracting folks to the profession unless they tend to be political conservatives.*

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# **CORPORATE SOCIAL AND FINANCIAL PERFORMANCE: A CANONICAL CORRELATION ANALYSIS**

**Margaret L. Andersen, North Dakota State University**

## **ABSTRACT**

*A major stream of research has resulted from efforts to understand the relationship between social performance and financial performance that exists for corporations. Can a company do well by doing good? Using canonical correlation, the results of this study indicate a strong relationship between a company's social performance and its financial performance. Further, this association differs across industries. In examining social performance, both strengths and concerns are important and should be considered separately. Finally, this study points to the importance of operating income as a key financial performance measure.*

# ETHICAL PREDISPOSITION OF CERTIFIED PUBLIC ACCOUNTANTS: A LARGE-SCALE STUDY OF GENDER DIFFERENCES

Donald L. Ariail, Southern Polytechnic State University  
Mohammad J. Abdolmohammadi, Bentley College  
L. Murphy Smith, Texas A & M University

## ABSTRACT

*The individual traits of moral development and personal value priorities are theoretically linked to ethical behavior. Understanding the role of gender, including gender differences, is important with regard to the development and future success of the accounting profession. Using a large sample of 304 Certified Public Accountants (CPAs), this paper investigates gender differences in moral development and personal value preferences of CPAs. We used the Defining Issues Test (DIT) to measure moral development, the Rokeach (1973) Value Survey (RVS) to determine value preferences, and the Musser and Orke (1992) typology to determine value type preferences. The typology analysis indicates that all CPAs in our sample prefer personal values to social values. However, while males prefer competence values, females have higher preference for moral values. For example, while male CPAs exhibit higher priorities for the competence values of imaginative and logical, female CPAs exhibit higher priority for the moral value of loving. We also find a gender effect for moral development, where female CPAs significantly outscore their male counterparts on the moral reasoning DIT P-score.*

## Acknowledgment

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KEY WORDS: Moral development, ethics, DIT, personal values, value types, RVS.

## **DISCHARGING TAXES IN BANKRUPTCY**

**Donald L. Ariail, Southern Polytechnic State University**  
**Michael M. Smith, Baker, Donelson, Bearman, Caldwell & Berkowitz**  
**Neil Deininger, Deininger & Wingfield**  
**Reba M. Wingfield, Deininger & Wingfield**

### **ABSTRACT**

*According to the National Bankruptcy Research Center, bankruptcy filings in 2009 were 32% higher than in 2008. Whether or not this upward trend in filings will continue into 2010 is currently unknown. However, with the Wall Street Journal reporting that typical bankruptcy petitions now include more affluent taxpayers with earnings of \$100,000 - \$300,000, Certified Public Accountants (CPA) can expect to encounter old and new clients who seek bankruptcy protection. A full understanding of the possibilities for utilizing bankruptcy as another tool for dealing with the IRS collection efforts is a critical element in properly advising tax debtors. The CPA can be invaluable in assisting clients and their attorneys in determining if and when bankruptcy is a viable alternative for resolving Federal income tax liabilities. In addition to understanding the various administrative tax resolution methods available, CPAs need to understand the use of bankruptcy as a possible last resort solution. This paper focuses on the use of bankruptcy when Federal tax liabilities are the sole or primary consideration. The tax related implications and rules for using Chapters 7, 11 or 13 bankruptcy protections are reviewed. In addition, the mechanical rules that must be followed to discharge individual income tax liabilities and the rules regarding the discharge of employment taxes are discussed. A final section on tax planning includes 14 specific planning ideas.*

## TWENTY-FOUR SEVEN ACCOUNTING

Paul A. Ashcroft, Missouri State University

### ABSTRACT

*While technology has very noticeably affected our daily lives in major ways, the overall impacts of technology on accounting are not as apparent and have not occurred as rapidly. However, current developments in technology have created the ability to issue financial statements that include transactions that occurred within the most recent hours or even minutes. CPAs in public practice, accountants in industry, non-profit organizations and governments, financial managers of all types, and other business professionals all need to be aware of the opportunities for and increased need for such timely reporting systems. This paper discusses the movement towards up-to-date financial reporting, which is often referred to as “twenty-four seven accounting”. Also discussed are the benefits of twenty-four seven accounting compared to the traditional periodic financial reporting model.*

# **A CROSS SECTIONAL STUDY OF FINANCIAL MEASURES IN PREDICTING STOCKS' RISKINESS DURING YEAR 2008 CRASH PERIOD**

**Victor Bahhouth, University of North Carolina  
Ramin Maysami, University of North Carolina**

## **ABSTRACT**

*The study tests the use of financial measures in predicting stocks' riskiness during 2008 crash period. The stock market witnessed a number of crashes with the most recent one in year 2008. Crashes cause instability in the stock market and a collapse of investor confidence. In a study, Bahhouth and Maysami (2009) showed evidence that Beta had a marginal effect in predicting stocks riskiness. The paper explores the ability of using financial ratios to identify stocks' riskiness (i.e. stocks that are more adversely affected during the crash periods). Analysts, practitioners and academicians used financial ratios in assessing stock returns in financial markets ( Bhandari 1988 and Basu 1977). The results showed that a set of financial measures exhibited significant predictive power in identifying stocks that were adversely affected during the year 2008 crash period.*

# INTERNAL CUSTOMER SERVICE IN ACCOUNTING DEPARTMENTS

**Shawn M. Carraher, Cameron University**  
**Greg Treadwell, Cameron University**  
**Samuel Lane, Lane Import**  
**Cozzie J. Burrus, Cameron University**

## ABSTRACT

*Customer Service is important for any business. It helps build the reputation of the firm and serves as a building block for the firm. A much under researched area is internal customer service as opposed to customer service with external customers. With internal customer service you need to understand what the customer is trying to communicate to you. Since customer service is a valued characteristic of most organizations, it is certainly conceivable that customer service is a value that should permeate throughout the organization. Even in the accounting department, the rules of good customer service should prevail. After all, the tentacles of the accounting department reach to insiders and outsiders; and this extensive reach could stress the entire organization if handled improperly. So regardless of whether the customer service area of accounting is communicating with board members, management, coworkers, vendors, creditors, government agencies or even the final consumer--good customer service should prevail.*

*These customers of the accounting department have predetermined ideas regarding the treatment they expect from accounting customer services. These expectations include a staff of competent individuals that exhibit a willingness to understand and the ability to listen to their customer's needs. In addition, these users of the accounting customer services usually seek relevant data to enhance decision-making, which could ultimately create a greater need for the existing accounting department. Ultimately, the accounting department could find itself in a very favorable situation by simply merging its customer service with a value-added data mining operation, which would better serve inside and outside customers of accounting information. In effect, accounting managers should recognize that their departments must become more service oriented to survive. In the current study we examine customer service among 245 accounting department personnel from three mid-western organizations. The results indicate that personality significantly influences internal customer service performance.*

## INTRODUCTION/CONCLUSIONS

Future research is suggested based upon prior research and theory (Buckley and associates, 1992- present; Carland and associates 1984-present). Full paper available from first author.

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# IMPLEMENTATION OF PORTFOLIO DIVERSIFICATION METHODOLOGY IN THE ASEAN COUNTRIES

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## ABSTRACT

*Portfolio diversification benefits appear from the motivation of minimizing risk and maximizing the return. Recently, investors have expanded their investment into the global arena for diversification purposes. Although, controlling risk in global market is much more challenging because of number factors involved that are unknown to the investors. However, potential for global portfolio diversification has been recognized by the investors and researchers alike in recent years.*

*A portfolio with the highest level of expected return for a given level of risk is said to be mean-variance efficient. Therefore, the risk-reward ratio of internationally diversified portfolio is expected to be most favorable. Advantage of international portfolio diversification transpires from the motivation of risk minimization and maximization of the expected return. In this paper, we implement a portfolio diversification methodology based on partial-correlation proposed by Choudhury and Naidu (2009). Their approach utilizes market relationship that is independent of world market influence. In this paper, portfolios are constructed using both partial-correlation approach and Markowitz (or correlation) approach in the ASEAN countries for two different home markets, namely Japan and Singapore. Three different strategies were explored to measure performances of diversified portfolios that are created by both correlation and partial-correlation approach. Analysis reveals that, partial-correlation approach produces portfolios that are comparable to portfolios created by Markowitz approach based on Sharpe's performance measure.*

## **SEASONALITY IN INDEX MEMBERSHIP WHEN THE INDEX SHOWS NONE**

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**David Meyer, University of Akron**

### **ABSTRACT**

*Seasons such as the "January effect" or the "turn-of-the-week" effect have had significant study since the early 1980s. Extant research tends to rely on index returns observations and finds the markets have become generally efficient with respect to calendar periods of trading. This research examines the Dow Jones Industrial Average returns and trading volume for seasonalities as well as the returns and trading volumes of the individual members of the index. We find that while the overall index and most members do not show seasons in their respective trading, there are members of the index that show significant seasonality in trading in the 2001 to 2008 period. This preliminary research further seeks to explain this finding through examining dividend policy and merger and acquisition activity.*

## **FINANCIAL REPORTING OF SMALL CITIES**

**Susan R. Cockrell, Birmingham-Southern College**

### **ABSTRACT**

*The Governmental Accounting Standards Board (GASB) issues standards that apply to all state and local governmental units that choose to prepare their external financial statements in conformity with generally accepted accounting principles. Within these standards are numerous financial reporting requirements. It has been argued that the extent of compliance with these requirements is influenced by the constructs: socioeconomic environment, political environment, and audit quality.*

*Prior studies that have investigated the disclosure compliance issue in the public sector have focused on municipalities with populations greater than 25,000. Consequently, public sector accounting literature is void of any empirical evidence regarding determinants of disclosure compliance by small municipalities. This paper extends prior research by investigating and comparing financial reporting of small (population less than 25,000) and large (population greater than 25,000) cities.*

# MARTINGALES, EFFICIENT MARKET HYPOTHESIS AND KOLMOGOROV'S COMPLEXITY THEORY: A NOTE

Amaresh Das, Southern University at New Orleans

## ABSTRACT

*Empirical observations have challenged the stricter form of the efficient market hypothesis. These empirical observations and theoretical considerations show that price changes are difficult to predict if one starts from the time series of price changes. But the 'fair game' description of price change in terms of martingale is rather formal. This brief note provides a new direction or explanation – in terms of Algorithmic complexity theory of Kolmogorov that makes a clearer connection between the efficient market hypothesis and the unpredictable character of stock returns. The efficient market hypothesis which holds that the market is always right and which has been the drivers of trillions of dollars, inspiration of index funds, and vast new derivatives market can be saved by Kolmogorov's theory.*

Key words: Martingales, martingales difference sequence, algorithmic complexity, efficient market hypothesis

## INTRODUCTION

The efficient market hypothesis was formulated explicitly by Paul Samuelson (1965) who showed mathematically that properly anticipated prices fluctuate randomly. Using the hypothesis of rational behavior and market efficiency, he was able to demonstrate how  $y_{t+1}$ , the expected value of the price of a given asset at time  $t+1$ , is related to the previous values of prices  $y_0, y_1, \dots, y_t$  through the relation

$$E [ y_{t+1} \mid y_0, y_1, \dots, y_t ] = y_t \quad (1)$$

Stochastic processes obeying the conditional probability given in equation (1) are called martingales. Martingales are very important types of sequences. (Davidson and Mackinnon (1993))

### **Definition 1**

A sequence  $\{y_t\}$  of random variables is called a martingale if, for all  $t$ ,  $E \{ |y_t| \}$  exists and is finite and for all  $t$

$$E [ y_{t+1} \mid y_0, y_1, \dots, y_t ] = y_t$$

Martingales do crop up as such from time to time in econometrics but a more immediately applicable notion is that of a martingale difference sequence.

**Definition 2**

A sequence  $\{y_t\}$  is said to be a martingale difference sequence if

$$E [ y_{t+1} \mid y_0, y_1, \dots, y_t ] = 0$$

**Theorem 1**

If  $\{y_t\}$  is a martingale difference sequence and there is an  $r \geq 1$  such that the series

$$\sum_{t=1}^{\infty} t^{-(1+r)} E (|y_t|^{2r})$$

Converges, then  $S_n \rightarrow 0$  almost surely.

Between the cash flow dates, there is a constant drift in the asset price and most likely, there will also be a finite drift if fluctuations are included. Such drifts are present in most real markets. The modified statement then is that, up to the drift  $dF/dt$ , the market does not expect a net change of the true or fundamental, prices. However, deviations of a certain amplitude  $y$ , where  $y = F(t) - F(0)$ , occur with probabilities  $p(y)$ , which satisfy

$$\int_{-\infty}^{\infty} p(y) dy = 1 \tag{2}$$

for all  $t$ . The expected profit from an investment is then

$$E(y) \equiv \int_{-\infty}^{\infty} y p(y) dy > 0 \quad \text{so long as} \quad dF/dt > 0 \tag{3}$$

Such an investment is not a fair game of chance because it has a positive expectation. However for a fair game of chance:

$$E(y) = 0 \tag{4}$$

The fair game condition about the price changes observed in a financial market is equivalent to the statement that there is no way of making a profit on an asset by simply using its recorded history of its price fluctuations. This conclusion is the 'weak form' of the efficient market hypothesis. This price changes are unpredictable from the historical time series of those changes.

Since the 1960s, a great number of empirical investigations have been devoted to testing the efficient market hypothesis. In the great majority of the empirical studies, the time correlation between price changes has been found to be negligibly small, supporting the efficient market hypothesis. However, it was shown in the 1960s that by using the information present in additional time series such as earnings/ price ratios, dividend yields and time-structure variables, it is possible to make predictions of the rate of return of a given asset on a long time scale, much larger than a month.

Empirical observations have challenged the stricter form of the efficient market hypothesis. These empirical observations and theoretical considerations show that price changes are difficult to predict if one starts from the time series of price changes. In the strict form, an efficient market is an idealized system. In actual markets, residual inefficiencies are always present. Investors over react, under react and make irrational decisions based on imperfect data. Many agree with Yale Professor Robert Shiller that the efficient market hypothesis represents one of the most remarkable errors in the history of economic thought.

### **KOLMOGOROV COMPLEXITY THEORY (KCT): PRELIMINARIES**

The description of a fair game in terms of martingale is rather formal. The theory that the market is always right and that the decisions of the millions of rational investors, all acting on information to outsmart one another, always provide the best judge of stock values, is crumbling. In this section, we will provide an explanation in terms of algorithmic complexity theory of Kolmogorov (Kolmogorov (1985) Cohn (1991), Ziegler and Koolen (2008))

In computational complexity theory the amount of resources required for the execution of algorithms is studied. Different kinds of Kolmogorov complexity are available: the uniform complexity, prefix complexity, monotone complexity, time-bounded Kolmogorov complexity, and space-bounded Kolmogorov complexity. The most popular types of computational complexity are the 'time' complexity of a problem equal to the number of steps that it takes to solve an instance of the problem as a function of the size of the input (usually measured in bits) using the most efficient algorithm,. Burgisser (1997), and Tucker and Zucker (2001) classify computational problems by complexity class such as P, NP.

Whatever be the way of classification, the complexity theory addresses computational problems and not particular problem instances. The input string for a computational problem is referred to as a problem instance, and should not be confused with the problem itself. In computational complexity theory, a problem refers to the abstract question to be solved. In contrast, an instance of this problem is a rather concrete utterance, which can serve as the input for a decision problem. The instance is a particular input to the problem, and the solution is the output corresponding to the given input. To further highlight the difference between a problem and an instance, consider the following instance of the decision version of the travelling salesperson: Is there a route of length at most 2000 kilometres passing through all of Germany's 15 largest cities? The answer to this particular problem instance is of little use for solving other instances of the problem, such as asking for a round trip through all sights in Milan whose total length is at most 10km.

Decision problems are one of the central objects of study in computational complexity theory. Malajovich (2002) , Basu et al (2006) view decision problem as a formal language where the members of the language are instances whose answer is yes, and the non-members are those instances whose output is no. The objective is to decide, with the aid of an algorithm whether a given input string is member of the formal language under consideration. If the algorithm deciding this problem returns the answer, *yes*, the algorithm is said to accept the input string, otherwise it is said to reject the input. The input is actually an arbitrary graph.

In algorithmic information theory, the Kolmogorov complexity (also called descriptive complexity, algorithmic complexity or algorithmic entropy) of a string is the length of the shortest binary program, which outputs that string. It is the algorithmic complexity theory that makes a clearer connection between the efficient market hypothesis and the unpredictable character of stock returns. Such a connection is now supported by the property that a time series that has a dense amount of non-redundant economic information (as the efficient market hypothesis requires for the stock returns time series) exhibits statistical features that are almost indistinguishable from those observed in a time series that is random.

### **EFFICIENT MARKET HYPOTHESIS AND KCT**

Within algorithmic complexity theory, the complexity of a given object coded in an  $n$ -digit binary sequence is given by the bit length  $K^{(n)}$  of the shortest computer program that can print the given symbolic sequence. Kolmogorov showed that such an algorithm exists; he called this algorithm asymptotically optimal.

To illustrate this concept suppose that as a part of space exploration we want to transport information about the scientific and social achievement of the human race to regions outside the solar system. Among the information blocks we include, we transmit the value of  $K^{(n)}$  expressed as a decimal carried out to 125,000 places and the time series of the daily values of the Dow Jones industrial average between 1898 and the year of the space exploration (approximately 125,000 digits). To minimize the amount of storage space and transmission time needed for these two items of information, we write the two number sequences using, for each series, an algorithm that makes use of the regularities present in the sequence of digits. The best algorithm found for the sequence of digits in the value of  $K^{(n)}$  is extremely short. In contrast, an algorithm with comparable efficiency has not been found for the time series is a non-redundant time series.

Within algorithmic complexity theory, a series of symbols is considered unpredictable if the information embodied can not be 'compressed' or reduced to a more compact form. This statement is made more formal by saying that the most efficient algorithm reproducing the original series of symbols has the same length as the symbol sequence itself.

Algorithm complexity theory, therefore, will help us understand the behavior of a financial time series. In particular,

- 1 Algorithm complexity theory makes a clear connection between the efficient market hypothesis and the unpredictable character of stock returns. Such a connection is now supported by the proper that a time series has a dense amount of non redundant economic information 9 as the efficient market hypothesis requires for the stock returns time series)

- exhibits statistical features that are almost indistinguishable from those observed in a time series that is random.
- 2 Measurement of the deviation from randomness provides a tool to verify the validity and limitations of the efficient market hypothesis.
  - 3 From the point of view of algorithmic complexity theory, it is impossible to determine between trading on 'noise' and trading on information 9 where we use information to refer to fundamental information concerning the traded asset, internal or external to the market. Algorithmic theory detects no difference between a time series carrying a large number of non-redundant economic information and a pure random process.

### CONCLUSION

Financial time series look unpredictable and their future values are essentially impossible to predict. This property of the financial time series is not a manifestation of the fact that the time series of price of financial assets does not reflect any valuable and important economic information. Indeed the opposite is true. The time series of the prices in a financial market carries a large amount of non-redundant information. Because the quantity of information is so large, it is difficult to extract a subset of economic information associated with specific aspect. The difficulty in making predictions is thus related to an abundance of information the financial data, not to a lack of it. The efficient market hypothesis – long part of academic folklore but codified in the late 60s at the University of Chicago, evolved into a powerful myth. Today the theory has given way to counterintuitive hypotheses about human behavior, psychological models of decision making and the irrationality of markets. Kolmogorov's idea may work and drive the financial market in the century ahead.

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# **CONTRIBUTING SUCCESS FACTORS WITHIN THE FINANCIAL PLANNING PROFESSION: INSIDE FINANCIAL PLANNER PERCEPTIONS**

**De'Arno De'Armond, West Texas A&M University**

## **ABSTRACT**

*Financial planner perceptions are made up of a complex neural blend of client management qualities, client demographic qualities, personal qualities, business practice qualities, and job qualities. This study empirically assesses perceptions of the financial planning professional to find those factors seen to be most important and least important contributing to financial planner self reported success. The data utilized within this study were gathered via a survey instrument developed and administered in an online format during the months of June and July 2008. A total of 403 geographically diverse respondents (4% response rate) who are members of the FPA and agree to receive email from the organization answered the survey. The final sample used after significant non-response cases were eliminated was 349 respondents (3.5%). Findings of this study indicate that client relationships, wealth of client served, use of ethical practices, ability to empathize, number of clients served, client referrals, and job autonomy are among the most important contributors to financial planner perceived success.*

## **CORPORATE GOVERNANCE IN THE LIMELIGHT – AGAIN: DO WE NEED GLOBAL STANDARDS?**

**R. Duggal, Southeastern Louisiana University**

### **ABSTRACT**

*The world economies experienced one of the worst recessions in history in 2008-2009 and a number of economies, including the U.S., are still grappling with high unemployment and a weak recovery. It is believed that weak corporate governance, in combination with an expansionary monetary policy and inefficient regulatory environment started the economic turmoil in the U.S. whose impact was felt across the globe from Iceland to Hong Kong. Using financial leverage, Wall Street banks engineered pools of mortgages into complex securities, obtained investment grade ratings from the rating agencies, and sold these securities to retail and institutional investors all over the world. What the world witnessed was a massive failure of corporate governance at different levels. The boards of directors of Wall Street banks oversaw managers making huge bets with corporate capital and reap huge personal payoffs without bearing the full risk of their bets. The rating agencies made money hand over fist by assigning these securities the coveted investment grade ratings and raking in large fees. And institutional investors across the world, including mutual funds, pension funds, and municipalities, failed to perform due diligence when investing their shareholders and clients' investments.*

*Lehman's bankruptcy alone caused havoc across the globe: In Japan, banks and insurance companies reported a loss of \$2.4 billion; the Royal Bank of Scotland Group reported a loss of between \$1.5 to \$1.8 billion; and Sachsen, a state owned bank in Germany lost half a billion euros. In addition, 5,600 retail investors in England and 43,000 in Hong Kong lost hundreds of millions of dollars (Pittman, 2009). Governance transgressions have occurred in other countries as well but did not affect the world economies and investors to the same degree as the failures in the U.S. In 2003 Parmalat, an Italian firm and a world leader in dairy food business, filed for bankruptcy after billions of euros went missing. In 2008, Satyam Computer Services, an Indian software giant, reported that its CEO may have defrauded the firm billions of dollars (Lakshman, 2009).*

*This paper investigates whether the existing corporate governance structures in different countries are performing well. Second, given increasing integration of world economies, the paper also addresses the question of whether we need global standards for corporate governance to prevent or minimize the recurrence of recent events.*

# PRE-OPERATING PERFORMANCES AND IPOS AFTER MARKET RETURNS

Yuhong Fan, Weber State University

## ABSTRACT

*This study examines IPOs' initial underpricing, price momentum in the short run, and long run market performances via their pre-IPO operating performances. Variables like years existing before IPO, offer size, pre-IPO operating performances, and sales growth rate are chosen as the proxies to measure firms' ex-ante uncertainty. Empirical tests are thus conducted in these three stages: first trading day, 6 months and 36 months after issuing. The high initial returns are explainable by investors' overreaction and the firm's high uncertainty. Internet firms exhibit a short-run positive price momentum and a long-run price reversal after controlling for the change of operating performance, firm size, and market to book ratio. Long run market performances can be significantly explained by pre-IPO fundamental variables like sales per share.*

## INTRODUCTION

There are numerous studies examined IPO's initial underpricing (see Rock 1986, Ritter 1984 and 1991, Welch 1989, Jegadeesh et al 1993, Loughran and Ritter 2002, and Tinic 1988). Many theories are proposed in explaining this phenomena, such as Asymmetric information - the winner's curse, overreaction, underpricing as a signal of firm's quality, book-building theory, change issue objective function, avoid litigation, and the marketing roles of IPO. Comparing to articles exploring firm's initial underpricing, there are much less studies examined IPO's long run market performance.

The pioneering work in the field of IPO's long run performance is Ritter (1991). The author finds that issuing firms during 1975-84 substantially underperformed a sample of matching firms from the closing price on the first day of public trading to their three-year-anniversaries. Tech, Welch, and Wong (1998) attribute some of the poor post-IPO performance to "optimistic" accounting early in the life of the firm. It is not surprising that firms are eager to look good when they conduct their IPOs, and that the investors have difficulties in finding hidden warning signals. Yi (2001) investigates pre-offering earnings and long-run performance of IPOs. This study finds that IPO firms as a whole underperformed a market index and control firms over a 3-year period after initial issue, which is consistent with Ritter (1991)'s results. Moreover, firms with positive pre-offering earnings perform better than firms with negative earnings. Among all the firms, only the firms going public with negative earnings have a statistically significant negative abnormal mean return. Yi's finding is consistent with the over-optimistic hypothesis, that investors may have been too optimistic about future prospects of IPO firms, especially those with negative earnings.

It is interesting to see Ritter's research (2002) that conducted a review of relevant literature, in which he mentioned that there is no reliable relationship between short-run underpricing and long-run performances. However, if IPOs poor long run performances can be attributed to investor's

initial optimism on pre-IPO's operating performances, this initial fad must lead to IPO's deep underpricing on their first trading day. In other words, pre-IPO operating performances might explain both IPO's initial underpricing and their long run performances. Theories support the relation between pre-IPO operating performances and IPO's underpricing and long run performances include the changing-risk composition hypothesis and the overreaction hypothesis. The changing risk composition hypothesis (Ritter 1984), which is based on the asymmetric information theory, states that the degree of underpricing is correlated with a firm's ex ante uncertainty. The more uncertain the market is about the true value of the issuing firm, the higher the discount the company must offer to uninformed investors to submit their bids. We think the perfect measurement for firm's ex ante uncertainty is its operating performances disclosed in its prospectus. The overreaction hypothesis is derived from behavioral finance theory, and states that investors often violate rational choices when making decisions. According to DHS (Daniel, Hirshleifer, and Subrahmanyam, 1998), initial overreaction and self-attribution bias would drive the price above the rational expected value. Further information will gradually induce the price back toward the fundamental value. We would expect that issuing firms may exhibit a short-run positive price momentum and the long-run price reversal.

This study examines IPOs issued during years between 1999 and 2000, in which a large amount of Internet firms went public. These IPOs experienced extremely high initial returns, 88.6% for Internet firms versus 44.7% for non-Internet firms. We choose variables like pre-IPO operating performances, years existing before IPO, offer size, and sales growth rate as the proxies to measure firms' ex-ante uncertainty. The obtained results are consistent with the changing risk composition hypothesis. Among all the uncertainty measures, sales growth rate and age of the firm before IPO are the most powerful variables to explain initial returns. Sales growth rate is positively related to initial return, whereas age before IPO is negatively related. Preliminary results from this study support the overreaction hypothesis in several respects. First, it is demonstrated that as an industrial class, Internet firms have a tendency to experience upward price revision when compared to non-Internet firms. Based on book-building theory, price revision should be higher for offers where there is a strong demand. Second, the Internet dummy variable is significantly and positively related to initial returns after controlling for uncertainties, with a coefficient of more than 0.30. Third, Internet firms had a clear pattern of positive price momentum and long-run price reversal compared to non-Internet firms. The 6 and 36-month buy and hold returns are 17.34% and -53.68% for Internet firms and 5.41% and -1.56% for non-Internet firms. The regression results show that Internet firms earned 24% higher 6-month buy and hold returns than non-Internet firms, when controlling for firm's risk and initial returns. Fundamental variables like sales per share and sales to total assets before IPO, which cannot explain initial returns and short-run returns, can explain firms' long-run buy and hold returns with significantly positive coefficients. Internet firms earn significantly negative 36-month buy-and-hold returns after controlling for change of operating performances, size, and market-to-book ratio.

The pioneer work on Internet IPOs was conducted by Bartov, Mohanram and Seethamraju (2002), in which the authors show how Internet-related firms were initially priced with a small sample of 98 Internet firms. Their article investigated whether there exists valuation differences between Internet and Non-Internet firms in the initial prospectus price, final offer price, and first trading day price. Unlike standard IPO research, their work focused on studying offer prices instead

of initial returns. In contrast to Bartov, Mohanram and Seethamraju, who studied the association between pricing of Internet IPOs and a set of financial variables, in this paper, we use pre-IPO operating performance variables as an uncertainty proxy to explain the initial returns, short-run and long-run aftermarket performances. The combination of investing firms' performances in the initial day, 6 month, and 36 month after initial offerings gives a broader and unique view of valuing Internet stocks than Bartov et al (2002) and other related research.

Ljungqvist and Wilhelm (2001) report that ownership structure and inside selling behavior can partially explain the astronomical IPO initial returns for 1999-2000. They find that insider ownership stakes declined from 1996 to 2000, and 1999 and 2000 witnessed a sharp decline in both the frequency and magnitude of secondary sales of existing shares by pre-IPO owners. The authors argue that these changes in ownership structure and selling behavior should undermine the incentives to bargain over the offer price, thus contribute to the high initial returns for 1999 and 2000. We find that Internet firms exhibit lower float ratio (measured as share offered divided by total shares outstanding) than non-Internet firms, from which it can be inferred that insider ownership is higher for Internet firms than for non-Internet firms. Thus the insider ownership fails to explain high initial returns for Internet firms compared to non-Internet firms. Jaggia and Thosar (2004) find evidence to support DHS' overreaction framework by investigating high-tech IPOs medium-term aftermarket performance. The authors propose an overreaction explanation for IPOs based on the DHS's overreaction framework that overreacted IPOs will exhibit positive momentum in the medium-term. They test the DHS overreaction hypothesis in the 6 months after IPO with a sample of 301 high-tech IPOs, and find that momentum variables are important to explain the firm's medium-term performance, which is consistent with the overreaction prediction. In this paper, we test the overreaction hypothesis in initial return period, short run (6-month), and long run (36-month) aftermarket performances using broader pre-IPO operating performances as proxies for firms' fundamentals. The sample includes not only Internet firms, but also Non-Internet firms with the aim of showing the divergent patterns of Internet and non-Internet firms in the initial return and after offering periods.

There are some other studies that have examined Internet IPOs, (see Bartov, Mohanram, and Seethamaraju (2002), Ljungqvist and Wilhelm (2001), Schultz and Zaman (2001), Cooper, Dimitrov, Rau (2001), and Jaggia and Thosar (2004)), but few focus on the relation of pre-IPO operating performances and firm's long run market performances.

# **THE RELATIONSHIP BETWEEN PROFITABILITY AND THE LEVEL OF COMPLIANCE TO THE INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) OF TELECOMMUNICATION INDUSTRY IN THE PHILIPPINES**

**Rodiel C Ferrer, De La Salle University  
Glenda Ferrer, University of Rizal System**

## **ABSTRACT**

*This paper is to empirically identify the magnitude of financial disclosures by Philippine companies particularly those that belong to Telecommunication Industry, investigates whether Philippines publicly listed corporations comply with International Financial Reporting Standard, aims to develop strategy to which maximum compliance with IFRS and study the determinants affecting the level of compliance among publicly listed corporations in the Philippines for the year 2008.*

*Ergo, the financial statement submitted in 2008 to SEC is used to examine and study the correlation between profitability and International Financial Reporting Standard disclosure requirements in the Philippine setting.*

*Keywords – Profitability, IFRS, Compliance and Determinants*

# **ARE COMPANIES THAT REPORT MATERIAL WEAKNESSES IN INTERNAL CONTROL MORE LIKELY TO RESTATE THEIR FINANCIAL STATEMENTS?**

**Pascal A. Bizarro, Bowling Green State University**  
**Charles D. Boudreaux, Nicholls State University**  
**Andy Garcia, Bowling Green State University**

## **ABSTRACT**

*This study provides empirical evidence on the relationship between reported material weaknesses in internal control and the probability of a company restating its earnings, based on a sample of 518 restating companies and 518 matching companies selected from the period January 1, 2004 through December 31, 2005. First, this study finds a significant relationship between the incidence of material weaknesses reported by the firm and the probability of a firm restating its earnings. Second, the magnitude or frequency of material internal control weaknesses reported by the firm is significantly related to the probability of a firm restating its earnings. The higher the number of material weaknesses reported by a company, the greater the probability that the company will restate. Finally, the type of material internal control weakness is significantly related to the probability of a firm restating its earnings. This study finds that companies reporting material weakness in accounting related areas such as accruals, revenue recognition, period-end closings and accounting policies, and complex areas such as derivative and lease accounting are more likely to restate earnings than those companies reporting material weakness in non-accounting areas such as training, segregation of duties, senior management, and subsidiary specific areas*

## **ALTERNATIVE ASSETS: REPORTED VERSUS REALIZED RETURNS**

**Jeffry Haber, Iona College**  
**Andrew Braunstein, Iona College**  
**George Mangiero, Iona College**

### **ABSTRACT**

*Alternative asset funds often are in the process of marketing a new fund during the lifetime of an existing fund. The marketing materials for the new fund include the interim results of the existing fund, which are self-reported. Thus the possibility exists of there being an incentive to overstate those interim rates of return.*

*This study employs actual data on contributions, distributions, and reported rates of return for a sample of alternative asset funds. We formally test whether there is a statistically significant difference for the alternative asset funds between the average of the reported returns and the average of the actual returns. This test is first done for the sample as a whole. We then split the sample of funds into two subsets – those marketing new funds and those not marketing new funds – and perform the statistical test for each group separately.*

### **INTRODUCTION**

Alternative assets are usually formed using a limited partnership structure and generally have limited lives (ten years is common), which can be extended depending on market conditions and how the winding-up of the final fund holdings is progressing. As a group, alternative assets consist of private equity, venture capital, real estate, natural resources, oil and gas, timber, infrastructure and hedge funds. The present paper omits hedge funds from the group because hedge funds do not usually possess a limited life.

During the life of an alternative asset fund, returns are reported by the fund manager. These returns are “unrealized.” Realized returns are based strictly upon cash distributions, which can occur during the entire life of the fund, but do so more commonly during the middle and end of the fund’s life span. The initial period of the fund’s life (after the fund closes) is spent acquiring assets, re-positioning and improving these assets, making management changes, and finally, disposing of the assets. It should be noted that sometimes disposition happens very early in the process (for example, the Blackstone purchase of Equity Office Properties saw a large number of sales transactions occur almost simultaneously with the purchase).

Most funds are seeking to raise capital for a new fund while the operations of the current fund are ongoing. The due diligence (and marketing materials) for the new fund certainly would include the experience of the other funds within the fund family. This leads to the research question – do the unrealized gains reported by the alternative investments (and which represent a large

portion of the internal rate of return) manifest themselves as cash distributions throughout the life of the fund? By taking year 2000 vintage funds and looking at the reported unrealized gains throughout the last 10 years, a comparison can be made to the actual distributions made by the fund. This is of current interest, because the years since 2004 have seen an unprecedented rise in assets under management for alternative asset providers due to foundations and pensions following university endowments into the alternative space. There has been a proliferation of alternative asset funds to help accommodate this influx of capital.

This study employs actual data on contributions, distributions, and reported rates of return for a sample of alternative asset funds. Access to this type of data allows us to informally and formally evaluate the accuracy of the reported interim internal rate of return for funds of this sort.

## **BACKGROUND**

At an investment conference held in New York City in 2009, a panelist asked the audience “What is the business of an alternative asset fund?” He ultimately provided his own answer to that question by stating, “They are in the business of raising the next fund.” Existing funds utilize the results of those very funds as a selling point in raising the next fund, and during the life of the fund the track record is self-reported by the fund. Thus, an obvious question is whether or not such funds overstate the interim results. To put it another way, do unrealized returns reported by the fund ever become realized?

Alternative asset funds receive commitments from investors, which are “called” as the investment fund finds suitable investments. The fund uses the cash raised from the capital call, along with debt, to purchase equity stakes, real estate, etc. in businesses that are suitable, given the parameters of the fund’s investments. The fund then values the holdings and reports to the investors the unrealized gains or losses (or if interim sales are made, the realized gains or losses on the individual holdings that were sold).

In the end, the only true determination of how the fund actually performed is to conduct a comparison of the cash flows provided by the investors to the fund to the cash flows provided by the fund back to the investors. Alternative assets have a fairly long life (usually ten years as a minimum and often the life is extended to get more favorable terms on sales of remaining holdings), and during the middle of the life cycle there is often a mixing of investors putting in more money at the same time that they are receiving distributions.

## **METHODOLOGY AND EMPIRICAL RESULTS**

This paper takes real examples of alternative asset fund performance (using only funds that have completed their life cycle) and employs the cash flows provided by the investors (capital calls) and the cash flows provided by the funds (distributions) to determine the true internal rate of return of the investment. This is compared to the rate of return reported by the investment fund. We also separate the investment funds into two groups – those that were raising a new fund during the life of the current one and those that were not doing so. It is expected that a group that is raising a new fund might tend to report a rate of return that is higher than the true rate of return as calculated by

cash flows, whereas a group that is not raising a new fund is less likely to report a rate of return that overstates the true rate of return.

Slightly more than half of the funds sampled were indeed raising capital for a new fund during the operation of the current fund. We hypothesized that for those funds, marketing strategy might lead to a situation where the reported return exceeded the actual return. Likewise, for funds not currently marketing new ones, we expected that the reported return was not as likely to exceed the actual return. An informal examination of the data yielded mixed results in terms of supporting our hypotheses. Of those funds marketing new funds, fewer than half had reported returns overstating the actual returns. For funds not currently marketing new ones, precisely half had reported returns overstating the actual returns (although it was by less than one half of one percent in one of those cases).

A paired t-test was conducted to formally test whether there is a significant difference for alternative asset funds between the average of the unrealized returns and the average of the realized returns. This test was first done for the sample as a whole. We then split the sample of funds into two subsets -- those marketing new funds and those not marketing new funds -- and performed the paired t test for each group separately. None of the three tests performed found statistically significant differences between the unrealized (reported) returns and the realized (actual returns). Thus, we did not receive statistical support for our primary suggestion that for funds marketing new ones, the average of the unrealized returns may well be significantly greater than the average of the realized returns. As we expand our study, we intend to increase substantially the number of funds tested.

# MONTHLY SEASONALITY IN U.S. LONG TERM CORPORATE BONDS

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## ABSTRACT

*We explore monthly seasonality in high grade long term corporate bonds from January 1926 to December 2008. We test three types of month effects. In addition, we analyze the data based on Republican and Democratic presidencies. The mean of monthly total returns for the entire data set (0.50%) is significantly greater than zero. The mean return of January is significantly higher than the mean of the other eleven months stacked together; the mean of March is significantly lower. We find significantly higher or lower volatilities for some months compared to the other months. January experienced the highest mean monthly return, followed by a dip in February and March, and then an upward trend until January. The mean of monthly returns during the Republican presidencies (0.66%) is significantly higher than during the Democratic presidencies (0.33%). Though not fully efficient the U.S. corporate bond market exhibits a high degree of efficiency.*

## INTRODUCTION

Since the time stock exchanges were first established, traders and investors have exhaustively looked for patterns in securities prices that they could exploit to realize superior returns. However, as early as 1900, Bachelier characterized security prices as being efficient. Over thirty years later came the landmark work by Cowles (1933) in which he documented the inability of forty-five professional agencies to forecast stock prices. The conclusion was that stock prices are random – in general they do not exhibit patterns. A large array of research – bulk of them devoted to analysis of the stock markets has looked at the issue of efficiency of financial markets. The evidence with regard to efficiency is mixed.

The corporate bond market is a very sizable market, and trading in bonds, especially treasury bonds, is very brisk. Bonds are appropriate for investors seeking income, as well as for investors looking for broad diversification. In contrast to research with regard to the stock markets, a small number of researchers have looked at the issue of efficiency of the bond markets. An aspect that has possibly not been rigorously looked at is whether the corporate bond market exhibits monthly seasonality. This research seeks to fill that void. Our findings indicate the presence of January effect: the mean return of January is significantly higher than the mean of the other eleven months stacked together. We also find a March effect: the mean of March is significantly lower than the mean of the other eleven months stacked together. We also find significantly higher or lower volatilities for some months compared to the other months.

In subsequent sections we review previous research on the efficiency of the bond markets, outline the research methodology of this study, analyze results, and round off with summary and conclusion.

## LITERATURE SURVEY

In contrast to the extensive research on equity returns, few investigations examine seasonality in the fixed income market. Schneeweis and Woolridge (1979) find evidence of a January effect in various municipal, corporate, public utility, and government bond series using data from 1952-1977. Smirlock (1985) finds a January effect for low-grade corporate bonds, but not for high-grade corporate or U.S. Government bonds using data from 1953-1981. Chang and Pinegar (1986) also find a January effect for lower quality bonds. Work by Wilson and Jones (1990) finds a January effect for corporate bonds and commercial paper. Jordan and Jordan (1991) examine seasonality in daily corporate bond returns using the Dow Jones Composite Bond Average and compare it to seasonality of equity using daily S&P 500 stock returns. For the period 1963-1986, corporate bond returns exhibit January, turn of the year, and week of the month effects, but no significant day of the week effects or turn of the month effects. And finally, Cooper and Shulman (1994) find significant year-end effect in junk bond prices using data from 1980-1991.

We carry out a rigorous analysis of existence or non-existence of seasonality in the U.S. corporate bond market by analyzing data for a much longer period (1926-2008) and using a different methodology compared to the previous studies. This will further increase our understanding of how efficient the U.S. corporate bond market has been over a long period. It will also help investors to time their investments and corporate bond issuers to time bond issues. In addition we examine whether there is difference in returns of corporate bonds during Republican versus Democratic presidential periods.

We hypothesize that the ideology of smaller government embraced by Republicans will cause lower demand for funds during Republican presidential months and so lower Treasury borrowing, which will cause yields to go down and total returns to go up because of higher monthly capital gains. This should create a situation in which the total returns during Republican periods should be higher than Democratic periods, which is what we find.

## RESEARCH METHODOLOGY

The goal of this research was to find out, for the length of period of study, if there was a month effect in U.S. long term government bonds total monthly returns, and if so, was it more pronounced during certain periods. We studied the month effect in three different ways. .

Was the mean of monthly total returns of long term government bonds different from zero? We tested this by subjecting the mean of monthly returns for a given month  $i$  to the following hypothesis test:  $H_0: \mu_i = 0$  vs.  $H_a: \mu_i \neq 0$ .

Was the mean of monthly total returns of long term government bonds of a given month different from the mean of the other months stacked together? We performed this by conducting the following hypothesis test for a given month  $i$ :  $H_0: \mu_i = \mu_j$  vs.  $H_a: \mu_i \neq \mu_j$ , where  $j$  represents the remaining 11 months other than  $i$ .

Was the variance of the monthly total returns of long term government bonds for a given month different from the variance for the other months stacked together? We tested this by conducting the following hypothesis test for a given month  $i$ :  $H_0: \sigma_i^2 = \sigma_j^2$  vs.  $H_a: \sigma_i^2 \neq \sigma_j^2$ , where  $j$

represents the remaining 11 months other than  $i$ . We used the standard F-test for testing this hypothesis. In addition to the t-tests and F-tests, we used Kruskal-Wallis nonparametric tests for differences in population medians. We also use the Mood's Median test which is more robust against outliers.

Many studies have used the dummy variable methodology to detect market seasonality. Chien, Lee and Wang (2002) provide statistical analysis and empirical evidence that the methodology may lead to misleading results. We avoided this problem by following the methodology used in Hamid and Dhakar (2005) using which they analyze seasonality in the Dow Jones Industrial Average.

## ANALYSIS OF RESULTS

We analyze the entire U.S. long term corporate bond total monthly returns data set from January 1926 to December 2008. Table 1 summarizes the statistical output and results of the tests.

Table 1: Month effect in Long Term Corporate Bonds Total Returns (%): 1926 to 2008

|                     | All  | Jan    | Feb   | Mar   | Apr    | May   | Jun   | Jul   | Aug   | Sep   | Oct    | Nov    | Dec    |
|---------------------|------|--------|-------|-------|--------|-------|-------|-------|-------|-------|--------|--------|--------|
| Count               | 996  | 83     | 83    | 83    | 83     | 83    | 83    | 83    | 83    | 83    | 83     | 83     | 83     |
| Mean                | 0.50 | 0.89   | 0.18  | 0.04  | 0.15   | 0.50  | 0.52  | 0.31  | 0.59  | 0.46  | 0.69   | 0.79   | 0.88   |
| Median              | 0.40 | 0.59   | 0.34  | 0.25  | 0.18   | 0.20  | 0.44  | 0.28  | 0.38  | 0.40  | 0.50   | 0.62   | 0.67   |
| Minimum             | -8.9 | -6.45  | -6.65 | -4.04 | -7.69  | -4.83 | -4.68 | -8.81 | -4.45 | -8.63 | -8.9   | -4.71  | -5.8   |
| Maximum             | 15.6 | 5.96   | 7.52  | 3.56  | 13.76  | 8.2   | 3.95  | 5.86  | 8.37  | 6.23  | 8.85   | 12.67  | 15.6   |
| Range               | 24.5 | 12.41  | 14.17 | 7.6   | 21.45  | 13.03 | 8.63  | 14.67 | 12.82 | 14.86 | 17.75  | 17.38  | 21.4   |
| Standard Deviation  | 2.10 | 1.85   | 2.02  | 1.49  | 2.41   | 2.10  | 1.44  | 2.16  | 2.06  | 2.01  | 2.44   | 2.40   | 2.46   |
| Sample Variance     | 0.04 | 0.03   | 0.04  | 0.02  | 0.06   | 0.04  | 0.02  | 0.05  | 0.04  | 0.04  | 0.06   | 0.06   | 0.06   |
| p-value (m=0)       | 0.00 | 0.00   | 0.41  | 0.83  | 0.57   | 0.03  | 0.00  | 0.20  | 0.01  | 0.04  | 0.01   | 0.00   | 0.00   |
| p-value (t test)    |      | 0.05   | 0.14  | 0.01  | 0.17   | 1.00  | 0.88  | 0.40  | 0.68  | 0.84  | 0.45   | 0.24   | 0.14   |
| p-value (F test)    |      | 0.06   | 0.31  | 0.00  | 0.04   | 0.52  | 0.00  | 0.37  | 0.41  | 0.30  | 0.03   | 0.05   | 0.02   |
| Mean % Change       | Pos  | Pos    |       |       |        | Pos   | Pos   |       | Pos   | Pos   | Pos    | Pos    | Pos    |
| Month Effect (Mean) |      | Higher |       | Lower |        |       |       |       |       |       |        |        |        |
| Month Effect (Var)  |      |        |       | Lower | Higher |       | Lower |       |       |       | Higher | Higher | Higher |

Notes:

1. "Pos" implies that the mean of monthly returns was significantly greater than zero.
2. "Higher" implies that the mean of monthly returns was significantly greater than the rest of the months. "Lower" implies that the mean of monthly returns was significantly smaller than the rest of the months.

The mean of monthly returns for the entire data set (0.50%), is significantly greater than zero ( $p = 0.00$ ). Except for February, March, April and July the mean of monthly total returns of the remaining eight months were significantly greater than zero. January experienced the highest mean monthly return (0.89%) followed by December (0.88%) and November (0.79%). March had the lowest mean (0.04%), followed by April (0.15%) and February (0.18%). January experienced the highest mean monthly return, followed by a dip in February and March. There is an upward trend from April to June, followed by fall in July, and rapid increase from September to January. In more simplistic terms, after a falling trend from January to March, we see an upward rising trend from March to January.

We see a January effect: the mean of monthly returns of January is significantly greater than the mean of the returns of the other eleven months stacked together. We also find a March effect: The mean of monthly returns of March is significantly lower than the mean of the returns of the other eleven months. This phenomenon can be explained by two factors. First, individual investors may create seasonal demand for non-investment grade bonds, and second, there may be a shift in demand for high-rated bonds at year end that is related to institutional “window dressing”. Previous researchers also found January effect for corporate bonds. But we also find a March effect.

In terms of the month-effect, the total returns of none of the months were significantly different from the total return of the other months. The total return for January was greater than the other months, and April was lower than the other months both at 10% level of significance. The difference in monthly changes in medians of total returns long term corporate bond was significant based on two non-parametric tests (Kruskal-Wallis test H statistic = 21.40 with p value = 0.03). Mood’s Median test yields slightly less significant result with a (Chi-square = 19.23 with p value = 0.059). In regard to volatility, only April, October, November and December exhibited higher variance compared to the other months, while March and June exhibited lower variance compared to the other months.

### Returns in Real Terms

Table 2 below shows the monthly returns in real terms for the entire study period and the three sub-periods. It shows the mean long term corporate bond return, mean CPI, and their difference. We see a positive mean monthly real return of 0.25% for the entire study period. The first and third sub-periods have positive mean monthly real returns (0.46% and 0.35% respectively). However, the second sub-period has a negative mean monthly real return of 0.04%. This period coinciding with the Breton Woods fixed exchange rate era was the most stable period in terms of asset prices, commodity prices, interest rates, and exchange rates. Since in this period a risk was lower real return also was lower.

Table 2: Mean Real Monthly returns for Long Term Corporate Bonds

| Period    | Mean LTCB | Mean CPI | Difference |
|-----------|-----------|----------|------------|
| 1926-2008 | 0.50      | 0.25     | 0.25       |
| 1926-1945 | 0.47      | 0.01     | 0.46       |
| 1946-1972 | 0.22      | 0.26     | -0.04      |
| 1973-2008 | 0.73      | 0.38     | 0.35       |

### Month Effect: Republican and Democratic Presidential Periods

Given the important impact party philosophies have on the economy, we explore the three types of month effects in corporate bonds total monthly returns during the Republican and Democratic presidencies.

## Republican Presidencies

Table 3 shows the statistical output for monthly total returns of corporate bonds during Republican presidencies over the period 1926-2008. The mean (0.65%) over the 517 Republican months was significantly greater than zero. The means of five of the months were significantly greater than zero (January, August, October, November and December)

In terms of month effect, the means of total returns for March was lower than the mean of the other eleven months; similar is case with the mean of April. Kruskal-Wallis test found significant difference in the medians of the various months at 6% level (Kruskal-Wallis H-statistic = 19.19 with p value = 0.06). But Mood's Median test shows significant difference in the medians (Chi-square of 21.63 with p value = 0.03). October and December had the highest average rank based on median followed by November and January. April had the lowest average rank followed by March and July. In regard to month effect with respect to variance, June and March experienced lower variance than the other months.

Table 3: Month effects in Long Term Corporate Bonds Total Returns (%):  
Republican Presidencies

|                     | All   | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   | Oct   | Nov    | Dec    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Count               | 517   | 43    | 44    | 43    | 43    | 43    | 43    | 43    | 43    | 43    | 43    | 43     | 43     |
| Mean                | 0.66  | 1.06  | 0.49  | 0.03  | -0.18 | 0.43  | 0.39  | 0.17  | 1.03  | 0.63  | 1.30  | 1.24   | 1.30   |
| Median              | 0.57  | 0.99  | 0.68  | 0.24  | 0.14  | -0.11 | 0.43  | 0.30  | 0.83  | 0.76  | 0.88  | 0.78   | 1.04   |
| Minimum             | -8.81 | -3.03 | -5.23 | -4.04 | -7.69 | -4.83 | -4.68 | -8.81 | -3.45 | -8.63 | -4.5  | -4.71  | -5.8   |
| Maximum             | 15.6  | 5.96  | 7.52  | 3.56  | 5.48  | 8.2   | 3.95  | 5.86  | 8.37  | 6.23  | 8.85  | 12.67  | 15.6   |
| Range               | 24.41 | 8.99  | 12.75 | 7.6   | 13.17 | 13.03 | 8.63  | 14.67 | 11.82 | 14.86 | 13.35 | 17.38  | 21.4   |
| Standard Deviation  | 2.48  | 1.98  | 2.20  | 1.76  | 2.49  | 2.40  | 1.63  | 2.68  | 2.42  | 2.54  | 2.72  | 3.05   | 3.15   |
| Sample Variance     | 0.06  | 0.04  | 0.05  | 0.03  | 0.06  | 0.06  | 0.03  | 0.07  | 0.06  | 0.06  | 0.07  | 0.09   | 0.10   |
| p-value (m=0)       | 0.00  | 0.00  | 0.15  | 0.92  | 0.64  | 0.24  | 0.13  | 0.68  | 0.01  | 0.11  | 0.00  | 0.01   | 0.01   |
| p-value (t test)    |       | 0.18  | 0.60  | 0.02  | 0.03  | 0.53  | 0.29  | 0.22  | 0.29  | 0.94  | 0.11  | 0.19   | 0.16   |
| p-value (F test)    |       | 0.03  | 0.15  | 0.00  | 0.50  | 0.40  | 0.00  | 0.25  | 0.43  | 0.44  | 0.21  | 0.03   | 0.02   |
| Mean % Change       | Pos   | Pos   |       |       |       |       |       |       | Pos   |       | Pos   | Pos    | Pos    |
| Month Effect (Mean) |       |       |       | Lower | Lower |       |       |       |       |       |       |        |        |
| Month Effect (Var)  |       | Lower |       | Lower |       |       | Lower |       |       |       |       | Higher | Higher |

Notes:

1. "Pos" implies that the mean of monthly returns was significantly greater than zero.
2. "Higher" implies that the mean of monthly returns was significantly greater than the rest of the months. "Lower" implies that the mean of monthly returns was significantly smaller than the rest of the months

## Democratic Presidencies

Table 4 shows the statistical output for monthly total returns of corporate bonds during Democratic presidencies over the period 1926-2008. The mean (0.33%) over the 479 Democratic months was significantly greater than zero. January, May, June and December produced monthly total returns which were significantly greater than zero.

Though the means of four months were significantly greater than zero, no month experienced mean returns significantly greater than the mean of the other eleven months. We got similar findings from Kruskal-Wallis and Mood's Median tests for difference in the medians of the monthly returns:

there is no significant difference in the medians of various months (Kruskal-Wallis H-statistic = 12.95 with p value = 0.3, Mood's Median test Chi Square = 8.28 with p value= 0.69). Though the result is not significant, October had the highest average rank based on median followed by January.

There was quite a bit of month-effect in terms of variance. March, June, September, November and December exhibited lower standard deviations; April and October exhibited higher standard deviations compared to the other months. The standard deviations were lower under Democratic presidents (ranging from 1.15% to 2.29%) than under Republican presidents (ranging from 1.63 % to 3.15 %).

Table 4: Month effect in Long Term Corporate Bonds Total Returns (%):  
Democratic Presidencies

|                     | All   | Jan   | Feb   | Mar   | Apr    | May   | Jun   | Jul   | Aug   | Sep   | Oct    | Nov   | Dec   |
|---------------------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|--------|-------|-------|
| Count               | 479   | 40    | 39    | 40    | 40     | 40    | 40    | 40    | 40    | 40    | 40     | 40    | 40    |
| Mean                | 0.33  | 0.71  | -0.16 | 0.04  | 0.51   | 0.57  | 0.67  | 0.45  | 0.12  | 0.27  | 0.03   | 0.32  | 0.43  |
| Median              | 0.34  | 0.49  | 0.21  | 0.26  | 0.22   | 0.26  | 0.48  | 0.25  | 0.34  | 0.21  | 0.40   | 0.35  | 0.54  |
| Minimum             | -8.90 | -6.45 | -6.65 | -3.83 | -1.60  | -2.54 | -2.23 | -4.29 | -4.45 | -2.65 | -8.90  | -2.72 | -2.33 |
| Maximum             | 13.76 | 4.50  | 2.89  | 1.87  | 13.76  | 6.31  | 3.41  | 5.28  | 2.87  | 4.13  | 3.61   | 2.70  | 2.70  |
| Range               | 22.66 | 10.95 | 9.54  | 5.70  | 15.36  | 8.85  | 5.64  | 9.57  | 7.32  | 6.78  | 12.51  | 5.42  | 5.03  |
| Standard Deviation  | 1.58  | 1.69  | 1.75  | 1.15  | 2.29   | 1.76  | 1.21  | 1.43  | 1.47  | 1.22  | 1.92   | 1.28  | 1.26  |
| Sample Variance     | 0.02  | 0.03  | 0.03  | 0.01  | 0.05   | 0.03  | 0.01  | 0.02  | 0.02  | 0.01  | 0.04   | 0.02  | 0.02  |
| p-value (m=0)       | 0.00  | 0.01  | 0.57  | 0.81  | 0.17   | 0.05  | 0.00  | 0.05  | 0.62  | 0.17  | 0.92   | 0.13  | 0.04  |
| p-value (t test)    |       | 0.14  | 0.07  | 0.12  | 0.61   | 0.37  | 0.08  | 0.57  | 0.34  | 0.76  | 0.30   | 0.94  | 0.63  |
| p-value (F test)    |       | 0.28  | 0.19  | 0.01  | 0.00   | 0.18  | 0.02  | 0.22  | 0.28  | 0.02  | 0.05   | 0.04  | 0.03  |
| Mean % Change       | Pos   | Pos   |       |       |        | Pos   | Pos   |       |       |       |        |       | Pos   |
| Month Effect (Mean) |       |       |       |       |        |       |       |       |       |       |        |       |       |
| Month Effect (Var)  |       |       |       | Lower | Higher |       | Lower |       |       | Lower | Higher | Lower | Lower |

Notes:

1. "Pos" implies that the mean of monthly returns was significantly greater than zero.
2. "Higher" implies that the mean of monthly returns was significantly greater than the rest of the months. "Lower" implies that the mean of monthly returns was significantly smaller than the rest of the months

## SUMMARY AND CONCLUSION

We analyzed the monthly seasonality of total monthly returns of long term corporate bonds for the period of January 1926 to December 2008. We explored three types of month effects: if the mean of monthly returns for the entire data set as well as for each month was different from zero, if the mean of monthly returns for a month was different from the mean of the other eleven months stacked together, and if variance of monthly returns for a month was different from the variances for the other eleven months. Further, we explored monthly seasonality based on Republican and Democratic presidencies.

The mean of monthly long term corporate bonds total returns for the entire data set (0.50%) was found to be significantly greater than zero. January experienced the highest mean monthly change, continued by a dip in February and March. There is an upward trend from April to June, followed by trough in July, and rapid increase from September to January. We also found the mean of monthly long term corporate bonds total returns during the Republican presidencies (0.66%) to

be significantly higher than during the Democratic presidencies (0.33%). The U.S. Corporate long term bond market though not fully efficient exhibits a high degree of efficiency.

Similar analysis of intermediate term government market, the T-Bill market, high-grade corporate bond market, and the junk bond market will greatly increase our understanding of the behavior of bond markets. We plan to follow up with that line of research.

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# **SEASONALITY IN U.S. STOCK INDEXES: EFFICIENT MARKETS IN TRADING RETURNS AND VOLUME?**

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## **ABSTRACT**

*Research in seasonalities in stock returns (January effect, day-of-the-week effect and so forth) generally showed a disappearance by the end of the last century. The presumption has been that the stock markets, at least the major ones, are efficient with respect to timing of trades. This research finds differently. First, while the main indexes tend to not show seasons of higher or lower returns, there are still some seasons remaining as found in the period of 2001 through 2008. Second, often the trading volume of the index is significantly different in the seasons examined, even if index mean return is not significantly different from the non-season. The main implication is that investment managers may find better prices and transaction costs if they can place a trade during certain calendar periods.*

*Keywords: efficient markets, liquidity, seasonalities*

# **FINANCING NEW BUSINESS VENTURES: ACCOUNTING & FINANCE CONCERNS IN CUSTOMER SERVICE MANAGEMENT**

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## **ABSTRACT**

*This paper is written to explore the many aspects of financing new business ventures and projects in customer service management organizations. New business financing can take many forms at different stages. The stages of a new business venture can include research and development, demonstration, early commercialization, and demand-driven commercialization. The various financial instruments that help ventures through these stages include Government finance, International funding Mechanisms, Private-sector finance, and Micro-credit and community-based financing (Chaurey, Gueye, & Babu 2004). Not all new business ventures go through these stages of development and financing. This report will also explore other new business venture financing and the entrepreneurial qualities that attract it. Different people and areas get more business financing than others. This report will try to look in to any regional, gender, or national bias when organizations or individuals finance new business ventures. Another aspect of financing new business ventures and entrepreneurial individuals are the changes these entities and people make in their communities. This report will look at the social and economic changes affected by financing. Extensive legal advice and services may be needed for different ventures. This report will also explore some of the need for experienced counsel when seeking creative financing solutions.*

## **INTRODUCTION/CONCLUSIONS**

Future research is suggested based upon prior research and theory (Buckley and associates, 1992- present; Carland and associates 1984-present).

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# EVIDENCE FROM AN AUDITING COURSE: PERFORMANCE AND STUDENT USE OF INSTRUCTIONAL TECHNOLOGY

Songtao Mo, Purdue University Calumet

## ABSTRACT

*The introduction of the online learning tools initiates the shift of the focus of the learning environment from instructors to students to achieve the balance between the parties. The availability of the online learning tools also encourages the students to be more actively involved in the learning process towards their own learning objectives. This paper provides a descriptive analysis of the impact of instructional technology on student activities on Blackboard Vista in a face-to-face auditing course. To supplement the lectures in the classroom, the instructor utilizes the web-based instructional tools and encourages students to use the technological aids on a voluntary basis. Further analysis is conducted on the dataset containing student performance statistics and student activity data gathered from the Blackboard Vista, a platform that facilitates and supports the web-based educational environment. The empirical results indicate that improved student activities and course interactions are associated with the introduction of the new function of instructional technology. In addition, the students who exercise diligence, measured by their activities on Blackboard, are more likely to have better performance in the auditing course.*

*This paper contributes to existing literature and teaching practice in multifold. First the research design allows researchers to capture the features rarely included in self-reporting surveys, which have not been well documented in the literature. Second, the study supports the view that the integration of instructional technology into face-to-face courses enhances the student learning motivation and hence has the potential of improving student performance.*

# **EVIDENCE ON THE ASSOCIATION BETWEEN MAJOR AND PERFORMANCE IN THE INTRODUCTORY FINANCIAL ACCOUNTING COURSE**

**Songtao Mo, Purdue University Calumet  
Elaines Waples, Purdue University Calumet**

## **ABSTRACT**

*This study investigates the differences in student performance in the introductory financial accounting course across various combinations of majors. This paper advances current research on the association of student performance and selection of major by using data from sources other than self-reporting. Approaching the research question from a fresh perspective, the study provides empirical results that supplement the findings of previous research using surveys and experiments.*

*The study utilizes the Kruskal-Wallis test and discriminant analysis in conducting empirical tests. The results suggest that, relative to students of other majors, the accounting majors are more likely to have higher grades in the introductory financial accounting course. A closer examination reveals that the accounting and finance majors share similarities in all variables except gender and length of programs. While the accounting program attracts more female students, the finance majors tend to graduate earlier. Further analysis also indicates that, compared with other business majors, accounting and finance majors are better performers and spend less time to complete their programs.*

# **CORPORATE FINANCIAL REPORTING COMPLEXITY: RECOMMENDATIONS FOR IMPROVEMENT**

**Hassan Said, Austin Peay State University**

## **ABSTRACT**

*Despite the improvements in financial reporting stemming from Sarbanes-Oxley, the US financial reporting system continues to face a number challenges. Conceivably, most urgent is the need to reduce complexity, and hence improving transparency and increasing usefulness of reported financial information to constituents. This paper examines the Final report of the Advisory Report of the Advisory Committee on Improvements to Financial Reporting and offers recommendations to progressively redress the existing complex system of standards, rules, and regulations that fail to provide relevant and transparent financial information. Furthermore, this complexity has been mounting for many years as a result of different forces; structural, institutional, cultural, behavioral, and political. It is believed that these recommendations, if implemented, would achieve measurable improvements to the current financial reporting system. The paper concentrates on the sources that create substantive complexity and provides an analytical insight of the recommendations. This paper also provides implications for accounting educators and practicing professionals.*

# **REVIEWING ABC FOR EFFECTIVE MANAGERIAL AND FINANCIAL ACCOUNTING DECISION MAKING IN CORPORATE ENTITIES**

**Junaid M. Shaikh, Curtin University of Technology**

## **ABSTRACT**

*The traditional product-costing system failed to show that the low-volume products were driving more than their share of overhead costs. As a result of these misleading costs, the company's management was mispricing its products. An activity-based costing system is a two-stage process of assigning costs to products. In stage one, activity-cost pools are established. In stage two a cost driver is identified for each activity-cost pool. Then the costs in each pool are assigned to each product line in proportion to the amount of the cost driver consumed by each product line. Henceforth, To examine ABC validity we have studied literature for effective decision making in international context.*

Key words : Activity Based Costing, Implementation, Managerial Accounting, Financial Accounting, Decision Making.

## **METHODOLOGY AND OBJECTIVES OF RESEARCH ANALYSIS**

To examine ABC for Managerial and Financial decision making ,we have studied and Reviewed the available Literature and research paper in specific region in relation with 'Activity-Based Costing'. Particularly, on innovation or passing fad, behavioral cost initiatives and Managerial and Financial decision making.

As an objective of research we predetermined following objectives:

- " To examine activity costing in present context of corporate entity.
- " To Critically analyzing behavioral cost initiatives with reference to industry.
- " To observe Issues to address before for Managerial and Financial Accounting decision making in entities.

## **INTRODUCTION AND IMPLEMENTATION OF ABC A CRITICAL ANALYSIS**

Khalid, (2005 ), says the three reasons for undertaking the study include assessing the seriousness of Saudi Arabian companies in adopting management tools such as activity based costing (ABC), finding out if Saudi companies also suffer from the low diffusion process of ABC in developing countries, and countering the scarcity of studies on management innovations adopted by Saudi companies.

The thrust is not uncommon. Indeed recent research evaluates the German cost accounting to see how it has evolved (Sharman & Vikas 2004) and the trend of ABC adoption in Ireland (Clarke & Mullins 2001).

The theme agrees with the title of the article although apart from creating awareness, the educational significance seems low.

This is important for management accounting as it has also been recognized that ABC is not being widely adopted (Sharman 2003, Clarke & Mullins 2001).

The author's strategy for the study is simple and within his capabilities and resources in the environment he chose to work in.

### **ABC AND MANAGERIAL ACCOUNTING DECISION MAKING**

Obviously, the need for ABC to be clearly communicated to employees. To run successfully, the system needs to be understood and accepted by its users, the employees. Given the literature, it is important for management to clarify on the potential impact of ABC on product cost; hence the information has to be communicated to all personnel impacted by ABC. Further, a benefit of developing incentives for employees to encourage the use of ABC information to improve product design and processes. The management holds the responsibility to have long-term focus, clearly defined and justified objectives, committed and having clear plans of how to use the ABC data. The system needs a champion, steering committee and adequate resources with sufficient knowledge to ensure its usefulness. Pierce (2004) highlights the importance of a well-informed champion who is capable of making preliminary judgments on the likely benefit of ABC implementation before significant funds are committed.

People resist changes that question their current practices and suspect changes that directly impact their performance (Tatikonda, 2005).

The management owes their (crucial) deep understanding of what is a profitable business and what drives cost, to their employees (Barrett, 2004). The managerial issue exists because it is management's responsibility to direct and link performance management and the costing system towards strategic direction, for instance economic value creation (Stenzels, 2004). Performance management plays a variety of roles including strategic planning, budgeting, and forecasting, reporting and analyzing data to further support business needs (Stenzels, 2004).. ABC will only move if people are willing and ready to work with the new system (Tatikonda, 2005) besides understanding how the cost system relates and benefits the entire organization.

Cokins (2005) finds that driver selection is of utmost importance because it significantly impact data integrity, and decisions made thereafter. This indicates that the system does not fit to all industry. Pierce (2004) highlights that ABC would not be beneficial for companies having high proportion of costs, which are considered, fix. Also, producers of a single product or a small group of relatively homogenous products would not benefit the ABC as well (Pierce, 2004). Each company has its own unique requirement of the ABC system; therefore developing in-house Cokins (2005) introduces the SAS, a computing system capable of handling large amount of data faster. The software is equipped with extraction, transform and loading application, also sophisticated reporting and visualization viewing techniques. Barrett (2004) proposes the work management tool, which

allows administrator to design, schedule, and monitor repetitive, processes and e-mail alerts to users as reminders. ABC and Financial Accounting Decision Making:

Towards financial issues with regard to implementing ABC, obviously, the implementation of ABC could contribute both tangible and intangible costs to the company. Tangible costs would be on designing, training and implementing the system. Intangible costs could include employees' morale and political fallout. A survey conducted by Pierce (2004) reveals that financial issue remains an important indicator for users who are in the stage of considering implementing ABC. This is because the companies are unconvinced that the likely benefits would outweigh the cost of implementation. Even though the pre-implementation stage requires an amount of investment, Kren et. al (2004) mentions that the objective ABC is meant to control the cost of activities and this draws management's attention towards the work itself, unlike traditional cost systems which directs towards workers. The data analysis contributed by the system is capable of supporting a company's financial stand in the long run. For instance, by eliminating non-value added activities from core activities, certain cost is certainly reduced besides having tasks re-engineered to better suit the company's operating condition. This includes having more related tasks to be done by a worker instead of a few. The primary objective of having an ABC in place - to provide accurate product cost information. Users of ABC have to be aware of the potentials and benefits of the system. ABC has the ability to support better planning and to support profitability analysis (Barrett, 2004), however future users have to consider the amount of responsibility and both tangible and intangible investment with regards to implementing it. Significant impact of implementation towards the organization is also important because ABC does not work in all conditions.

### **CONCLUDING REMARKS**

It shows that companies are considering adopting the ABC as their costing system because it could improve their understanding on how costs behave. Therefore, ABC has the potential of assisting towards better performance reporting which encompass profitability analysis, enhanced contribution to decision-making, value added analysis besides supporting towards the company's strategic issues.

The managerial issue exists because it is management's responsibility to direct and link performance management and the costing system towards strategic direction, for instance economic value creation (Stenzels, 2004). Towards financial issues with regard to implementing ABC, obviously, the implementation of ABC could contribute both tangible and intangible costs to the company. Tangible costs would be on designing, training and implementing the system. Intangible costs could include employees' morale and political fallout. A survey conducted by Pierce (2004) reveals that financial issue remains an important indicator for users who are in the stage of considering implementing ABC.

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# THE MARKET EFFECT OF THE TROUBLED ASSET RELIEF PROGRAM (TARP)

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## ABSTRACT

*In October of 2008, the U.S. Treasury launched the Troubled Asset Relief Program (TARP). The purpose of the Program was to promote stability for financial institutions primarily in association with the subprime mortgage debacle. Upon its inception, some theorized that this program would be beneficial to stockholders of firms participating in the Program, while other believed that it would be detrimental to stockholders of recipients of such funds. Because of these conflicting opinions, this study was undertaken to assess the effect the Program has had in its brief life to stockholders. An analysis was conducted using a sample of 25 firms which participated in the Program. This analysis compared the security prices of these firms in the year preceding TARP (pre-TARP) to the security prices of the same firms in the year after TARP (post-TARP). Findings indicate that stockholders of these firms realized a drop in security prices between the two periods. In addition, a control sample of 25 similar firms that did not receive TARP funding was analyzed during the same periods. Findings indicate that these firms did not realize a drop in security prices between the two periods. Thus, we can conclude, for those firms participating in TARP, stockholders of those firms saw the value of their investment drop, whereas stockholders of non-participating firms did not see a similar drop.*

# **DOES THE WEIGHTED COST OF CAPITAL ASSOCIATE WITH RETURNS ON OPERATING AND FINANCIAL ASSETS WITH INVESTOR ANTICIPATION OR REACTION? [AND DO OPERATING AND FINANCIAL ASSETS HAVE SYNERGY?**

**Zane Swanson, University of Central Oklahoma  
Veli Viinanen, Deloitte**

## **ABSTRACT**

*The relation of firm accounting information and investor decision-making is a key financial accounting issue for the proposed FASB/IASB financial accounting presentation standard. Firm accounting information is a result of management's decisions. This study focuses on the investors' perspective of the consequences of management's actions with respect to the cost of firm capital and the returns on assets. Conventional thought hypothesizes management to maximize the return on asset investments within the rubric of minimizing the firm weighted average cost of capital. Within this framework, we investigate financial statement relevance with regard to whether investors anticipate or react to firm asset investment returns. The study also examines the existence of synergy between firm operating and financial asset returns. Because leverage is a central capital structure factor, we also investigate the leverage impact on the relation between investor supplied fund costs and asset returns.*

# **ADVERSE INTERNAL CONTROL OVER FINANCIAL REPORTING OPINIONS AND AUDITOR DISMISSALS/RESIGNATIONS**

**Maya Thevenot, SUNY Fredonia**  
**Linda Hall, SUNY Fredonia**

## **ABSTRACT**

*This paper describes a study of the factors that affect a firm's choice to either dismiss or remain with their incumbent auditors when faced with adverse auditor opinions on the design and effectiveness of their internal controls. The study focuses on a unique sample of firms that received an adverse opinion in one year, followed by an unqualified opinion in the following year, thereby isolating a critical time in the client/auditor relationship. Auditor dismissals and a limited number of auditor resignations are examined in this same context. We find that the severity of the internal control problems, the auditor-related fees, the length of auditor-client relationships and the presence of a Big Four auditor affect the probability that a firm will switch auditors at this point. Further analysis examines the factors that affect auditor dismissals versus resignations, and switches from Big Four auditors to smaller audit firms or to other Big Four auditors. The existence of non-switching behavior among firms facing adverse internal controls over financial reporting opinions is supported by embeddedness theory, whereby client/auditor relationships demonstrate positive duration dependence and develop relationship-specific assets.*

## **INTRODUCTION**

The Sarbanes-Oxley Act (SOX) enacted into law in 2002 is considered one of the most significant pieces of legislation since the Securities Acts of 1933 and 1934. An important change to the existing regime came with Sections 302 and 404 which require management to provide an assessment of the design and effectiveness of firms' internal controls, as well as auditors to provide an opinion on management's assessment of controls. In addition, Auditing Standard No. 2 now requires that auditors provide a separate opinion on firms' internal controls based on an independent evaluation. As a result of these mandates and the corresponding increase in scrutiny of internal controls, a number of companies received adverse opinions on their internal controls, which likely impacted to some extent the relationship with their auditors. Despite internal control problems, a client and an auditor may decide to continue their engagement and work through the problems together. Alternatively, a client may change audit firms because of irreparable damage to the relationship due to the conflict, or in order to seek another firm that may help the client earn an unqualified opinion. This study contributes to the growing literature on internal controls and the impact of SOX by investigating the factors that affect the decision to switch auditors, either by

dismissal or resignation, following the issuance of an adverse opinion on internal controls over financial reporting (ICOFR) by auditors.

Prior research shows that auditor switches are related to the issuance of qualified audit opinions and going-concern reports (Chow & Rice, 1982; Mutchler, 1984). In addition, auditor turnover is more likely given internal control deficiencies disclosure pursuant to Section 302 and 404 of SOX (Ashbaugh-Skaife, Collins & Kinney Jr., 2007; Ettredge, Heintz, Li & Scholz, 2007). We extend this line of research by focusing on a sample of firms that received an adverse opinion on internal controls, and examine the specific factors that affect auditor turnover, including the severity and nature of the internal control deficiencies, the amount of auditor-related fees, the length of the auditor-client relationship, and the type of audit firm that expressed the negative opinion.

Deficiencies in internal controls have been associated with poor accrual quality (Ashbaugh-Skaife, Collins, Kinney Jr. & LaFond, 2008), poor board and audit committee quality (Krishnan, 2005; Zhang, Zhou & Zhou, 2007; Hoitash, Hoitash & Bedard, 2009), firm risk (Ashbaugh-Skaife, Collins, Kinney Jr. & LaFond, 2009), and the cost of equity capital (Ogneva, Subramanyam & Raghunandan, 2007; Ashbaugh-Skaife et al., 2009). In addition, firms with more severe internal control weaknesses tend to be smaller, financially weaker, have more complex operations and fewer resources (Ge & McVay, 2005; Ashbaugh-Skaife et al., 2007; Doyle, Ge & McVay, 2007). These firms also experience a higher drop in share price when control problems are disclosed (Hammersley, Myers & Shakespeare, 2007). These prior studies suggest that firms with disclosed deficiencies in internal controls are significantly disadvantaged relative to other firms in their access to audit services because they pose risks that auditors may be unwilling to take. Consistently, Raghunandan and Rama (2006) and Hogan and Wilkins (2008) find that firms with internal control deficiencies pay higher audit fees. Such firms have a strong incentive to change auditors, and auditor switches have been shown to be associated with a decrease, or less of an increase in audit fees (Simon & Francis, 1988; Ettredge & Greenberg, 1990). However, a majority of firms with internal control deficiencies remain with their incumbent auditors (Hall & Bennett, 2010), posing the question: what are the factors that prompt firms with internal control weaknesses to switch auditors? In this paper, we further examine what motivates a firm to dismiss their auditor or the auditor to resign from an engagement. We also explore the factors that affect firms' decisions to switch from one Big Four auditor to another, versus switching from a Big Four to a non-Big Four auditor.

We find that the number of material weaknesses in internal controls disclosed in an ICOFR examination, which are the most severe internal control deficiencies, increases the likelihood of an auditor switch. When the effect of the type of control weakness is examined, we find that only entity-level weaknesses, perceived to be more severe than account-specific deficiencies, affect auditor switching. Our results show that the amount of auditor-related fees, the length of the client-auditor relationship and the presence of a Big Four auditor also affect the probability of an auditor change. When auditor dismissals and resignations are examined separately, some interesting results emerge. First, only resignations are affected by the severity of the internal control weaknesses, implying that auditors shift away from potentially risky firms, while clients do not seem to dismiss auditors solely in light of severe problems. Second, high audit fees are an important factor in dismissals, which is not surprising considering the weak incentive for auditors to resign when a client is paying high fees. Interestingly, we find that the number of disclosed material weaknesses affects the likelihood of a switch from a Big Four to a non-Big Four auditor, but not the change from

one Big Four to another Big Four auditor. This suggests that firms with more severe problems turn to smaller auditors potentially looking for less conservative treatment. Moreover, we find that firms are likely to switch from a Big Four to a non-Big Four auditor when the auditor-related fees are high, perhaps to decrease their future audit cost.

The results of this study should be of interest to audit firm managers, audit committee and board members, investors, regulators and other stakeholders. Following SOX, a large number of firms switched auditors, and researchers and professionals alike have been trying to explain this trend (Turner, Williams & Weirich, 2005). The new internal controls requirements enacted in Sections 302 and 404 spurred a great deal of research and debate about the effects of the disclosure of significant control deficiencies. This study contributes to the literature on this topic because it is the first of its type to focus on a unique set of firms with internal control deficiencies and the factors that affect the decision of these firms to switch auditors.

The remainder of the paper proceeds as follows. Section II describes the contextual and institutional background and develops the hypotheses to be tested. Section III describes the sample characteristics. Section IV presents descriptive statistics and results of univariate statistical analysis. Section V presents the models utilized and provides results of multivariate analyses. Section VI and VII describe our findings with respect to dismissals versus resignations, and the effects of the presence of a Big Four audit firm on the analyses. Due to space constraints, sections II through VII, Appendix A, References, and Tables 1 through 7 are included in the full-text article to be presented at the Allied Academies International Conference in New Orleans, April 14-16, 2010. The final section follows, offering our conclusions based on this study and considerations for future research.

## CONCLUSIONS

Recent changes in the regulatory environment have significantly expanded the disclosure requirements pertaining to firms' internal controls. On one hand, Sections 302 and 404 of SOX require that managers provide an assessment of the design and effectiveness of their firms' internal controls and auditors express an opinion on this assessment. On the other hand, Auditing Standard No. 2 requires that auditors provide a separate opinion on internal controls based on their independent examination. Disclosing internal control problems is not looked upon favorably in the market (Hammersley, et al., 2007), and hence, adverse ICOFR opinions are likely to impact auditor-client relationships negatively, which may result in engagement termination. In this paper, we study the factors that affect auditor switches following adverse ICOFR opinions. This study is unique in that it focuses on firms that received adverse opinions in one year, followed by an unqualified opinion in the next, isolating the sample from firms with longstanding or endemic internal control weaknesses.

We find that the probability of firms switching auditors in the year following an adverse ICOFR opinion increases with the number of material weaknesses present, which are the most severe problems in internal controls. An examination of the type of internal control issues firms face shows that only entity-level and not account-specific weaknesses increase this probability. This suggests that firms with more severe internal controls issues are more likely to change auditors in an effort to achieve an unqualified opinion. In addition, the amount of auditor-related fees and the

presence of a Big Four audit firms also increase the probability of a switch, while the length of the auditor-client relationship decreases the probability of a switch.

Several interesting results emerge when dismissals and resignation are examined separately. First, severe internal control issues affect only the probability of an auditor resigning, implying that auditors try to stay away from risky firms. Second, the magnitude of auditor-related fees and the presence of a Big Four auditor only increase the probability of an auditor dismissal. This suggests that when faced with an adverse internal controls opinion, firms tend to dismiss their auditor when they are paying high fees and their incumbent auditor is one of the Big Four. Dismissal may be due to a firm's desire to decrease their audit costs and/or look for less conservative treatment from a smaller audit firm. Auditor tenure decreases the probability of both auditor dismissal and resignation, although its effect on dismissals is much stronger. This implies that clients and auditors have an investment in their relationship that is strengthened over time and is less likely to be terminated as a result of an adverse opinion.

An examination of the switches from a Big Four to another Big Four or to a non-Big Four audit firm reveals that the number of material weaknesses and the amount of auditor-related fees increase the probability of a switch to a smaller auditor. This is consistent with the idea that firms tend to switch from large audit firms to smaller auditors, either to get less conservative treatment or to decrease their audit cost. In addition, firms tend to stay loyal, rather than switch to another Big Four firm when they have a longer tenure with their current auditor.

Overall, the results suggest that the number and severity of the internal control deficiencies, the amount of auditor-related fees, auditor tenure, and the presence of a Big Four auditor affect the probability of an auditor switch in the year following an adverse ICOFR opinion. However, these factors affect auditor dismissals and resignations differently suggesting that it is important to consider the underlying reason for the switch. Switching from one Big Four audit firm to another or to a non-Big Four auditor is also affected the severity of internal control weaknesses, audit costs, and the length of the client/auditor relationship.

The results of this study are relevant and useful to a variety of audiences. First, the results provide evidence of the significant effects of the Sarbanes-Oxley legislation, especially the effects of Sections 302 and 404 on client-auditor relationships. The sample is current and unique, focusing the results on the critical point in the client-auditor relationship where a decision to switch or not is likely to occur. Therefore, these findings should be useful to audit firm managers, audit committee and board members, investors, regulators and other stakeholders interested in the impact of SOX on firm behavior. In addition, the study provides insight into auditor switching behavior, prompted either by the client or the audit firm. It also draws attention to the prevalence of loyal or non-switching behavior which can be best explained by embeddedness theory. This is important because while clients may engage in opinion-shopping or audit cost-minimizing behavior, and audit firms may take on risk-reducing actions, some relationships are maintained and sustain throughout adverse conditions.

## **A CASE STUDY ON ONE NATION'S ATTEMPT TO MOVE TO ACCRUAL ACCOUNTING**

**Geoffrey Tickell, Indiana University of Pennsylvania**

### **ABSTRACT**

*Over the past three decades, there has been a slow but steady global movement undertaken by most governments to move from cash-based accounting to accrual-based accounting. This migration is the result of calls for greater accountability, increased transparency and more informed decision-making from the public sector. Questions remain regarding the implementation of accrual accounting within public sector organisations. This paper reports on an investigation into Fiji's attempt to use accrual accounting as its financial reporting format. Findings suggest that, due to the nation's low-skilled public service, high labor turnover and insufficient investment in capital equipment, undertaking the move to accrual accounting for this and similar developing nations requires a different approach to that used by developing economies. This paper concludes with recommendations on how to effectively introduce accrual accounting in the public sector of developing nations.*

## MODELING COST BEHAVIOR

Arnel Onesimo O. Uy, De La Salle University

### ABSTRACT

*Literature acknowledges that costs might not be linear and proportional with activity levels. However, conjectures about the sticky behavior of costs are largely based on anecdotal and empirical evidence despite sufficiently advanced economic theory that explains cost behavior (Cooper and Kaplan, 1998; Noreen and Soderstrom, 1997; Banker and Johnston, 1993). For instance, while Noreen and Soderstrom (1997) find no evidence of stickiness, Anderson, et al (2003) find that SG&A costs are sticky - that is, they increase, on the average, by 0.55% per 1% increase in revenues, but decline by 0.35% per 1% decrease in revenues. Subramaniam and Weidenmier (2003) confirm cost stickiness, finding that total cost increase 0.93% per 1% increase in revenues but decrease only by 0.85% per 1% decrease in revenues. Both studies used data from US firms.*

*The paper firstly derived a basic cost behavior model which will allow us to test asymmetric behavior. Then using Philippine company data from 2004 to 2008, the study will run different linear models, particularly OLS and GLS regression analyses and discussed the results for each.*

# STOCK SPLIT ANNOUNCEMENTS: A TEST OF MARKET EFFICIENCY

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**Frank Bacon, Longwood University**

## ABSTRACT

*An efficient market is a market where all relevant information is available to all participants at the same time, and where prices respond immediately to available information. Stock markets are considered the best examples of efficient markets. This means that possibility exists for investors to make sustainable, above normal, returns. The purpose of this study is to test market efficiency – effects of stock split announcements on stock price. This analysis will focus closely at the semi-strong form efficient market hypothesis. Particularly, is it actually possible to earn an above normal return on a publicly traded stock when the firm announces a stock split? Numerous past studies suggest a capital market is said to be efficient with respect to corporate event announcements (stock split, buyback, right issues, bonus announcement, mergers and acquisition, dividend etc). However, according to the semi-strong form efficient market hypothesis, it is not possible to consistently outperform the market by using public information such as stock split announcements. This type of information should impound stock price sufficiently fast to disallow any investor's earning an above normal risk adjusted return. Evidence here supports the positive signal associated with the sample of stock split announcements examined. Likewise, the study results support the semi-strong form efficient market hypothesis.*

## INTRODUCTION

One of the most controversial issues in finance is whether the financial market is efficient in using economic resources and information or not. Yet, other financial theory issues such as volatility, predictability, speculation and anomalies are also related to the efficiency issue and are all interdependent (Hassan, Kabir, and Anisul Islam (2000)). Primarily, the term efficiency is used to describe a market in which relevant information is impounded into the price of financial assets. Many researchers have referred (and still refer) to stock splits as financial puzzles (Dimson, Elroy, and Massoud Mussavian). The nature of stock splits possibly stems from two widely held, but interesting views: stock splits are merely costly paper shuffling exercises that cannot affect the value of the firm; and the value of the firm immediately and significantly increases upon the announcement of impending stock splits (Arbel, Avner, and Gene Swanson). The second view recently has gained credibility from studies that carefully document positive effects around the time of stock split announcements. Several reasons for these announcement effects have been offered such as trading range, attention, signaling, and tax, yet important questions remain unanswered.

This study will analyze the role that information plays in stock split announcement effects by examining pure stock split announcements across a range of stocks differing in terms of their

information. Often, when a company announces a stock split, it will encourage more interest in the firm. A stock split is essentially when a company increases the number of shares (Joshua Kennon). For example, if you owned 30 shares of XYZ at \$20 per share, and there was a 2-1 stock split, you would then own 60 shares worth \$10 each. Why do companies issue splits if you still have the same amount of money?

Liquidity. Some companies believe that their stock should be inexpensive so more people can buy it. This creates a condition where more of the company's stock is bought and sold. And generally is viewed by investors as a positive signal about the company's future performance. The problem, in theory, is that the increased activity will also leads to bigger gains and drops in the stock, making it more volatile (Joshua Kennon).

So, how fast does the stock market react to publicly announced information? According to Gene Fama (1970), market efficiency can take on three forms: weak form efficiency, semi-strong form efficiency, and strong form efficiency. The efficient market hypothesis implies the stock market should immediately respond to public announcements of stock splits making it impossible for an investor to make an above normal return on their investment by acting on such information. This study investigates whether an investor can achieve an above normal return by acting on public announcements of regular stock splits. The study tests the efficient market hypothesis by assessing the investor's ability to earn an above normal return in the short run by acting on stock split announcements.

## **BACKGROUND AND PURPOSE**

The purpose of this event study is to test the market efficiency theory by analyzing a sample of 30 regular stock split announcements impact on the firm's stock price. Specifically, how fast does the market price of the firms' stock react to the sample examined? Gene Fama defined market efficiency in terms of how fast stock market reacts to information. This research tests whether the announcement of stock splits react directly to Gene Fama's three hypothesis forms of market efficiency; strong form, semi-strong form, or weak form.

For this study 30 randomly chosen, publicly traded, two for one stock split have been analyzed. This study tests the effects of the samples stock prices using the standard risk adjusted event study methodology. If a strong correlation exists between an announcement and an immediate equity market price change, there may not be opportunity to earn an above normal return and such evidence would support the efficient market theory hypothesized of Gene Fama.

## **LITERATURE REVIEW**

Gene Fama, a finance researcher out of the University of Chicago, defined market efficiency in terms of how fast the stock market reacts to information. He defined the efficiency in three different forms: weak-form, semi-strong form and strong-form. Weak-form efficiency deals with the notion that stock price react so fast to all past information that no investor can earn an above normal return when acting on information. For example, if an investor receives a firms report and buys the firm's stock after discovering the firm had high earnings for the period. If the stock does not rise after the stock has been purchased by the investor than the market is said to be efficient with

respect to past information and is weak-form efficient. Many studies support the random walk theory in support of weak form efficiency. Some have chosen to concentrate on individual markets such as: study of random walks in Korea (Ayadi and Pyun 1994, Ryoo and Smith 2002) the United Kingdom (Poon 1996) and Turkey (Buguk and Brorsen 2003). However, other studies have focused on emerging markets such as: Markets in Asia (Huang 1995) and Latin America (Ojah and Karemera 1999).

Semi-Strong form efficiency deals with the notion that stock price react so fast to all public information that no investor can earn an above normal return when acting on information. Public announcements of stock splits, repurchases, dividend increases are examples of public information. So for example, if an investor buys stock on the announcement and still does not make an above normal return (higher than the S&P 500) then the market is semi-strong form efficient. Studies which test semi-strong form efficiency consist of: Berry and Howe (1994) who looked for association in pattern of hourly public information arrival and aggregate measures of intraday market activity and Ball and Brown (1968) which documents the claim that no investor can earn an above normal return on publicly available information such as accounting statements, stock split announcements, dividend announcements, sale of stock announcements, repurchase of stock announcements, block trades, and earnings announcements.

Strong-form efficiency deals with the notion that stock price react so fast to all information (public and private) that no investor can earn an above normal return when acting on information. The market reacts to an event within the confines of the firm (secret information) when it occurs even before it is publically announced. For example, an investor must act on inside information, which is illegal. If an investor buys the stock on the event and still does not make an above normal return, then the market is strong-form efficient. To date some work which has already been done in evaluating strong-form efficiency are Jaffe (1974), Pratt, Givoly and Palmon (1985).

Weak form efficiency expresses that a company's stock price is based on past prices and information, while strong form efficiency states that the stock price is a reflection of all information, public and private. Both of these theories have great importance however; this study focuses on stock split announcements. Stock split announcements are reflected in the company's stock price according to the semi-strong form of efficiency, stating that all public information available determines stock price.

## METHODOLOGY AND STUDY SAMPLE

The study sample analyzes 30, randomly selected, two for one stock split announcements between the time period January 1, 2007 and January 1, 2008. The random sample was selected from two for one stock split announcements traded either on the NYSE or NASDAQ. Table 1 describes the sample.

Table 1: DESCRIPTION OF STUDY SAMPLE WITH ALPHA AND BETA

| COMPANY TIKER | FIRM NAME              | ANNOUNCEMENT DATE | TRADED INDEX | ALPHA     | BETA     |
|---------------|------------------------|-------------------|--------------|-----------|----------|
| CMI           | Cummins Inc.           | 11-Dec-07         | NYSE         | 3.486E-05 | 1.639803 |
| STAN          | Standard parking Corp. | 6-Dec-07          | NASDAQ       | 0.0027234 | 0.895494 |

| COMPANY TIKER | FIRM NAME                       | ANNOUNCEMENT DATE | TRADED INDEX | ALPHA      | BETA      |
|---------------|---------------------------------|-------------------|--------------|------------|-----------|
| FWLT          | Foster Wheeler AG               | 7-Nov-07          | NASDAQ       | 0.0033958  | 1.2263521 |
| MHS           | MedcoHealth Solutions Inc.      | 29-Nov-07         | NYSE         | 0.0019753  | 0.4993287 |
| CJR           | Corus Entertainment             | 25-Oct-07         | NYSE         | -0.0011638 | 0.5623395 |
| KWK           | Quicksilver Res Inc.            | 7-Jan-08          | NYSE         | 0.0050441  | 1.198143  |
| MCRS          | MICROS Systems, Inc.            | 8-Jan-08          | NASDAQ       | 0.0021831  | 1.3852609 |
| PEG           | Public Service Enterprise Group | 15-Jan-08         | NYSE         | 0.0015462  | 0.9471912 |
| WGOV          | Woodward Governor Company       | 23-Jan-08         | NASDAQ       | 0.000978   | 1.6197094 |
| RBN           | Robbins & Myers Inc             | 9-Jan-08          | NYSE         | 0.0041401  | 1.8537707 |
| PRXL          | Parexel International Corp.     | 11-Feb-08         | NASDAQ       | 0.0021592  | 0.9182907 |
| SWN           | Southwest Energy Corp.          | 28-Feb-08         | NYSE         | 0.0064151  | 1.1876747 |
| STLD          | Steel Dynamics, Inc.            | 4-Mar-08          | NASDAQ       | 0.0045887  | 1.6628648 |
| HOLX          | Hologic, Inc.                   | 30-Jan-08         | NASDAQ       | -0.0015193 | 0.9401351 |
| PBR           | Petroleo Brasileiro             | 26-Mar-08         | NYSE         | 0.003535   | 1.3921116 |
| SU            | Suncor Energy Inc.              | 27-Feb-08         | NYSE         | 0.0022379  | 0.6273151 |
| CLF           | Cliffs Natural                  | 11-Mar-08         | NYSE         | 0.0081582  | 1.5255764 |
| WFT           | Weatherford International LTD.  | 21-Apr-08         | NYSE         | 0.004072   | 1.1575673 |
| BCUY          | Bucyrus International, Inc.     | 30-Apr-08         | NASDAQ       | 0.005398   | 1.5559632 |
| UNP           | Union Pacific                   | 1-May-08          | NYSE         | 0.0023406  | 1.1102468 |
| GGB           | Gerdau Sa Ads                   | 30-May-08         | NYSE         | 0.004435   | 1.3362372 |
| ATW           | Atwood Oceanics Inc.            | 11-Jun-08         | NYSE         | 0.0004715  | 0.7371181 |
| FLR           | Fluor Corporation               | 7-May-08          | NYSE         | 0.001844   | 1.2402736 |
| ARTW          | Art's-Way Manufacturing Corp.   | 9-Jul-08          | NASDAQ       | 0.0016537  | 0.4244719 |
| PCX           | Patriot Coal Corp.              | 24-Jul-08         | NYSE         | 0.0045177  | 0.7663393 |
| ALXN          | Alexion Pharmaceuticals, inc.   | 29-Jul-08         | NASDAQ       | 0.0023448  | 1.0018051 |
| ATVI          | Activision Blizzard, Inc.       | 11-Jul-08         | NASDAQ       | 0.001401   | 0.9529861 |
| ILMN          | Illumina, Inc.                  | 22-Jul-08         | NASDAQ       | -0.0006873 | 0.8257861 |
| DXPE          | DXP Enterprises, Inc.           | 8-Sep-08          | NASDAQ       | 0.000527   | 1.1057953 |
| GHM           | Graham CP                       | 31-Jul-08         | NYSE         | 0.002705   | 1.5613543 |

To test semi-strong market efficiency with respect to public announcements of stock splits and to examine the effect of stock split announcements on stock return around the announcement date, this study proposes the following null and alternate hypotheses. The null hypothesis is the values you do not expect ( $H_0: \beta \leq 0$ ); the alternative hypothesis is the values you expect ( $H_A: \beta \geq 0$ ).

*$H_{I_0}$ : The adjusted stock price return of the sample of firms announcing stock splits is not significantly affected by information on the announcement date.*

*$H_{I_A}$ : The adjusted stock price return of the sample of firms announcing stock splits is significantly positively affected by information on the announcement date.*

**H2<sub>0</sub>:** *The adjusted stock price return of the sample of firms announcing stock splits is not significantly affected by information around the announcement date as defined by the event period.*

**H2<sub>A</sub>:** *The adjusted stock price return of the sample of firms announcing stock splits is significantly positively affected by information around the announcement date as defined by the event period.*

This study uses the standard risk adjusted event study methodology from the finance literature. The announcement date (day 0), obtained from <http://finance.yahoo.com/>, is the date of the firm's announcement of the stock split. The required historical financial data, i.e. the stock price and S&P500 index during the event study period was also obtained from the internet website <http://finance.yahoo.com/>.

1. The historical stock prices of the sample companies, and S&P 500 index, for the event study duration of -180 to +30 days (with day -30 to day +30 defined as the event period and day 0 the announcement date) were obtained.
2. Then, holding period returns of the companies (**R**) and the corresponding S&P 500 index (**R<sub>m</sub>**) for each day in this study period were calculated using the following formula:

$$\text{Current daily return} = \frac{(\text{current day close price} - \text{previous day close price})}{\text{previous day close price}}$$

A regression analysis was performed using the actual daily return of each company (dependent variable) and the corresponding S&P 500 daily return (independent variable) over the pre-event period (day -180 to -31 or period prior to the event period of day -30 to day +30) to obtain the intercept alpha and the standardized coefficient beta. Table 2 shows alphas and betas for each firm.

3. For this study, in order to get the normal expected returns, the risk-adjusted method (market model) was used. The expected return for each stock, for each day of the event period from day -30 to day +30, was calculated as:

$$E(R) = \alpha + \text{Beta} (R_m),$$

where **R<sub>m</sub>** is the return on the market i.e. the S&P 500 index.

4. Then, the Excess return (**ER**) was calculated as:

$$ER = \text{the Actual Return (R)} - \text{Expected Return } E(R)$$

5. Average Excess Returns (**AER**) were calculated (for each day from -30 to +30) by averaging the excess returns for all the firms for given day.

$$AER = \text{Sum of Excess Return for given day} / n,$$

where n = number of firms in sample i.e. 30 in this case

6. Also, Cumulative AER (CAER) was calculated by adding the AERs for each day from -30 to +30.

Graphs of AER and Cumulative AER were plotted for the event period i.e. day -30 to day +30. Chart 1 below depicts Average Excess Return (**AER**) plotted against time. Chart 2 below depicts Cumulative Average Excess Return (**CAER**) plotted against time.

### QUANTITATIVE TESTS AND RESULTS

Referring back to the questions from the beginning, the question still stands; did the market react to the announcement of regular, two for one stock splits? And was the information surrounding the event significant? If however a significant risk adjusted difference is observed, then we support our null hypothesis that this type of information did in fact significantly either increase or decrease stock price. To statistically test for a difference in the Actual Daily Average Return and the Expected Daily Average Returns, we conducted a paired sample t-test and found a significant difference at the 10% level between actual average daily returns and the risk adjusted expected average daily returns. A significance level of 10% is reliable; significant levels one thru ten support data since the best significance level is 0. Therefore, results here support the alternate hypothesis  $H_{2A}$ : The risk adjusted return of the stock price of the sample of firms announcing stock splits is significantly positively affected around the announcement date as defined by event period. This finding supports the significance of the information around the event since the market's reaction was observed.

Second, testing the efficiency of the market in reaction to the announcement of a regular two for one stock split event is important. Particularly, do we observe weak, semi-strong, or strong form market efficiency as defined by Fama, 1970, in the efficient market hypothesis? The key in the analysis or tests is to determine if the AER (Average Excess Return) and CAER (Cumulative Average Excess Return) are significantly different from zero or that there is a relationship between time and either AER or CAER. Graphs AER and CAER in Charts 1 and 2 below, show the relationships. T-tests of AER and CAER both tested different from zero at the 10% level of significance. The observation of Chart 2, the CAER graph, confirms the significant positive reaction of the risk adjusted returns of the sample of firms tested prior to the announcement of regular two for one stock split.

Chart 1: AVERAGE EXCESS RETURN OVER EVENT PERIOD

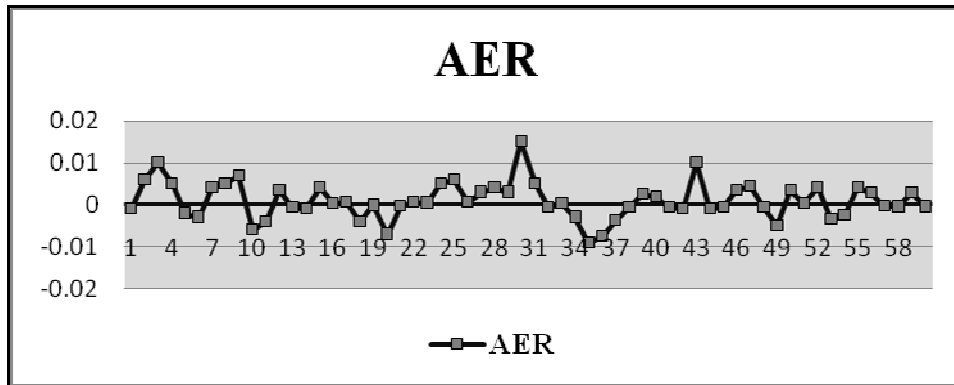


Chart 2: CUMULATIVE AVERAGE EXCESS RETURN OVER EVENT PERIOD

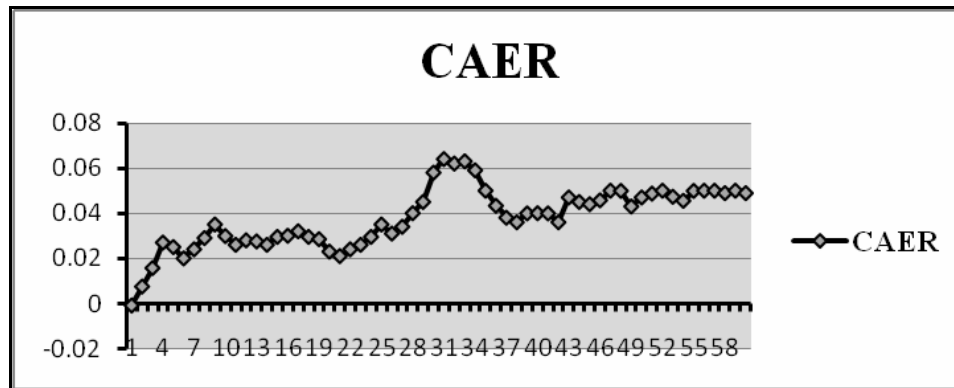


Chart 2 shows that the announcements of stock splits had a positive impact on the firm's share price up to twenty-nine days prior to announcement day 0, the two for one stock split announcement date. This illustration supports the null hypothesis  $H_{10}$ : for the sample of firms analyzed, an investor is not able to earn an above normal risk adjusted return by acting on the public announcement of a two for a one regular stock split. Since as of the announcement date, the firms' stock prices had already adjusted to the new information. This is correlated with the semi-strong form market efficiency hypothesis which states that the stock price reflects all publicly available information.

## CONCLUSION

This study investigated whether an investor could achieve an above normal return by acting on public announcements of regular stock splits. Also, this study tested the efficient market hypothesis by assessing the investor's ability to earn an above normal return in the short run by acting on stock split announcements. There were 30 randomly chosen firms from the time period December 1, 2007 and January 1, 2009. The analyzed stocks were traded on the NYSE or NASDAQ. Also this study used standard risk adjusted event study methodology with the market model and appropriate statistical tests for significance were conducted. Results show a positive market reaction prior to the firms' announcement of regular two for one stock splits. And the results from this study support efficient market theory at the semi-strong form level as documented by Fama (1970).

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# A TRADING STRATEGY FOR ACTIVE INVESTORS IN DUAL CLASS SHARES

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## ABSTRACT

*Studies of firms with two classes of shares report a price premium for the class with superior voting rights over the restricted voting rights shares. The premium varies over time and appears to be sensitive to the likelihood of a contested takeover attempt. We develop a trading system that capitalizes on these variations in the price premium and demonstrate that an active investor can profit from “vote price arbitrage” using this technique. Our approach entails shorting one class of shares and buying the other class when the voting rights price premium becomes either unusually large or unusually small. These findings provide constructive guidance for active investors seeking wealth enhancement.*

## INTRODUCTION

Firms that have two classes of shares are prevalent in foreign markets [Bergstrom and Rydqvist (1990); Zingales (1994)] but less so in the United States where Smart and Zutter (2003) have noted some increase among newly public firms. Most firms with dual classes of shares are structured so that both classes have the same financial characteristics but different voting rights. In some cases, one class has a vote and the other does not. In other cases, both classes have voting rights, but one class has rights that are superior to those of the other class.

Research conducted on dual class firms in the U.S. by Lease, McConnell and Mikkelsen (1983) finds that the class with superior voting rights trades at over a 5% premium relative to the restricted vote class on average and attributes this price difference to the value of the vote to the marginal investor. Superior vote shares trade at much higher vote price premiums in foreign markets than in the U.S. Levy (1982) reports a 45.5% premium for Israel and Zingales (1994) reports an 82.5% premium for Italy. Zingales (1995) analyzes vote price premiums and provides evidence that the vote component is small but can increase and fluctuate dramatically when an event that changes the likelihood of a control contest occurs.

This study draws on the findings of Zingales (1995) and two later studies by Dittman (2001), and Fedenia and Hirschey (2009) who report inefficiencies in the pricing of dual class shares. We present a trading strategy for dual class shares that exploits the variation the prices of these shares to generate profitable opportunities for active traders. The strategy of “vote price arbitrage,” demonstrates how an investor can achieve profits that are *theoretically* riskless with no net cash outlays. In reality, it is a low risk and low investment trading strategy for dual class shares. Our strategy takes into account the practical implication of implementing an arbitrage scheme; that is, trading costs, the need for capital and the resulting risk exposure as outlined by Shleifer and Vishny

(1997). The strategy entails shorting the superior vote class and buying the restricted vote class when the vote price premium gets unusually high from a historical standpoint, shorting the restricted vote class and buying the superior vote class when the vote price premium becomes unusually low, and closing out open positions when the vote price premium reverts to its “normal” value. Our tests show that, even using a very conservative strategy with transaction cost estimates that are higher than those available to most professional traders, high returns at relatively low risk are achievable.

## SAMPLE SELECTION

The sample is compiled from data available on CRSP and Edgar, for a collection period that extends from July, 1962 when the first two of our sample firms started trading dual class shares through December, 2005, the last month that CRSP data was available at the time we developed the sample. In some firms, the different classes derive cash flows from different divisions of a conglomerate firm, but have voting rights for the overall organization. In other cases, the classes differ only in their voting rights. For some of these differential voting firms, one class has voting rights and the other class does not, while for others, both classes have voting rights but the rights of one class are superior to the rights of the other class. A third type of arrangement exists where one class has superior voting rights and the other class has preferential dividends from the firm’s cash flows. We select only the firms where the two classes of shares have the same financial characteristics. This results in a sample of 66 firms.

We separate the data into two periods, the estimation period and the test period. The estimation period is used to compute statistics on the historical fluctuations in the vote price premium. The period beginning when the first dual class share firm started trading in the U.S. (July, 1962) until December, 1991 was selected as the estimation period. The end point of the estimation period was chosen because that was the point where half of the sample firms were traded. We used other time periods for the estimation period and results were similar to what we get using this time period. We do not report the results here for conciseness. The period from January, 1992 until December, 2005 is used as the test period to implement our trading strategy using the parameters derived in the estimation period.

## METHODOLOGY

Price ratios that deviate significantly from the levels that reflect the long-term value of the vote generate opportunities for vote price arbitrage. The superior vote shares are over-valued relative to the restricted vote shares when the price ratio is significantly greater than one. This creates a potential profit opportunity from shorting the overvalued superior vote shares and simultaneously buying an equal number of the restricted vote shares.

Deviations for the price ratios may also be reflected by values that are less than one. In these instances, the superior vote shares are underpriced relative to the restricted vote shares. This situation lends itself to shorting the restricted vote shares and buying the same number of the superior vote shares. These extreme price deviations create opportunities for vote price arbitrage, with positions being closed when the price ratio reverts to a level that reflects the true long-term value of the vote.

We use the price ratios computed for the estimation period to develop upper and lower bounds beyond which it is profitable to short one class of shares and purchase the same number of shares of the other class. Open positions are closed out when the price ratio reverts back to its median value, which is used as the “normal” value in this study.

We compute price ratio bounds using the data for the estimation period and use three paired percentiles to implement the trading strategy in the test period. The trading strategy is applied using the 99<sup>th</sup>, 95<sup>th</sup> and 90<sup>th</sup> percentiles as the upper limits and the 1<sup>st</sup>, 5<sup>th</sup> and 10<sup>th</sup> percentiles as the lower limits. We open positions by shorting 1,000 shares of the superior vote class and buying 1,000 shares of the restricted vote class whenever the price ratio rises above the upper limit. Similarly, when the price ratio falls below the lower limit, we open a position by shorting 1,000 shares of the restricted vote shares and buying 1,000 shares of the superior vote shares. We close an open position when the price ratio returns to its median value.

We compute the total dollar accumulation in each year of the test period, 1992 through 2005. We also compute the average daily investment for each year. The dollar accumulation and average daily investment are used to compute an estimate for the annual return from the strategy for each year. We compute the maximum investment for each year as well to give an indication of the level of funds needed to carry out the strategy.

## **RESULTS**

The accumulated dollar values of the vote price arbitrage strategy are significantly positive in every year except 2004 and 2005 for the fifth percentile strategy and every year except 1993 and 2003-2005 for the first percentile strategy. In no year is the dollar value negative for any of the strategies, indicating a very low level of risk. Average annual returns from this strategy are significant in an economic sense with the lowest annual return at 4.9%, the highest at 110% and most returns falling between 10% and 40%. The annual returns also exceed the reference treasury yield by a significant margin, making this a viable proposition even for investors with cost of funds exceeding this rate. The maximum investment is never above a million dollars in any of the strategies for any of the years. These results indicate that high returns can be achieved with a vote price arbitrage strategy with little risk by investors, even if they have a limited access to capital.

The first risk that could imperil this strategy is the risk inherent in any technical analysis oriented strategy - future market conditions may change from what prevailed during the period the parameters were estimated and tested. To mitigate the potential staleness of the estimated parameter, investors can engage in dynamic updating of the parameters of the trading model by incorporating more current market data and updating their positions accordingly.

Additionally, investors may have to close positions at inopportune times before the prices of the two classes converge and take losses due to temporary adverse fluctuations in relative prices. This exposure is analogous to that reported in studies by DeLong, Shleifer, Summers and Waldman (1990); Shleifer and Summers (1990); and Shleifer and Vishny (1997). Microstructure issues could complicate this strategy since both classes of the dual class shares may not be widely held or heavily traded. The results from this study indicate that a necessary early close out is not likely to impose large losses, however, this study does not exhaust the universe of potential close-out times, leaving the possibility of losses resulting from such occurrences.

## CONCLUSION

We provide evidence that a vote price arbitrage strategy has the potential to provide active traders with substantial low-risk returns on a continuous basis. Notwithstanding, this study is not meant to promote the use of this actual strategy, but rather to suggest that active trading of dual class shares can be a profitable proposition. Our study is based on data for U.S. firms where vote price premiums tend to be small compared to firms in other countries. Therefore, application of this strategy in foreign markets is likely to yield different results.

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