Volume 11, Number 1 *2006*

Allied Academies
International Conference

New Orleans, Louisiana
April 12-15, 2006

Academy of Accounting and Financial Studies

PROCEEDINGS

Volume 11, Number 1 *2006*

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PRIVATIZATION OF PUBLIC HIGHER EDUCATION LENDS CREDIBILITY TO NEW REPORTING MODEL

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ABSTRACT

The Governmental Accounting Standards Board (GASB) makes the rules of accounting for public sector entities, including public colleges and universities. In 1999 the GASB set forth new reporting requirements for these organizations, with implementation beginning in 2001. Under the new reporting model, public colleges and universities may report tuition as operating revenue, much like the revenue from sales and services in a business. When the new approach was announced, many questioned the wisdom of the GASB. Most public colleges and universities still depended heavily on state appropriations, which would be classified as nonoperating revenue in the new system and often would be larger than tuition, creating an anomalous operating statement. But a recession soon after and the response of state governments would prove the genius of the GASB.

Tuition at public four-year institutions in the 2003-04 academic year increased at the highest rate in three decades, an average of 14 percent more than the prior year (Farrell, 2003). The increase for those institutions in 2004-05 was 10 percent (Hoover, 2004). Colleges and universities have implemented large tuition increases to compensate for falling sources of revenue which historically have subsidized the price of higher education, notably state appropriations. (Pulley, 2003). State appropriations to public colleges and universities fell 2.1 percent from the 2002-03 fiscal year to the 2003-04 fiscal year, the first decline in 11 years (Hebel, 2004). Appropriations to public institutions of higher education have decreased in some states due to sluggish revenues from regional economies dependent on manufacturing or technology. Moreover, public colleges and universities compete for public funds with other programs, such as K-12 education and Medicaid (Hebel, 2003). Lyall and Sell (2006) assert that public institutions of higher education are effectively being privatized.

This study assesses the extent to which changes in the revenue structure of public higher education have provided credibility for the new reporting model. The authors used the US News and World Report top 20 public institutions of higher education as a sample and examined trends in tuition, grants and contracts, auxiliary income, and state appropriations for the fiscal years ended in 2002, 2003, and 2004. It appears the GASB read correctly the realities of state finance and crafted a system that recognizes the operation of the contemporary university as a business. Implications of the findings will be discussed.

CONFRONTING THE BIG BOXES: COMPETITIVE STRATEGIES FOR SMALL BUSINESSES

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ABSTRACT

The past quarter-century has witnessed the rise of the big box retail format and the subsequent decline of Main Street small businesses. Today's customers are demanding high-quality products at low prices, greater convenience, and a wide assortment of goods. Wal-Mart's competitive advantage lies in its ability to meet these demands. Specifically, Wal-Mart excels in providing low prices, wide assortment of goods, and the convenience of one-stop-shopping. This paper reviews the research on the competitive responses of small retailers to mass merchandisers and discounters. The paper examines the theories surrounding competitive advantage and the strategies available for small businesses to compete against big box retailers. Although prior research has recommended that small businesses can benefit from differentiation strategies,, this paper argues that a hybrid strategy of low cost and differentiation with an emphasis on providing superior customer service may be the most effective competitive weapon against mass merchandisers such as Wal-Mart. A discussion of the success of dollar stores in competing with discounters supports the argument that a hybrid strategy is effective.

THE FASB'S NEW RULES FOR EXCHANGES OF NONMONETARY ASSETS: A POSSIBLE AVENUE FOR EARNINGS MANAGEMENT?

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ABSTRACT

The new FASB standard (SFAS No. 153) on accounting for exchanges of nonmonetary assets fundamentally changes the accounting procedures for these transactions. The previous standard, APBO No. 29, based the accounting for the exchange on whether the assets involved were similar or dissimilar in nature. For assets similar in nature, the general rule was that no gain could be recognized unless other assets were included in the exchange. The new standard introduces a subjective determination of the concept of commercial substance. Any exchange where commercial substance exists is accounted for at fair value with gain or loss on the exchange recognized in the current financial statements. This paper examines how this new standard is applied and the possibility of its provisions being used as an earnings management device by companies.

INTRODUCTION

The latest standard to come from the move to fair value accounting is SFAS No. 153, "Exchanges of Nonmonetary Assets - an amendment of APB Opinion No. 29." This standard was issued in 2005 and supercedes many of the provisions of Accounting Principles Board Opinion (APBO) No. 29. APBO No. 29 accounted for asset exchanges at a mixture of fair value and book value based on whether the assets involved were similar or dissimilar in nature. Generally, gains could not be recognized on exchanges of similar assets unless some other form of assets (commonly referred to as boot) was received in the exchange.

SFAS No. 153 eliminates the similar/dissimilar asset aspect of accounting for asset exchanges. Therefore, an exchange of similar productive assets may result in gains or losses on the financial statements of each of the companies involved. These financial statement effects open the door for possible earnings management behavior on the part of companies. Companies must make inherently subjective decisions on whether fair value should be used to measure the exchange and, if so, what is the fair value of the asset(s) involved. This subjectivity allows companies to engage in transactions to achieve a specific financial statement result. This paper examines how the provisions of SFAS No. 153 can be used as an earnings management device and some of the related problems associated with this use including possible auditor/client conflicts and tax issues.

BACKGROUND AND LITERATURE REVIEW

APBO No. 29 did not allow companies to recognize gains on exchanges of similar productive assets unless a company received other assets in addition to the similar assets. The reasoning behind this nonrecognition was the company's economic standing had not really changed. This rule applied to all exchanges of similar productive assets and this created a problem, at least according to the FASB. A different issue exists when one company exchanges a nonproductive asset for a similar asset that the company believes will be productive. Numerous factors could result

in an asset being nonproductive for one company while being productive for another. Geography can play a role. Some companies have better (or worse) name recognition in certain areas and, therefore, their stores perform better (or worse) depending upon the geographic location of the store. Geography is a key factor in the example used later.

SFAS No. 153 allows for the distinction between these two types of exchanges to be recognized by eliminating the similar/dissimilar provisions of APBO No. 29. The general rule under SFAS No. 153 is that all exchanges are accounted for at fair value (with full gain or loss recognition) unless one of three conditions is present. These conditions are:

1) the fair values of the assets involved are not determinable;
2) the exchange is part of a sales transaction; and
3) the exchange does not have commercial substance.

The first two of these conditions apply to limited types of transactions. Therefore, the crux of accounting for exchanges under SFAS No. 153 centers on the notion of commercial substance. In straightforward terms, commercial substance means the company has significantly improved (or conceivably worsened) its economic position as a result of the exchange. If commercial substance is established, the exchange is accounted for at fair value with the difference between the fair value of the asset(s) received (or given up whichever is more clearly evident) and the book value of the asset(s) given up recognized as gain or loss.

Accounting for an exchange of nonmonetary assets at fair value under SFAS No. 153 requires the accountant to make judgments about the transaction. First, the determination of commercial substance is subjective in nature and will often not be clear but will depend upon assumptions or expectations related to the future use of the assets. Second, once commercial substance is established, a fair value measurement must be derived for the asset received. As these assets are nonmonetary, this determination is sure to be subjective in nature. It is this inherent subjectivity in the entire process that creates the potential for this standard to be used as an earnings management tool.

Schroeder, Clark, and Cathey (2005) defined earnings management as "the attempt by corporate officers to influence short-term reported income." There are many reasons corporate officers may engage in earnings management. Healy and Wahlen (1999) list several possible reasons for this behavior. These include influencing stock prices, increasing management compensation, and avoiding violations of debt covenants. It is important to note that earnings management is a short-term focused behavior Another important note is that earnings management is not synonymous with fraudulent financial reporting. There is plenty of leeway within generally accepted accounting principles (GAAP) for an accountant to make choices that will materially alter reported income. Dechow and Skinner (2000) characterized various earnings management tactics used by companies into one of the following five groups: conservative accounting; neutral accounting; aggressive accounting; fraudulent accounting; and backdating sales invoices. Many of these tactics reported on by Dechow and Skinner were not violations of GAAP. These tactics simply involved management making judgment decisions that might have been either aggressive or conservative but were still acceptable within GAAP. This is the type of issue brought on by the subjective nature of the commercial substance test and use of fair value in accounting for exchanges under SFAS No. 153.

Earnings management resulting from fraudulent accounting is clearly unethical. However, earnings management behavior that is within GAAP creates a gray area from an ethical analysis standpoint. Arguments related to the ethics of this behavior are not the purpose of this paper but rather a growing concern for the profession.

EXAMPLE APPLYING SFAS NO. 153

To illustrate the potential problem, assume two fictitious national grocery store chains, Great Midwestern Grocery Company (GMGC) and Great Southeastern Grocery Company (GSGC). Each of these companies is evaluating their existing stores with plans to dispose of underperforming stores. Each company has a strong reputation and following in their principal geographical area of operations. GMGC is particularly strong in Iowa, Illinois, Minnesota, and Wisconsin. GSGC is particularly strong is Georgia, South Carolina, Alabama, and Florida. Among the stores GMGC has decided to dispose of is one in Savannah, Georgia. GSGC has a similar store in Des Moines, Iowa that it has slated for disposal. The companies have heard of each other's plans related to these stores and begin talks on possibly acquiring the other's store. In the end, the companies decide to simply exchange the two stores along with all the fixtures located in the stores.

At this point, each company has to ascertain whether the exchange has commercial substance. In this example, each company is giving up a nonperforming store for a store that is located in the company's strongest area of operations. It is reasonable to believe that each company thinks the new store will be superior in its performance to that of the store given up. The judgment call that each company's accountants make will affect the company's financial statements.

In this exchange, it appears reasonable to assume that each company's economic position has been improved. They have given up an underperforming store outside their central region of operations and received a store located within their core area of operations. Each new store could reasonably be expected to perform at least adequately since it is located in the company's strongest area of operations. However, there are other factors that need to be considered in the evaluation of commercial substance. For example, does GMGC already have stores in Des Moines and, if so, how many? While the new store there may be profitable, is this profitability at the expense of the other stores? If this is the case, then the overall cash flows or value of the company may not be significantly changed. The same issue exists for GSGC and its new Savannah store.

This example is a fairly simple transaction but it illustrates the fact that commercial substance is very often almost impossible to either prove or disprove. The fact that the exchange resulted in a change in expected cash flows or overall value of the company is not enough. The change must also be significant. So, while GMGC or GSGC fully expects the new store to perform better than the old store, is the increased performance a significant improvement? This question, like many associated with fair value accounting, generally has no definitive answer.

In order to take the example forward, let's assume commercial substance exists. Now the companies must determine the fair value of the new store. This fair value will be compared to the book value of the old store's assets to determine the recognized gain or loss. Grocery stores are not assets that are bought and sold on an active market like stock of publicly traded companies so quoted market prices do not exist for these grocery stores. Therefore, the measurement of the fair value of these stores will involve subjective judgments and estimates on the part of the management of both GMGC and GSGC. The companies could use a number of techniques to develop an estimate of fair value. They could have the assets appraised by an expert. They could discount the expected cash flows of the new store at an appropriate interest rate or they could look at the recent sales prices of other similar assets adjusted for any differences between the asset sold and the asset currently held. The emphasis here is that the fair value measurement like the commercial substance decision is very subjective.

GMGC has determined the fair value of the new Des Moines store to be $1,000,000 by discounting the future expected cash flows at the company's current cost of capital. GMGC now compares this value to the book value of the Savannah store given up. This book value is the one part of equation that is objective since it comes from GMGC's books. If we assume a book value of the Savannah store assets of $600,000, then GMGC would recognize a gain of $400,000 on the

exchange in the current period's income statement. If the book value of the Savannah store assets exceeded $1,000,000, then, obviously, GMGC would recognize a loss on the exchange.

If GMGC engaged in this exchange for the main purpose of recognizing a gain and improving the company's operating results, then they have engaged in an earnings management tactic. If the fair value of the new store (the Des Moines store) is estimated at $1,000,000 and the book value of the old store (the Savannah store) is $600,000, then GMGC does recognize a $400,000 gain. This will increase reported earnings for the current period. However, as was noted in the definition of earnings management, this is a short-term adjustment. Over the long run, the effects are going to be somewhat if not fully negated. To illustrate, let's assume the actual assets involved in this exchange are all depreciable with an average remaining life of twenty years. GMGC's new assets have a book value of $1,000,000 while the old assets' book value was $600,000. Assuming straight-line depreciation and no salvage value, GMGC's depreciation expense for the next twenty years has increased from $30,000 per year to $50,000 per year. So, over the twenty year asset life, the $400,000 gain is completely offset by increased depreciation charges.

The focus of this example and the paper has been on how accounting for exchanges of similarly productive assets has changed and how this change can be used as an earnings management technique. SFAS No. 153 can also cause changes in accounting for exchanges of dissimilar assets. These exchanges must also meet the commercial substance test in order to be accounted for at fair value. Under APBO No. 29 these exchanges were accounted for at fair value in almost all situations. If an exchange of dissimilar assets is deemed to not have commercial substance, the company can account for the exchange under SFAS No. 153 at book value and avoid recognition of gain or loss. This does create another avenue for earnings management where the company has a gain or loss on the exchange but does not want the gain or loss reflected in current earnings. The company can argue that the exchange does not have commercial substance.

CONCLUSION

SFAS No. 153 continues the FASB's move toward fair value accounting. It also increases the complexity of accounting for exchanges of similarly productive assets. APBO No. 29 generally resulted in the use of book value to account for these exchanges which was consistent with income tax accounting. How companies adopt and implement SFAS No. 153 over time will determine whether the potential earnings management uses of the standard will be a problem for the profession.

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DO HOMOGENEOUS GOODS PRODUCE THE SAME RETURNS? AN ANALYSIS OF S&P 500 INDEX MUTUAL FUNDS

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ABSTRACT

Standard and Poor's (S&P) 500 Index mutual funds have become enormously popular with investors. S&P 500 Index mutual funds are designed to replicate the S&P 500 Index, and therefore, should move very closely with the Index. Since S&P 500 Index funds are supposed to be homogeneous goods, theoretically, they should yield the same returns. Unlike other investments, investors who hold S&P 500 Index funds have a clear benchmark for performance: the returns on the S&P 500 Index. In this paper, I analyze the performance of S&P 500 Index funds.

INTELLECTUAL CAPITAL REPORTING: A USER PERSPECTIVE

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ABSTRACT

The field of intellectual capital (IC) has witnessed rapid growth in recent times, with a range of IC measurement and reporting models being developed by academics, consultants and practitioners. Despite widespread pronouncements that businesses report their IC, and increasingly regulatory requirements for organisations to do so, surveys of practice indicate limited IC reporting practice. In addition, there are limited empirically-validated insights in to the reasons for this apparent 'disconnect' between theory and practice, with important questions remaining unresolved: do users of corporate disclosure information find this adequate? Is there demand for IC reporting? If so, how is this best provided? Given these questions, this study examines the need of decision makers for IC information.

INTRODUCTION

The Western world has entered what is commonly referred to as the 'knowledge age', where information and ideas have overtaken agricultural produce and manufactured goods as the key commodities, and where innovation rather than industrial production is emphasised. Many organisations are seeking to transform themselves into knowledge-intensive or 'knowledge-based organisations', and they are urged to report their intellectual capital (IC) to wider stakeholders in an effort to ensure fair and stable valuations and accurate decisions about the allocation of economic resources. However, few companies appear to be actively engaged in IC reporting (ICR) (Guthrie and Petty, 2000; April et al., 2003), raising concerns "about the effectiveness of present levels of IC management within even the best practice organisations" (Roslender & Fincham, 2004, p.184). This study's objective is to uncover user perceptions in relation to company disclosure generally, the demand for ICR specifically and the extent to which these needs are currently being met, and the potential frameworks that might facilitate the process of ICR.

The structure of the paper is as follows. Firstly, the importance of IC and the implications for measurement, management and reporting is discussed, followed by a description of the research method utilised. The results are then presented while the final section concludes with a synthesis of the study's main findings and implications.

THE IMPORTANCE OF IC AND ICR PRACTICE

There is increasing evidence that the drivers of value creation in modern competitive environments lie in a firm's IC rather than its physical and financial capital. Studies of listed companies consistently find significant gaps between the accounting book value of organisations and their market value. Analyses made publicly available by the consulting firm Accenture indicates that, for knowledge intensive firms, tangible assets and resources typically comprise between fifteen

and twenty-five percent of company value in the last five years (Ballow et al., 2004). The same study also finds that, across the majority of listed companies in the United States, expectations of future growth value (as opposed to current earnings) comprise almost sixty percent of current company value. Adopting a formal framework to report on IC is a way for firms to explicitly identify, audit and manage intangible sources of value creation and communicate these both internally and externally.

However, content analysis studies of annual reports generally conclude that ICR in practice is deficient. In one of the earlier studies, Guthrie and Petty (2000) examined reporting practices amongst 20 leading Australian companies and found "a lot of empty rhetoric surrounding the notion of measuring, valuing and reporting intellectual capital" (Guthrie and Petty, 2000, p.246). Other studies utilising content analysis methods have found corresponding low levels of ICR (Brennan, 2001; April et al. 2003; Ordonez de Pablos, 2002). The parlous state of ICR reported by these researchers contrasts with the extensive illustrations of IC statements produced by Scandinavian organisations, and indicate in relation to IC "the lack of any systematic foundation to either the measurement or reporting practices" (Roslender and Fincham, 2004, p.203).

While these studies are able to comment on the lack of cohesive ICR, they provide only limited explanation for their observations. One plausible explanation involves the degree to which users of annual reports require IC information for their decision-making purposes. Indeed, the extant literature is equivocal in this regard. For example, Johanson (2003) suggested that analysts may not emphasise IC value even when it is voluntarily reported on because investors are not convinced that investment decisions should be based on intangible value. In contrast, Lev (1999) is of the view that financial analysts are likely to use IC information if provided, thereby making capital markets more efficient and reducing the cost of capital, thereby encouraging growth (p.15). To date, this equivocal stance has not been resolved. To remedy this gap, this paper presents the results of a survey of Hong Kong Finance Professionals aimed at eliciting their views on the reporting of IC, their knowledge of the reporting tools available, and also on their ability to privately access information that might help them determine the value of company IC to support their decision-making. Doing so is timely given the divergent views expressed in prior literature.

RESEARCH SAMPLE

Much of the literature suggests that financial analysts is the ideal group to study to examine whether or not voluntary disclosures made in company annual reports are likely to have an impact on the financial markets (Lev, 1999). However, it was not possible to obtain participation from a large enough number of financial analysts in Hong Kong for the results to possess much external validity. Therefore, a proxy sample group in the form of members of a professional financial body was targeted in gathering the survey data. The professional body was large enough in Hong Kong to enable a meaningful sample to be drawn from it. Further, members of the professional body are all known to possess core financial skills relating to the reading and interpretation of annual reports.

The survey instrument was administered face-to-face during professional development sessions, and also during office visitation opportunities, to a total of 238 respondents. All responses were useable. Data were analysed using simple descriptive statistics to obtain percentage values for responses to each of the closed questions. The open-ended responses were tabulated and analysed on a content basis to identify obvious respondent threads.

RESULTS

As shown in table 1, the majority of respondents are in favour of the accounting profession and / or the regulatory authorities imposing additional IC disclosure requirements on listed companies in Hong Kong. Most respondents (91%) believe that they would find IC reports decision-

useful if they were made available. This finding is shown in Item 2 in table 1. Only a small number (9%) thought they would not find IC information useful in supporting decisions. It may be that these respondents either could not conceive of what information would be provided by the IC reports or that they are so used to making decisions without having access to formal reports on IC information that they feel equipped to continue along the same path unaided. Overall, however, the majority of participants thought that voluntarily disclosing IC information should have a positive impact on market capitalisation (see Item 3 in Table 1)

Table 1. Demand for ICR

	% of Respondents (N=238)	
Item	Yes	No
1. Do you think that the accounting profession and/or the regulators in Hong Kong should require listed companies in Hong Kong to provide more information on their IC?	87	13
2. Certain tools are designed to provide information on a company's IC. Do you think you would find information provided by such tools useful in making investment decisions regarding a company?	91	9
3. Do you think that a company voluntarily disclosing additional information on its IC should be rewarded by the capital market in the form of a higher share price?	88	12

Table 2 shows that a majority of respondents (60%) feel they are in a poor or very poor position to get hold of information on the IC of listed Hong Kong companies through public sources. Fewer than half this number (28%) of respondents rated their ability to obtain such information as good or very good.

Table 2. Ability to acquire IC information through public information sources?

Please rate your ability to obtain information on the IC of listed Hong Kong companies through public information sources? (%), N=238	
Very poor	18
Poor	42
Neutral	12
Good	22
Very good	6
Total	100

The findings presented in Table 2 are in stark contrast to the results shown in table 3. As table 3 shows, if private information channels are used a majority of respondents (68%) feel they are able to obtain good or very good information on the IC of listed Hong Kong companies. Only

16% of respondents still feel they are in a poor or very poor position to obtain such information once private information sources are considered.

Table 3. Ability to acquire IC information through private information sources?

Please rate your ability to obtain information on the IC of listed Hong Kong companies through private information sources? (%), N=238	
Very poor	7
Poor	9
Neutral	16
Good	39
Very good	29
Total	100

Overall, however, perceptions are that ICR is increasing. Table 4 shows that 64% of respondents believe that companies listed in Hong Kong are reporting more IC information than they were 10 years ago.

Table 4. ICR Trends

Do you think Hong Kong listed companies are disclosing more information on their IC than they did 10 years ago? (%), N=238	
Yes	64
No	26
No idea	10
Total	100

CONCLUSIONS

The survey data offers an empirical account of how a group of financial professionals uses IC information and of the value that this group imputes to IC reporting.

There is considerable support for the mandated disclosure of IC with 87% of respondents agreeing that the accounting profession or the regulatory authorities in Hong Kong should make listed companies provide more information on their IC (table 1 item 1). It is worth noting, however, that regardless of what the policy-makers do, most respondents think Hong Kong companies are more transparent with respect to their IC than they were 10 years ago (table 4). Provided this trend continues and the market mechanism efficiently answers the call for increased IC reporting, the eventual intervention by a regulatory body may have little impact unless the requirements to disclose are onerous.

The demand for a market response certainly seems to exist with 88% of respondents believing that voluntary disclosure of IC by companies should be rewarded by the capital market in the form of a higher share price (table 1 item 3). An even greater number of respondents (91%)

think that having access to IC reports will assist them in making investment decisions (table 1 item 2).

A majority of respondents (68%) claim to be in a good or very good position to obtain information on the IC of listed Hong Kong companies through private information sources (table 3). The same respondents rate their ability to obtain adequate IC information on listed Hong Kong companies via public information channels more poorly with only 28% of respondents in a good or very good position to get the information they need (table 2).

This finding is significant because it suggests that one group of stakeholders (financial professionals in the case of this study) are able to gain an advantage over other stakeholder groups because of information asymmetries created by special relationships. This results in an uneven playing field in which some stakeholders are empowered, and others are not. Lev (1999) also expressed this view, but with no empirical support. An equitable balance could be restored if companies were to report publicly the information they currently communicate privately to certain elite stakeholder groups.

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U.S. GROWTH MUTUAL FUNDS PERFORMANCE: AN EVALUATION

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ABSTRACT

Prior research has used different techniques to study whether mutual funds are able to repeatedly outperform the market (defined as performance persistence). This study takes a simple but straightforward approach to such a comparison. Based on earlier research, the S&P 500 is the market proxy. Each year over the study period (1988 to 1996) a mutual fund's annual return is compared to the S&P 500 annual return. Based on whether it is above (outperformance) or below (underperformance) the market return, each fund is categorized as a "winner" or a "loser" for that year. Over the eight-year study period, it is seen that in six years the percentage of winners repeating exceeds the percentage of repeating losers. This finding supports the hot hands phenomenon documented by prior research (Hendricks, Patel & Zeckhauser 1993; Goetzmann & Ibbotson 1994). The two years when losers are greater in repeat percentage are preceded by years in which the market benchmark had very high returns. This result indicates that a year in which the market has a really high return, it is more likely that losers will repeat their losing performance the following year. Conversely, it also seems to suggest that given the same scenario, winners are less likely to demonstrate persistence over the next year.

THE EMERGENCE OF CSR AND SUSTAINABILITY INDICES

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ABSTRACT

The aim of sustainability performance indices is to provide a benchmark for financial products and to measure the financial performance of companies that lead their industry in terms of sustainability. This paper examines sustainability performance indices on global financial markets and determines the extent of Australian representation within these global indices.

The paper outlines the emergence of nine major market indices designed to track the performance of a variety of listed companies that are seen to have desirable sustainability practices. These indices include: ARESE Sustainable Performance Indices; Dow Jones Sustainability Index; FTSE4Good Indices; Calavert, Domini Social Index; E. Capital Partners Ethical Index; Ethibel Sustainability Index; Humanix Ethical Index; and Jantzi Social Index.

Following a brief description of each of these indices, this paper catalogues each index according to: (a) their launch date; (b) the markets they cover; and (c) their Australian weighting. This section concludes by identifying that Australian listed companies are not well represented among these major indices.

THE EMERGENCE OF SUSTAINABILITY INDICES

In response to an increasing investor appetite for socially responsible and ethical investments (McKinsey & Company, 2000; Greene, 2003), and in an attempt to develop a performance rating for sustainability, a number of stock market indices have emerged on the global financial markets.

These sustainability indices are designed to benchmark the performance of global Socially Responsible Investments (SRI) and to help investors identify listed companies that employ sustainable business practices that incorporate a desire or practice to be socially responsible. These are companies that are focused on not just delivering sound financial performance but are equally focused on delivering performance around a number of sustainability issues.

Table 1 below lists the nine major stock market indices designed to track the performance of listed companies that are seen to have desirable sustainability practices.

The nine major sustainability indices mentioned above are briefly described in the following section.

Table 1: Australian weightings of major sustainability indices

Index	Launched	Markets Covered	Australian Weighting
ARESE Sustainable Performance Indices	2001	Europe	-
Dow Jones Sustainability Index	1999	Global	2.63%
FTSE4Good Indices	2001	Global	1.46%
Calavert	2000	USA	-
Domini Social Index	1990	USA	-

E. Capital Partners Ethical Index	2000	Global	1.60%
Ethibel Sustainability Index	2002	Global	1.62%
Humanix Ethical Index	2001	Global	1.56%
Jantzi Social Index	2000	Canada	-

ARESE SUSTAINABLE PERFORMANCE INDICES (ASPI)

The ARESE Sustainable Performance Indices (ASPI) was launched in July 2001 and tracks the financial performance of leading sustainability companies across Europe. The ASPI indices inclusion criteria has four main themes: (1) triple bottom line perspective; (2) positive screening approach; (3) risk management; and (4) a stakeholder-centered approach. The ASPI does not include any Australian companies within its composite.

DOW JONES SUSTAINABILITY INDEX

Launched in September 1999, the Dow Jones Sustainability Indices (DJSI) was the first global indices tracking the financial performance of leading sustainability-driven companies worldwide. The DJSI is constructed with a selection criteria comprising the following six elements: (1) strategy; (2) financial; (3) customer and product; (4) governance and stakeholder; (5) human; and (6) process. Of the 316 companies included in the DJSI World Index, 16 are Australian companies, which represent a total of 2.63% of the total index market capitalisation.

FTSE4GOOD INDICES

The FTSE4Good Indices measure the performance of socially responsible companies around the world. Launched in July 2001, the selection criteria cover environmental sustainability, stakeholder relationships and universal human rights. Of the 627 companies that comprise the FTSE4Good Global Index, 17 companies are Australian and together they represent only 1.46% of the indices weighting.

CALAVERT SOCIAL INDEX

Launched in April 2000, the Calvert Social Index measures the performance of US-based socially responsible companies included in the 1,000 largest companies (listed stocks on the NYSE and Nasdaq-AMEX) in the US.Companies included in the Calvert index meet the selection criteria comprising environment, workplace issues, product safety and impact, community relations and investments, military weapons contracting, international operations and human rights, and indigenous peoples' rights. The Calavert does not include any Australian companies within its composite.

DOMINI SOCIAL INDEX

The Domini Social Index is a socially and environmentally screened index consisting of primarily large-cap US companies and is the oldest US socially responsible index and was launched in 1990. The Domini Social Index excludes companies with significant revenues from alcohol, tobacco, gambling, nuclear power and weapons contracting. It includes companies with positive

records in community involvement, the environment, employee relations and hiring practices. The Domini Social Index does not include any Australian companies within its composite.

E. CAPITAL PARTNERS ETHICAL INDEX

The E. Capital Partners Ethical Index was launched in January 2000 and is a global index combining traditional financial approaches with social and environmental criteria. The general guiding principle of the index penalises those companies that operate in sectors E.Capital assesses as being injurious to the rights and dignity of humanity. Primarily, armaments, nuclear, alcohol, tobacco and gambling, and pornography. The E.Capital includes only 1.60% of its weighting in Australian companies.

ETHIBEL SUSTAINABILITY INDEX

The Ethibel Sustainability Index commenced in June 2002 and is a global index that focuses on sustainable development and stakeholder involvement. Ethibel comprises companies that have been screened on the following core themes: internal social policy, environmental policy, external policy and economic-ethical policy. The Ethibel includes only 1.62% of its weighting in Australian companies.

HUMANIX ETHICAL INDEX

The Humanix Ethical Index was established in January 2001 and is a globally focused index. Humanix comprises companies that have passed the Humanix ethical screening process and are approved by the Humanix Ethical Council for inclusion in the index. Humanix includes only companies whose activities are not related to significant environmental risks, respect human rights, and where 97% or more of the total turnover is not derived from production and/or marketing of arms or the production of alcoholic beverages. The Humanix Ethical Index includes only 1.56% of its weighting in Australian companies.

JANTZI SOCIAL INDEX

The Jantzi Social Index (JSI) is a socially screened index containing Canadian companies that pass a set of broadly based social and environmental criteria. The index was launched in January 2000.The JSI does not include companies that have significant involvement in the production of nuclear power, the manufacture of tobacco products or weapons-related contracting. The JSI also avoids companies that have a consistently poor relationship with aboriginal communities; undertake questionable or fraudulent business practices; have a consistently poor employee relations record; have a consistently poor environmental performance record compared with industry counterparts; have experienced significant problems at their operations outside of Canada, or have operations in, or links with, Burma; or manufacture unsafe products. The JSI does not include any Australian companies within its composite.

SUMMARY OF SUSTAINABILITY INDICES

Sustainability indices first emerged on a global basis in 1999 with the Dow Jones Sustainability Index (DJSI). While the methodologies used to compile the indices differ between each index, the focus of the selection models are similar in that they screen companies based on factors such as their corporate governance, workplace practices, social impact and environmental performance.

These indices have an important role in helping to facilitate SRI and to benchmark SRI performance (Mckinsey & Company, 2000). The out-performance of these indices (and the individual companies that together constitute the indices) relative to global stock market indices has also been used as evidence to support a growing argument that practicing sustainability increases the value of the firm (Bauer *et al*, 2003; Brown & Caylor, 2004, Grompers *et al*., 2003; Hamid & Sandford, 2002; Harrison & Freeman, 1999; Pava & Krausz, 1996; Roman *et al*., 1999; Waddock & Groves, 1997).

Of the nine major sustainability indices, only the Dow Jones Sustainability Index (DJSI) uses a comprehensive approach to CSR and rates its constituent companies using the four key elements of CSR: (1) environmental impact; (2) corporate governance; (3) social impact; and (4) workplace practices.

CONCLUSION

Of the nine major sustainability indices, only five have a global reach and of these five, only a few Australian companies are represented. The absence of stronger Australian representation across the indices and the absence of a comparable index on the Australian bourse indicate the relative immaturity of sustainability disclosure by Australian companies. This finding is consistent with a recent Federal Government study which examines corporate sustainability from the perspective of investors and concluded, "companies are not articulating their sustainability behaviours as well as they might" (Mays, 2003, p.6).

This lax behavior regarding sustainability disclosure by the majority of Australian listed companies is likely to change with the pressure coming from: (a) an increase in Australian SRI investment; (b) new legislation targeting disclosure; and (c) the introduction of an Australian ratings agency focused on this rating typology.

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THE SCALING PROPERTY OF RANDOMNESS: THE IMPACT OF REPORTING FREQUENCY ON THE PERCEIVED PERFORMANCE OF INVESTMENT FUNDS

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ABSTRACT

This paper reports on the life-time annual returns and volatility of the largest Australian five-star rated investment funds. Using this actual performance data, we model the likelihood that an investor would have viewed the actual performance as either positive or negative based upon the frequency of the performance reporting. By examining the scaling properties of the random returns generated by the investment, we find that the probability of an investor viewing the performance of their investment as successful, rather than unsuccessful, can be influenced by the time intervals under which the performance is reported. The findings from this research have direct implications to Australian investment managers in setting policies regarding the provisions of real-time and periodic performance reporting to their investors.

INTRODUCTION

Investment funds in Australia currently have an estimated $923 billion in Funds Under Management (FUM) and is forecast to grow at 12% per annum to $3 trillion by 2014 (Rainmaker, 2004). With more than 2,700 investment funds competing for market share (Finch, 2005), many funds are attempting to differentiate their product by offering additional features. One common feature is the provision of real-time, end-of-day, or online performance reporting, as well as the customisation of reporting periodicity for each investor. From the investors perspective, features such as these offers improved transparency and convenience, as the investor can regularly view the investment performance by accessing this information online, Otherwise, they may change the time scale under which their printed valuation statements are prepared, thereby increasing the frequency of performance reporting..

Features such as these are seen as positive initiatives in that they may be helping to increase FUM by differentiating the product and attracting additional fund inflows. However, these initiatives may be delivering the opposite effect, and may play a role in the decline of FUM, as investor's motivations to withdraw from the fund increase because of a greater probability of perceiving the investment performance as unsatisfactory.

We argue that reducing the time scale under which an investor views their performance (eg. from monthly performance reporting to daily performance reporting), will increase the probability that an investor will perceive the performance of their investment as being unsuccessful. This is

because under a shorter time scale, the investor will be observing the volatility of their investment, rather than the return (Taleb, 2005, p. 67).

Through the use of Prospect Theory (Kahneman and Tversky, 1979), insights are gained into the behaviour of investors given volatility of expected returns, and the likelihood of an investor judging the investment as being either successful or unsuccessful. This paper will model the change in probability that an investor will likely view their investment performance as being unsuccessful, by narrowing the time scale used to report performance.

PROSPECT THEORY

Standard models in economics and finance that deal with investment decision making under uncertainty are based on the expected utility paradigm. In short, they assume that the preferences of investors are characterised by risk aversion across the entire distribution of outcomes – their utility functions are everywhere concave. However, based on the observation that individuals exhibit behaviour counter to expected utility theory, Friedman and Savage (1948) and Markowitz (1952) theorise that the utility functions of individuals must include both concave and convex segments. They base base their claim on the observation that individuals simultaneously purchase lottery tickets and insurance policies, implying both risk-seeking and risk-averse behaviour. In particular, Markowitz argues that investors make decisions based on perceived changes in their wealth, and argues that investors are risk-averse for losses and risk-seeking for gains, except in the case where gains or losses are extreme, where the situation is reversed and individuals become risk-seeking for losses and risk averse for gains. Later experiments conducted by Kahneman and Tversky (1979) and Tversky and Kahneman (1992) find that individuals maximise the expected value of a function with a convex segment for losses and a concave segment for gains, supporting the earlier theoretical propositions of Friedman and Savage (1948) and Markowitz (1952).

In response to their experimental findings, Kahneman and Tversky (1979) and Tversky and Kahneman (1992) formulate *Prospect Theory* and *Cumulative Prospect Theory*. The essence of these paradigms is that the preferences of individuals are defined, not over actual payoffs (as per expected utility theory), but rather over gains and losses relative to some reference point, so that losses are given a greater utility weight. The key elements of their paradigms are: (1) Investors base their decisions on change of wealth rather than total wealth, in contrast to expected utility theory; (2) Investors employ subjective decision weights rather than objective probabilities; (3) Investors suffer negative utility of around 2.25 times more than they derive positive utility from gains, where the gains are of equal size to the losses.

In summary, the decision to hold or sell an investment will be based on the investments volatility (change in wealth), rather then the absolute performance (total wealth). Further, an investor will be subjective when observing random volatility, and where this volatility generates a negative return, the investor will be 2.25 times more inclined to sell the investment, then they will be to continue to hold it.

METHODOLOGY

Four Australian investment funds were selected to model the success probabilities. Funds were chosen if they had more than more than $1 billion in FUM and also carried a five-star rating issued by Morningstar. Due to the large size and high rating of these funds, their investment performance is likely to be most representative of a typical Australian mutual fund investor. The data was sourced from Morningstar and Iress, and the qualifying funds are shown in Table 1 below:

Table 1.
Australian Five-star Investments Funds Larger than $1 billion

5-star investment fund	FUM ($m)	Investment focus	Year established
Manager: APN **Fund:** Property for Income Fund	1,608	Domestic real estate	1998
Manager: MLC **Fund**: Platinum Global	1,477	International large value	1994
Manager: P. M. Capital **Fund**: Absolute Performance Fund	1,293	International large blend	1998
Manager: UBS **Fund**: Property Securities Fund	1,194	Domestic real estate	1993

The monthly closing unit prices for each of the four investment funds were complied for each month since the fund was established. This allowed for the calculation of a lifetime annual mean return and standard deviation for each of the funds. The results of these calculations are shown in Table 2 below:

Table 2.
Lifetime Annual Mean Returns and Standard Deviation

5-star investment fund	Average annual return (μ)	Standard deviation (σ)
Manager: APN **Fund:** Property for Income Fund	7.0% p.a.	2.3%.
Manager: MLC **Fund**: Platinum Global	8.0% p.a.	5.0%
Manager: P. M. Capital **Fund**: Absolute Performance Fund	11.7% p.a.	5.8%
Manager: UBS **Fund**: Property Securities Fund	5.6% p.a.	2.9%

To model the probability that an investor would view their performance as being successful across a range of reporting time scales, the average investment returns and volatilities of each investment fund was adjusted for eight unique reporting time periods, assuming all returns followed a normal distribution. The ability to measure success probabilities can be expressed in Equation 1 below:

$$P(X>0) = P(Z> \left\{ \frac{0 - \left(\mu / n \right)}{\sigma / \sqrt{n}} \right\}) \quad (1)$$

Where

P(X>0) = the probability of the investors return being greater than zero
Z = number of standard deviations from X to the mean, μ
μ = mean of the distribution of historical investment returns
σ = standard deviation of the distribution
n = annual time intervals where investment performance is reported

FINDINGS

Using the performance data in Table 2 and applying Equation 1, the probability of an investor viewing the investment performance as being successful (i.e. the investment generates an investment return greater than 0% p.a.) is calculated across eight different time scales. These results are shown in Table 3 below:

Table 3.
Probability of success at different time scales

Time Scale	APN	MLC	PM	UBS
1 year	99.9%	95%	98%	97%
1 quarter	94%	79%	84%	83%
1 month	81%	68%	72%	71%
1 week	66%	59%	61%	61%
1 day	56%	53%	54%	54%
1 hour	51.3%	50.7%	50.9%	50.8%
1 minute	50.2%	50.1%	50.1%	50.1%
1 second	50.02%	50.01%	50.01%	50.01%

Where an investor views their investment performance on a real-time or end-of-day basis (i.e. time scales of between one second and one day) there is typically a 50.01% to 56% chance that they will see a positive return. Should they view the same investment performance over a longer time scale (say, once per week, or once per month) there is a 59% to 81% chance that they will see a positive increase in their wealth. Investors viewing quarterly or annual reporting will have the greatest chance (79% to 99.9%) of observing a positive result.

For example, an investor in the APN fund who views the unit price on a daily basis is likely to have 206 days per year were they view the performance as successful, and 159 days per year were they view the performance is unsuccessful. Each unsuccessful day causes 2.25 times more dissatisfaction than the satisfaction they feel when observing a positive result, so overall, the investor is likely to view their performance as unsuccessful.

However, should the APN investor view the same investment performance but on a monthly basis, there is likely to be 10 months were they see a positive return and two months where they see a negative return. As such the investor would derive 10 units of positive utility from the gains, and 4.5 units (2 x 2.25) of negative utility from the loses. Overall, the investor is likely to view the performance as successful, despite it being exactly the same investment return that they were observing previously – only on a narrower time scale.

It is the accumulation of dissatisfaction that influences the investors view on the success of the investment, and this dissatisfaction is a key motivator for investors selling an investment because, in their mind, it is perceived to be unsuccessful (Malkiel, 1995).

CONCLUSION

An investor will feel some pleasure when they experience positive performance, but not in an equivalent amount as the pain they experience when the performance is negative (Taleb, 2005). Narrowing the time scale under which investment performance is reported by an investment fund, greatly increases the probability that the investor will experience more pain and dissatisfaction. This dissatisfaction will eventually motivate the investor to sell the investment as they perceive it to be performing unsatisfactorily.

Investment funds attempting to differentiate themselves to secure improved fund flows should resist the temptation to provide investors with the ability to view performance reporting over narrow time periods (such as real-time, end-of-day, or weekly reporting). This strategy of differentiation by allegedly 'improving' the investor reporting is counter-productive; as it is likely this very feature will actually motivate investors to leave the fund.

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DO HYBRID INSTRUMENTS LOWER THE COST OF CAPITAL?

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ABSTRACT

The issue of hybrid instruments by firms is often justified on the grounds that these instruments allow issuers to achieve a lower cost of capital than would be the case under issues of straight debt and equity. In order to assess the validity of such claims it is necessary to examine the economic impact of hybrid instruments on the issuing company. If a firm can genuinely achieve a lower cost of capital than would otherwise be the case with the issue of either straight debt or equity, we argue that this is directly linked to regulatory (reporting) arbitrage, rather than the outcome of financial synergy that arises when debt, equity and option instruments are combined to form a hybrid security. We evaluate the argument that hybrid structures lower the cost of capital from an opportunity cost and risk perspective. We focus our analysis on two main structures: convertible debt and reset preference shares.

INTRODUCTION

It is not uncommon for chief financial officers and investment bankers to justify the issuance of hybrid securities by companies on the basis that these instruments allow issuers to achieve a lower cost of capital than would be the case under separate issues of straight equity and straight debt. As a snapshot, consider the following:

> *"…..hybrid's flexibility allows issuers to lower the cash cost of debt by introducing exposure to equity upside. A well-structured hybrid may also allow equity to be issued at a premium in the future, thereby lowering the cost of equity"*[1]
> *"In recent times, we have seen the introduction of considerable amounts of hybrid capital onto companies' balance sheets. These issues all have the same aim of reducing the company's overall cost of capital"*[2]

If we take the case of a simple hybrid structure – a convertible bond under which holders have the right to either convert their notes to ordinary shares at a prespecified date or redeem the notes at their face value – the basis of such claims is that if the share price of the issuing firm falls below the conversion price, the firm will have sold an overvalued option, while if the price of the firm rises above the conversion price, the firm will have issued stock at a premium to the price at the date of issue of the convertible bond. In either case, the firm can achieve a lower cost of capital than would have been the case had the firm issued either straight debt or equity – securing debt finance at a below-market rate should its share price remain stable or fall and securing equity finance at a price premium should its share price rise.

In order to assess the validity of such claims it is necessary to examine the economic impact of hybrid instruments on the issuing company. If a firm can genuinely achieve a lower cost of capital than would otherwise be the case with the issue of either straight debt or equity, we argue that this

is directly linked to regulatory arbitrage, rather than the outcome of some mystical alchemy that arises when debt, equity and option instruments are combined to form a hybrid security. In this regard, we evaluate the argument that hybrid structures lower the cost of capital from two perspectives: opportunity cost and risk. Again, we restrict our focus to a convertible bond, given this instrument forms the structural foundation of most hybrid instruments.

OPPORTUNITY COST OF HYBRIDS

The fundamental weakness in the argument that hybrids offer a win-win outcome for issuing firms is that it only compares the performance of the instrument with straight debt when share prices fall, and only with straight equity when prices rise. To assess the real economic impact of hybrid instruments on the issuing firm it is necessary to incorporate how the instrument compares with straight equity when share prices fall and straight debt when share prices rise. To do otherwise presents only a partial and positively-biased assessment of the impact of hybrids on the cost of capital for the issuing firm.

Consider a scenario under which a convertible bond is issued at a coupon rate of 10% and a conversion premium of 20%. The share price of the issuing firm at the time the bond is issued (P_0) is $10, and the firm can issue senior debt at the same term as the convertible bond at a coupon rate of 15%. Consider first the outcome if the share price of the firm at the conversion date (P_1) falls to $5. Those advocating the cost of capital advantages of hybrids point out that given the fall in share price the debt will be redeemed, and the firm has secured debt funding at 500 basis points below the rate that it would have paid had it issued straight debt. This, however, only compares the convertible bond to the issue of straight debt, and ignores the fact the firm could have issued straight equity as an alternative to the convertible bond. What of the opportunity cost of issuing the convertible bond relative to equity?

While it is true that relative to straight debt the firm has achieved a lower cost of capital by issuing the hybrid, compared to equity, the firm has forgone the opportunity to achieve a lower cost of equity by issuing equity at the higher P_0 price. In this sense, the opportunity gain in terms of a lower cost of debt needs to be weighed against the opportunity cost associated with the firm paying a higher cost of equity than might otherwise have been the case. Subject to relativities associated the size of the price fall, the premium associated with the conversion option and the impact on the cost of equity associated with changes in leverage, it may be the case that the cost of capital of the firm may be unchanged, or even higher, in this setting. It is thus a misconception that a firm is better off having issued convertible securities should its share price subsequently fall. To add further weight to the argument, the firm in question is likely to experience heightened financial pressures associated with servicing the convertible bonds to the extent that the fall in share price at P_1 accurately reflects significantly lower future cash flows than were envisaged at the time the bonds were issued. This in itself may impact negatively on the cost of capital of the firm.

Now consider the outcome if the share price of the firm at the conversion date (P_1) instead rises to $15. Those advocating the cost of capital advantages of hybrids would do so on the basis that the rise in share price will lead holders to convert their bonds to ordinary equity, resulting in the firm issuing stock at a price that is 20% above the price P_0 prevailing at the time the convertible bond were issued. This, however, only compares the convertible bond to the issue of straight equity, and ignores the fact the firm could have issued straight debt as an alternative to the convertible bond. What of the opportunity cost of issuing the convertible bond relative to straight debt?

While it is true that the firm has sold equity at on the conversion date at a price of $12 compared to the share price at issue of $10, it is unrealistic to directly compare a certain share price of $10 with an uncertain sale of shares at some future date at a price of $12. With respect to straight debt, the convertible bond issue is expensive because conversion results in equity dilution. If the share price at conversion exceeds the conversion price, the firm is obligated to issue equity at a

below market price, exacerbating the dilution impact. In our example, equity worth $15 per share is issued to convertible bond holders at $12 per share. Taken from another perspective, the firm in this case has effectively sold an underpriced option on equity to convertible bond holders – although the cost of the convertible bond is lower than the cost of straight debt, the rate on the convertible bond is not low enough to justify the benefits accruing to convertible bond holders on exercise of their options. Thus while there is an opportunity gain to equity related to the conversion premium, this is offset by opportunity costs related to the issue of equity at a below-market price. The firm would have been better off issuing straight debt because this would obviate the sale of an underpriced call option to convertible bond holders. Again, it is a misconception that a firm will be better off having issued convertible securities should its share price subsequently rise. The obligation of the firm sell equity to convertible bond holders at a below-market price works to offset the lower coupon rate on the convertible bond.

Our analysis suggests that the principle of 'no free lunch' extends to hybrid securities. In the case of the convertible bond, the hybrid confers greater benefits than straight debt and lower benefits than straight equity if the firm performs poorly, while the reverse holds if the firm prospers. In markets exhibit some degree of efficiency, there should be little or no direct benefit to the cost of capital arising from the issue of a hybrid instrument when straight debt and equity alternatives exist.

Can a better case for issuing hybrids be advanced if markets are not efficient, in the sense that the share price of a firm is underpriced or overpriced from the perspective of better-informed insiders? If insiders perceive the share price of firm to be significantly overvalued, such that bond redemption is highly probable, then the issue of convertible bonds might be justified on the basis of securing low cost debt. If this were the case, however, it may be more efficient for the firm to issue straight equity at the inflated price. Conversely, if insiders believe the share price of the firm to be significantly undervalued, such that bond conversion is highly probable, then the issue of convertible bonds might be justified on the basis of deferring the issue of stock until the price has risen. If this were the case, however, a similar outcome could be achieved by issuing straight debt in the current period and subsequently issuing equity at the expected higher price at the time of the maturity of the debt, using the proceeds of the equity issue to payout the debt. Again, hybrids appear to provide no significant cost of capital advantage over the use of straight debt and/or equity.

RESET PREFERENCE SHARES

Reset preference shares are a recent hybrid structure that are considered in some circles to impact positively on the cost of capital of issuing firms by reason of (1) the substantial power they place in the hand of issuers to influence outcomes in their favour, and (2) the ability to use franking credits to pay dividends. Reset preference shares allow the issuer to reset the terms of the instrument as permitted by prospectus on each reset date. The issuer can make changes to factors such as the distribution rate, the term to next reset, conversion ratios and conversion discounts. The holder may either accept or reject the new terms - if accepted, the instrument rolls over until the next reset date, while if rejected, typically, the *issuer* can choose to convert the securities into ordinary equity or redeem the securities for cash.

It is apparent that the reset preference share confers considerable power to the issuing firm – in essence the issuer has full control of any decision to convert or redeem the securities at reset dates, and by controlling the new terms of the security at reset date, the issuer is positioned to influence the decision of investors to accept or reject the new terms. The ability to influence the outcome at reset dates confers significant benefits to the issuing firm, which in turn, may positively impact on the cost of capital of the firm. However if all the benefits appear to accrue to the issuer, surely investors factor this into the price and expected yield on reset preference shares? If this is the case, the expected higher yield may work to offset some or all of the benefits associated with funding flexibility that accrue to the issuing firm under this instrument.

Two arguments might be put forward to suggest that this is not the case. First, in the Australian setting, a large proportion of the holders of reset preference shares have been retail investors. The complicated nature of these instruments, combined with the lower financial sophistication of this segment, may result in issuing firms achieving better prices on reset preference shares than would be the case if investors were better able to assess and price risk into the instruments. Second, until recently, the ability of issuing firms to recognise these instruments as equity on their balance sheets enabled firms to use franking credits to pay dividends to holders, increasing the after-tax yield for investors. It could be argued that the ability to gross-up yields to reflect the tax benefits of franking credits may compensate investors for the power vested in the hands of issuers at reset dates.

The argument that the payment of franking credits to investors acts to reduce the cost of capital of the firm is, however, not clearcut. The basis of the argument is that faced with two companies of identical systematic risk, one of which pays fully-franked dividends and one which does not, equity investors will accept a lower rate of return on the firm which pays the fully-franked dividends because the imputation credits can be used to offset their personal tax liability. While this is plausible, dividend imputation has had a negligible impact on the after-tax cost of capital of Australian firms. Specifically, the value of franking credits is dependent on the tax position of individual shareholders. Foreign investors (who comprise approximately one-third of investors in the Australian market) cannot make use of franking credits. Further, the unrestricted flow of international capital into and out of the Australian market, combined with its low proportion of global share market capitalisation, implies the cost of capital for Australian issuers is largely set internationally. Lonergan (2003) cites evidence that the majority of independent expert reports (94%) do not make any adjustment to the cost of capital for dividend imputation, and of those that do the majority attribute little or zero net effect on the value of the company being assessed.

Evidence that regulatory arbitrage, rather than sustainable cost of capital advantages, has been a major driver of the decision for Australian firms to issue reset preference shares is demonstrated in the increasing number of issuers who have redeemed their securities or allowed them to convert since the January 2005 introduction International Accounting Standards (IAS32) which reclassify most reset preference shares as debt rather than equity. It is somewhat ironic that reset preference shares which were issued for 'capital management purposes' are now being redeemed, converted or restructured for 'capital management purposes'.

CONCLUSION

It is concluded that convertible bonds represent neither low-cost debt nor the deferred sale of equity at an attractive price, and as such, should provide no tangible benefits in terms of the overall cost of capital of the issuing firm. The real cost of convertible bonds is significantly higher than the coupon rate on the bonds, and potentially higher than the cost of straight debt. Specifically, the cost of capital for convertible bonds should incorporate the implicit opportunity costs associated with the conversion rights attached to the instrument. This suggest that favourable accounting treatment – regulatory arbitrage – whereby these instruments are classified as equity on the balance sheets of issuing firms rather than debt, as being one of the major drivers for the issuance of these instruments. This classification increases the debt capacity of firms, such that reported leverage may understate the true leverage of these firms. In the case of reset preference shares, the increase in the number of issuers who have redeemed their securities or allowed them to convert since the January 2005 introduction International Accounting Standards (IAS32) - which reclassify most reset preference shares as debt rather than equity – supports the argument that regulatory arbitrage has been a major factor in the issue of these instruments.

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THE CHANGING RELATIONSHIPS BETWEEN GOLD, OIL, AND STOCK PRICES

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ABSTRACT

Investors have historically been advised to include gold in their portfolios to combat possible losses that occur during periods of inflation, economic chaos, social unrest, and war. Even though times have changed and there are many other asset selections today that might provide so-called portfolio risk insurance, many investors prefer to still use gold in either direct or indirect forms. Oil, in either direct or indirect forms, is another asset that is now mentioned by many analysts as an alternative candidate for portfolio inclusion as a form of risk insurance in the 2000's oil-troubled times. Consequently, both gold and oil intuitively would be expected to have an inverse relationship with stock market movements if either were to be a suitable risk deterrent. Using the same logic, gold and oil should have a close positive relationship. The data from this study demonstrates changing relationships between gold, oil, and stock price movements in today's economy.

INTRODUCTION

Economic theory has historically demonstrated an inverse relationship between gold prices and stock prices. This circumstance has been typically attributed with such events as inflation, economic chaos, social unrest, and even war. During most prior crises, gold prices soared as stock prices tumbled. Gold mining stocks often fared even better than direct gold investment as rising gold prices turned many unprofitable or marginally profitable gold mines into moneymakers. Financial advisors were often quick to advise investors to maintain a position in gold during trying times.

Over the 1990s, gold prices remained depressed as inflation and economic or other types of unrest were nonexistent or minimal. Although there was political uncertainty in various parts of the world, the degree of unrest evidently was not enough to affect the price of gold. Some researchers at this time, such as (Phillips & Ewing, 1999), suggested that gold had forever lost its luster. Other researchers, such as (Clements, 1998), hailed its benefits.

The 2000s, however, brought chaos, social unrest, and even war. Even though investors today have a better selection of assets to hold during times of uncertainty, some still prefer to use gold in either direct or indirect forms to provide portfolio risk insurance. Others appear to prefer alternate dollar-denominated financial assets, such as oil investments, especially with the situation in the mid-eastern oil-producing nations.

The objective of this paper is to investigate and analyze the use of gold and oil as portfolio risk averters over various time periods. Brief reviews of the history of gold and oil prices will be followed by an analysis of the relationships between gold, oil, and stock prices.

GOLD AND OIL PRICE HISTORY

Both oil and gold prices have a long and interesting past. Gold prices remained fairly stable as a store of value for many years that included such crises as world wars, conflicts, and presidential assassinations. The price of gold began to change in 1971, however, when the United States abandoned its policy of buying or selling gold to approved central banks at a fixed price of $35 an ounce. This decision demonetized gold, and what was once the bedrock of the global financial

system became just another asset in the world of commodities. Gold prices increased from 1971 to 1975 before declining. Prices reversed again in late 1976 and reached all-time highs in 1980 with average monthly prices in the high $600 range. Since 1980, there has been a decline in prices to the high $200 range in the late 1990s. The average price of gold went above $300 in 2002, above $400 in late 2003, and recently above $500 in late 2005.

Oil prices have fluctuated randomly for well over a century. Whenever oil prices became unstable, new energy strategies were often suggested or triggered. Presidents Nixon and Ford sought to reduce the United States' dependence on imports by stimulating domestic energy supplies. President Carter promoted various programs including the introduction of synthetic fuels. Oil and gas prices were also deregulated during his tenure. When the Shah of Iran fell, the upward price spike of oil stimulated a nationwide drive for greater energy efficiency. The next eight years bore dramatic results as domestic oil productivity soared and this demonstrated that the United States could exercise more market power than suppliers. Unfortunately, we have not continued our conservation push as the record-high price of oil today indicates.

METHODOLOGY

Average monthly prices for gold (London fix, US dollar per troy ounce) and oil (West Texas intermediate spot price USD/bbl.) were downloaded from the Financial Forecast Center (www.forecasts.org) for the 30-year period, 1976-2005. Average monthly averages for the Dow Jones Industrial Average Stock Index was also downloaded for the same time period.

In an effort to investigate the past and current relationships between gold, oil, and the DJIA, the 30 years of data were analyzed with simple correlation coefficients using ten shorter periods that ranged from 1 year to all 30 years. Correlation coefficients were computed between gold and the DJIA; oil and the DJIA; and gold and oil prices.

ANALYSIS

Table 1 shows the relationships between gold prices and the DJIA for the ten defined periods. Economic theory suggests an inverse relationship between gold prices and the DJIA.

Table 1
Gold Prices and the DJIA Correlation Coefficients

Years	Time Period	Correlation Coefficient
1	2005-2005	.420
2	2004-2005	.257
3	2003-2005	.813
4	2002-2005	.651
5	2001-2005	.315
10	1996-2005	-.149
15	1991-2005	-.288
20	1986-2005	-.469

25	1981-2005	-.445
30	1976-2005	-.070

The five time periods from 10 years to 30 years demonstrate the expected inverse relationship. The most current 5-year, 4-year, 3-year, 2-year, and 1-year observations all exhibit positive relationships. The 3-year period has a very high coefficient of .813.

Table 2 shows the relationships between oil prices and the DJIA for the ten periods. Economic theory suggests an inverse relationship between oil prices and the DJIA if oil might be considered in the same risk insurance vein as gold, as some advisors adhere.

Table 2
Oil Prices and the DJIA Correlation Coefficients

Years	Time Period	Correlation Coefficient
1	2005-2005	.061
2	2004-2005	.255
3	2003-2005	-.799
4	2002-2005	.563
5	2001-2005	.419
10	1996-2005	.427
15	1991-2005	.529
20	1986-2005	.565
25	1981-2005	.266
30	1976-2005	.298

All time periods, except the 3-year 2003-2005 period, exhibit positive relationships. These positive relationships suggest that perhaps oil has never been a possible portfolio risk friend. The one inverse relationship period did show a significant relationship.

Table 3 shows the relationships between gold prices and oil prices for the ten periods as previously described. Economic theory would suggest a strong positive relationship between gold prices and oil prices if oil might work as a substitute for gold as portfolio insurance.

Table 3
Gold Prices and Oil Prices Correlation Coefficients

Years	Time Period	Correlation Coefficient
1	2005-2005	.529
2	2004-2005	.729
3	2003-2005	.839
4	2002-2005	.887

5	2001-2005	.866
10	1996-2005	.706
15	1991-2005	.478
20	1986-2005	.239
25	1981-2005	.302
30	1976-2005	.506

All ten observation periods of Table 3 exhibit positive relationships. Most of the current periods show very high correlation. The longer time periods show lesser relationships, although all are positive.

CONCLUSION

The study was very interesting. Today's economy, at least the last five years, does not support the historic adage that there is an inverse relationship between gold and stock prices. In fact, these last five years of positive relationships suggest that perhaps gold has indeed lost its luster of providing portfolio risk insurance benefits. Oil investments don't appear to provide inverse portfolio advantages either, as various analysts suggest. On the other hand, there is a strong current relationship between gold and oil prices. Perhaps times really have changed or else both gold and oil are facing supply/demand factors just like any other asset.

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NEW DEVELOPMENTS IN INNOCENT SPOUSE RULES

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ABSTRACT

Both spouses are usually liable for taxes owed to the IRS on a joint tax return. However, the "innocent spouse doctrine" offers relief to a spouse when it would be inequitable to hold that spouse liable for taxes created by the other spouse. The innocent spouse laws have go through numerous changes over the years and Congress made a major revision to the law in 1998. The revised law made it easier to obtain innocent spouse relief when inequitable situations arose. This article explains the innocent spouse rules and discusses the implications of Code Section 6015. The article then summarizes new developments in the innocent spouse rules with particular emphasis on a recent Tax Court decision that dealt with the innocent spouses rules in community property states.

BOARD SIZE AND FIRM PERFORMANCE: THE CASE OF SMALL FIRMS

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ABSTRACT

Existing literature discusses the inefficiencies in the monitoring role of the board of directors when the membership is too large. Several studies have found an inverse relationship between board size and firm performance in large firms. Given the nature of small firms, this relationship may not be present. This relationship had not been tested in small U. S. firms. We also find an inverse relationship between board size and firm performance in small firms.

INTRODUCTION

In the aftermath of Enron Corporation's collapse, the board of directors and the role played by its members have come under great scrutiny, bringing on the Sarbanes-Oxley Act of 2002, and also proposals by the New York Stock Exchange (NYSE). Reforms suggested by the Sarbanes-Oxley Act are still in the process of being formally translated into rules by the Securities and Exchange Commission (SEC).

With the increase in the perceived risk and responsibilities of serving on a corporate board, there appears to be a decrease in the sizes of boards. Several studies have examined the relationship between the size of the board of directors, and firm value and performance [Bhagat and Black (1996; Yermack (1996); Eisenberg et al. (1998)]. Is board size an important determinant of the board's quality of monitoring and decision-making? If so, what is the effect of these inefficiencies on the profitability and value of the firm? Yermack (1996) and Eisenberg et al.(1998) both conclude that there exists an inverse relationship between board size and firm value. In a discussion on corporate governance, Lipton and Lorsch (1992) state that larger groups or boards, are less efficient, in that individuals are apt to be less open in corporate policy discussions. People tend to be more reserved and polite in larger groups. This type of behavior by board members reduces the effectiveness of their monitoring role of management. Jensen (1993) agrees with this point, "when boards get beyond seven or eight people they are less likely to function effectively and are easier for the CEO to control." As pointed out by Monks and Minow (1995), in many corporate restructurings (after successful tender offers), the boards of directors were reduced in number.

Yermack (1996), using a sample of large firms taken from *Forbes* magazine's rankings of the 500 largest U.S. public corporations between 1984 and 1991, finds an inverse relation between firm value and the size of the board of directors. Most all of the boards in his sample had between six and 24 members on the board. The mean number of directors on any one board was 12 in his sample. The largest loss in firm value appeared to be when there were changes in the board between six and 12 members. This change in value was approximately equal to that when boards increased from 12 to 24 members. Yermack's findings hold when controls for variables such as company size and board stock ownership were made. The examination of valuation effects of significant changes in board size would provide more evidence on the relationship between board size and firm valuation and performance. Yermack examines abnormal stock returns of six firms that significantly decreased board size and four firms that significantly increased board size, and

concludes that investors react positively to decreases in board size, and negatively to increases in board size.

In a similar examination, except for size and home country of the sample firms, Eisenberg et. al. studies the board-size effect in a sample of 879 Finnish firms. Their sample consisted of mean and median board sizes of three and four members, respectively. These sample firms had mean and median assets of about $800,000 and $7 million, respectively. Controlling for variables such as industry, age of firm, and board stock ownership, they find that board size is inversely related to the firm's performance, as measured by an industry-adjusted return on assets. Eisenberg et. al. state that small firms may "lack the same degree of separation of ownership and management that play a central role" in the explanations of the effect. However, their findings are consistent with Yermack (1996), of an inverse correlation between board size and firm performance.

This study is unique from existing studies in several ways: 1) the effect of board size on firm profitability is tested, using small U.S. firms, unlike Eisenberg et al. (1998) that uses small Finnish firms, and 2) the sample includes the financial data from 10-K reports filed either in March 2000, or June 2000. Gilson and Roe (1993) and Roe (1994) point out that the extent of the board's role in the monitoring of management varies by country. The hypothesis that large boards are ineffective in their monitoring role due to communication and control difficulties, has not been tested fully on small U.S. firms. The nature of the agency relationships present in small firms can be very different in that managers may have strong, vested interests, both financial and emotional, in the performance of the firm. This examination of small firms provides further evidence on this agency-related issue, by comparing the possible relation between board size and firm value and profitability in more recent samples of small U.S. firms vs. large U.S. firms.

DATA AND METHODOLOGY

The sample in our study includes a random sample of firms on the *Compustat* data tapes that match our criterion as a "small firm". Firm size is identified by total assets in the year board size is identified. Yermack (1996), with a sample of large firms, finds similar results using either total assets or net sales as a measure of firm size. Firms on the tape were identified as "small" firms if total assets were less than $18 million. This criterion for the small vs. large firm identification stems from the New York Stock Exchange listing requirement. The *Compustat* financial tape, along with 10-K reports, found on the Securities and Exchange Commission's (SEC) internet Edgarbase, is used to gather profitability measures, total assets, industry averages and board size data. As noted in both Eisenberg et. al (1998) and Yermack (1996), the results of their tests using firm profitability were the same as those using market-based firm valuation data as the dependent variable.

A total of 2,078 firms met the criterion as a "small firm" on the *Compustat* tape. Our final sample resulted in 1,013 firms that had met the "small firm" criterion and had recent board data available on their 10-K report on the SEC Edgarbase. The average total assets of the sample firms was $7.6 million. Board sizes in the sample firms ranged from 18 members down to one member, with the average being five members. We see that nearly 24% of the sample firms are in the Business Equipment industry, following by 88 firms, or 9% from the Drug industry. Over 40% of the sample firms fell into miscellaneous industries.

A regression analysis is used to test the relation between board size and firm profitability among these "small firms". Return on Assets, adjusted by industry, and as used in Eisenberg et. al, is used as the profitability measure. The return on assets measure (ROA) is adjusted by industry, by taking the difference between the firm ROA and the industry ROA, or ΔROA. Our model will control for firm size (the log of total assets), and industry (two-digit SIC industry dummy variables).

For the sample group, a significant inverse relation between board size and firm value could imply that inefficiencies in communication and monitoring of a large board of directors negatively effects firm performance. We regress the variable ΔROA against the board-size log, control variable

for industry and firm size. We expect to find negative and significant relations between the financial performance measures and the board-size log.

RESULTS

Our findings appear to support the negative relationship between board size and firm profitability found by Yermack who used a sample of large U.S. firms. We find that the ordinary least squares regression of ΔROA on the log of board size and the log of total assets is *significant*. Further, the coefficient for board size is *negative*, and the coefficient for total assets is positive. This implies that a large number of directors on a board may harm profitability and firm value. Also, it appears that the larger the firm, the more profitable the firm.

We separated the sample by industry and ran the OLS regression. The results were not significantly different from the entire sample. There are a total of nine (9) firms with ROA's below -1,000%, or above +1,000%. The minimum ROA was -2,177.9% and the maximum +1,573.14%. We ran the regression, omitting these possible outliers, and had similar results. In addition, it appears that the larger the firm, the more profitable the firm. The results of a regression using an ROA variable (unadjusted for industry), gave similar, but more significantly negative results, in relation to board size. It appears that the board-size effect may be due to the inefficiencies in communication and coordination of large groups, which then leads to possible greater control by the CEO.

This study adds further evidence on this agency-related issue, examining small U.S. firms, which has not been done. This issue of an appropriate size for a board of directors is a very timely and important one, since the effectiveness of boards is being questioned and examined in the corporate world. With the added requirements of the Sarbanes-Oxley Act, including board independence, it would be beneficial for shareholders to learn of the potential positive effects of an optimal board size.

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TESTS OF TECHNICAL TRADING RULES IN THE ASIAN-PACIFIC EQUITY MARKETS: A BOOTSTRAP APPROACH

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ABSTRACT

This study examines the effectiveness of nine technical trading rules in eight Asian-Pacific equity markets for periods ranging from January 1987 to November 2005. The annualized returns from each trading rule are compared to a naive buy-and-hold strategy to determine profitability. The TSEC, Straits Times, Hang Seng, Jakarta, KOSPI and the BSE emerge as equity markets where technical trading rules may be profitable. There is no evidence of profitability for the other two markets, the Nikkei and the All Ordinaries. Disregarding statistical significance, the results reveal that 56 out of the 72 (77.8 per cent) trading rule variants tested on all data sets were profitable after accounting for transaction costs. The results are important because they provide investors with information about the Asian-Pacific equity markets that can be used to determine optimal asset allocations and to further diversify portfolios.

Keywords: *Technical Analysis; Market Efficiency; Asian Capital Markets; Stock Returns.*

JEL Classification: *C15; G11; G14*

THE MANY DIMENSIONS OF SOCIAL SECURITY REFORM

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ABSTRACT

There is absolutely no way that our Social Security system can continue on its current course. Everybody knows it. The problem is that every solution has its significant cost. Restructuring SSN is going to cost trillions of dollars. Critics of each plan can decry the tremendous cost that an opponent's plan entails and thereby greatly undermine support of that plan by all but the most informed advocates. Another impediment to reaching an accommodation is that to admit that your plan entails significant cost invites the charge, "Aha, even HE knows that his plan is unworkable." Therefore, proponents of each plan focus on the great perceived benefits of that plan, but typically incompletely address the plan's drawbacks.

Clearly, what is needed is a comprehensive and cool-headed analysis of all the plans advanced. While that would be an investigation of incredible scope, it is possible to begin such an effort by outlining the general cost/benefit of each type of plan. For instance, one plan suggests that we raise the SSN tax on all workers. That would certainly solve the problem, if we raise the contributions high enough. However, we must appreciate that in about 2027, there will be only two workers per retired person, and the average SSN check is just over $1,000 per month. In a static world that would mean that every worker would, on average, pay $500 each month into SSN. Alternatively, SSN tax could be raised only on the workers making more than the current maximum SSN taxable wage of $94,200 (for 2006). Representative Spratt of S.C. told an audience in 2005 that those higher-income people already receive less per dollar contributed than any other group. Raising their taxes might lead to a revolt by those people that would destroy SSN as we know it.

Various personal investment plans, such as the plan proposed by President Bush, promise great benefits to participants. However, the dollars that personal investors withhold from the current SSN system are needed to pay current retirees. Those dollars would have to be replaced by money from the general fund through higher taxes or greater debt. So, the beneficiaries of Bush's "ownership society" would end up not only supporting their own retirement, but in addition would make up the shortages that plan causes current retirees.

Of course, in about 2050 when the current workers employing personal accounts retire, a new generation of workers will be able to invest in their retirement without the burden of supporting then current retirees. This situation introduces an element of "fairness" between generations. Each plan needs to be considered with a framework of cost, benefit, fairness, time and social goals before the nation can alter the current system.

BEWARE OF PITFALLS WHEN SERVED WITH IRS LEVIES

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ABSTACT

Internal Revenue Code Section 6332(e) provides protection to those who honor IRS levies, even where it turns out that the levy may have been improper or wrongful. Under the protection of this Code section, those who turn over property or property rights to the government pursuant to an IRS levy are discharged from any obligation or liability to the delinquent taxpayer or to any other person related to such rights or property.

Section 6332(e) is one of the more vital cogs in the IRS' enforcement machine. It greatly increases the effectiveness of tax levies by affording strong protection from liability to those persons or entities who honor a tax levy served on them. It does not matter if the levy was untimely, wrongful, or improperly made. Sec. 6332(e) keeps the levy recipient safely out of any fight over the propriety or the effectiveness of the levy, leaving that argument to be made solely between the taxpayer and the government.

But how far does this protection go? Does it protect levy recipients in any and all circumstances? What if, for instance, the levy is erroneously or wrongfully served on a person who does not actually possess property of the taxpayer, but who instead possesses property of a related taxpayer.?

This paper gives a short summary of the purpose, use and scope of IRS levies. It then explores I.R.C. Section 6332(e) and the level of protection it affords (and fails to afford) to those who are served with and honor a tax levy. It gives particular attention to fact situations where levy recipients have found that 6332(e) failed to protect them in honoring a levy.

THE USEFULNESS OF RATIO ANALYSIS IN PREDICTING STOCK MARKET RETURNS

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BACKGROUND

There is much debate over the ability of firms to earn an above-normal return using either rules of investing or ratio analysis. If the capital markets are weak-form efficient then the market will already have reacted to the past information embodied in financial ratios. Theoretically, if the average investor responds irrationally to past information, arbitrageurs would short those stocks that are over-priced and buy those that are undervalued pushing over-priced shares down and under-priced shares up. Therefore, if capital markets are always weak-form efficient, one should not be able to predict return or change in stock price using financial ratios, because the price of a stock should already reflect the information in those ratio's. If the stock returns can be predicted using financial ratios, investors could use that information to make greater profit than the market as a whole.

RESEARCH PROBLEM

Though some researchers believe that the markets are efficient enough to render ratio analysis useless, there is some evidence that markets may not always be efficient and that ratio's can help predict returns. The set of ratio's that may be useful for this purpose include B/M (book to market), P/E (price to earnings), and DY(dividend yield). It would be valuable to any investor to determine to what extent the market is inefficient and, therefore, whether one can out-think the market and earn above normal returns. Presumably, if the market is efficient, then, holding growth constant, neither B/M nor market capitalization should effect the average firm's return over any period. Dividend Yield should have already been incorporated in stock prices after holding growth constant, therefore, over the time-period of the study, it should not have a statistically significant effect on return assuming the truth of the EMH.

LITERATURE REVIEW

Previous research shows that there are reputable challenges to weak-form market efficiency. If a stock has high book value to market value (B/M), earnings to price (E/P) or Cash Flow to Price (C/P) it is considered a "value" stock. Value stocks have a higher return than growth stocks over the period between 1975 and 1995 all else being equal (Fama and French, 1998). From 1963 to 1975, there was a negative and statistically significant relationship between firm size and returns as well (Reinganum, 1982) after accounting for beta and differences in growth. Other research suggests that "B/M and E/P forecast both equal- and value- weighted NYSE returns over the period 1963-1994" after accounting for serial correlation in returns (Lewellen, 2004).

It is also possible that, assuming one can use ratio's to predict returns over certain period, this result does not actually challenge the EMH. There are two possibilities which would allow certain ratio's to predict dollar returns, one in which "ratios track time-variation in discount rates"(Lewellen, 2004) and another in which unexpected different returns are due "to differences in risk, not to a true

inefficiency."(Ross, 2005) If ratios reflect changes in the risk premium or differences in risk then changes in those ratios should rationally predict changes in stock prices.

METHODOLOGY

This study uses information on 10059 stocks gathered from http://multexinvestor.com and OLS regression (using data analysis software named Stata). The percentage change in a stocks price over the past fifty-two weeks was regressed on DY, BM, Beta, Market Capitalization and change in EPS Year over Year. This base regression equation was chosen with the expectation that if capital markets were efficient then DY (not change in DY) should not have a statistically significant effect on the change in stock prices over these fifty-two weeks. After accounting for growth in EPS, DY should have already been accounted for in past prices and should not then be able to help predict stock price. Likewise, market capitalization should have no clear effect on the change in stock prices after accounting for growth in EPS because changes in EPS should account for any possible change in the cash flow that can be distributed to stockholders. Similarly, market to book value should also not predict returns for the same reasons.

Only companies whose percentage of insider ownership was less than 10% of the company's market capitalization were included in the study due to the limited capacity of Small Stata. Stata was chosen over Microsoft excel due to its ability to check for the Variance Inflation Factor and quickly create square and interaction terms (and repeat regressions).

QUANTITATIVE TESTS AND RESULTS

The data does provide some evidence that contradicts EMH. Dividend Yield was useful in predicting the change in stock price over the fifty-two week period at the 99% confidence level even after holding growth in EPS constant. For every 1% difference in dividend yield between companies one could expect to find a 1.338% drop in the percentage change between stock prices between the beginning and the end of the 52-week period. This is consistent with the findings of Fama and French(1998) who also found that DY could help predict returns from 1976 to 1995.

Dividend Yield may not be the variable driving the difference in price. Interestingly, the absolute value of its t-statistic falls by half when one includes inside ownership as a variable. This suggests that the effect of dividend yield (in other words the failure of the market to account for all past information) may be partially dependent on the amount of insider ownership, though this possibility must be accepted with a grain of salt because the interaction term was not significant at the 95% level. If this were true it would imply that some other variable could be driving both.

Insider ownership was significant, after including an interaction term between beta and dividend yield (which was significant at the 99% confidence level.) The interaction between beta and dividend yield is difficult to interpret but it might imply two things: 1. that value and growth stocks have different risks (causing the effect of dividend yield to be dependent upon beta) or 2. that the effect of DY over this range of stocks was dependent upon beta (or something correlated with beta) for some other reason. The interaction between beta and dividend yield is consistent with the idea that growth and value stocks may have different risks. In other words, people, who are risk averse wealth maximizers, will feel beta's importance to be related to return. If the difference in returns that can exist between value and growth stocks is caused by a change in risk then the size of beta would change how investors perceive that extra risk factor.

Beta was originally statistically significant at the 1% significance level, however, when the effect on price changes over the range of stocks caused by DY is modeled using a non- linear relationship and an interaction term between DY and beta is included, beta becomes insignificant. This suggests that the originally statistically significant effects of beta are not due to its interaction with the change in stock prices but by how it effects the interaction of DY with stock prices. This

is also consistent with the idea that growth and value stocks have different risks because the effect of beta is different and depends upon the size of DY.

One might counter that this effect could have been caused by variation in DY that was insufficient to cause the change from one stock to another in the interaction term between beta and DY to be statistically different than beta itself. This was not the case as the coefficients of variation for DY and beta are 84 and 185 respectively. Considering that the variation in DY is greater than the variation in beta, the resulting statistical insignificance of beta mentioned above could not have been caused by a lack of variation in DY. If this were so, then the variation of DY would have to be smaller than the variation in beta, unless beta and DY are positively correlated to the extent that one should drop out. However, if this were so, the inclusion of DY in an equation without modeling for a non-linear relationship and an interaction between DY and beta should have already shown beta to be insignificant. That was not the case.

Also very interesting, the t-statistic for Dividend Yield rose when a squared term (the squared term was also statistically significant at the 1% confidence level) was included and the coefficient DY jumped significantly from –1.33 to –3. Which is a result that also supports the idea that there is a non-linear relationship between DY and returns over the period of the study. Also, the adjusted R^2 jumped from .073 to .1136 despite the increased number of variables. The change in EPS and the beta was also significant at the 95% confidence level, however, EPS remained significant even after the addition of the interaction term between dividend yield and beta and the inclusion of the squared term for beta.

Dividend Yield had a relationship with returns characterized by a negative coefficient and a decreasing slope. It is logical that during a period of economic growth, investors might generally prefer stocks with a lower payout ratio. This does not explain why the effect of a loss in DY decreases as DY becomes smaller. It is possible that this could be caused by a peculiarity in the psychology of investors. During a period in which investors prefer lower payout ratios, like a period of expected growth, investors may become more optimistic regarding the growth of companies that show more confidence in their ability to grow. This perceived confidence could be seen to be embodied on lower payout ratio's and therefore, in lower DY.

The regression with no interaction terms or modeling for non-linear relationships. Note that the F-statistic shows no likelihood of all coefficients being 0 at the 99% confidence level:

	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
dyield	-1.338333	.16328	-8.20	0.000	-1.658725	-1.017941
mb	.0038201	.0039604	0.96	0.335 |	-.0039512	.0115914
beta	4.329654	1.511084	2.87	0.004 |	1.36457	7.294739
marketcap	6.41e-06	.00003	0.21	0.831	-.0000525	.0000653
pe	.0248424	.0214594	1.16	0.247	-.0172657	.0669505
eps	.0018834	.000649	2.90	0.004	.0006099	.0031568
insideown	-.4273247	.3025704	-1.41	0.158	-1.021035	.1663861
_cons	11.8426	1.945221	6.09	0.000	8.025641	15.65956

Number of obs = 1059
F(7, 1051) = 12.91_
Prob > F = 0.0000
R-squared = 0.0792
Adj R-squared = 0.0730

After inclusion of the squared term of DY and the interaction term between DY and beta. Please note that the likelihood of all coefficients being zero falls and R^2 rises:

fiftytwo |	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
dyield	-4.295421	.389413	-11.03	0.000	-5.059539	-3.531304
dyields	.077892	.01129	6.90	0.000	.0557384	.1000457
mb	.0050101	.0038273	1.31	0.191	-.0025	.0125203
beta	2.364032	1.629741	1.45	0.147	-.8338916	5.561955
marketcap	7.34e-06	.000029	0.25	0.800	-.0000496	.0000642
pe	.0258046	.0207268	1.24	0.213	-.0148662	.0664754
eps	.0018088	.000627	2.88	0.004	.0005784	.0030392
insideown	-.6753589	.2945429	-2.29	0.022	-1.253319	-.097398
idyieldand~b	-1.544514	.294803	-5.24	0.000	-2.122984	-.9660429
_cons	23.04078	2.353905	9.79	0.000	18.42188	27.65967

Number of obs = 1059
F(9, 1049) = 19.41
Prob > F = 0.0000
R-squared = 0.1427
Adj R-squared = 0.1354

CONCLUSIONS

Different results of this analysis contradict or are consistent with the idea that an above normal return could be made using ratio-analysis and, therefore, contradict or support the existence of weak-form efficiency. Because DY predicted growth in stock price, ratio-analysis might be useful in predicting returns over certain periods. If value and growth stocks do indeed have different risks, some of which are independent of beta, ratio analysis is useful for tracking this added risk (rather than being useful in finding above average return) even if the EMH is correct in the weak-form. The possible usefulness of DY in predicting changes in stock prices seems to conflict with EMH, but if this difference is caused by different risks (which differ between value and growth stocks) not measured by beta, then the effect of DY could simply be a reflection of this added risk.

The variable EPS accounted for change (or growth) in EPS rather than a stagnant value and it will not be useful for predicting changes in stock price because the amount of growth in EPS that has not already been predicted by the market should not be predictable to any specific investor

acting upon the same information. However, future research could be devoted to determining whether once could beat the market in predicting that change.

There is also evidence present that supports conclusions, which, while not originally sought, could be very interesting and useful. As the coefficient of insider ownership became significant after accounting for the relationship between DY and beta (and DY's non-linear relationship to price change) this suggests that under some set of conditions, perhaps the percent of insider ownership could predict future returns. This is a conclusion that is difficult to reach with certainty, however, because multexinvestor would have recorded this value at the end of the fifty-two weeks. This implies that causality may run in the other direction.

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BUSINESS ENVIRONMENT FRAUD: ACCOUNTING HAPPENINGS

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ABSTRACT

Fraud will never be eliminated, but with a better understanding of how and why fraud occurs, steps can be taken to prevent or minimize the risk of fraud. The purpose of this research is to provide a better understanding of fraud that can be perpetrated in a business organization. This research covers some of the more common types of fraud and presents several different examples of fraud.

Fraud is organized into three broad categories; misappropriation of assets, corruption, and fraudulent financial reporting. Each category is briefly discussed including specific types of fraudulent activities. These activities include skimming, expense report abuse, and billing and payroll schemes. Fraud statistics, including the costs and types of fraud, are shown. There is also a section about the most effective methods for uncovering existing fraud.

Two important aspects of preventing and detecting fraud are gaining an understanding of how and why it occurs. Therefore, this research is designed to help auditors and members of management become more aware of the risk of fraud within an organization.

An important part of this research addresses the concerns an auditor has when he or she suspects fraud during an audit. Included are circumstances that could lead to fraud and indicators of fraudulent activities. Finally, this research makes recommendations to improve fraud detection and prevention. For example, an anonymous hotline for employee whistle blowing is one of the most effective methods of fraud detection.

THE IMPACT DETECTION RISK HAS ON TAX COMPLIANCE: AN ALTERNATIVE VIEW

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ABSTRACT

Utilizing the uniqueness of the State of Ohio's tax reporting requirements, this paper uses survey data and a within subjects methodology to examine the impact detection risk, both actual and perceived, has on taxpayer compliance. This research design provides the opportunity to evaluate the impact of detection risk for actual taxpayers facing the detection risk of an actual taxing authority for two different taxes with significantly different detection risks. The within subjects methodology also allows for the isolation of detection risk since all other factors are constant.

Consistent with prior research, our study provides evidence that the detection of tax underreporting and the associated penalties do affect taxpayer compliance, however, our results also provide evidence that the magnitude of the effect of detection risk may not be great. Alternative factors are suggested that may have a greater role inducing taxpayer compliance

A SURVEY OF INTERNAL AUDIT DIRECTORS: RESOURCES, PROCESSES, AND SOX COMPLIANCE

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ABSTRACT

This paper presents results of a 2005 survey of internal audit directors (IADs) at domestic telecommunications organizations. The instrument used to collect data included sections on organization characteristics, internal audit resources, processes, and SOX compliance. Among other things, IADs reported that SOX-related costs were a large portion of the total internal audit budget in 2004, but SOX-related costs were expected to decline in 2005. The number of internal audit positions was expected to grow substantially in 2005, however. No consensus existed on identified areas of risk or top audit initiatives. Surprisingly, a large majority of IADs reported that processes had not been re-engineered as a result of SOX, and a smaller majority said that there was no plan to do extensive re-engineering of processes. The survey resulted in a rich source of data for examining internal audit effectiveness and efficiency.

MODELING THE IMPACT OF NEW TECHNOLOGIES ON PACE OF PLAY IN GOLF: SEGWAY GT, RANGE FINDERS, RFID GOLF BALLS, AND LONGER HITTING DRIVERS

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ABSTRACT

A model-based decision support system (DSS) is used to study the impact of new technologies on pace of play on golf courses. The DSS is based on a Microsoft Excel simulation model that accurately represents the variability and interactions that impact pace of play on a golf course. Research shows the economic benefits of understanding the impact of policy on golf course play, specifically throughput (rounds played) and cycle time (round length). The use of a new mode of transport, the Segway GT, is compared to traditional two player carts. Results indicate that pace of play is improved and that golf course managers have cost/implementation strategic options that could offer advantages in a competitive market. Other technologies that are addressed include the use of radio frequency identification (RFID) to identify lost golf balls, global positioning systems (GPS) and other range finders to identify target distance, and longer hitting clubs.

INTRODUCTION

Golf courses and country clubs are second only to gambling in the amount of revenue produced in the amusement, gambling and recreation industries. In 2002 there were 12,189 golf courses that produced $17.4 billion (US Economic Census, 2002). In 2001 there were 518.1 million rounds of golf played. Since then the number has declined by 4.5 percent, even though 2004 saw an increase of .7 percent. In the late 90's, 1800 new courses were built at a rate of over 300 per year. That number has declined to just 150 new courses in 2004 (Kuffman, 2005). With the number of courses increasing and the number of rounds played decreasing, the imbalance in supply and demand has many courses struggling to attract customers. One of the major factors in getting people on the golf course is the amount of time it requires to complete a round of golf (cycle time). If cycle time can be reduced, the number of rounds played during a day (throughput) can be increased.

Math-based models have been used to analyze stochastic systems such as manufacturing plants or distribution networks. Recent research demonstrates that math-based models are also being used to model pace of play on golf courses (Tiger and Salzer, 2004; Tiger, et al, 2003). A simulation model that accurately quantifies queuing on a course, developed by Tiger, et al (2003) is the basis for this research. In Tiger et al's (2003) paper, a modeling concept was created that offered a simple, yet powerful method for modeling course congestion, specifically, waiting for the group immediately in front to move *out of the way*. The concept is call gate methodology.

Gates are modeling constructs used at different points of a course. The gates indicate at what point on the fairway the players behind would be able to safely hit. The location and frequency of the gates vary based on golfer characteristics (short or long hitters); hole length and design. Typically, a par 4 hole typically has one fairway gate and a par 5 hole has two fairway gates. No

fairway gate is used on par 3 holes because the players behind must wait until all players leave the green to safely hit.

Many queuing statistics are available as model output: feature-specific (tee box, fairway, green, and to next hole) and type (par three, par four, and par five) are the primary outputs.

TECHNOLOGIES

The primary technology of interest in this paper was the use of one-person carts, similar to the Segway GT, and their impact on pace of play. The Segway Golf Transporter (GT) is a Segway that has been fitted with a golf bag carrier, extended life range batteries, enhanced traction tires, and a special software-control key ("Business Outlook," 2006).

Other technologies that could affect pace of play are RFID golf balls, range finders, and longer (but not necessarily straighter) golf clubs. Radar Golf Inc. produces a ball, with an RFID chip imbedded in its core, that they claim performs equal to or better than balls from Titleist, Callaway, Nike and Maxfli (LaPedus, 2005).

Another technology that offers the possibility of increasing pace of play is rangefinders. Knowing the exact distance from the tee box to a bunker or the distance to the green can allow the player to make a confident swing.

Global positioning systems provide an accurate measurement from the player's current location to the green. GPS handheld devices can be carried by the golfer to find distances form his/her location to any waypoint previously set.

Another alternative for range finding is the handheld laser range finder. The laser rangefinders look like small video cameras and are used like binoculars. These rangefinders send out a laser beam that bounces off the target. The unit measures the amount of time for the beam to bounce back and calculates the distance. The process takes less than a second. The laser rangefinder works only with line of site, but is more accurate than the GPS system (Gleason, 2005).

DATA COLLECTION

Prior research did not identify rates specific to transport mode. No information existed for determining different rates for walkers, two person carts, and one-person carts. Additionally, prior research assumed that all rates followed a normal distribution. For this research, new data was collected to (1) generate transport specific rates and (2) determine different rate shapes and parameters. Data was collected for two different transportation methods - two players in a cart and with one player in a cart. One player in a cart was assumed equivalent to a Segway GT. No research has been done in this area but the Segway GT will travel at 12.5 m.p.h. and the course where the data was collected for this study has its carts set at the 12 m.p.h. setting. The electric golf carts have faster settings, 20 m.p.h., but most courses do not use this setting because it is too fast for uneven terrain. A global positioning system (GPS) was used to locate the gates on the course as waypoints. The GPS recorded the route of the players and the time. The times, locations, and speeds are viewed with software that shows when the waypoint is reached. The times are used to calculate the rate on the fairway in yards per minute. Also the time on the tee boxes and greens and the time to travel to the next hole are recorded. The start and stop times when searching for a lost ball were also recorded. The rate distributions all had a positive skewness and a lognormal distribution was found to be a better fit than a normal distribution. Tee box and green times followed a normal distribution, which were the same results as the prior research.

SIMULATION EXPERIMENT

An experiment was run comparing two players in a cart with one person in a cart for different tee time intervals (6, 8, 10, 12 and 14 minutes). Smaller intervals put more golfers on the course, increasing rounds played (throughput) and increasing round length (cycle time). Each mode/tee time interval was simulated for 100 busy days. A busy day is defined as a day that enough player demand exists to fill all tee time intervals. On most courses, this occurs during weekends and holidays. The main factor is the weather; however, other factors exist that might increase the number of busy days: the quality of the course, the size of the market area, the number of other courses in the area, etc. Courses in the southern United States could have over 100 busy days annually due to good weather; however, northern U.S. courses may have less than 50 annually.

EXPERIMENT RESULTS AND ANALYSIS

The use of the Segway GT reduced round length and increased rounds played for all tee time intervals studied. The reason for this is that with only one player on the vehicle, a more direct route is taken.

For the golf course used in this study, the optimum tee time interval would be 12 minutes. When tee time intervals are reduced to 10 minutes, no improvement in rounds played exists, but round length continues to increase, as shown in Figures 4 and 5. Service is compromised without the benefit of additional revenue. If the players are given a quicker round of golf, they are more likely to return, thus creating more business on less busy days, or adding to the number of busy days for the course.

CONCLUSION

Anecdotal evidence tells us that these technologies can increase the pace of play: in this study we demonstrated that a math-based model has enabled us to quantify the benefits. Benefits can vary from course to course due to the location of hazards and bunkers, distance traveled between holes, cart path routes, terrain, and green size. This study has shown that improvement always occurs when using the Segway GT on any golf course. Managers of golf courses are always looking for ways to improve pace of play. Reducing the time required to play a round of golf will attract more golfers to a course. It will also allow more players to play on any given busy day. These technologies offer managers options that can have a significant impact on revenues. The Segway GT allows golfers to travel through the course in a more direct route. The use of RFID golf balls will reduce the amount of time searching for lost balls, many of which are caused by golf clubs that allow the average players to hit farther but not more accurately. Range finders will reduce the amount of time to determine the yardage to the green or to a hazard. When the correct yardage is known, a player can select the correct club and be less likely to hit into a hazard. Having the ball in the fairway, instead of the hazard, will also speed up play. Implementing any or all of these technologies will improve pace of play and increase revenues.

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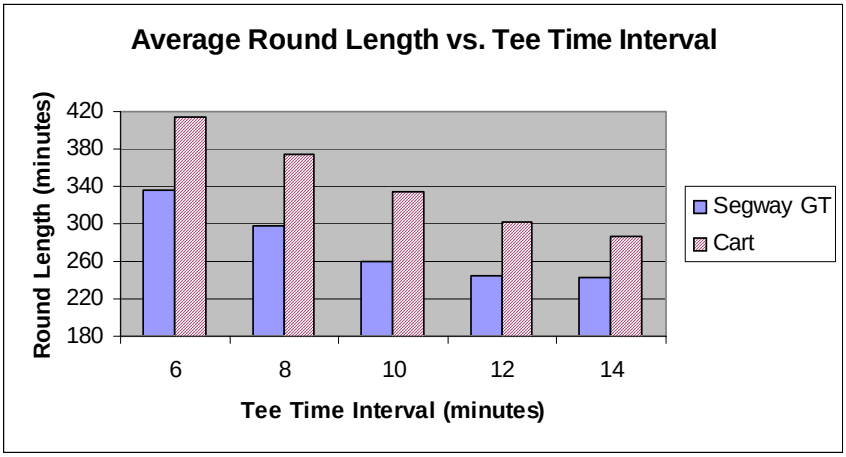

Figure 1

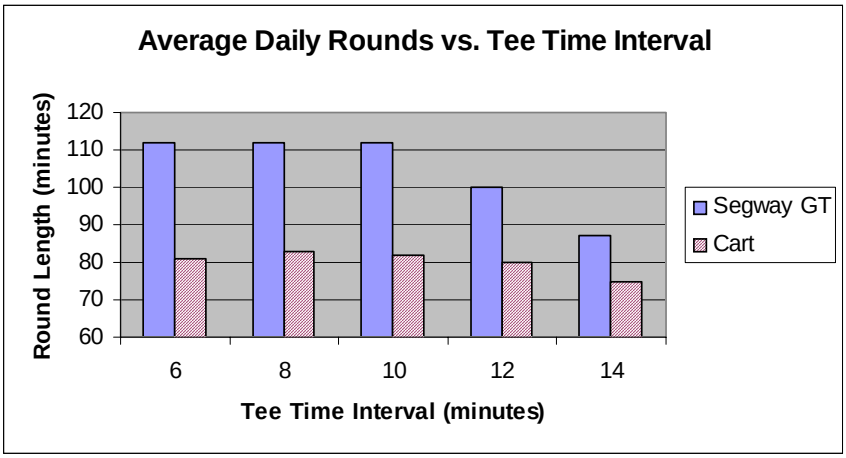

Figure 2

THE USEFULNESS OF COST ALLOCATIONS: AN EXPERIMENTAL INVESTIGATION

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ABSTRACT

This paper reports the effects of service department cost allocation schemes on demands for service by divisional managers. Cost allocations have been suggested to be useful in specific managerial settings (Thomas 1980). Zimmerman (1979) suggested that if allocation methods that include the costs of externalities (e.g., delays, degraded service) were developed, they should encourage decisions that are more behaviorally congruent than decisions made with methods that do not incorporate externality costs.

The general experimental setting in this research consists of a decentralized firm with two manufacturing divisions and a centrally run service department. The role of the division manager is to demand maintenance, knowing the specific benefits the maintenance will have on divisional profits, but only the allocation method used to charge for the cost of the service provided. Each division receives all service demanded. A marginally increasing cost function for maintenance and decreasing marginal benefits for additional units of maintenance are used to discourage excessive demands by the managers.

Five allocation methods are used in this study along with a control group that makes the same decision - how much maintenance to demand - with no costs allocated to the division. Average actual cost and an ad hoc method based on average actual cost are used to test Zimmerman's ideas. The other methods are a fixed (predetermined) rate, marginal cost, and a Shapley value-type allocation. All allocation methods yielded average demand levels that were significantly different from amounts demanded when no allocation of costs was made. However, the ad hoc method, which included a type of externality cost, did not cause demand levels to be closer to amounts that were better for the firm as a whole than a method not including the externality cost. Other comparisons showed that the amounts demanded for each allocation method were significantly different from both the firm-wide and divisional optimal levels.

Key Words: Cost allocations; service departments; externalities.

CPA FIRMS OFFERING OF FORENSIC SERVICES SURPRISINGLY CONSISTENT OVER TIME: ARE CPA'S MISSING OUT ON A FORENSIC ACCOUNTING GOLD RUSH?

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ABSTRACT

This paper presents data generally indicating that, over the seven-year period 1998 through 2004, Certified Public Accountant (CPA) firms' offering of forensic accounting services didn't change very much at all. While a few fluctuations (up and down) of the percentages of firms offering forensic services between years were noted, overall it appears that (1) about the same percentage of CPA firms offered such services in 2004 compared with 1998 and (2) no meaningful changes have occurred during the seven-year period in the types of firms offering such services, for example, in 2004, as in 1998, only around 10 percent of the smallest CPA firms offered forensic services compared with around 42 percent of the largest CPA firms. The apparent lack of growth in forensic services provided by CPA firms is quite surprising considering that demand for such services has likely increased in recent years. Possible implications: If there really is more forensic business out there now than a few years ago, then it appears, based on the survey data, that professionals other that CPAs are capturing much or most of the new business. If this is the case, perhaps it is because many CPA's don't find such work profitable; or, perhaps many CPAs do not seek such work because of inadequate training/education in forensic techniques; or, perhaps, "forensic specialists" are sought after by the market to a greater extent than 'traditional' CPA's that offer forensic accounting as one of many public accounting services. This paper presents the results of national surveys of CPA firms over a seven year period indicating the extent to which such firms offer forensic services and also discusses several possible implications of the data.

SMALL FIRMS AND SARBANES-OXLEY: WHAT ARE THE COSTS OF COMPLIANCE?

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ABSTRACT

Since its enactment in 2002, a recurring theme in the discussion of the Sarbanes-Oxley Act has been how costly compliance with its provisions has been and how heavily those costs fall on small firms. Many estimates of the costs of Sarbanes-Oxley have relied on self-reported survey data or have not focused on smaller companies. This study provides direct insight into the issue by focusing exclusively on small companies and examining their filings with the Securities and Exchange Commission (SEC) regarding the costs of compliance with Sarbanes-Oxley. Although not uniform across all small firms, the results indicate that the Sarbanes-Oxley is imposing significant costs on many smaller companies.

DEVELOPING AN EFFECTIVE CORPORATE POLICY FOR EMPLOYEE INTERNET AND EMAIL USE

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ABSTRACT

This paper provides the necessary organizational steps to develop an effective employee Internet and email policy. First, we examine the growth in personal use of the Internet and email in the workplace. Second, we will explain the potential liability of both the employee and employer. Third, we will discuss whether employer monitoring of employee Internet and email use is effective. Forth, we will examine the need to develop an organizational culture of responsible employee Internet and email use. Finally, we will look at the required elements of an effective Internet and email corporate policy.

Recent surveys have shown that most employees use their work email for personal use. In addition, over a third of workers admit that they regularly surf the Internet while at work. The problem of improper Internet use exposes both the employer and employee to significant liability. Developing an organizational culture that supports responsible Internet and email use is essential to reducing this liability and increasing employee productivity. Building such an organizational culture includes employee involvement in developing a policy and communication of that policy to all employees.

This research concludes that a successful corporate policy should provide for responsible personal use of the Internet and email in the workplace.