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Proceedings of the Academy of Accounting and Financial Studies

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REAL ESTATE OWNED AND CARRYING COSTS- LOOKING AT THE EFFECTS OF EMPLOYMENT AND INTEREST RATES ON MARKETING TIME

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ABSTRACT

This paper examines the effects of changes in employment and interest rates on marketing time of residential houses - over time. This paper presents evidence over an eighteen (18) year period from 1979 to 1996 which reveals that as interest rates and employment levels change that marketing times of single family homes respond in an expected manner. An interesting discovery was that at one point in the study period employment changes appeared to impact days on market as much as, or more than, changes in interest rates. As expected, when employment declined in the study area, days on market increased and later increased even as job growth surged and then days on market declined with a time lag. The marketing times for lower and higher priced homes were examined separately over the study period.

The research presented here should be of interest to real estate agents who are constantly asked, "how long will it take to sell my house?" Bankers who are trying to estimate holding costs on real estate owned should also find this type research of interest. Transfer companies might find this research to be of value.

It is clear that as non-property economic conditions change over time, different priced properties react in different ways to the changes.

INTRODUCTION

There are many factors which influence the length of time required to sell a single family residential property. The physical attributes such as size, age, number of rooms, condition of the house, and other property characteristics have an obvious impact on the "value" of the house, but what about the marketing time of the home; what influences are important? Research as shown the time required to sell the property depends not only on the physical characteristics of the house but also on the listing price of the property. Other factors which may also influence the number of days the property remains on the market are the general economic conditions of the area and the level of mortgage interest rates. In this paper we present information as to how these "market" factors influenced the average number of days (DOM) required to sell a single family house in the Lake

Charles Louisiana market between 1979 and 1996. Bankers and transfer companies should find the research useful in marketing real estate owned investments as the DOM directly influences holding costs and thus organizational profits. Additionally, this information should be of substantial interest to real estate agents who are usually asked two key questions when seeking a new listing; "How much can you get for my home?", and "How long will it take to sell my home?" The information presented should also be of interest to brokers who are estimating advertising budgets, sign inventory, and other business decisions affected by the marketing times.

In order to conduct this study, multiple listing service data was utilized. The data was for the first quarter of each year from 1979 to 1996. The data included approximately 3,000 actual sales and transactions which occurred during the study period, which spanned eighteen years. The macro economic data consisting of employment data for the area was obtained from the Louisiana Department of Labor. The mortgage interest rates were obtained from the Federal Reserve Bulletin. The mortgage rates were the average for the year.

Lake Charles is a medium sized city (150,000 population in the SMSA) in the Southwest corner of Louisiana about 150 miles East of Houston and about 120 miles West of Baton Rouge. The area is somewhat dependent on the petroleum industry; however, this dependence is no different than many other medium sized markets which invariably are somewhat dependent on a key industry or sometimes a few key employers. McNeese State University is located in Lake Charles and is a regional university with over 8,000 students and over 1,000 employees. Lake Charles is a seaport city serving the Southwest Louisiana area and the port contributes millions of dollars to the local economy. In the early 1990's, casino gambling was introduced to the area and is having an impact on the local economy.

In the Mid to late 1970's, and very early 1980's, the local economy was strong, as the oil industry was booming. In the early 1980's however, the petroleum industry collapsed and this caused a major downturn in the local economy. This local downturn continued through out most of the 1980's, but in the latter part of this decade, the economy began to recover. The area appeared to be in another boom period in 1996, but by late 1997, after the study ended, signs of weakness were surfacing. The impacts of the economic trends on the real estate market area revealed in this study. The level of sales has been increasing and at the same time the average time it takes a home to sell has been decreasing.

A summary of the results is presented in Table 1. Provided in this Table 1 are the total number of houses sold during the first quarter of each year, the average days on the market DOM), the mortgage interest rate, the employment statistics, and the average DOM for homes priced above and below the median. Homes priced below the median are referred to as "low priced" and those priced above the median are referred to as "high priced". The employment statistics for Lake Charles consist of the "non-ag" wage and salary data. Similar to other oil dependent areas, the employment picture was positive in the late 1970's and peaked in 1981. This was followed by a steady decline between 1982 and 1987 when the economy of the area experienced a decline. Since 1987 the economy of the area has shown a steady improvement that has continued through the end of the study period.

The economy in Southwest Louisiana was depressed for most of the early to mid-1980's. This is reflected in Table 1 data by the number of sales each year and the number of people employed. Between 1982 and 1987 the number of sales was low but started to increase about 1989/90. During

this same time period the number of people employed was depressed, the biggest decline coming from 1981 to 1982, and starting to increase in 1988. These employment trends affected the number of homes sold during this period. The peak years for sales were 1979 and 1980. This level of sales activity was not achieved again until 1995. During several years in the study period the housing the market declined even as interest rates dropped to levels lower than prevailed in the late 1970's. This phenomenon of declining interest rates combined with declining housing market supports the hypothesis that employment gains or losses impact housing markets, at least on a local level, on a part with interest rates.

TABLE 1

YEAR	TOTAL SALES	AVG. DOM	AVG INT RATES	AVG EMPLMNT FOR YEAR	AV DOM FOR LOW PRICED	AV DOM FOR HIGH PRICED	CHNG IN EMPLMT
1979	237	55	10.48	63500	50	59	4500
80	200	57	12.25	67300	52	63	3800
81	172	54	14.16	70400	52	56	3100
82	134	73	14.47	64400	75	71	-6000
83	112	86	12.2	61600	68	105	-2800
84	117	101	11.87	60200	91	112	-1400
85	104	97	11.12	59000	75	121	-1200
86	128	123	9.82	57800	135	110	-1200
87	148	125	8.44	58600	120	130	800
88	178	114	8.51	60500	111	116	1900
89	155	107	9.76	62600	109	104	2100
90	199	137	9.68	67700	155	119	5100
91	168	127	9.02	70900	123	132	3200
92	182	132	7.98	71300	151	114	400
93	182	123	7.03	72100	143	103	800
94	190	93	7.26	76700	99	86	4600
95	215	100	7.65	79900	107	93	3200
96	195	76	7.56	83200	74	78	3300

As employment began to rise after 1987, there was a decline in the DOM the average property stayed on the market. This was not a steady decline, but fluctuated with a slow trend toward the lower number of days on the market. As the employment increases the number of days an average home stays on the market would decline. According to expectations, there was a lag of one to three years as the buying public adjusted their expectations of the future. If the average home buyer expects to be unemployed in the future they will postpone buying decisions. If the employment picture is unsure they will likewise postpone the decision to buy a home. Only when the home buying public feels comfortable about their future employment prospects, will they buy a home. This is especially true following a period of high unemployment or recession in a local area.

In addition to changes in employment, interest rates also impact the time required to sell a house. Table 1 provides data on interest rates for the years 1979 to 1996. As can be seen in this table, the interest rates increased during the late 1970's and peaked in 1982 at over 14%. Since 1982, interest rates have experienced a downward trend and seem to be have stabilized since 1992, with relatively minor fluctuations since then. In comparing the average DOM to interest rates, the days on market started to increase in 1982, even though interest rates had been rising for several years but at the point had in fact started to decline. It has been shown that interest rates impact the sales of homes and lower interest rates should therefore spur real estate sales. While this is true, it is apparent that the level of employment is also a critically important factor in determining the number of days a property can be expected to remain on the market.

The results reported in Table 1 would indicate the importance of employment trends on the average days a property remained on the market. Another possible explanation of why the DOM increased while interest rates were declining is that when people anticipate that interest rates will be low or will continue to decline, they may not be as anxious to buy. This could be partly true because they wait for the rates to fall further and partly because the cost of renting property is lessened when the rate of inflation is anticipated to be low. Part of the attraction of home ownership is that it provides some hedge against inflation. When inflation is expected to be high, people tend to invest to real goods such as real estate to protect themselves against price increases. At times when inflation is expected to be low this is usually not a factor.

Charts 1 and 2 contain a graphical presentation as to how changes in employment and interest rates over time compare to changes in DOM over time.

Chart 1
INTEREST RATES AND DOM OVER TIME

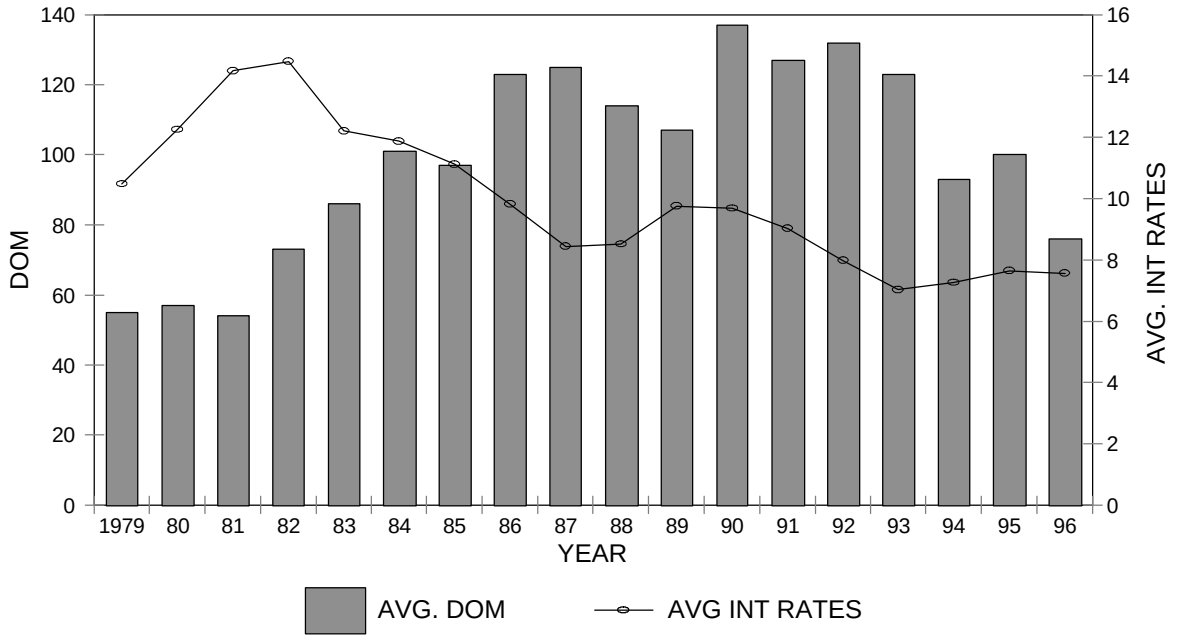


Chart 2
CHNGS IN EMPLY & DOM OVER TIME

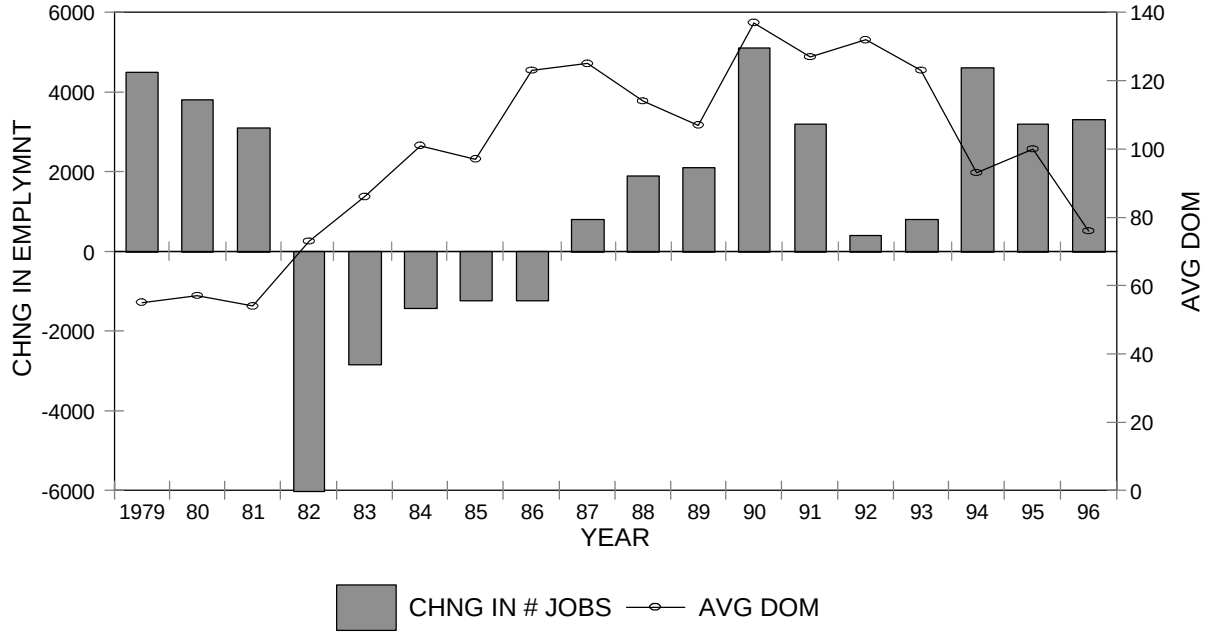


Chart 1 presents clear evidence that even as interest rates were increasing in the first three years of the study, marketing times were actually stable and declined in 1981. As rates began to fall after 1982, DOM increased and remained high for almost a decade. Chart 2 presents graphical information which indicates that in most years when employment change was positive, DOM reacted positively either that year or in the following year.

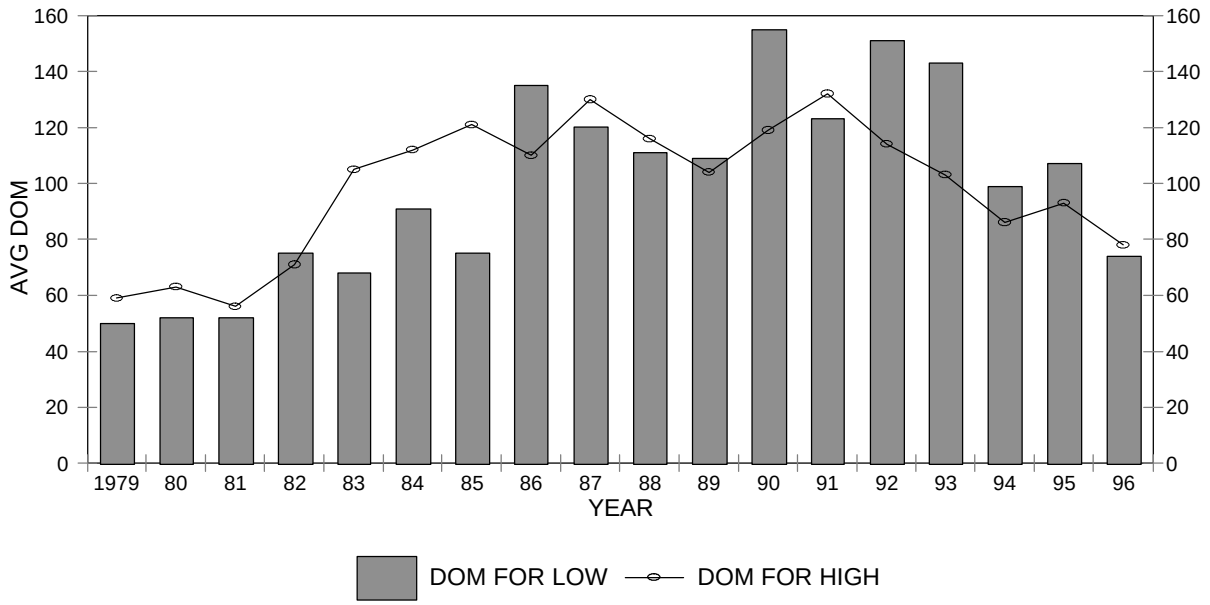
To further enforce the critical importance of local employment, note in Charts 1 and 2 that as interest rates fell in the early to mid 1980's, DOM remained high until employment turned positive in 1988. To get a picture of how market segments were changing over time, each sale was placed into one of five categories based on the number of days on the market. These categories were 0-7 days, 8-30 days, 31-180 days, 181-264 days, and more than 364 days. Table 2 indicates what percentage of the sales in each year fell into these categories. For example, in 1979 13% of the houses were on the market for 0-7 days and 29% were on the market from 8-30 days. The total number of sales occurring the first quarter of each year is shown in the last column of Table 2. From this we see that before 1986, very few of the sales were for homes that had been on the market more than one year. However, beginning in 1987, the number in this category increased significantly and was at least four percent of the sales until 1995. It is important to note that atthis same time, the total number of sales was increasing. It is quite possible that many houses that had been on the market for a long time were now being sold. The increased demand due to increased employment may have been responsible for some less desirable houses (that had been on the market a long time) being sold.

TABLE 2

	Days on Market						
	0-7	8-30	31-160	161-364	>364	Total % for year	Total # of Sales For Yr.
1979	13	29	56	3	0	100	237
1980	9	32	56	4	1	100	200
1981	11	28	58	2	0	100	172
1982	9	26	57	7	1	100	134
1983	6	21	59	13	0	100	112
1984	7	20	56	17	1	100	117
1985	5	14	64	15	1	100	104
1986	5	22	52	16	5	100	128
1987	7	17	52	17	7	100	148
1988	8	18	56	12	6	100	178
1989	1	24	59	10	6	100	155
1990	18	16	40	16	10	100	199
1991	9	14	51	21	5	100	168
1992	12	14	49	16	9	100	182
1993	16	18	46	11	9	100	182
1994	22	24	38	10	6	100	190
1995	13	19	53	11	4	100	215
1996	15	17	58	8	1	100	195
All	11	21	53	11	4	100	

It is evident that the employment market affects the DOM. To determine if this was true for all price ranges, the sales were separated into two groups based on the selling price of the house (please refer back to Table 1). The first group (low price) contains sales of homes that sold during the year in questions, at a price below the median price. The other group (high price) sold at prices above the median for the year. The results of this are shown in Chart 3 which provides the average days on market for these categories in each of the years.

Chart 3
DOM FOR LOW AND HIGH PRICED HOMES



One interesting result is that higher priced homes experienced a lower DOM than did lower priced homes during the latter half of the study period. This can be seen in the results reported in Chart 3. Earlier in the period, the higher priced houses had a longer time on the market before they sold. As the market improved, this trend reversed itself and the higher priced homes sold in less time. It seems as the economy came out of the recession the higher priced homes sold in less time than the lower priced homes.

The trend became more obvious in 1992 and during subsequent years as employment continued to improve and people became more confident about the economy. This renewed confidence reveals itself in both Table 1 and Chart 3 in both the level of sales and the declining level of DOM. Also the fact that higher priced houses sold faster than lower priced houses indicates the increasing confidence in the economy.

While the data available did not provide an indication of what types of new jobs were being created in these years, it is reasonable to expect that some would be low paying and others would be higher paying. More high paying jobs would create a demand for higher priced houses. However, even if the jobs were not high paying, we might expect a greater demand for higher priced housing as the interest rates in the later years of the study were relatively low. A potential home buyer would qualify for a larger loan when interest rates are low. This might contribute to a higher demand for more expensive homes.

This article has presented evidence which indicates that changes in employment may be more critical to housing marketing times than levels of interest rates. While the research was conducted in a medium sized town where the oil industry was the dominant employer; the results should be

globally useful because the composition of the labor force is not the issue. The issue is changes in employment levels vs changes in and absolute levels of interest rates. The evidence indicates that bankers should not expect to sell their REO's just because interest rates are declining, if employment levels in the area are declining. There is additional evidence of this in Japan where real mortgage rates are near zero and real estate values are declining and marketing times are increasing. Realtors should inform their clients of these research results in order to promote better client relations, if the clients are bankers.

The results of the study also indicate the higher priced homes tend to have higher DOM at the bottom of the local employment cycle, but not as employment is increasing.

While most parts of the United States are experiencing increasing labor trends, there are always local communities where a major employer has closed a factory and moved to offshore facilities, or a major government facility has closed. The information presented here should help all owners and sellers of houses estimate marketing times. These marketing times are critical to some owners such as banks and transfer companies who must estimate inventory holding costs as a cost of operating their business. This information should also be useful to real estate brokers and agents who are almost always asked, "How long is it going to take to sell my house?"

LITIGATION DISCLOSURES

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ABSTRACT

The adequacy of disclosure of litigation contingencies in financial statements continues to be a very important reporting issue. The principal objective of this study was to investigate the extent to which meaningful disclosures of litigation are present in corporate financial statements. A related objective was to examine the relationship between extent of note disclosure and selected financial statement ratios. The data was obtained from Compact Disclosure. Over 1100 financial statement notes of public companies were examined. First, a descriptive approach was used to categorize the notes into different levels of disclosure. A set of financial statement ratios was used to examine the relationship between the disclosure levels of the notes. Analysis of variance and discriminate analysis were used to analyze the data. The results indicate that there are differences in financial condition as measured by the selected financial ratios of those companies which had minimal disclosures of litigation versus those companies which presented more complete meaningful disclosures.

INTRODUCTION

The adequacy of disclosure of litigation contingencies in financial statements continues to be a very important accounting issue. Litigation contingencies are distinctive in that their disclosure is influenced not only by the management of a company but also by external auditors, corporate attorneys and to some extent by the Securities and Exchange commission. Therefore, the content of financial statement litigation notes may meet minimal disclosure requirements but reflect the judgements of individuals having diverse motives and perspectives. Consequently, there is lack of consistency in the manner in which litigation actions are disclosed. Since the litigation disclosure decision involves judgements regarding materiality and probability of losses, and multiple parties, considerable latitude exists in the decision making process regarding disclosures, and this leads to potential confusion for the users of financial statements and a reduction in the usefulness of the information provided.

The principal objective of this study was to investigate the extent to which meaningful disclosures of litigation are present in corporate financial statements. A related objective was to examine the influence of financial soundness as measured by certain ratios on the level of litigation disclosure. Financial statement notes provide additional information that is intended to assist users in evaluating a firm's financial position. Consequently, when significant uncertainties are not adequately disclosed, the financial statements of the firm are of diminished value and could be misleading (Kneer, Reckers, Reed & Jennings, 1985).

PRIOR RESEARCH

Woolsey's (1954) research on materiality and disclosure recognized that different accountants, having identical information, could exhibit different decisions on disclosure. More recent research incorporating influences from psychology has described the judgement process as a probabilistic system, examining the relationship between observed inputs and outputs (Ashton, 1974). Others who have examined the judgement process of the materiality decision include Boatsman and Robertson (1974), Hofstedt and Hughes (1977), Moriarity and Barron (1976), Newton (1977), Firth (1979), and Jennings, Kneer and Reckers (1987).

Several studies have addressed criteria for both threshold level and point of reference used in practice for the materiality judgement: (1) net income (Frishkoff, 1970; Boatsman & Robertson, 1974; Chewning, Pany and Wheeler, 1989); (2) size (Frishkoff, 1980; Moriarity and Barron, 1976); (3) total assets (Bates, Ingram & Reckers, 1982); (4) "Big 8" versus non-"Big 8" auditors (Woolsey, 1973; Messier, 1983). Holstrum and Messier (1982) found that items of more than 10% of net income would be considered material by most groups, while items less than 4% of net income would be considered immaterial by most groups. In addition, they reported that users tended to have lower materiality thresholds than did preparers or auditors. Libby (1979) found disclosure of a major litigation uncertainty, when combined with supplemental accounting information concerning the uncertainty, had a major effect on bankers' risk assessment of the firm. Jennings, Kneer & Reckers (1987) performed a second study that compared the materiality thresholds of three groups typically involved in litigation disclosures; CPAs, judges and lawyers. This study found that many members of the legal profession saw current lawsuit disclosures as inadequate.

During the past thirty years, a number of studies have focused on corporate bankruptcy. Several studies have concluded that failing firms exhibit significantly different ratio measurements than do continuing entities (Beaver, 1967, 1968) (Altman, 1968).

Beaver's research in 1966 and 1968 reported that certain financial ratios were strong predictors of bankruptcy. His studies concluded that the mean ratios of failed firms were poorer than those of nonfailed firms for a period of five years prior to the failure. Altman (1968) used a multivariate approach to bankruptcy predictions. He used multiple discriminant analysis (MDA) as the technique for distinguishing between failed and nonfailed firms. Altman selected thirty-three bankrupt manufacturing firms and a matched sample of thirty-three nonbankrupt firms, stratified by assets size and industry. From twenty-two original variables, the five providing the most efficient discriminant function were selected. The five variables were chosen based upon the statistical significance of the discriminant function and the intercorrelations among the discriminating variables, as well as the predictive accuracy of the discriminant function.

Edmister (1972) used MDA to analyze small companies and affirmed the position that ratio analysis not only had predictive value but that the value was cumulative as independent ratios were added. Moyer (1977) reexamined the Altman model and reestimated the coefficients. He concluded that the original model contained two superfluous variables, market value of equity/total debt and sales/total assets (X4 and X5 in this study).

Hopwood, McKeown, and Mutchler (1989) examined firms which had received a going concern report qualification by auditors to assess the ability of qualified opinions as warning signs of forthcoming bankruptcy. Their analysis employed a combination of variables from previous

bankruptcy models. They found that an auditor may "insist on improved accounting" when faced with a client whom the auditor believes is more likely to fail. They concluded that this perception may be due to the belief that the auditor's liability may be diminished if "preferable" accounting methods were employed.

This present research extends the concepts of the Hopwood, et al. study by showing that the extent (detail) of litigation disclosure is greater when the financial statements indicate financial distress.

DATA SELECTION

The data for the study was obtained from Compact Disclosure. This database contains financial and management information extracted from annual and periodic reports filed with the Securities and Exchange Commission (SEC) by over 12,000 public companies. Criteria for inclusion in the data base are: (1) the company must have filed an SEC document containing financial information (e.g. 10K, 20F, Registration Statement) within the last 18 months, 2) at least 500 shareholders of one class of stock and 3) at least $5 million in assets. Companies included are those that provide goods and services to the public. The Compact Disclosure used for this study included financial statements with years ending in the twelve month period prior to July 1, 1996.

Financial statement notes of the companies in the database were searched for the phrases "litigation", "lawsuit", "lawsuits," or "legal proceedings". All records which contained one of these four phrases were selected for examination. The original search resulted in 1,515 companies. The litigation footnotes and selected financial and descriptive variables (See Appendix A) were downloaded from the data base for examination and analysis. If the note reported that the company was the initiator of the litigation (gain contingency) or that the litigation had been settled (no longer a loss contingency), the company was eliminated from the selection. Of the 1,515 companies originally selected, 357 were dropped, leaving 1,158 in the analysis. In order to assess the financial condition of the companies using the Altman and Beaver models, certain variables (financial ratios) were created.

A descriptive approach was adopted in categorizing the litigation notes into different levels of disclosure. Specifically, each note was classified into one of the following four mutually exclusive categories: **Minimal Disclosure, Meaningful Qualitative Disclosure, Meaningful Quantitative Disclosure, and Accrual for Loss Contingencies**. The litigation notes falling within the Minimal Disclosure category were not only the most prevalent (663), but also the most seriously lacking in meaningful content. Apparently, according to many companies, a note meets the FASB's requirements if it simply states that the company is currently involved in litigation and that it is unable to estimate its future losses. These notes provide little or no substantive information to the reader, although occasionally they indicate the general nature of the lawsuit(s). The following three sample disclosures are representative of this category.

I. MINIMAL DISCLOSURE

N = 663

* Company XYZ is involved in various litigation arising from the ordinary course of business which management believes will have no material effect on the consolidated financial statements.

* In the normal course of business, the Company and its subsidiaries become involved in litigation incident to operations. Management is of the opinion that ultimate resolution of all matters of litigation and dispute will not result in a significant liability to the Company.

* The Corporation is involved in legal proceedings generally incidental to its business. While the result of any litigation contains an element of uncertainty, management presently believes that the outcome of any known pending or threatened legal proceeding or claim will not have a material adverse effect on the Corporation's consolidated financial position.

The second most common form of disclosure was the Meaningful Qualitative Disclosure statements which appear to more closely satisfy the FASB's intended disclosure objectives. Although specific monetary estimates were not provided, the nature of the litigation as well as certain specific information was provided. The usefulness of these footnotes in evaluating risk depends upon the explicitness of the additional information being provided. These notes typically include some detail but do not make reference to the dollar damages sought.

II. MEANINGFUL QUALITATIVE DISCLOSURE

N = 269

* The Bank is currently involved in numerous lawsuits relating to delinquent loans, including cases involving predecessor banks to the Bank. Some of these lawsuits involve counterclaims alleging lender liability for undetermined sums. Management and counsel for the Bank, based upon their review of cases so far, have no reason to believe that the counterclaims have merit.

* The Company and certain other persons, including certain officers and directors of the Company, are defendants in purported class action lawsuit filed in 19XX in the U.S. District Court [Actual Case Reference]. This suit alleges violations of Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder and seeks an unspecified amount of damages. The plaintiff alleges that the defendants inflated the price of the Company's stock by making false statements regarding the beneficial qualities of [a Product] and misrepresenting [an Individual's] role in the development of [the Product].

The notes within the third category, Meaningful Quantitative Disclosure, usually indicate the nature of the loss contingency as well as provide some type of range or estimate of the actual amount of damages sought. These Meaningful Quantitative Disclosure notes provide the most explicit information of the three non-accrual notes: Minimal Disclosure, Meaningful Qualitative Disclosure, and Meaningful Quantitative Disclosure respectively.

III. MEANINGFUL QUANTITATIVE DISCLOSURE

N = 153

* Various suits and other legal proceedings and claims are pending against the Company. These include one group of product liability cases brought against the Company and varying numbers of other companies on behalf of individuals claiming billions of dollars in damages and other monetary, injunctive, and declaratory relief as a result of injuries alleged to have resulted from the use by their spouses' mothers of certain estrogen drugs, including [a specific drug, previously sold by the Company] during pregnancy.

* The Company is a party to a number of lawsuits and claims (some of which are for substantial amounts) arising out of the conduct of its business, including those relating to commercial transactions, product liability and environmental safety and health matters. In one such lawsuit, involving a dispute with [XYZ Corporation] concerning the development and supply of [the Product], a judgement was entered against the Company in 19XX for $10 million in compensatory damages and $60 million in punitive damages, plus interest; the Company has appealed the judgement.

All of the litigation notes falling within the Accrual for Loss Contingencies category disclosed that some form of an accrual to the financial statements had been made. However, the dollar amount of the accrual was not generally disclosed. In examining 1158 litigation notes, only 73 provided this more detailed level of disclosure. The following is an example of the final level of disclosure.

IV. ACCRUAL FOR LOSS CONTINGENCIES

N = 72

* The Company is party to various legal actions brought by various limited partnerships, joint ventures and others which allege, among other things, breach of contract by [the Company] with respect to drilling and/or operating agreement between the Company and these entities, breach of fiduciary duty, violation of various state and federal securities acts, common law fraud, common law misrepresentation, and actions that allegedly give rise to recovery under the federal Racketeer-Influenced and Corrupt Organization Act ("RICO"). Management believes, based upon present facts and circumstances, that sufficient litigation liabilities have been accrued in the Company's financial statements. However, management is presently unable to determine whether the outcome of litigation against the Company will ultimately result in liabilities in excess of amounts provided.

INDEPENDENT VARIABLES

The independent variables selected for evaluation of financial condition were the Altman and Beaver ratios. Although questionable as predictors of bankruptcy, these variables are considered to be valid criteria for assessing the relative financial condition of the firms in the study. The variables (and the identification codes) used in this research) are:

Altman's Financial Ratios:

X1: Working Capital/Total Assets - short term liquidity;

X2: Retained Earnings/Total Assets - cumulative profitability;

X3: Earnings Before Interest & Taxes/Total Assets - current profitability - a form of return on assets;

X4: Market Value of Equity/Book Value of Debt - the market's perception of long term solvency and profitability;

X5: Sales/Total Assets - asset usage and efficiency;

Beaver's Financial Ratios:

A1: Current Assets/Total Assets - short term liquidity;

B1: Current Assets/Current Liabilities - short term liquidity;

C1: Current Assets/Net Sales - short term liquidity;

C3: Working Capital/Net Sales - short term liquidity;

NL1: Cash Flow/Total Liabilities - long term solvency; ability to service debt;

NL2: Net Income/Total Assets - current profitability, return on assets;

NL3: Total Liabilities/Total Assets - debt ratio, long term solvency.

The original model included all twelve variables. The five Altman ratios, X1 (WC/TA), X2 (RE/TA), X3 (EBIT/TA), X4 (EQ/TL) and X5 (NS/TA) (the ratio X1 (WC/TA) was common to both studies), and the seven Beaver Ratios, A1 (CA/TA), B1 (CA/CL), C1 (CA/NS), C3 (WC/NS), NL1 (CF/TL), NL2 (NI/TA) and NL3 (TL/TA) were the independent variables. The four levels of litigation disclosure: (I) Minimal Disclosure, (II) Meaningful Qualitative Disclosure, (III) Meaningful Quantitative Disclosure and (IV) Accrual for Loss Contingencies were the dependent variables. The following three combinations, (II & III) Meaningful Qualitative Disclosure plus Meaningful Quantitative Disclosure; (III & IV) Meaningful Quantitative Disclosure plus Accrual; and (II, III & IV) Meaningful Qualitative and Quantitative Disclosures plus Accrual, were also used as dependent variables in the study. Analysis of variance (ANOVA) and Multiple Discrimination Analysis (MDA) statistical techniques were used.

One objective was to ascertain whether financial ratios could be useful in explaining some of the variations currently found in the litigation disclosure. Six different models were tested using analysis of variance. The dependent variable, Minimal Disclosure (I), was compared against all the remaining dependent variables, both independently, (I vs. II), (I vs. III) & (I vs. IV), as well as against three combinations, (I vs. II & III), (I vs. III & IV), and (I vs. II, III, & IV.

Four ratios were statistically significant for all the models, and four variables [X4 (EQ/TL), X5 (NS/TA), B1 (CA/CL) and NL1 (CF/TL)] were not significant for any of the models. The first of the four significant variables was Beaver's A1 (CA/TA), which was not one of his better predictors (38% original prediction ability). The remaining three variables were Altman's first three ratios. The first, X1 (WC/TA) was a logical choice, since it is a ratio frequently found in studies of corporate problems. Ordinarily, a firm experiencing consistent operating losses will have shrinking current assets in relation to total assets. The second variable, X2 (RE/TA) was more effective, since it measures cumulative profitability over time. The ratio X3 (EBIT/TA) is the measure of the productivity of the firm's assets, abstracting from it any tax or leverage factors. Since a firm's ultimate

existence is based on the earning power of its assets, this ratio appears to be particularly appropriate for studies dealing with corporate failure (Altman, 1968).

Eight of the twelve ratios were significantly different (at .10 level) for the comparison of Group I versus Group II and Group I versus Group IV. Group I means were significantly different for six ratios when compared to a combination of Groups I, II, and III. Of these six ratios,it was decided to eliminate two from further analysis. Ratio C1 (CA/Net Sales) had been eliminated from the discriminant analysis due to multicollinearity. Ratio NL3 (Total Liabilities/Total Assets), although significant, had much higher p values and appeared in only one of the discriminant functions. A third ratio of the six, X1 (WC/Total Assets), had previously been eliminated during the correlation analysis due to multicollinearity. However, since the ratios to which it was highly correlated were now being dropped, X1 was retained for analysis.

The greatest differences found in the disclosure levels was the difference between Minimal Disclosure and Meaningful Qualitative Disclosure. There appears to be some support for the position, that when faced with a client that is more likely to fail, the auditor, or perhaps company management, may insist on improved disclosure.

INTERPRETATIONS

The ANOVA results indicate a difference in the populations of Group I Disclosure companies and Groups II, III, and IV Disclosure companies. The means of the ratio variables by Disclosure Group are shown in Table 4. Two of the ratios, A1 (Current Assets/Total Assets) and X1 (Working Capital/Total Assets) are measures of short term liquidity. Ratio A1 expresses the percentage of total assets expected to be available to meet current liabilities, while ratio X1 reduces current assets by known current liabilities and expresses the excess current assets as a percentage of total assets. Group I Disclosure companies are more liquid, as measured by these ratios. Group I companies have working capital equal to 15.4% of total assets, while Groups II, III, and IV have 9.3%, 13.5% and 12.3% respectively. Over one-half (55.5%) of Group I's assets were Current assets whereas none of the other groups were above 50% (47.1%, 49.1% and 47.8%).

Variable X3 (Earnings Before Interest and Taxes/Total Assets) measures current profit and assets usage. This measure of a "return on assets" eliminates the effect on net income of both taxes and the interest cost of financing assets. Group I firms experienced an 8.20% return using this measure. The returns for Group II, III, and IV were almost half that of Group I: 4.7%, 2.2% and 4.1% respectively. The ratio of Retained Earnings/Total Assets, X2, reflects relatively long-term profitability and accumulated earnings. Group I firms had retained earnings which averaged 11.7% of total assets, while the other groups had negative X2 means, -12.8%, -8.1%, and -4.6%. Since the numerator of this ratio is cumulative, the length of time the company had been operating would have an effect on the measure.

The above analysis indicates that those firms in the sample which provided relatively more extensive disclosure about pending or threatened litigation were not as financially sound as measured by the ratio variables selected for this study. They appear less liquid and less profitable, both currently and long-term. One possible explanation for some of this result is that the lower levels of liquidity and profitability are due to the impact of accruals for the contingent liability. While this might be a feasible explanation for the Group IV companies, it would only explain the Group II and

Group III differences if the majority of the companies have made accruals which they are not acknowledging in the notes.

SUMMARY

The results of this study indicate that there are measurable differences in financial condition as measured by the selected financial ratios of those firms which had Minimal Disclosures of litigation versus those firms which presented Meaningful Disclosures. Companies which provided relatively more extensive disclosure about threatened or pending lawsuits were not as financially sound as measured by the ratios selected as variables. Certain limitations should be recognized when considering these results. This study was cross-sectional and covered only one year; reporting patterns might differ in other periods. Moreover, judgement concerning financial soundness based on ratio analysis should be exercised with an understanding of the risk inherent in such evaluations. In addition, certain omitted variables such as firm size may be influencing disclosure patterns.

MEASURING JOB SATISFACTION OF ACCOUNTING FACULTY

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ABSTRACT

This study measured the reported relative extent of job satisfaction of a representative national sample of college and university faculty teaching in accounting programs. Specific aspects of job satisfaction were measured and compared with overall perceptions of satisfaction reported by the respondents. The questionnaire included the Job Descriptive Index, demographic data, and an overall scale for a measure of each of the five aspects of job satisfaction. The results of this study indicate that the Job Descriptive Index appears to provide a good measure of the job satisfaction of accounting faculty. The index was least effective at measuring the environment aspect of job satisfaction. In general, accounting faculty reported satisfaction with most aspects of their jobs, with promotion opportunities and pay being areas of least satisfaction.

INTRODUCTION

The purpose of this study was to examine the results of a survey of the attitudes and work-related satisfaction of selected accounting faculty members from a national cross section of colleges and universities. The morale of accounting faculty and its potential relationship to other job-related variables was selected for this study because many changes in the environment of higher education have occurred in recent years, and some of the perceptions of these changes on job satisfaction have not been reported. Some examples of these developments in higher education which potentially affect the job satisfaction of accounting faculty include dramatic technological advances, changes in accreditation standards, continuing budgetary limitations, increased accountability for performance, and changes in student characteristics.

SELECTED LITERATURE

Extensive research literature exists for studies involving morale, job satisfaction and job performance in various work environments. Many of these reported results have some relationship to the early works of Maslow (1954) or Herzberg (1959) or Porter (1963). For example, Porter (1963) conducted a series of studies to examine the extent to which managers perceived certain attributes of their work situation. Subsequently, various researchers used the Porter approaches to examine job satisfaction of diverse groups as managers, union leaders, and government employees. Examples of these studies include Miller (1966) and Ivancevich (1969). These behavioral studies analyzed relationships involving motivation, job satisfaction, job performance and turnover. However,

relatively few of the studies involving these variables have specifically focused on academic accountants.

Carpenter and Strawser (1971) combined Maslow's hierarchy of needs and Porters's satisfaction questionnaire to measure satisfaction of accounting practitioners and accounting educators. Their survey results for 164 educators and 131 practitioners reported that the lowest level of satisfaction related to the self-actualization need and to compensation. They reported that academic affiliation and academic rank did not appear to be major determinants of the degree of satisfaction or dissatisfaction.

Sellers and Hagler (1976) reported that accounting faculty members in the southeast region were satisfied with the degree of independence which they had in their work, with their opportunity to influence the major decisions in their departments, and with their compensation when compared to other faculty within their departments. However, there was not satisfaction with the amount of funding provided though their departments. This study reported that many factors other than work load contributed to job satisfaction.

Campbell et al. (1988) surveyed accounting faculty members of the Southern Business Administration Association using the Job Descriptive Index Instrument developed by Smith, Kendall, and Hulin (1969) and which some researchers cite as providing a better measure of job satisfaction. The purpose of their study as to examine five areas of job satisfaction, and to report the extent that each area contributed to job satisfaction.

Smith and Plant (1982) studied fifty-one male-female matched pairs of university professors using the job Description Index (JDI). Subjects were matched on four variables known to relate to job satisfaction. Five dependent t test outcomes were reported, and the t tests based on the JDI variables of work, pay and promotions were nonsignificant and the tests based on supervision and co-workers were significant at the .05 level. Omega-squared values were obtained for the two significant t tests, and the study concluded that either no significant sex differences in job satisfaction exist or that the differences wee not psychologically meaningful.

Some of the studies of job satisfaction have reported significant differences between the sexes. Centers and Bugental (1966) concluded that women placed more value on the social factors of work than did men, but that men valued the opportunity for self-expression in work more than did women. However, various other studies of job satisfaction reported no significant differences for the gender variable (Brief and Oliver, 1976; Brief, Rose and Aldag, 1977; Weaver, 1978). Hulin and Smith (1964) reported that gender was not as critical a factor as were several that covaried with gender (for example, pay and promotional opportunities).

Johnson, Smith and Tucker(1982) compared the JDI response format with a five point Likert style format to test for internal consistency,m test-retest reliability, and convergent and discriminant validities using a multitrait-multimethod (MTMM) matrix. The JDI was described by Vroom (1964), Robinson, Athanasiou, and Head (1969), and Price (1977) as the most carefully developed measure of job satisfaction. The purposes of this Johnson, et. al. study were to provide added information on the short-term stability of the JDI, to evaluate other psychometric properties of the presently used three point scale relative to a five point Likert-style scale, and to demonstrate the usefulness of the MTMM matrix for these comparisons. The subjects used were psychology students and the results supported continued use of the JDI in its original format since a five point Likert-type scale did not significantly improve the stability or the capacity to distinguish among the five subscales of the JDI.

Ward, Moseley and Ward (1986) examined job satisfaction of professional women accountants using a questionnaire based on the JDI. Their survey results indicated that female accountants appeared to be relatively satisfied with all aspects of their work environment . They indicated a very high level of satisfaction with co-workers and supervision and a moderately high level of satisfaction with the nature of their work. They were least satisfied with the pay and available promotional opportunities.

Brown and Corless (1990) used the JDI to survey accountants employed in governmental auditing positions. Their principal conclusions were that government auditors seemed to be very satisfied with their promotion opportunities and that the women auditors were satisfied with their pay. Both men and women were less than satisfied with supervision, co-workers, and the nature of their work.

Several behavioral research studies in accounting have indicated satisfaction is related to turnover (for example, Bullen, 1982; Bullen and Flamholtz, 1985; Dillard and Ferris, 1979; Fetyko, 1972; Harrell and Stahl, 1984; Istvan and Wollman, 1976; Lammers, 1975; Loeb and Gannon, 1972; Sorensen, 1967; Sorensen and Sorensen, 1974; White and Hellriegel, 1973). However, Aranya (1982) reported no association between job satisfaction and turnover.

METHODOLOGY

The method used to collect data for this investigation was a survey consisting of questionnaires mailed to a random sample of approximately 500 college and university accounting faculty members. The survey questionnaire included instructions for completing the Job Description Index (JDI), one page of demographic data, and a five point Likert scale for an overall measure of each of the five aspects of job satisfaction profiled in the JDI. The five main aspects are pay, promotion, supervision, co-workers, and environment (general nature of work).

The Job Description Index was initially developed in 1969 and is designed to elicit the extent of individual satisfaction concerning the work environment in five areas comprising 72 characteristics. The validity and scoring using this index has been examined in a number of research studies. The format of the JDI is that of brief descriptive words or phrases to obtain responses for specific aspects of work. The scoring system for the short descriptions is as follows: (1) Agreement (yes) responses to positive descriptions and disagreement (no) to negative descriptions receive scores of "3"; (2) Disagreement (no) responses to positive descriptions and agreement (yes) to negative descriptions receive scores of "0"; and Indecision (?) receive scores of 1. Scores are analyzed for each of the 72 characteristics by the demographic subgroups. The Likert scale was used to solicit respondents overall relative perception of job satisfaction and these results were correlated with the JDI scores.

ANALYSIS OF RESULTS

The principal research question examined the relative extent of reported job satisfaction reported by the responding accounting faculty. Results for each of the five aspects of work (72 individual characteristics) were analyzed principally using t tests related to the demographic data. The response rate was approximately 45%. The format of the analysis was to test for significant

differences in the scores for each of the job related categories. For example, one of the hypothesis tested was the following:

There is no difference between faculty at public versus private universities/colleges regarding the job satisfaction aspect of "supervision". The results of this study indicate that the JDI appears to provide a good measure of job satisfaction among accounting faculty, although the index is least effective at measuring the "environment" aspect of job satisfaction. The results indicate that accounting faculty are satisfied overall with most aspects of their jobs, with pay and promotion opportunities being aspects of least satisfaction. There are also some differing degrees of satisfaction among the demographic subgroup comparisons but more relative agreement than disagreement.

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EXCESS CASH HELD BY BIDDING FIRMS AS A POSSIBLE SOURCE OF STOCK PRICE REACTION IN MERGERS: AN EMPIRICAL INVESTIGATION

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ABSTRACT

This paper examines the stock price reaction at the announcement of merger by companies holding excess cash. Undistributed cash may motivate the managers of the companies to get involved in mergers and acquisitions even when the profitabilities of these investments are suspect. We found evidences that market interprets mergers by firms having higher level of free cash as low profit projects and accordingly at the announcement of merger by these companies, their shareholders suffer significantly negative returns. These evidences lend support to the theory that firms tend to spend their excess cash by acquiring other companies even when the projects are not profitable.

INTRODUCTION

Mergers and acquisitions by corporations are among the most visible signs of their organizational and structural changes. But these transactions also are major sources of controversy, because benefits of mergers are still not clearly understood. Effect of mergers on the value of the equity of the bidding and target firms have been the subject of extensive empirical research. Most of the merger studies report significant gain by the target firms' shareholders at the announcement of merger, but the evidence regarding the effect on the stock of the acquiring firms is not conclusive. Mandelker(1974), Haugen and Langetieg(1975), Langetieg(1978), and Asquith(1983) found positive but insignificant abnormal returns for shareholders of the bidding firms. On the other hand Dodd(1980), Asquith and Kim(1982), and Dennis and McConnell(1986) report significantly negative returns for the bidders. Eger(1983) investigated the effect of pure exchange mergers on the value of debt and equity of target and bidding firms. In that study stocks of the bidding firms did not show any excess returns at the announcement of mergers. Travlos(1987) did a comprehensive study by grouping bidders according to the payment method of the merger- cash financed and stock financed. Stockholders of the bidding firms in cash financed mergers experienced no abnormal gains or losses, but the results of the pure exchange mergers showed that the shareholders of the bidding firms experienced significant losses at the announcement of takeover proposal. Eckbo, Giammarino, and Heinkel(1990) developed a model incorporating the information asymmetries between bidders and targets to examine the effect of payment method on bidding firms' shareholders in corporate takeovers. They report that average announcement period abnormal return was significantly positive and higher for mixed offers than all cash or all stock mergers.

Contradictory findings may be due to the intermingling of variables or omission of some important characteristics of the bidder itself. Failure to isolate these variables will result in samples that are not sufficiently homogeneous, which makes the comparison between them difficult. According to the free cash flow theory advanced by Jensen (1986), excess cash available to bidders may be able to explain the motives of merger and market's reaction at the announcement of an acquisition. Free cash flow theory proposes that firms who have excess cash and who do not distribute it to their shareholders tend to waste their money on acquisitions which are mostly low or negative value producing investments. Conglomerate mergers generally take place between firms from unrelated industry groups and are undertaken when firms are looking to diversify their operations or when the firms just want a place to invest their money and increase the size of the firm. According to free cash flow theory, conglomerate will generate lower gains to the shareholders of the bidding firms, and this negative effect will be higher for firms with higher levels of distributable cash.

The purpose of this study is to investigate the sources of gain in a merger by examining the level of cash flow of the participating firms. In this study we will examine the role of excess cash as a possible source of observed stock price reactions of the bidding firms in a merger.

DATA AND METHODOLOGY

Mergers included in the study occurred between 1978-1990. The sample was selected from Mergers and Acquisition magazine where effective dates of merger and method of payments are given. Mergers financed by combinations of cash, stock, and/or debt were not included in the sample. Data from the Merger and Acquisition magazine were cross-checked with the information available in the Wall Street Journal Index(WSJI). Announcement dates of mergers were obtained from WSJI. Acquiring and acquired firms had to be listed on the NYSE, AMEX, or OTC. Their returns from -136 to +136 trading days relative to merger announcement date available on CRSP tapes. Firms engaged in any kind of restructuring(e.g., other merger activities, new offerings of securities, repurchases etc.) within six months of the announcement date, were excluded from the sample.

The relative sizes of the targets were also considered in selecting the sample. Relative size is defined as the ratio of the book value of the assets of the target to the book value of the assets of the bidder [Lev and Mandelker(1972)]. If a target firm is too small compared to acquiring firm, it is not expected to have impact on the performance of the merged company. For our study, following Choi and Philippatos(1983), if the relative size of the target was less than ten percent, it was excluded from the sample. The final sample contained 265 mergers.

We grouped the mergers according to the level of free cash flow(high free cash vs. low free cash) in the absence of any direct measure of free cash flow, we used financial "slack" as its proxy. Financial slack, defined by Myers and Majluf (1984) and previously used by Asquith and Mullins(1986) and Bruner(1988), is inverse of the net debt ratio which is computed as follows:

$$Net\ Debt\ Ratio = \frac{Net\ Debt}{Common\ Equity + Preferred\ Stock + Net\ Debt}$$

where, net debt = total debt - (cash + cash equivalents). The net debt ratio for each firm was divided by the industry average to get the "normalized" slack ratio. If the ratio is greater than one, the firm is slack poor, and if it is less than one it is slack rich. These ratios were calculated one year before the merger announcement dates. In all cases, book value of the assets were used.

The mean adjusted model was employed in the analysis of the security returns. Using a procedure similar to Jayaraman and Shastri(1988), abnormal returns and standardized abnormal returns were calculated. The estimation period was -136 to -16 days relative to the date of announcement date. The daily and cumulative excess returns during the test period, t=-15 to +15, was tested for statistical significance. The null hypothesis is that the mean excess return on the event day, which is the first public announcement day of merger, is zero. Abnormal returns were defined as:

$$A_{i,t} = R_{i,t} - \overline{R_i}$$

where $A_{i,t}$ = abnormal return on security I on day t
$R_{i,t}$ = return on security I on day t
$\overline{R_i}$ = mean return for security I

$$\overline{R_i} = \frac{1}{T}\sum_{t=1}^{T} R_{i,t}$$

T = number days in the estimation period

Standardized abnormal return for a security I on day t, $SA_{i,t}$, is calculated as:

$$SA_{i,t} = A_{i,t}/S_i$$

S_i = standard deviation of security I's return during the estimation period.

The test statistic Z_t is calculated as:

$$Z_t = \overline{SA_t}\sqrt{N}$$

$$\overline{SA_t} = \frac{1}{N}\sum_{i=1}^{N} SA_{i,t}$$

N = number of firms in the sample
The cumulative abnormal return(CAR) was computed over a period of t_1 to t_2, which is any interval of time during the test period. The CAR for a security I between two dates is given by:

$$CAR_i = \sum_{t_1}^{t_2} A_{i,t}$$

For a sample of N securities the mean CAR is:

$$CAR_{t_1,t_2} = \frac{1}{N} \sum_{i=1}^{N} CAR_i$$

The standardized CAR(SCAR) was calculated as:

$$SCAR_i = \frac{\sum_{t_1}^{t_2} SA_{i,t}}{\sqrt{t_2 - t_1 - 1}}$$

For N number of securities, the test statistic Z for the given period was determined as:

$$Z_{t_1,t_2} = \overline{SCAR}\sqrt{N}$$

$$\overline{SCAR} = \frac{1}{N} \sum_{i=1}^{N} SCAR_i$$

In order to identify the factors which effect the abnormal returns around merger announcement, we also ran a cross-sectional regression with CAR around event date(t=-1 to o) and also (t=-1 to +1) as the dependent variable and the following factors as independent variables: I) method of financing, ii) type of merger, iii) net debt ratio, iv) dividend payout ratio, v) growth rate of bidder, vi) post merger change in debt ratio, and excess debt capacity. The regression equation is given by:

$$CAR_{i,t_1,t_2} = a + b_1 D_1 + b_2 D_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + e_i$$

Among the independent variables, D_1 and D_2 are dummy variables. D_1= 1 if merger is financed by cash, zero if not. D_2 = 1 if merger is conglomerate, zero if not. Variable X_3 is the pre-merger net debt ratio of the bidding firm. Net debt ratio and 'slack' are inversely related, i.e., higher net debt ratio means lower level of free cash. Higher dividend payout ratio(X_4) reduces the level of cash at the discretion of corporate managers. So, following the argument of free cash flow theory higher payout ratio is expected to be associated with higher cumulative returns. For our study we calculated the dividend payout ratios of the bidder for two years prior to the merger announcement and averaged them. Growth rate of acquiring firms,

X_5, was calculated as the growth in stock price over two years prior to the merger. Merger by a growth company was expected to be a value producing transaction. Variable X_6 is the post-merger change in debt ratio. If leverage is expected to increase in the post merger period, it will force the managers to commit the cash flow to debt servicing. This would reduce the discretionary cash available to debt servicing. Excess debt capacity X_7, was calculated by subtracting the debt ratio of the industry of the bidder from the pre-merger combined debt ratio of the bidder and target, which was the sum of the total debt of the combined firms divided by their total assets. This was estimated two years prior to the merger announcement date. Excess debt capacity could be an indicator of higher liquidity.

EMPIRICAL RESULTS

Tables 1-7 report the abnormal returns earned by stockholders of the bidding firms around the merger announcement date. Results for the low and high free cash flow bidders are given in tables 1 and 2. For low free cash bidders, SAR is negative on the announcement day(Table 1) but it is not significant. For bidders with high levels of free cash(Table 2), SAR on day t=-1 and t=0 are -0.20(Z=-2.38) and -0.29(Z= -3.44) respectively. They are significant at .02 and .01 level.

Table 1

Daily Average Standardized Abnormal Returns (SAR) and Standardized Cumulative Abnormal Returns (SCAR) of Bidding firms (N=127) having lower level of free cash, from 15 days before and 15 days after the merger announcement (day zero) date.

Day	SAR%	Z	SCAR%	Z
-15	0.05	0.59	0.05	0.59
-14	0.09	0.99	0.10	1.11
-13	-0.06	-0.65	0.05	0.54
-12	0.06	0.65	0.07	0.79
-11	-0.08	-0.95	0.02	0.28
-10	-0.16	-1.79	-0.04	-0.48
-9	-0.09	-1.07	-0.07	-0.84
-8	0.04	0.50	-0.05	-0.61
-7	-0.11	-1.22	-0.09	-0.98
-6	-0.08	-0.95	-0.11	-1.23
-5	0.04	0.44	-0.09	-1.05
-4	0.09	1.01	-0.06	-0.71
-3	-0.03	-0.29	-0.07	-0.76
-2	0.06	0.65	-0.05	-0.56
-1	-0.35	-3.89	-0.14	-1.55
0	-0.06	-0.71	-0.51	-1.68
+1	-0.16	-1.81	-0.18	-2.06
+2	0.13	1.44	-0.15	-1.67
+3	0.01	0.11	-0.14	-1.60
+4	0.21	2.38	-0.09	-1.03
+5	-0.001	-0.01	-0.09	-1.01
+6	-0.05	-0.14	-0.09	-1.01
+7	-0.04	0.40	-0.08	-0.91
+8	-0.01	-0.15	-0.08	-0.92
+9	-0.07	-0.83	-0.09	-1.07
+10	-0.03	-0.39	-0.10	-1.12
+11	0.16	1.84	-0.07	-0.75
+12	-0.13	-1.49	-0.09	-1.02
+13	0.12	1.41	-0.07	-0.74
+14	0.12	1.35	-0.04	-0.48
+15	0.02	0.18	-0.04	-0.44

Table 2

Daily Average Standardized Abnormal Returns (SAR) and Standardized Cumulative Abnormal Returns (SCAR) of Bidding firms (N=138) having lower level of free cash, from 15 days before and 15 days after the merger announcement (day zero) date.

Day	SAR%	Z	SCAR%	Z
-15	0.05	0.61	0.05	0.61
-14	0.07	0.85	0.09	1.03
-13	-0.08	-0.88	0.03	0.33
-12	-0.02	-0.19	0.02	0.19
-11	-0.06	-0.67	-0.01	-0.13
-10	0.14	1.66	0.05	0.56
-9	-0.05	-0.61	0.02	0.29
-8	0.07	0.79	0.05	0.55
-7	0.03	0.31	0.05	0.62
-6	-0.05	-0.61	0.03	0.39
-5	0.10	1.16	0.06	0.73
-4	-0.21	-2.52	-0.002	-0.03
-3	0.04	0.46	0.01	0.10
-2	0.03	0.31	0.02	0.18
-1	-0.20	-2.38**	-0.04	-0.44
0	-0.29	-3.44***	-0.11	-1.29
+1	0.01	0.15	-0.10	-1.21
+2	0.14	1.62	0.07	-0.80
+3	0.04	0.44	-0.06	-0.68
+4	-0.14	-1.59	-0.09	-1.02
+5	0.07	0.85	-0.07	-0.81
+6	-0.05	-0.60	-0.08	-0.91
+7	-0.04	-0.41	-0.08	-0.98
+8	-0.06	-0.73	-0.09	-1.11
+9	-0.06	-0.70	-0.10	-1.22
+10	0.22	2.55	-0.06	-0.70
+11	-0.004	-0.05	-0.06	-0.70
+12	0.07	0.83	-0.04	-0.53
+13	0.19	2.31	-0.01	-0.09
+14	0.06	0.67	0.002	0.04
+15	0.02	0.31	0.01	0.09

***Significant at .01 level
**Significant at .05 level

When methods of financing and levels of free cash are considered together, it is found that in cash financed mergers, bidders with high free cash(Table 3) earn positive but insignificant abnormal returns during the period t= -3 to t= +3. SCARS for the portfolio are positive from t= -15 to t = +15. For high free cash bidders in stock financed mergers(Table 4), SAR on t= -1 is -0.52(Z= -4.06) and on t =0 it is -0.69(Z= -5.31). Both are significant at .01 level. Abnormal returns earned by low free cash bidders in stock financed mergers(Table 5) are also negative but the losses are lower than the high free cash bidders with same method of payment. We conclude that stock financing does not lower the agency cost of free cash, so stock financing by high free cash bidder is viewed more negatively than stock financing by cash poor bidders.

Table 3

Daily Average Standardized Abnormal Returns (SAR) and Standardized Cumulative Abnormal Returns (SCAR) of Bidding firms (N=78) having higher level of free cash, in cash financed mergers, from 15 days before and 15 days after the merger announcement (day zero) date.

Day	SAR%	Z	SCAR%	Z
-15	0.09	0.77	0.09	0.77
-14	0.01	0.08	0.07	0.60
-13	-0.01	-0.07	0.05	0.45
-12	0.08	0.73	0.09	0.75
-11	0.12	1.04	0.13	1.13
-10	0.09	0.82	0.16	1.37
-9	-0.13	-1.12	0.10	0.85
-8	0.09	0.83	0.12	1.09
-7	-0.08	-0.68	0.09	0.80
-6	-0.03	-0.29	0.08	0.67
-5	-0.01	-0.10	0.07	0.60
-4	-0.16	-1.39	0.02	0.18
-3	0.10	0.87	0.05	0.41
-2	0.03	0.26	0.05	0.47
-1	0.05	0.40	0.06	0.55
0	0.01	0.07	0.06	0.55
+1	0.19	1.70	0.11	0.95
+2	0.26	2.33	0.17	1.47
+3	0.13	1.14	0.19	1.70
+4	-0.04	-0.32	0.18	1.58
+5	0.27	2.42	0.23	2.07
+6	-0.11	-0.96	0.21	1.82
+7	-0.09	-0.76	0.18	1.62
+8	-0.07	-0.61	0.17	1.46
+9	0.05	0.47	0.17	1.53
+10	0.35	3.12	0.24	2.11
+11	0.05	0.42	0.24	2.15
+12	0.08	0.70	0.25	2.24
+13	0.26	2.25	0.30	2.62
+14	0.19	1.67	0.33	2.88
+15	0.11	1.00	0.34	3.01

Table 4

Daily Average Standardized Abnormal Returns (SAR) and Standardized Cumulative Abnormal Returns (SCAR) of Bidding firms (N=60) having lower level of free cash, in stock financed mergers, from 15 days before and 15 days after the merger announcement (day zero) date.

Day	SAR%	Z	SCAR%	Z
-15	0.01	0.05	0.01	0.01
-14	0.16	1.20	0.11	0.88
-13	-0.16	-1.26	-0.001	-0.01
-12	-0.15	-1.13	-0.07	-0.57
-11	-0.29	-2.21	-0.19	-1.50
-10	0.20	1.58	-0.09	-0.72
-9	0.05	0.36	-0.07	-0.53
-8	0.03	0.25	-0.05	-0.41
-7	0.16	1.25	0.004	0.03
-6	-0.08	-0.60	-0.02	-0.16
-5	0.24	1.88	0.05	0.41
-4	-0.29	-2.24	-0.03	-0.25
-3	-0.04	-0.30	-0.04	-0.32
-2	0.02	0.18	-0.03	-0.26
-1	-0.52	-4.06***	-0.17	-1.30
0	-0.69	-5.31***	-0.33	-2.57
+1	0.22	-1.71	-0.38	-2.92
+2	-0.03	-0.21	-0.37	-2.89
+3	-0.08	-0.64	-0.38	-2.96
+4	-0.26	-2.05	-0.43	-3.34
+5	-0.19	-1.47	-0.46	-3.58
+6	0.02	0.19	-0.45	-3.46
+7	0.03	0.24	-0.43	-3.33
+8	-0.05	-0.41	-0.43	-3.35
+9	-0.21	-1.59	-0.46	-3.60
+10	0.04	0.32	-0.45	-3.46
+11	-0.07	-0.55	-0.45	-3.51
+12	0.06	-0.47	-0.43	-3.35
+13	0.12	0.93	-0.40	-3.12
+14	-0.11	-0.89	-0.42	-3.23
+15	-0.09	-0.67	-0.43	-3.30

Table 5

Daily Average Standardized Abnormal Returns (SAR) and Standardized Cumulative Abnormal Returns (SCAR) of Bidding firms (N=46) having lower level of free cash, from 15 days before and 15 days after the merger announcement (day zero) date.

Day	SAR%	Z	SCAR%	Z
-15	0.02	0.12	0.02	0.12
-14	-0.02	-0.17	-0.004	-0.03
-13	-0.29	-1.95	-0.17	-1.15
-12	-0.12	-0.84	-0.21	-1.42
-11	-0.06	-0.39	-0.21	-1.44
-10	-0.18	-1.20	-0.27	-1.82
-9	-0.23	-1.58	-0.33	-2.27
-8	-0.01	-0.07	-0.32	-2.15
-7	-0.02	-0.12	-0.30	-2.07
-6	-0.002	-0.01	-0.29	-1.96
-5	0.17	1.15	-0.22	-1.52
-4	0.20	1.32	-0.16	-1.08
-3	-0.07	-0.46	-0.17	-1.16
-2	0.17	1.18	-0.12	-0.80
-1	-0.36	-2.44**	-0.21	-1.41
0	-0.46	-3.09***	-0.31	-2.13
+1	-0.43	-2.90	-0.41	-2.77
+2	-0.06	-0.43	-0.41	-2.79
+3	-0.08	-0.52	-0.42	-2.84
+4	0.07	0.49	-0.39	-2.66
+5	-0.20	-1.33	-0.43	-2.88
+6	0.18	1.25	-0.38	-2.55
+7	0.11	0.72	-0.35	-2.34
+8	-0.15	-1.00	-0.37	-2.50
+9	-0.12	-0.84	-0.39	-2.62
+10	-0.12	-0.81	-0.40	-2.73
+11	-0.08	-0.57	-0.41	-2.78
+12	-0.11	-0.75	-0.42	-2.88
+13	0.08	0.56	-0.40	-2.72
+14	0.18	1.23	-0.36	-2.45
+15	-0.22	-1.15	-0.39	-2.67

***Significant at .01 level
**Significant at .02 level

We also grouped the mergers by their type and levels of free cash. For high free cash bidders in conglomerate mergers(Table 6), SAR= -0.26 and on day t= -1, which is significant at .05 level (Z= -2.24). On day t=0, SAR=-0.64, significant at .01 level(Z= -5.56). SCARS are negative from t=0 to t= +15. For high free cash non-conglomerate bidders(Table 7), SAR= -0.14 on day t= -1, but it is not statistically significant. On days t=0 to t=+2, SARS are positive but not significant. This supports the predictions of the free cash flow theory that conglomerate mergers for high free cash bidders are generally low benefit acquisitions.

Table 6

Daily Average Standardized Abnormal Returns (SAR) and Standardized Cumulative Abnormal Returns (SCAR) of Bidding firms (N=76) having higher level of free cash, in conglomerate mergers, from 15 days after the merger announcement (day zero) date.

Day	SAR%	Z	SCAR%	Z
-15	-0.02	-0.22	-0.02	-0.22
-14	0.09	0.82	0.05	0.43
-13	-0.07	-0.64	-0.002	-0.02
-12	0.01	0.08	0.003	0.02
-11	-0.07	-0.57	-0.03	-0.24
-10	0.13	1.15	0.03	0.26
-9	-0.17	-1.48	-0.04	-0.32
-8	-0.06	-0.50	-0.06	-0.48
-7	-0.03	-0.30	-0.06	-0.55
-6	-0.01	-0.12	-0.06	-0.56
-5	0.11	1.00	-0.03	-0.23
-4	-0.24	-2.13	-0.10	-0.84
-3	-0.03	-0.27	-0.10	-0.88
-2	-0.01	-0.06	-0.10	-0.86
-1	-0.26	-2.24**	-0.16	-1.41
0	-0.64	-5.56***	-0.32	-2.76
+1	0.02	0.17	-0.30	-2.64
+2	0.02	0.15	-0.30	-2.53
+3	0.15	1.32	-0.25	-2.16
+4	-0.14	-1.24	-0.27	-2.38
+5	0.13	1.11	-0.24	-2.08
+6	-0.01	-0.07	-0.23	-2.05
+7	-0.12	-1.05	-0.26	-2.22
+8	-0.03	-0.30	-0.26	-2.24
+9	-0.15	-1.34	-0.28	-2.46
+10	0.12	1.04	-0.25	-2.21
+11	-0.02	-0.18	-0.25	-2.20
+12	-0.06	-0.52	-0.26	-2.26
+13	0.14	1.20	-0.23	-2.00
+14	0.07	0.62	-0.21	-1.85
+15	0.08	0.66	-0.20	-1.71

***Significant at .01 level
**Significant at .05 level

Table 7

Daily Average Standardized Abnormal Returns (SAR) and Standardized Cumulative Abnormal Returns (SCAR) of Bidding firms (N=62) having higher level of free cash, in non conglomerate mergers, from 15 days before and 15 days after the merger announcement (day zero) date.

Day	SAR%	Z	SCAR%	Z
-15	0.15	1.14	0.15	1.14
-14	0.05	0.36	0.14	1.06
-13	-0.08	-0.61	0.07	0.52
-12	-0.05	-0.38	0.03	0.26
-11	-0.05	1.20	0.01	0.07
-10	0.15	0.74	0.07	0.55
-9	0.09	1.74	0.10	0.79
-8	0.22	0.79	0.17	1.35
-7	0.10	-0.78	0.20	1.54
-6	-0.10	0.63	0.15	1.21
-5	0.08	-1.40	0.17	1.35
-4	-0.18	0.98	0.11	0.88
-3	0.12	0.54	0.14	1.12
-2	0.07	-1.07	0.16	1.22
-1	-0.14	1.02	0.12	0.91
0	0.13	0.03	0.14	1.13
+1	0.004	2.25	0.14	1.11
+2	0.29	-0.80	0.20	1.61
+3	-0.10	-1.00	0.18	1.38
+4	-0.13	0.04	0.14	1.12
+5	0.01	-0.82	0.14	1.10
+6	-0.10	0.55	0.11	0.90
+7	0.07	-0.75	0.13	1.00
+8	-0.09	0.44	0.10	0.83
+9	0.06	2.66	0.11	0.90
+10	0.34	0.13	0.18	1.40
+11	0.02	1.82	0.18	1.40
+12	0.23	2.11	0.22	1.72
+13	0.27	0.32	0.21	2.08
+14	0.04	-0.27	0.27	2.11
+15	-0.03	-0.67	0.26	2.02

To further investigate the price effect of merger announcement on the stock price of the acquiring company, we ran two cross sectional regressions: one with cumulative abnormal return (CAR) from day t=-1 to t=+1, and another with CAR from t=-1 to t=0 as dependent variable. The results of the regression are reported in table 8. Regression 1(CAR from t=-1 to t=+1) indicate that the only significant variables are financing method and net debt ratio. The coefficient of dummy variable representing cash financing is significantly positive. The coefficient of net debt ratio(b_3) is significantly negative at .05 level(Z= -2.16). Higher net debt ratio implies lower cash position. When these two results are considered in combination, it supports the postulates of free cash flow theory

that cash financing by low liquidity firms is viewed as negative, while cash financing by firms with excess cash results in non-negative returns. When we regressed CAR from t=-1 to t=0, only the financing variable was found to be significant.

Table 8

Results of Regression of Cumulative Abnormal Return on the Method of Financing, Type of Merger, Net Debt Ratio, Growth of Bidder, Dividend Payout Ratio, and Post-Merger Change in Leverage. In Regression 1, CAR is Calculated for Days -1 to +1, and in Regression 2, it is Calculated from Days -1 to 0 Relative to the Announcement Date.

$$CAR = a + b_1D_1 + b_2D_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7$$

	a	b_1	b_2	b_3	b_4	b_5	b_6	b_7	R^2	F	PR>F
Regression 1:	-.02	.03	-.002	-.008	-.001	-.001	-.001	-.001	.085	3.44	.001
	(-2.94)**	(4.34)**	(-.37)	(-2.17)*	(-.71)	(-.55)	(-.55)	(-.75)			
Regression 2:	-.02	.02	-.003	-.005	-.001	-.001	-.001	-.0008	.051	1.98	.057
	(-2.75)	(3.29)**	(-.43)	(-1.32)	(-.51)	(-.66)	(-.05)	(-.51)			

** Significant at .01 level
* Significant at .05 level

CONCLUSION

The purpose of this study was to examine whether excess cash at the hands of the managers of the acquiring firms affects the stock price reaction on around the merger announcement date. Free cash flow theory postulates that when a firm has higher level of undistributed cash, there is a relatively higher probability that they will be less careful in selecting their acquisitions and the cash will be invested in low profit projects.

We grouped the mergers by the levels of excess of bidders. Abnormal return for low free cash bidders was not significant on the announcement date, but for bidders with excess cash, abnormal returns were significantly negative one day before the announcement and on the announcement date.

Cash financing reduces cash while stock financing does not. To study the agency problem of free cash, we compared excess return earned in stock financed mergers by high and low free cash bidders. Though abnormal returns are negative in both cases, losses for high free cash bidders are higher.

Free cash flow theory suggests that mergers between unrelated businesses are low benefit transactions. Since conglomerate mergers fit this description, we examined their equity returns at the announcement of merger. In conglomerate mergers, for bidders with excess cash, abnormal returns on days t=-1 and t=0 were found to be significantly negative at .05 and .01 level respectively. But for non-conglomerates with excess cash, return on day t=0 was positive but statistically insignificant.

In the cross-sectional regression with cumulative abnormal return from day -1 to +1 as the dependent variable, coefficients of the method of payment and pre-merger net debt ratio were found

to be significant. The coefficient by cash financing is positive. The coefficient of net debt ratio is negative.

The above findings lend support to the predictions of free cash flow theory. It indicates that excess cash may motivate managers to seek external growth for the sake of growth in size only.

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STUDY OF THE STOCK PRICE REACTION AT MERGER ANNOUNCEMENT AS A PREDICTOR OF THE POST MERGER PERFORMANCE OF THE MERGED COMPANY

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ABSTRACT

This study examines the correlation between stock price reaction at the announcement of merger and the post merger operating performance of the merged companies. In case of stock financed mergers the findings lend support that equity returns around merger announcement are indicators of future profitability of merged companies. For the total sample we observed decline in all of the accounting measures in the post merger period, but none of these changes were statistically significant.

INTRODUCTION

Most of the merger studies used change in stock prices around the merger announcement date as a change in stockholders' wealth and also as a measure of the efficiency of the merger. This is the traditional approach. But measurement of "wealth" by changes in stock prices around the announcement date may be flawed. Stock price around the announcement date may go up or down just because of signaling conveyed by the merger without any permanent change in the value or efficiency of the company. According to Scherer(1988) and Caves(1989), real consequences of merger may be difficult to measure by stock market reaction only. In order to fully investigate the consequences of merger, we propose to study the changes in shareholders' wealth by studying the changes in stock price in conjunction the study of subsequent changes in operating performance.

DATA AND METHODOLOGY

In our study we use the following variables which typically measure the operating efficiency. All variables will be estimated for year -1 relative to the announcement date, and for years +1 and +2 relative to the effective date of merger.

1. Ratio of Operating Cash Flow to Sales: This is the ratio EBITDA(Earnings Before Interest Taxes, Depreciation and Amortization). EBITDA is calculated as net sales minus costs of goods sold and other operating expenses(before depreciation).

2. Ratio of Operating Profit to Total Assets: We will use book value of assets for our calculation. Some researchers argue that book value may go up just because of the way merger accounting is done, for example pooling vs. purchase. To avoid this problem, following a procedure similar to Opler and Weston(1991), we will determine the post-merger assets by adding post-merger capital expenditures and increase in networking capital to the pre-merger book value of the total assets of the merging firms.
3. Asset Turnover: It is the ratio of sales to total assets. This ratio measures asset utilization. A high post merger ratio will indicate efficient utilization of assets, and a low ratio will indicate inefficiency or idle capacity.

All cash flow variables are measured before taxes. Accounting method(purchase vs. pooling) and financing method affect the taxes to be paid. So the use of pre-tax cash flow will help reduce the effect.

Mergers included in the study occurred between 1978-1990. The sample was selected from Mergers and Acquisition magazine where effective dates of merger and method of payments are given. Mergers financed by combinations of cash, stock, and/or debt were not included in the sample. Data from the Merger and Acquisition magazine were cross-checked with the information available in the Wall Street Journal Index(WSJI). Announcement dates of mergers were obtained from WSJI. During the two years after the merger, some of the bidders were themselves taken over or filed for bankruptcy, and some went private. They were excluded from the sample. Some bidders were involved in multiple mergers during our study period. Since we collected accounting data over two years after the merger, any firm engaged in merger within three years of the previous acquisitions was excluded from the sample. Our final sample contains a total of 90 mergers.

Accounting data were collected from Moody's Industrial Manual. Data for capital expenditure and changes in net working capital were obtained from 10K and annual reports filed with SEC. In this study we measured the percentage change in the accounting variables mentioned from one year before the merger announcement(year -1) to years +1 and +2 after the merger completion date. Following Kaplan(1989), the pre- and post-merger accounting measures were adjusted for industry effects. Industry data were collected from Robert Morris Associates(RMA) financial statistics. Significance of the change was estimated by a two-tailed t-test, where the test statistic is:

$$t = \sqrt{N} \frac{Mean\ \ percentage\ \ change}{standard\ \ deviation\ \ of\ \ change}$$

where, N = number of observations.

To examine whether stock price reactions around merger announcements reflect the post merger performance of the company, the accounting variables were regressed on the cumulative excess return(CAR) over days -1 to 0, where t = 0 is the merger announcement date:

$$Y_i = A_i + B_i(CAR_{-1,0})$$

here Y_i is a post merger accounting variable. The CAR for a security between two dates is given by the sum of daily abnormal returns during the period:

$$CAR_i = \sum_{t_1}^{t_2} A_{i,t}$$

Abnormal return $A_{i,t}$ is defined as:

$$A_{i,t} = R_{i,t} - \overline{R_i}$$

where, $R_{i,t}$ = return on a security on day t, $\overline{\boldsymbol{R}}$ = mean return for the security.
For a sample of N securities the mean CAR is:

$$CAR_{t_1,t_2} = \frac{1}{N} \sum_{i=1}^{i=N} CAR_i$$

The regression was repeated for each accounting variable for each of the two post merger years. Significance was tested by a two-tailed t-test. Since it is postulated that cash rich firms tend to waste their money on low or negative value acquisitions[Jensen (1986)], we attempted to investigate the relationship between post-merger operating performance and pre-merger excess cash or 'slack' of the bidder. In the absence of any direct measure of free cash flow, we used financial "slack" as defined by Myers and Majluf(1984). Slack is defined as the inverse of net debt ratio where net debt ratio is computed as follows:

$$Net\ debt\ ratio = \frac{net\ debt}{common\ equity + preferred\ stock + net\ debt}$$

Net debt = total debt -(cash + cash equivalents). We will run this following cross-sectional regression:

$$Y_i = A_i + B_i(slack)$$

where Y_i is the post merger performance measured by any of the three accounting variables mentioned before. This regression was repeated for each variable and each of the two post-merger years.

EMPIRICAL RESULTS

Table 1 shows the percentage change in operating cash flow over sales. We report both unadjusted and industry adjusted changes. Except for non-conglomerate mergers, all other samples experienced a decline in their operating margin. Industry adjusted changes for non-conglomerates are positive but nonsignificant from year -1 to +1. Changes from year -1 to +2 are positive (17.87%) and significant at 0.05 level.

Table 1

Percentage Change in Operating Cash Flow Over
Sales for the Years -1 to +1 and -1 to +2
Relative to the Year of Announcement.
Figures in the Parenthesis are Adjusted
for the Change in the Industry Average

Merger Sample	N	-1 to +1	t	-1 to +2	t
Total Sample	**90**	**1.8% (-1.46%)**	**0.28 (-0.17)**	**5.3% (-1.04%)**	**0.96 (-0.11)**
Cash Financed	**62**	**-0.05% (-5.98%)**	**-0.06 (-0.52)**	**6.4% (-6.65%)**	**0.91 (-0.53)**
Stock Financed	**28**	**-7.16% (-8.53%)**	**-1.08 (-0.77)**	**2.9% (-**	**0.33 (-1.02)**
Conglomerate	**41**	**-5.28% (-**	**-0.61 (-0.86)**	**-2.4% (-**	**-0.34 (-1.36)**
Non-conglomerate	**49**	**7.8% (8.45%)**	**0.84 (0.95)**	**11.8% (17.87%)**	**1.43 (2.17)**
Low Free Cash	**38**	**8.42% (1.7%)**	**0.80 (0.10)**	**6.61% (-7.25%)**	**0.71 (-0.41)**
High Free Cash	**52**	**-2.95% (-3.78%)**	**-0.36 (-0.40)**	**4.3% (3.58%)**	**0.64 (0.38)**

Percentage change in total asset turnover(Table 2) is negative for both time intervals for all samples. For the total sample and for stock financed mergers, these changes are significant at .05 during these periods. In case of low and high free cash firms, these changes are significant at .10 level, and for cash financed sample and conglomerate mergers, changes are not statistically significant. Non-conglomerate mergers shows most decline, where changes are significant at .01 level.

Table 2

Percentage Change in Total Asset Turnover for the
Years -1 to +1 and -1 to +2
Relative to the Year of Announcement.
Figures in the Parenthesis are Adjusted for the
Change in the Industry Average

Merger Sample	**N**	**-1 to +1**	**t**	**-1 to +2**	**t**
Total Sample	**90**	**-6.06% (-7.59%)**	**-2.37 (-2.65)****	**-6.04% (-8.67%)**	**-1.91 (-2.53)****
Cash Financed	**62**	**-2.93% (-5.01%)**	**-0.90 (-1.41)**	**-2.96% (-3.04%)**	**-0.73 (-0.74)**
Stock Financed	**28**	**-12.99% (-**	**-3.45 (-2.85)****	**-12.74% (-**	**-2.67 (-3.67)****
Conglomerate	**41**	**-0.03% (-0.95%)**	**-0.09 (0.22)**	**1.25% (-0.06%)**	**0.26 (-0.01)**
Non-conglomerate	**49**	**-10.85% (-**	**-3.16 (-4.08)*****	**-12.26% (-**	**-3.02 (-3.55)****
Low Free Cash	**38**	**-5.09% (-8.59%)**	**-1.2 (-2.08)***	**-4.24% (-**	**-0.81 (-1.84)***
High Free Cash	**52**	**-6.76% (-6.86%)**	**-2.11 (-1.73)***	**-7.37% (-7.3%)**	**-1.87 (-1.72)***

***Significant at .01 level
**Significant at .05 level
*Significant at .10 level

Industry adjusted changes in operating cash flow over assets are negative in all cases(Table 3), but they are significant only in period -1 to +2 for conglomerates(.05 level) and for low free cash bidder(.10 level).

Table 3

Percentage Change in Operating Cash Flow
Over Total Asset -1 to +1 and -1 to +2
Relative to the Year of Announcement.
Figures in the Parenthesis are Adjusted
for the Change in the Industry Average

Merger Sample	N	-1 to +1	t	-1 to +2	t
Total Sample	**90**	**-0.07% (-4.33%)**	**-0.11 (-0.47)**	**-3.39% (-7.04%)**	**-0.60 (-0.70)**
Cash Financed	**62**	**1.78% (-3.88%)**	**-0.19 (-0.32)**	**0.14% (-6.95%)**	**0.01 (-0.51)**
Stock Financed	**28**	**-6.36% (-5.34%)**	**-0.94 (-0.40)**	**-10.93% (-7.25%)**	**-1.45 (-0.65%)**
Conglomerate	**41**	**-1.84% (-7.95%)**	**-0.21 (-0.48)**	**-1.76% (-**	**-0.20 (-1.98)****
Non-conglomerate	**49**	**0.15% (-1.3%)**	**0.01 (-0.13)**	**-4.8% (3.3%)**	**-0.63 (0.40)**
Low Free Cash	**38**	**8.69% (-3.04%)**	**0.71 (-0.17)**	**-3.3% (-**	**-0.36 (-1.78)***
High Free Cash	**52**	**-7.66% (-5.28%)**	**-1.07 (-0.55)**	**-3.44% (-0.47%)**	**-(0.48) (-0.05)**

***Significant at .01 level
**Significant at .05 level
*Significant at .10 level

To understand and investigate the relationship between accounting variables and equity return around the merger announcement, we ran a series of cross-sectional regressions with a two day(day -1 to 0 relative to the announcement day) cumulative abnormal return(CAR) as the independent variable. Each of the accounting variables were regressed at a time. For the total sample we observed a positive correlation(Table 4), but none of it is statistically significant. Accounting variables were also regressed on the net debt ratio as the as the independent variable. Again, the correlations were found to be non significant.

Table 4

Results of the Regression Analysis for the Total Sample
Figures in the Parenthesis are t-values

A. Cumulative Abnormal Return (CAR) from day -1 to 0 as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	0.001 0.001	1.42 (0.73) 1.02 (0.49)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	-0.07 -0.08	0.67 (1.04) 0.93 (1.22)
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	-0.02 -0.05	2.36 (1.15) 1.25 (0.55)

B. Pre-Merger Net Debt Ratio as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	-0.06 -0.12	0.11 (0.23) 0.25 (0.52)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	-0.02 -0.04	-0.13 (-0.87) -0.11 (-0.58)
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	-0.10 -0.10	0.12 (0.25) 0.08 (0.15)

The same series of regressions were run by stratifying the sample into several homogeneous groups. For cash financed mergers we could not detect any meaningful relationship between post-merger accounting performance and the CAR or net debt ratio(Table 5). For the stock financed mergers(Table 6), for period one, two the accounting variables are found to have significant correlation(.01 level) with CAR. CAR for the bidders in stock financed mergers are reported to be negative by Travlos(1987). This finding indicates that abnormal return around stock financed mergers may be able to forecast the post-merger profitability of the merged companies. Relationship between free cash and change in operating margin is significant at .10 level for period one.

Table 5

Results of the Regression Analysis for Cash Financed Mergers
Figures in the Parenthesis are t-values

A. Cumulative Abnormal Return (CAR) from day -1 to 0 as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	-0.06 -0.07	-0.07 (-.03) -0.004(-0.002)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	-0.05 -0.03	-0.05 (-0.07) 0.13 (0.14)
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	-0.03 -0.07	0.39 (0.15) -0.06 (-0.02)

B. Pre-Merger Net Debt Ratio as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	0.09 -0.05	-0.35 (-0.54) -0.04 (-0.14)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	0.03 0.001	-0.18 (-0.86) -0.07 (-0.30)
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	0.11 0.04	-0.34(-0.50) -0.25(-0.31)

Table 6

Results of the Regression Analysis for Stock Financed Mergers
Figures in the Parenthesis are t-values

A. Cumulative Abnormal Return (CAR) from day -1 to 0 as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	0.25 0.24	6.69 (2.79)*** 5.26 (2.09)**
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	-0.09 -0.17	1.68 (1.51) 1.70 (1.27)
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	0.14 0.05	7.72 (2.61)*** 4.82 (1.85)*

B. Pre-Merger Net Debt Ratio as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	-0.26 -0.20	-0.90 (1.84)* -0.82 (1.66)*
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	-0.08 -0.09	-0.14 (-0.65) -0.30 (-1.17)
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	-0.36 -0.28	0.79 (1.29) 0.45 (1.06)

No significant relationship could be detected in cases of conglomerate mergers(Table 7), but for non-conglomerates (Table 8) the independent variables are found to have significant relationship with asset turnover(.01 level) and operating margin on asset(.10 level). Relationship net debt ratio is negative and significant for asset turnover ratio.

Table 7

Results of the Regression Analysis for Conglomerate Mergers
Figures in the Parenthesis are t-values

A. Cumulative Abnormal Return (CAR) from day -1 to 0 as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	-0.13 -0.23	0.05 (0.02) -0.17(-0.04)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	0.006 -0.01	-0.18 (-0.19) -0.90 (-0.82)
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	-0.08 -0.22	-0.04 (-0.01) -1.49 (-0.34)

B. Pre-Merger Net Debt Ratio as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	-0.54 -0.42	0.96 (1.13) 0.45 (0.48)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	-0.10 -0.19	0.27 (1.16) 0.45 (1.68)*
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	-0.59 -0.53	1.21 (1.36) 0.80 (0.75)

Table 8

Results of the Regression Analysis for Non-Conglomerate Mergers
Figures in the Parenthesis are t-values

A. Cumulative Abnormal Return (CAR) from day -1 to 0 as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	0.09 0.18	1.97 (0.94) 0.71 (0.37)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	-0.14 -0.14	2.10 (2.63)*** 3.31 (3.50)***
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	0.01 0.05	4.53 (1.98)** 3.11 (1.67)*

B. Pre-Merger Net Debt Ratio as the Independent Variable

Dependent Variable	Period	Intercept	Coefficient
Percentage Change in Operating Margin	-1 to +1 -1 to +2	0.30 0.12	-0.50 (-1.11) 0.14 (0.33)
Percentage Change in Asset Turnover	-1 to +1 -1 to +2	0.03 0.06	-0.42(-2.43)** -0.53 (-2.41)**
Percentage Change in Operating Cash Over Asset	-1 to +1 -1 to +2	0.26 0.21	-0.66 (-1.30) -0.44 (-1.05)

***Significant at .01 level
**Significant at .05 level
*Significant at .10 level

CONCLUSION

The evidence presented in this paper attempts to identify the relationship between equity return around merger announcement and post merger accounting variables. In case of stock financed mergers the findings lend support that equity returns may be an indicator of future profitability of merged companies. For the total sample we observed a decline in all of the accounting measures in the post merger period. But none of these changes were statistically significant. Two other studies that examined the relationship between stock price reaction and accounting performance are by Opler and Weston(1991) and Healy, Palepu, and Ruback(1992). Opler and Weston used Spearman Rank Correlation and found a positive relationship between accounting performance and equity return. But their study did not use a homogeneous sample. So the effect of merger type, financing method, or level of free cash was not investigated. Healy et.al.(1992) only used 50 of the largest mergers for

their study and found a positive relationship between operating performance and merger induced equity return. Their sample lacks diversity in size and also, is not homogeneous.

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ENVIRONMENTAL FACTORS INFLUENCING THE DEVELOPMENT AND PRACTICE OF FINANCIAL REPORTING IN JORDAN

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ABSTRACT

Research has shown that the development of accounting tends to be a function of environmental factors. It is influenced by and reflects the unique characteristics of each country's environment. This paper examines the major environmental influences on accounting in Jordan. It describes the cultural, economic, political, educational and professional factors and their effect on the development and practice of financial reporting in Jordan. The paper also examines the current changes promulgated by the government in its bid to liberalize the economy and encourage domestic and foreign investment and how these changes have impacted on financial reporting.

INTRODUCTION

Accounting is a product of the environment in which it operates and is a force for changing it. Accounting systems throughout the world have changed as the environments they serve have changed moving sequentially from the more rudimentary to the more complex and sophisticated. Arpan and Radebaugh (1985, p.13) state that:

> "Like other business practices, accounting is to a large extent environmentally bound. That is, it is shaped by and reflects particular characteristics unique to each country's environment. The list of these characteristics is virtually infinite, ranging from personal traits and values to institutional arrangements, and can even extend to climatic and geographical factors."

Culture has been defined by Hofstede (1980, p. 25) as "the collective programming of the mind which distinguishes the members of one human group from another". The word "culture" is reserved for societies as a whole, or nations, whereas "subculture" is used for the level of an organization, profession or family.

The society's attitude towards the accounting profession is negative. First the profession is not well paid and secondly the profession is held in low esteem as somehow being disreputable. The people practice accounting are not respected also because many of them have low or unsuitable education (i.e., they are practicing accounting while being educated in other subjects and having no formal degree or training in accounting, in other words, accounting profession is a public area). The public notion of accounting among people is no more than adding and subtracting numbers. As a

result, the role of accounting in the economy has been deteriorated and accountants do not occupy their right positions, therefore, it does not contribute much to the development of the economy.

The language of the country can be an impediment to the adoption of modern accounting standards if it cannot incorporate all the technical accounting terms. In Jordan the language of the country is Arabic. All financial reporting and financial regulations are in Arabic (though some companies prepare annual reports in Arabic and English)..

The religion of the country effects the attitudes towards business in general and accounting in particular. The religion of Jordan is Islam. 92% of the people are Muslim (Simonis and Finaly, 1993). Islam in general allows private property and the free enterprise system. People are allowed to operate businesses.

The degree of secrecy in the society affects the amount of disclosure in the financial statements. There is a degree of secrecy in businesses. The reason may be because many businesses are family owned or may have become public in recent years with a large number of shares being held by the original family.

ECONOMIC FACTORS

Mueller (1968) suggested that stage of economic development, type of economy, and growth pattern of an economy can exert an impact on a country's accounting practices. The stage of development affects the type of business transactions conducted in a country and the type of economy determines which transactions are more prevalent, each of which is an intrusion on the accounting system (Doupnik and Salter, 1995).

The correlation between the provision of better accounting and financial information and the development of the nation's economy can be traced in developing countries (Seiler, 1973). In the case of primitive economies, the need for accounting information is minimal. On the other hand, as the economy and the size of investment grows, either from public or private sectors, and the number of companies increases, there is an increase in demand for accounting information for decision making purposes from investors, creditors, management and government agencies. Therefore, it is possible to trace the development of financial reporting in Jordan through the development of the national economy, the increase in the size of investments and the number of companies.

Limited resources in a country may lead to lack of resources devoted to developing financial reporting standards. There may be a tendency to import standards from other countries rather than developing their own.

Jordan has few natural resources (no oil). The country's main mineral asset is its phosphate reserves which have been discovered and exploited on a commercial basis, and are located in the northeast and south of the country. Jordan's water resources are extremely scarce, and it has only one outlet to the sea, found at Aqaba in the extreme south of the country, with very narrow shores. These lack of resources, coupled with the fact that Jordan has had to devote a large part of its budget to the military made Jordan dependent on foreign aid to survive (Business International Limited, 1991).

ECONOMY

Economic ties with other countries have a significant effect on a country's financial reporting. Starting with a colonial past and proceeding to the present, these ties influence accounting to a great degree.

In the case of Jordan, it was originally colonized by the British. This led to the adoption of the companies act in which its modifications are still in practice today. Furthermore Jordan's ties with other countries presently have also influenced its accounting system. For example Jordan relations with western countries may have influenced the decision by the Jordan Association of CPA's to adopt International Accounting Standards in 1989.

The orientation of the government towards the economic system in Jordan is leaning towards a free market system. This has an effect on the type of accounting regulations. In centralized economies the accounting system is standardized and is meant for use by the government for economic planning and decision making. In free market economies there is more of a diversity of accounting practice and there are numerous decision makers such as stockholders, creditors, auditors in addition to the government. The Jordanian government from the very beginning adopted the market capitalist system . Thus from the beginning the accounting system was geared towards providing information for investors and creditors. Most of the economic activity in the country is carried out by the private sector.

There was no university accounting education in Jordan when the Kingdom was established in the 1940s because there were no domestic universities at all. Students, some of whom majored in accounting, graduated from Egyptian, Syrian, Lebanese, and Iraqi universities. As a result, the accounting practice in Jordan was a mixed of British and French practices. This situation lasted till 1962 when Jordan University was established. The university offered a major field of study in accounting. The second university to be established was Yarmouk University which was started in 1976. This further established the accounting major in Jordan.

The accounting profession in Jordan is not a new profession. It has been present since the establishment of the Kingdom and was recognized by the government in 1962 when the Companies Law No.33 was issued.

The major accounting professional association in Jordan is The Jordan Association of CPAs (JACPA) which was established in 1988. On March 13, 1989, the JACPA decided to adopt International Accounting and Auditing Standards for financial statements issued after 1990. However there was no law passed that directly enforced International Accounting Standards (IASs). IASs are only applicable to the extent that they do not conflict with the law. Financial Statements prepared by companies have become increasingly compliant with International Accounting Standards. However because of the lack of legislation and the lack of independence of auditors, compliance with IASs is sporadic. As mentioned earlier, the new Securities Law which has been adopted by the government does have a clause which specifies that companies must follow IASs.

CONCLUSION

This paper has examined the major environmental influences on accounting in Jordan and has traced the influence of these cultural, economic, political, educational and professional factors on the development and practice of financial reporting in Jordan.

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OIL PRODUCING COUNTRIES AND G-7 MONETARY POLICIES

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ABSTRACT

This paper examines the effects of a coordinated G-7 monetary policy on the real GDP, real money demand, exchange rate and price level of four oil producing GCC economies - Bahrain, Kuwait, Saudi Arabia, and the UAE. We develop a small-country model like that of Dornbusch (1976) and Papell (1988) but where the domestic economy is a GCC economy and the foreign country is the composite G-7 economy. Our model incorporates GCC specific characteristics such as underdeveloped financial markets and the principle of domestic budget balance. Annual data from the International Financial Statistics of the I.M.F. for the current floating exchange rate period are used to estimate the models using the Full Information Maximum Likelihood method.

This study finds that G-7 monetary policies have a greater impact on the real GDPs, price levels, real money demands and exchange rates of the UAE and Kuwait than on Saudi Arabia and Bahrain. For every 1% increase in the G-7 coordinated money supply, output falls by .825%, .7%, and .05% in the U.A.E., Saudi Arabia, and Bahrain, respectively. The study also finds significant evidence in favor of the principle of domestic budget balance and the dependence of GCC monetary policy on the price of exported oil in all four countries. The findings of this paper can provide useful reference points for GCC policy makers and help minimize the spillover effects of G-7 monetary policies on GCC economies.

INTRODUCTION

The Mundell-Fleming model (1962, 69) of the effects of domestic monetary policy under flexible exchange rates has been the basis of extensive research in the open economy literature for over two decades. In the small economy version of this model, a domestic monetary expansion can, under certain assumptions about capital mobility and trade elasticities, lead to a rise in domestic income and a depreciation of the economy's currency. The seminal paper of Dornbusch (1976) extends the results of the Mundell-Fleming model by incorporating exchange rate expectations and sticky prices. Dornbusch and Krugman (1976), Levin (1984) and Papell (1984) are examples of papers that examine the effects of monetary policy in such a framework. However, a review of the open economy literature indicates that there is no study that examines the effects of an external (foreign country) monetary policy on the domestic economy in the small country frameworks of Mundell-Fleming (1962, 69) and Dornbusch (1976).

There also exists substantial literature on open economy models that studies the effects of oil price shocks on the outputs, price levels and currencies of G-7 countries (US, UK, France, Japan, Germany, Italy, and Canada). In particular, studies by Findlay and Rodriguez (1977), Bruno (1978), Obstfeld (1980), Sachs (1982), Hamilton (1983), and Dotsey and Reid (1992) conclude that the two major oil price shocks of the 1970s caused, to varying degrees, inflationary rises, output contractions and exchange rate movements in the G-7 economies. At the same time these oil price shocks have caused the income levels of oil-producing (OPEC) economies to increase substantially. Much less work has been done to study the effects of G-7 monetary policies on oil-producing economies.

The objective of this paper is to fill this gap in the open economy literature by examining the effects of G-7 monetary policy on GCC countries. First, our model attempts to capture the effects of foreign monetary policy on a small open economy in a direct manner without treating these effects as shocks that are captured through the error terms in the model. Second, by focusing on the GCC economies as the domestic economies we may obtain a better understanding of how GCC monetary policy authorities respond to changes in their (exported) oil prices. The results of our estimation can provide a useful framework within which GCC policy makers can examine other monetary policy effects and see how these G-7 spillover effects on their economies can be minimized.

In May 1981, six oil producing nations (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) created an economic cooperation group known as the Gulf Cooperation Council (GCC). One economic goal of these nations is to create a "Common Market" within which there will a be free movement of goods, services, and inputs (capital and labor). Another aim of the GCC is to coordinate monetary, fiscal, and banking policies among member nations, so that in the long run this process could lead to an optimum currency area with a common currency (Zaidi 1990).

The G-7 countries are the largest trading partners of the GCC economies. In addition, the Bahrain Dinar, the Saudi Arabian Riyal and the U.A.E. Dinar maintain a limited flexible exchange rate vis-a-vis the US Dollar while the Kuwaiti Dinar is pegged to a weighted average of a basket of currencies.[1] However, since the US Dollar freely floats against other G-7 currencies, the GCC exchange rates provide one channel through which coordinated G-7 monetary policies can affect these GCC economies. Hence, even pegging their currencies to one or more G-7 currencies may not prevent fluctuations in G-7 currencies from affecting GCC outputs and price levels. Therefore, under flexible exchange rates, the GCC economies may not be insulated from the spillover effects of G-7 monetary policies.

There is also wide agreement that revenue from oil exports account for most of the of GCC government revenues (more than 90% for Kuwait). When oil (export) revenues of the GCC countries increase (sharply in the 1970s) government expenditures also increase since a large portion of public revenues are generated from oil exports. The result is higher monetary and economic growth because the monetary policies of GCC countries are a function of their fiscal policies. This growth occurs because domestic capital and money markets are underdeveloped, and so GCC monetary policies basically respond to the fiscal demand in their domestic markets (Zaidi 1990). Another major effect of the underdeveloped financial markets in the GCC countries is that most GCC residents and governments invest their assets in G-7 economies. This in turn increases G-7 incomes, the demand for GCC exports and eventually their GDPs and price levels. Thus the second channel through which G-7 monetary policies can affect GCC countries is through the direct and indirect effects of these policies on GCC outputs, money demands and the revenues from oil exports.

Consequently, a coordinated G- 7 monetary policy could impact GCC economies through two channels - directly and indirectly through monetary variables or indirectly through the effect on the (exported) oil revenues of the GCC countries.

The model employed in this paper is based on the work of Dornbusch (1976) and Papell (1988). We differ from these frameworks by using a small-country framework in which the domestic economy is a GCC economy and the foreign country is the composite G-7 economy. Other significant deviations are that we conduct our empirical analysis using GCC -specific characteristics such as underdeveloped financial and capital markets, the fact that monetary and fiscal policies cannot be distinguished from one another and the dependence of government revenues on oil exports. Due to data constraints we analyze only four members of the GCC- Bahrain, Kuwait, Saudi Arabia, and the U.A.E.. The annual data used in this paper is based on the International Financial Statistics and the Direction of Trade Statistics of the International Monetary Fund for the current floating exchange rate period.

The empirical study begins by examining the time-series properties of the data. We test for non-stationarily in the raw data (in log form) by using two separate tests - the Augmented Dickey-Fuller tests and the KPSS test. Next we test for the exogeneity of the domestic money supply and the foreign variables using the methodology outlined in Granger and Newbold (1986). Finally, we test for bi variate cointegration using the Engle and Granger (1987) two-step method.

This paper is organized as follows: the introduction and the model are presented in Sections I and II respectively. In Section III we discuss the statistical properties of the data. Our empirical results are stated and evaluated in Section IV. Section V presents our conclusions.

THE MODEL

The structural open economy model of a small country [2] is presented in equations (1)-(9) below. The domestic economy in our model is a GCC country and the foreign country is the composite G-7 economy. All variables are expressed in terms of their natural logs (except nominal interest rates):

$$y_t = a_{11} y_t^* - a_{12} m_t^* + a_{13}(e_t + p_t^* - p_t) + \epsilon_{1t} \quad \textbf{(20)}$$

$$m_t - p_t = a_{14} y_t - a_{15} i_t^* + \epsilon_{2t} \quad \textbf{(21)}$$

$$p_t - p_{t-1} = a_{16} y_{t-1} + \epsilon_{3t} \quad \textbf{(22)}$$

$$m_t = a_{17}\, p_{t-1}^o + \epsilon_{4t} \quad \textbf{(23)}$$

$$p_t^* = u_{1t} \quad \textbf{(24)}$$

$$i_t^* = u_{2t} \quad \textbf{(25)}$$

$$m_t^* = u_{3t} \quad \textbf{(26)}$$

$$y_t^* = u_{4t} \quad \textbf{(27)}$$

$$p_t^o = u_{5t} \quad \textbf{(28)}$$

y	:	is the GCC real output (1985 prices) ;
y*	:	is the trade-weighted G-7 real GDP (1985 prices);
i*	:	is the trade-weighted G-7 nominal interest rate;
e	:	is the trade-weighted dollar exchange rate (domestic currency price of foreign exchange);
p_t	:	is the GCC price level (GDP deflator) at time t;
p*	:	is the trade-weighted G-7 price level (GDP deflator);
m	:	is the GCC money supply (M1);
m*	:	is the trade-weighted G-7 money supply (M1);
p^o	:	is the real export price of oil in the GCC economies (1985 prices);
u's, e's:		are N(0,1) random errors;

Equation (1) shows that the output of GCC economies is demand-determined. GCC output is a function of G-7 countries' income (y^*), real exchange rates ($e_t + p^* - p_t$), and the G-7 nominal money supply (m^*). A major difference in standard formulations of this equation and our equation is the inclusion of a real balance effect arising not from a domestic interest rate but from the foreign money supply (m^*). Our justification for this assumption is the fact that these GCC economies have underdeveloped money and capital markets [3] (i.e. they lack a market determined short-term interest rate). This results in GCC investors and governments using the G-7 interest rate as a basis for accumulating foreign assets. Thus a decrease in the G-7 money supply will raise G-7 interest rates and the demand for G-7 assets. This leads to an increase in G-7 incomes and hence an increase in the demand for GCC exports.

The demand for real money balances (equation 2) depends positively on real income (y_t) and negatively on the G-7 nominal interest rate (i*). We use the same justifications for replacing the (non-existent) domestic nominal interest rate by the foreign interest rate as in equation (1). Second, equation (2) states that, in the absence of well developed financial markets in GCC countries, the demand for real money balances in GCC economies is a function of domestic income and the G-7

nominal interest rate (the opportunity cost of GCC deposits in G-7 economies). Third, the rate of inflation of the GCC economies (equation 3) depends only on the lagged output in these economies. Equation (4) states that the money supply of the GCC countries is assumed to be exogenous and is a function of the given lagged price of exported oil of GCC country. This relationship between money supply and the price of oil results because a significant part of the GCC government revenues are generated from oil exports, so that government expenditures (g) are a function of oil revenues. [4] Also, in this model, the link between the monetary and fiscal polices of such oil producing economies is the principle of domestic budget balance (see Morgan (1979), Goldsbrough (1985), Kaboudan (1988), and Zaidi (1990)). [5] Kaboudan (1988) argues that there is a strong link between oil revenues and fiscal policies in Kuwait's economy (pp. 49 and figure 1). To the extent that the GCC governments use their increased oil revenues domestically, their money supplies also expand. Thus monetary policies in the GCC countries are not distinct from their fiscal policies and money supply is postulated to depend on the lagged price of oil (p^o).

Equations (5), (6), (7), (8), and (9) represent the foreign price level, foreign interest rates, foreign money supply, foreign output, and the GCC real export price of oil respectively, which are exogenous variables. The foreign variables in equations (5)-(8) are assumed to follow normal random error processes and this assumption is justified by Granger causality tests. On the other hand, the real export price of oil (p^o) is assumed to be given at any point in time t and is an exogenous variable in this model because it is set (externally) by OPEC.

To obtain the reduced form solution for the domestic price level p_t we substitute (1) into (3) to generate equation (10). This equation shows that current price level (p_t) is a function of the past nominal and real factors of both economies, G-7 and GCC:

$$p_t = \beta_1 e_{t-1} + \beta_2 p_{t-1} + \beta_3 p^*_{t-1} + \beta_4 y^*_{t-1} + \beta_5 m^*_{t-1} \qquad \textbf{(10)}$$

where the βs are:

$$\beta_1 = a_{13}a_{16}; \quad \beta_2 = 1 - a_{13}a_{16}; \quad \beta_3 = a_{13}a_{16}; \quad \beta_4 = a_{11}a_{16}; \quad \beta_5 = -a_{12}a_{16}$$

Using equations (1), (2), (4), and (10) we obtain the reduced form equation for the exchange rate:

$$\epsilon$$

(11)

Where the δs are:

$$\delta_1 = \frac{\beta_1 (a_{13} a_{14} - 1)}{a_{13}a_{14}}; \qquad \delta_2 = \frac{\beta_2 (a_{13}a_{14} - 1)}{a_{13}a_{14}}; \qquad \delta_3 = \frac{\beta_3 (a_{13}a_{14} - 1)}{a_{13}a_{14}}$$

$$\delta_4 = \frac{\beta_4 (a_{13}a_{14} - 1}{a_{13}a_{14}}; \qquad \delta_5 = \frac{\beta_5(a_{13}a_{14} - 1)}{a_{13}a_{14}}; \qquad \delta_6 = \frac{- a_{11}}{a_{13}};$$

$$\delta_7 = -\frac{a_{12}}{a_{14}}; \qquad \delta_8 = - 1; \qquad \delta_9 = \frac{a_{15}}{a_{13}a_{14}}; \qquad \delta_{10} = \frac{a_{17}}{a_{13}a_{14}};$$

STATISTICAL PROPERTIES OF THE DATA

This section presents the data and its statistical properties. We use seasonally adjusted, annual data from 1973 to 1992 for the G-7 countries, Saudi Arabia and the U.A.E., from 1975 to 1992 for Bahrain and from 1973 to 1988 for Kuwait. [6] The exchange rates used are the trade-weighted exchange rates with respect to the US dollar and are obtained from the International Financial Statistics of the IMF. The bilateral trade weights are computed using the Direction of Trade Statistics of the IMF. The price level is the implicit price deflator, the money supply is M1, and the G-7 nominal interest rate is the three-month money market rate. The G-7 variables are constructed as trade-weighted averages of the G-7 variables with the weights corresponding to the bilateral trade weights.[7] All nominal variables are expressed in terms of the US dollar to facilitate cross-country comparisons.

To test for the exogeniety of the domestic money supply (m) and the foreign variables we perform the Granger causality tests based on Granger and Newbold (1986).[8] The test is performed for up to three lags (k) for each of these five variables and the results for m are presented in Table 1.[9] The null hypothesis that any of the variables (e, p, p*, y, y*, m*, i*) in the model do not Granger cause m cannot be rejected at the 5 % level of significance.[10] Hence there is no causality and m is an exogenous variable in this model. Tests conducted (but not reported here) for the four foreign variables (p*, y*, m* and i*) also indicate that there is an absence of causality at the 5 % level of significance, between them and the other variables in the model.

Table 1
Granger Causality Tests for the Exogeniety of the Domestic Money Supply(m)

	Bahrain			Kuwait		
Variable	F-values			F-values		
X	k=1	k=2	k=3	k=1	k=2	k=3
e	.011	.0002	.097	.003	.005	.062
p	-.009	.005	.028	.035	.042	.06
p*	.142	.14	.50	.004	.018	.563

y	.03	.03	.06	.003	.164	.33
y*	.004	.04	.11	.048	.07	.13
i*	.055	.126	.24	.076	.031	.21
Saudi Arabia				United Arab Emirates		
Variable	F-values			F-values		
X	k=1	k=2	k=3	k=1	k=2	k=3
e	.007	.013	.027	.034	.021	.024
p	-.0022	.023	.02	.010	.048	.07
p*	.011	.005	.016	.032	.043	.06
y	.003	.005	.026	.009	.016	.023
y*	.33	.03	.033	.067	.05	.04
i*	.022	.014	.016	.0123	.011	.04

It is standard practice when using time series data to test all the raw data series for the presence of non-stationarily. We conduct two separate tests for the presence of unit roots in the data - the Augmented Dickey-Fuller (1979) or ADF test and the stationarily test of Kwiatkowski, Phillips, Schmidt, and Shin (1992) or KPSS test.[11] The KPSS test is conducted because it directly tests the null of stationarily and does not suffer from the well known power problems of the ADF test as documented by Schwert (1987) and others.

In the context of unit root tests Campbell and Perron (1991) suggest that instead of fixing the lag-length (k) *a priori* and then conducting the ADF tests, the value of k should be based on data dependent methods. The criterion for choosing the value of k is based on starting at an initial upper limit of k_{max} and checking to see if the last included lag of the variable has a significant coefficient using the 10% value of the normal distribution (1.645) for significance. If it does then k is chosen to equal k_{max}. Otherwise the lags are reduced by one until we find the last included lag coefficient that is significant. We started with a $k_{max} = 2$ for the annual data used here and report the values for lags one and two. For the KPSS test the choice of the lag truncation parameter (k here) is a compromise between enough power for the test and low size distortions and a value of 2 is arrived at for the annual data being used here.

The ADF tests for the first unit root are presented in Table 2. We find that of the nine variables in the model all except the foreign interest rate (i*) show evidence of unit roots at the 5% level of significance for all four GCC countries although i* is only marginally stationary for Bahrain. However the unit root null cannot be rejected for any variable or country at the 1% level of significance. The results from the KPSS tests in Table 2 are mixed. Domestic and foreign money supplies are non-stationary for all four GCC countries at the 5% level of significance. However the real price of exported oil and the exchange rate are stationary at the 5% level of significance for all

four countries. In all, five of nine variables in Bahrain, Kuwait, and Saudi Arabia are stationary as opposed to three in the U.A.E. [12]

Table 2
Augmented Dickey-Fuller Test for the First Unit Root

Bahrain				Kuwait		
Variables	k=1	k=2	KPSS	k=1	k=2	KPSS
e	-1.15	-1.51	.131	-2.08	-1.61	.427
P	-2.27	-2.36	.408	-2.06	-3.85	.506
P*	-1.07	-1.96	.628	-2.41	-3.16	.634
y	-1.06	-0.64	.514	-1.83	-1.21	.422
y*	-0.59	-0.55	.374	-1.02	-1.13	.288
m	-2.54	-2.51	.504	-2.44	-2.89	.523
m*	0.63	0.83	.599	-0.23	-0.23	.598
i*	-3.07	-2.19	.123	-3.74	-2.58	.116
p^o	-1.25	-1.68	.150	-1.89	-1.63	.398
Saudi Arabia				United Arab Emirates		
Variables	k=1	k=2	KPSS	k=1	k=2	KPSS
e	-1.89	-1.96	.146	-1.22	-1.34	.425
p	-2.33	-2.99	.752	-1.71	-1.94	.535
p*	-2.57	-2.44	.400	-2.53	-2.92	.746
y	-0.63	-0.45	.706	-1.00	-1.09	.515
y*	-1.39	-1.45	.561	-2.56	-1.91	.559
m	-0.09	-0.04	.761	-0.67	-1.01	.649
m*	-1.12	-2.71	.633	-2.40	-2.39	.735
i*	-3.42	-2.16	.137	-3.71	-2.24	.163
p^o	-2.33	-2.27	.357	-1.94	-2.15	.274

ADF tests are also conducted to see if second unit roots are present in the nine data series by examining the first differenced series for unit roots. Table 3 presents the results of these tests. The ADF tests indicate that even at the 10% level of significance, most variables have a second unit root. The foreign interest rate is stationary at the 10% level of significance for Bahrain and at the 5% level of significance for Saudi Arabia, the U.A.E. and Kuwait. Three variables are stationary at the 5% significance level in the U.A.E. but only one in the case of Kuwait. The results for the KPSS tests indicate that most of the first differenced variables are stationary at the 5% significance level(Table 3). The foreign price level is non-stationary for all but Saudi Arabia where the foreign money supply and domestic output have unit roots at the 5% level of significance. In addition the real price of exported oil is non-stationary at the 5% significance level for Kuwait. The KPSS test indicates that the unit root null can be rejected for all variables and countries at the 1% level of significance.

Table 3
Augmented Dickey-Fuller Test for the Second Unit Root

Bahrain				Kuwait		
Variables	k=1	k=2	KPSS	k=1	k=2	KPSS
e	-1.58	-1.51	.146	-2.09	-1.83	.157
P	-1.57	-1.26	.333	-2.12	-2.39	.271
P*	-1.76	-1.31	.467	0.83	-0.34	.583
y	-3.00	-2.27	.295	-2.38	-2.13	.092
y*	-1.92	-1.79	.133	-2.23	-2.50	.142
m	-2.13	-1.52	.460	-1.87	-1.56	.423
m*	-1.97	-1.67	.154	-2.39	-2.39	.139
i*	-2.90	-2.50	.084	-3.82	-3.88	.106
p^o	-2.46	-2.01	.193	-1.35	-0.66	.487
Saudi Arabia				United Arab Emirates		
Variables	k=1	k=2	KPSS	k=1	k=2	KPSS
e	-2.29	-1.94	.148	-2.39	-1.98	.103
p	-1.03	-0.62	.689	-3.29	-2.92	.405
p*	-2.20	-1.94	.428	-1.68	-1.24	.667
y	-2.44	-2.92	.093	-2.71	-1.97	.216
y*	-1.58	-1.91	.152	-2.25	-2.51	.120
m	-2.56	-3.11	.121	-2.57	-2.41	.404
m*	-4.02	-4.83	.488	-4.02	-4.83	.119
i*	-3.63	-3.50	.074	-4.20	-3.93	.054
p^o	-2.08	-1.65	.439	-2.25	-1.68	.401

In conclusion, the ADF and KPSS tests suggest that first differencing some of the non-stationary variables in levels does not induce stationarily into these variables. Since it would be inconsistent to estimate our models using some variables in first differenced form and not others, we estimate our models using all the variables in their natural log form.

Since most of the data (in levels) for our nine variables indicates the presence of non-stationarily it is natural to test for the presence of cointegration among these variables. We conduct the bivariate cointegration tests of Engle and Granger (1987) on all sets of our variables and present our results in Table 4. The results shows that the null hypothesis of no cointegration of e, p, p*, or p with any other variable in the model cannot be rejected at the 5% level of significance for all four countries except for two pairs of variables in Kuwait - e and y as well as p* and y. However, the null of no cointegration cannot be rejected at the 1% level of significance for any pair of variables or any country. In conclusion there is very little evidence for bivariate cointegration among the data.

Table 4
Engle -Granger Cointegration Tests

Bahrain					Kuwait			
	Dependent Variable				*Dependent Variable*			
	t-ratios				t-ratios			
Independent Variable	e	p	p*	p^o	e	p	p*	p^o
e	---	---	---	---	---	---	---	---
p	-.98	---	---	---	-2.35	---	---	---
p*	-1.23	-1.09	---	---	-2.83	-1.02	---	---
y	-1.32	-1.76	-2.12	-0.94	-3.13	-2.60	-3.30	-1.68
y*	-1.76	-2.23	-2.62	-1.22	-1.91	-1.72	-1.88	-1.88
m	-1.14	-1.83	-0.33	-1.29	-2.40	-2.22	-.32	-1.57
m*	-1.63	-1.62	-1.57	-1.17	-2.75	-1.23	-1.29	-1.49
i*	-1.57	-2.16	-1.39	-1.61	-1.94	-2.09	-2.04	-2.54
p^o	-1.37	-2.35	-1.13	---	-2.2	1.47	0.66	---
Saudi Arabia					United Arab Emirates			
	Dependent Variable				***Dependent Variable***			
	t-ratios				t-ratios			
Independent Variable	e	p	p*	p^o	e	p	p*	p^o
e	---	---	---	---	---	---	---	---
p	-1.78	---	---	---	-1.26	---	---	---
p*	-1.93	-0.81	---	---	-1.60	-1.35	---	---
y	-1.96	-2.05	-1.85	-2.06	-1.42	-2.76	-1.43	-0.002
y*	-1.88	-1.39	-0.12	-1.26	-2.54	-2.01	-1.85	-1.62
m	-1.89	-0.87	-1.46	-1.84	-1.45	-0.65	-1.71	-1.25
m*	-1.86	-1.68	-1.85	-1.79	-1.86	-0.76	-1.07	-1.26
p^o	-2.11	-0.30	-1.08	- -	-1.26	-1.40	-0.18	---

EMPIRICAL RESULTS

In this section we present our empirical findings and an analysis of the effects of a coordinated G-7 monetary policy on four GCC economies. The four structural models are estimated using systems rather than single equation methods of estimation. The Full Information Maximum Likelihood estimation method (FIML) is used to estimate the parameters of the structural equations (1-5). We do this because FIML is the systems technique used to estimate a number of monetary open economy models (both structural and reduced form) in the papers by Hoffman and Schlagenhauf (1983), Woo (1985), Hall (1987), and Finn (1986, 89). [12]

Table 5 presents the results for the FIML estimation of the structural models for Bahrain, Kuwait, Saudi Arabia, and the UAE. Our empirical results indicate that most of the structural parameters (a_{11}- a_{17}) of the four models are significant at the 5% significance level and most are of reasonable magnitude and sign.

Table 5
Full Information Maximum Likelihood Estimates of the Structural Model

Parameter	Bahrain	Kuwait	Saudi Arabia	United Arab Emirates
a_{11}	.18 [d] (1.72)	.76 [b] (13.3)	.19 [b] (3.93)	-1.34 [d] (1.86)
a_{12}	.047 [d] (1.73)	-.91 [b] (12.13)	.069 [b] (3.58)	.824 [b] (4.03)
a_{13}	-.09 [d] (1.56)	.10 [b] (2.86)	0.456 [b] (7.28)	.02 (.078)
a_{14}	1.2 [b] (2.96)	-.42 (1.01)	-1.03 [b] (6.99)	1.478 [b] (12.65)
a_{15}	-.88 [C] (2.15)	-1.46 (1.01)	-1.30 [b] (2.99)	-4.65 [b] (4.8)
a_{16}	.72 [b] (5.22)	.85 [C] (2.02)	-.270 [C] (2.46)	-.37 [b] (3.17)
a_{17}	.18 [C] (2.65)	.63 [b] (14.3)	.4112 [b] (22.64)	.65 [b] (5.64)
Log Likelihoods	79.86	31.18	63.84	34.95

(.) : t-values are in parentheses;
[b] : denotes significant at the 1% level;
[C] : denotes significant at the 5% level;
[d] : denotes significant at the 10% level;

Two effects of G-7 coordinated monetary policies are important here - the direct effect of G-7 money supply on GCC output (a_{12}) and the indirect effect of G-7 interest rates on GCC real money demand (a_{15}). The parameter a_{12} is significant at the 10% level for Bahrain but at the 1% level for the other three countries. This parameter has the expected positive sign for all countries but Kuwait where the effect is significantly negative (i.e. a 1 % G-7 monetary expansion raises Kuwait's output by almost 0.9%). G-7 monetary policies have a greater negative impact on the output of the UAE than on that of Saudi Arabia or Bahrain. For every 1% increase in the G-7 coordinated money supply, output falls by .825%, .7%, and .05% in the UAE, Saudi Arabia, and Bahrain, respectively.

The results for the indirect effect of G-7 monetary policy on GCC output (a_{15}) are surprising in that they are all opposite in sign (negative) to what we expected. More surprisingly, monetary policy has a significantly positive effect at the 5% level of significance for Bahrain, Saudi Arabia and the UAE. The greatest impact of G-7 monetary policy through this channel is on the UAE where the effect is more than three times that on Bahrain and Saudi Arabia. One plausible explanation for this effect may be that the UAE is more open to the G-7 countries for trade or that a greater portion of the total UAE trade with the world is with G-7 countries. In conclusion, a coordinated G-7 monetary policy seems to have a greater impact (direct or indirect) on the real output and real money demand of the UAE than on any other GCC economy considered here.

Evidence in favor of the principle of domestic budget balance and the effect of the price of exported oil on the money supply of the four GCC economies by examining the parameter a_{17} in Table 5. This parameter has the expected positive sign and is strongly significant (1% level) for all four countries. Furthermore, changes in the price of exported oil have a greater impact on the money supply (a_{17}) of UAE and Kuwait followed by that of Saudi Arabia and Bahrain. As the price of exported oil increases the money supply of UAE and Kuwait rises by about three times as much as in Bahrain.

It is interesting to note the values of the other four less important parameters - a_{11}, a_{13}, a_{14}, and a_{16}. From Table 5 we conclude that G-7 incomes have a positive and significant effect (a_{11}) on the real outputs at the 1% significance level only for Kuwait and Saudi Arabia. The effect is positive, significant and the greatest for Saudi Arabia followed by Kuwait and is insignificant (and close to zero) for the UAE and negatively insignificant for Bahrain. In fact the exchange rate effect is over four times as strong on the Saudi Arabia as on Kuwait. The real exchange rate has a positive effect (a_{13}) on the real GDPs of Kuwait and Saudi Arabia and is significant at the 5% level. This effect is the greatest for Saudi Arabia and is over four times as large as the effect for Kuwait. Domestic income affects the demand for real money balances in the GCC economies through the parameter a_{14} and is significant (1% level) and positive as expected only for Bahrain and the UAE. It is also significant for Saudi Arabia but with the opposite sign. Finally, the parameter a_{14}, which captures the response of domestic prices to lagged excess demand in the domestic goods market, is significant at the 1% level for all four countries. However this effect is positive only for Bahrain and Kuwait with the impact being the greatest in Kuwait.

Table 6 presents additional evidence on the indirect channels through which G-7 monetary policies can affect GCC countries. This is done by using the estimated FIML structural parameters to infer the parameter values of the reduced form equations (10) and (11). We follow this approach to inference based on the estimation of structural open economy models by Papell (1988, 89). This allows us to capture, indirectly, additional monetary policy effects on the exchange rate and the price

level through parameters d_7, d_9, and b_5. Contrary to the expected negative theoretical sign, an expansionary G-7 monetary policy has an inflationary effect (b_5) on all four GCC economies with the effect being the greatest for Kuwait. As expected, a G-7 monetary expansion causes the exchange rate to depreciate (d_7) in the UAE and in Kuwait with Kuwait experiencing the largest impact. Finally, G-7 interest rates have the expected effect of causing an exchange rate depreciation in Bahrain, Kuwait and Saudi Arabia with the effect being the strongest in Kuwait. We can conclude from these parameter values that coordinated G-7 monetary policies have a greater effect on the exchange rate and price level of Kuwait and the U.A.E. than in Bahrain and Saudi Arabia.

Table 6
Reduced Form Values inferred from the Maximum Likelihood Structural Parameters

Parameter	Bahrain	Kuwait	Saudi Arabia	United Arab Emirates
β_1	-.065	.085	-.1231	-.0075
β_2	1.065	.92	1.123	1.007
β_3	-.065	.085	-.123	-.0074
β_4	.13	.65	-.0513	.5016
β_5	.034	.77	.0184	.308
δ_1	-.66	2.11	-0.385	0.245
δ_2	10.9	22.7	3.512	-33.27
δ_3	-.66	2.10	0.385	0.2458
δ_4	1.33	16.03	-.0.16	-16.56
δ_5	-.35	19.20	0.0576	-10.18
δ_6	2.0	-7.6	-0.417	67.37
δ_7	.04	-2.17	0.066	-0.557
δ_8	-1.0	-1.0	-1.0	-1.0
δ_9	8.15	34.76	2.765	-158.7
δ_{10}	-1.67	-15.0	-0.874	21.94

To sum up, a coordinated G-7 monetary policy has the greatest effects, through both direct and indirect channels, on the real output, price level, exchange rate and real money demand of the UAE and Kuwait.

CONCLUSIONS

This paper examines the effects of coordinated G-7 monetary policies on the real money demand, real output, exchange rate and price levels of four GCC economies - Bahrain, Kuwait, Saudi Arabia, and the UAE. We study several channels, both direct and indirect, through which external monetary policies can be transmitted from the composite G-7 economy to an oil exporting country in the GCC.

The model employed in this paper is of a small open economy based on the work of Dornbush (1976) and Papell (1988). Our model departs from these models by incorporating GCC specific characteristics such as underdeveloped capital markets and the dependence of domestic money supplies on the price of oil through the close connection between their fiscal and monetary policies. We use seasonally adjusted annual data from the International Financial Statistics of the I.M.F. for the current floating exchange rate period to estimate our models. Following Finn (1986) and Hall (1987) we use the Full Information Maximum Likelihood method to estimate the four structural open economy models. Finally, these structural parameter estimates are used to infer the parameters of our reduced form equations to provide us with additional evidence on the channels through which monetary policy can be transmitted abroad.

Statistical tests of the raw data indicate mixed evidence in favor of first and second unit roots using the conventional ADF(1979) tests and the more recent KPSS (1992) tests. The mixed evidence on statinarity causes us to estimate our models using the variables in their natural log form. When bivariate Engle-Granger (1987) tests are conducted we find no evidence that indicates any cointegration between the variables. In order to justify the assumption of an exogenous domestic money supply we conduct Granger causality tests and find that none of the model variables Granger-causes the money supply.

Our empirical results indicate that a coordinated G-7 monetary policy has a greater effect on the real GDP, real money demand, exchange rate and the price level of the UAE and Kuwait than that of Saudi Arabia and Bahrain. The greater effects on the UAE and Kuwait may partly be a result of the greater openness of these two GCC economies to trade with the G-7 or the result of a greater percentage of their world trade being accounted for by the G-7 countries. We also find evidence in support of the domestic budget principle of Morgan (1979) and Zaidi (1990) through the positive and significant dependence of the GCC money supply of each country on the real price of its exported oil. It should be noted that since complete data series are only available annually in these countries this affect the degrees of freedom for estimation purpose and hence is a weakness of such analyses.

The contribution of this paper to the open economy literature is twofold. First, our model attempts to capture the effects of foreign monetary policy on a small open economy in a direct manner without treating these effects as shocks that are captured through the error terms in the model. Second, by focusing on the GCC economies as the domestic economies we may obtain a better understanding of how GCC monetary policy authorities respond to changes in their (exported) oil prices. The model presented in this paper and our results can provide a useful framework within which GCC policy makers can examine other monetary policy effects and see how these G-7 spillover effects on their economies can be minimized.

This paper could be extended to directly study how fiscal policies in GCC economies could be used to minimize the effects of fluctuations in the G-7 import demand for oil on GCC incomes,

price levels and exchange rates. The model presented here can also be extended to examine the effects of G-7 monetary policies on non-GCC oil producing economies which are more open to trade as well as those with developed financial markets.

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ENDNOTES

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1. The value of the Kuwait Dinar is based on a fixed exchange rate scheme. While the Dinar exchange rate is based on a weighted average of major currencies, the exact composition of the basket or its weights are not released by the Kuwaiti government to prevent any manipulation of its value (IFS, 1994).

2. We could use a two-country framework to model the GCC and the G-7 economies but that would require that we impose some equality constraints on parameter values across GCC and G-7 countries. Given how structurally different these two sets of countries are, a small country framework seems to be a better one to adopt for this analysis.

3. Even though capital mobility may not be a problem in these four GCC economies, the uncovered interest rate parity condition becomes meaningless in the absence of a market-determined interest rate in these countries. Thus this condition is not usable in our analysis.

4. Zaidi (1990, pp. 760) states that "Economic activity in the GCC countries is heavily influenced by public expenditures, which are financed almost entirely by oil revenues ".

5. In the case of Kuwait, Kaboudan (1988, pp. 47) finds that the "Returns from the government-owned oil fields accounted for more than 90 percent of total reported fiscal revenues between 1970 and 1983".

6. Complete monthly or quarterly data for the period of 1973-92 for all GCC countries are not available. Only annual data for some countries like Bahrain, Kuwait, Saudi Arabia and U.A.E. are available. Even in these series there is no data for real GDP in Bahrain before 1975 and for real GDP in Kuwait from 1989-92.

7. The trade weights for this model are based on the export-import GCC data with respect to the G-7. The weights for G-7 countries are normalized to sum to unity and then used to construct the foreign variables.

8. We used RATS statistical software for our empirical estimation.

9. The critical values of F-test at the 5% and 1% level of significance are: $F_{1,17} = 4.45$, $F_{2,14} = 3.74$, $F_{3,11} = 3.59$, and $F_{1,17} = 8.40$, $F_{2,14} = 6.51$, $F_{3,11} = 6.22$, for Saudi Arabia and the UAE while for Kuwait and Bahrain the values are: $F_{1,13} = 4.69$, $F_{2,10} = 4.10$, $F_{3,7} = 4.35$,and $F_{1,14} = 9.07$, $F_{2,10} = 7.56$, $F_{3,11} = 8.45$.

10. In the context of similar open economy models, Baillie and Pecchenino (1991) and Baillie, Chung and Teislau (1991) also conduct KPSS tests in addition to the ADF tests on several macroeconomic variables to get stronger results about non-stationarily.

11. The 10%, 5%, and 1%, critical values for the first unit root from Mackinnon (1991) are: -2.65, -2.897, and -3.809 respectively for Saudi Arabia and the U.A.E. where the number of observations N=20 and -2.661, -3.04, and -3.857 for Bahrain and Kuwait where N

12. On the other hand, Kearney and MacDonald (1986) use the SURE and Lewis (1988) uses the two-step three stage least squares methods respectively to estimate their structural open economy models.

VARIATION ON THE DU PONT EQUATION

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ABSTRACT

The Du Pont Equation and the Extended Du Pont Equation are commonly used tools of financial analysis. The Extended Du Pont Equation decomposes the simple return on equity (ROE) expression into three components to demonstrate how poor equity return can be the result of low profit margins, poor asset utilization, or the firm's leverage situation. One of the implications of the Extended Du Pont equation (hereafter called simply the Du Pont equation) is that if debt is increased, return on equity also increases, if the profit margin is positive. This implication does not take into account that changing debt levels affects interest expense, which itself affects taxable income, net income, earnings per share, return on equity, and the degree of financial leverage.

For example, the Du Pont equation is ROE = (NI / Sales) X (Sales / Total Assets) X (Total Assets / Equity). The equation implies that the total effect of decreasing the percentage of equity (increasing debt) in the capital structure is applied to increasing ROE. However, increasing debt decreases net income (NI). This occurs because NI is really Earnings Before Tax (1 – t), and increased debt produces higher interest expense which reduces both EBT and NI. Another related factor is that the cost of debt may increase as the percentage of debt increases. Therefore, at least some of the effect of increasing the equity multiplier (EM) is offset by reduced net income.

There are at least two other problems with the standard Du Pont equation. First, calculating a new ROE for changes in debt requires changing both ROA and EM. In addition, the new calculated ROE does not take into consideration the effect that changing levels of sales would have on ROE. Both these problems can be addressed by altering the equation to incorporate the degree of financial leverage (DFL) and applying a single factor to the ROE of the unlevered firm. That is,

$$ROE_L = ROE_U \ (EM / DFL)$$

Also, the effect of increasing leverage can be negative even with a profit margin that exceed the cost of capital, if the firm is operating near its break even point. This paper, then, shows that modest adjustments to the Du Pont equation may result in a more precise determination of ROE.

THE IMPACT OF NEIGHBORHOOD IDENTIFICATION ON PROPERTY VALUES

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ABSTRACT

Over the past few years, many local communities have lobbied to have the name of their neighborhood changed to differentiate themselves from their current area name, with an expectation of an increase in housing prices.

This paper examines one such change in a neighborhood in Los Angeles by studying 329 homes located within one-half mile on both sides of the boundary of the new neighborhood for a three year period surrounding the name change. The dependent variable in the model is the price of a house sold during the three year period. The independent variables relate to the size of the house, characteristics of the house, the calendar quarter in which the sale took place (overall prices rose rapidly during the three year period, approximately 20% per year), and a dummy variable for whether the house was in the new area or not. Each of the three years was run as a separate regression as housing prices changed dramatically and non-linearly during the period.

Since there were no changes in public service associated with the name change, not even the zip code changed, any changes in price between the new and old area would be due to changes in the area name.

The square footage of the house, and the calendar quarter of the year when the sale took place were statistically significant (P<1.0%) in each of the three regressions, with the exception of the second quarter variable (P<10%) in the third regression. However, the dummy variable for inclusion in the new neighborhood was not significant any of the regressions and was in fact negative. The lack of significance for the neighborhood variable indicates that a name change without comparable changes in public services will have no impact on property values.

INTRODUCTION

The City of Los Angeles is divided into unincorporated areas which, although they bear different names, are all subject to and are governed by the same government bodies. One of these unincorporated areas, located in the west end of the San Fernando Valley, is known as Canoga Park. Most of the homes in this area were built in the late 1950's. However, the western section of Canoga Park extends into the hills which surround the valley and, due to the difficulty of building on this hilly terrain, was left vacant for almost thirty years. In the 1980's a large housing tract was built in these

hills. These homes were larger and more luxurious than the typical Canoga Park home. The developer of these new homes wished to distinguish his new homes from the original homes which made up most of Canoga Park therefore requested and received the right to change the name of the western section to West Hills.

Thinking that the name West Hills would increase property values, the homeowners who lived just east of the new boundary line requested that the boundary line be moved further east so they would be included in the new area. The boundary line continued to move east, as the homeowners who lived just outside of the new boundary line would pressure their city council person to move the line again so that they would be included in West Hills.

During the process, the Planning Department of the City of Los Angeles indicated that the city services, both present and future, were made for Canoga Park as a whole with no special provisions for West Hills. In addition, the creation of West Hills resulted in no changes to the school system.

Studies have shown that the quality of the school system and other city services have an impact on property values. It is also believed by many that the name of a community or area is an additional factor affecting value. This paper examines whether the mere changing of a name without any change in services will have a positive impact on property values. The results indicate that no significant value was added to the original Canoga Park properties by including them in the West Hills area.

This paper consists of four sections. The first discusses a theoretical framework for analyzing the effects of a name change on housing values. The second discusses the data selection and statistical methodology. The empirical results are discussed in the third section. Finally, a summary and our conclusions comprise the fourth section.

THEORETICAL FRAMEWORK & HYPOTHESES

Previous studies have shown that many factors affect the sales prices of homes. These include physical characteristics such as number of bedrooms, size, age, and lot size. Other studies have documented significant effects from the quality of the school system and other public services. It is assumed that two homes with the same significant physical characteristics and packages of amenities will sell for the same price.

This study will consider three possible effects on home prices as a result of the area name change discussed above:

1) The neighborhood identity does not impact property values and the mere changing of the neighborhood name would be a "non-event". The expected price behavior of the homes should remain the same between the old neighborhood and the new one.

2) The name change is initially viewed as a positive influence on housing prices within the affected neighborhood. However the change could be temporary since there are no changes in services. The results would be a price increase in a West Hills home relative to a comparable home in Canoga Park, followed by a convergence of the two prices over time.

3) If the impact were permanent and the initial increase was unbiased, there would be an immediate increase in home prices in West Hills relative to homes in Canoga Park, and the difference would continue over time.

The following general model can be used to determine the effect of a name change on property values:

$$\text{Sales Price}_i = f(P_{ij}, L_{ij}, A_{ij}, S_{ij}, W_i)$$

where Sales Price_i = Sales price for the i-th house

P_{ij} = a set of j physical characteristics for the i-th house

L_{ij} = a set of j location variables

A_{ij} = a set of j amenities for the i-th home

S_{ij} = a set of j public services for the i-th home

W_i = a dummy variable indicating if the home is in the West Hills area

As the properties included in the data set have similar characteristics, many of the variables that might normally be used in a pricing model were not included here. As lot sizes and number of bedrooms and bathrooms were similar for all of the houses and any differences were highly correlated with the square footage of the houses, the physical characteristics of the houses were represented by the size of the house. The houses were geographically close enough that the location variables and public services were the same for all houses and thus left out of the model tested.

Variables Used In The Analysis

Dependent Variable:	PRICE	Sales Price
Physical Characteristics:	BLDGAREA	Building Area (square feet)
Time Variables:		
	QUARTER2	Sold in April, May, or June (1 = yes, 0 = no)
	QUARTER3	Sold in July, August, or September (1 = yes, 0 = no)
	QUARTER4	Sold in October, November, or December (1 = yes, 0 = no)
Neighborhood Variables:	WESTHILLS	Is property located in West Hills? (1 = West Hills, 0 = Canoga Park)

DATA SELECTION

The data used in this study consists of 329 homes located within one-half mile east or west of the eastern boundary of West Hills. This area consisted of a one-mile wide rectangular area with its western half in West Hills and its eastern half in Canoga Park. The sales used in the study occurred from January 1, 1986 to December 31, 1988, a three year time period centered approximately around the adoption of the name change. The data set consisted of homes which were of similar size (between 1,200 and 1,900 square feet) and age (built between 1955 and 1960) were used. This represented the dominant housing type for the area sampled. Only about 5% of the homes in the area do not comply with this criteria.

For each sale, 12 variables were examined. Eight of these variables refer specifically to characteristics of the house. These include the square footage of the house and the lot, the number of bedrooms and bathrooms, the number of bathrooms relative to the number of bedrooms, building to lot size ratio, whether or not the house included a swimming pool, and the year the house was built. In general, these variables are found to be statistically significant with the price increasing as the size variables increase, decreasing as the building to lot size ratio increases (for there is relatively less yard for the house), increasing if a pool is present, and decreasing as the house grows older.

Other variables which have been shown to be significant in other studies were not included in this study for two reasons. First, many features are not found in Los Angeles homes. For example, homes in Los Angeles are not constructed with basements due to potential earthquake damage and the temperate climate. Second, the development in the area under study is primarily tract housing which was built at about the same time, subject to the same zoning regulations, and targeting the same segment of the population and thus the houses are very similar. All the homes were built with garages, have approximately the same building to lot size ratio, were built using frame and stucco construction, had similar floor plans, and the number of bedrooms and bathrooms was highly correlated with the size of the home.

During the period under study, 1986 to 1988, the San Fernando Valley experienced a period of rapidly rising housing prices (approximately 20% per year). To capture the effect of the appreciation of housing prices quarterly dummy variables were included (QUARTER2 to QUARTER4) which, with the constant representing the first quarter, divided the year into four three-month periods. Given the uneven lags in reporting home sales, a three month window seemed to be best for testing the data.

The last variable included measures the neighborhood effect. The dummy variable (WESTHILLS) indicates whether the home is located in West Hills (1=yes, 0=no). If the name change increases the value of the homes, a positive coefficient would be expected and if the name has no effect on value, the coefficient would be insignificantly different from zero.

RESULTS OF THE ANALYSIS

The results of the regression analyses are presented in Table 1. The regression equations used consisted of the size variable (BLDGSIZE) and the time variables (QUARTER2 to QUARTER4) which captured the impact of rapid home appreciation. As stated previously, many of the variables which impact on sales price were excluded from the analyses because they were common to all homes

in the area and therefore their effect was captured by the sampling process and included in the constant term or were highly correlated measures of size.

The estimated equations were able to explain almost half of the variation (44.36% of the variation in 1986, 48.69% in 1987, and 50.42% in 1988). The building size and time variables were significant at the 1% level with the exception of Quarter 2 in 1998 which was significant at the 10% level.

The neighborhood variable, however, was not significant, not even at a 10% level, during any of the three years and was in fact negative.

The statistical analysis indicates that although the current owners in the West Hills area believed that the name change would increase the values of their homes, this belief was not shared by the buyers and no price increase ensued.

TABLE 1
REGRESSION RESULTS

Dependent Variable:		PRICE		
Year:		1986	1987	1988
Number of Observations:		97	113	119
	CONSTANT	63,972	63,656	66,787
	probability	(0.000) ***	(0.000) ***	(0.000) ***
	t-value	(7.546) ***	(6.485) ***	(4.724) ***
Physical Variables:				
	BLDGAREA	37.7	47.91	64.76
	probability	(0.000) ***	(0.000) ***	(0.000) ***
	t-value	(7.059) ***	(7.675) ***	(7.192) ***
Time Variables:				
	QUARTER2	8,378	11,407	11,199
	probability	(0.004) ***	(0.000) ***	(0.067) *
	t-value	(2.944) ***	(3.727) ***	(1.850) *
	QUARTER3	11,043	17,400	33,509
	probability	(0.000) ***	(0.000) ***	(0.000) ***
	t-value	(4.111) ***	(5.416) ***	(5.636) ***
	QUARTER4	10,556	18,026	32,787
	probability	(0.001) ***	(0.000) ***	(0.000) ***
	t-value	(3.610) ***	(5.726) ***	(5.406) ***
Neighborhood:				

	WESTHILLS	(1,269)	(2,643)	(5,486)
	probability	-0.511	-0.207	-0.113
	t-value	(-0.659)	(-1.270)	(-1.597)
R-Squared		0.4436	0.4869	0.5042
Adjusted R-Squared		0.413	0.4629	0.4822
S.E. of Regression		8,378	10,798	17,988
Mean of Dep. Variable		127,242	143,883	180,783
S.D. of Dep. Variable		11,282	14,735	24,999
F-Statistic		14.51	20.31	22.97
*** denotes significance at .01 level (two-tailed test)				
* denotes significance at .10 level (two-tailed test)				

SUMMARY AND CONCLUSIONS

This paper has examined the impact of a name change on a neighborhood without a corresponding change in public services. The study used two comparable, adjacent neighborhoods, one which underwent the name change and the other which retained its original name. There were no other changes. Therefore, if any difference in home prices was found between the two areas, it must be due to the name change alone.

Using 329 transactions over a three year period, annual regression analyses were performed. The regression equations used consisted of the size variable (BLDGSIZE), time variables which captured the impact of rapid home appreciation and a dummy variable for neighborhood. The lack of significance for the neighborhood variable indicates that a name change without comparable changes in public services will have no impact on property values.

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THE IMPACT OF INVESTOR-FAN OWNERSHIP ON THE VALUE OF PUBLICLY-TRADED SPORTS FRANCHISES: THE CASE OF THE BOSTON CELTICS

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ABSTRACT

A number of professional sports teams have recently used the equity markets through initial public offerings as a source of funds. While traditional businesses make regular corporate announcements that shape investor perceptions about the current and future financial condition of the firm, sports teams also produce game-related information that could effect financial condition. We examine the relationship between the stock performance of the Boston Celtics (the oldest and most recognized publicly-traded sports franchise) and team events. We find significant relationships between stock returns and game-related events only during the first two years of public life. After the first two years, no significant relationships are observed. Rather than conclude that the market is inefficient, however, we find evidence of a shift in investors. During the first two years of public life, institutions actively traded the Celtics based on information that may effect cash flows, and the stock price moved as expected. Since then, however, institutions liquidated their holdings, leaving the majority of ownership in the hands of investor-fans. These investors exhibit a tremendous passion for the team and, consequently, find value only in simple ownership. The ability of the firm to generate cash flows holds little or no value to these investors.

INTRODUCTION

The finance literature is rich with evidence of a distinct market response around important events and announcements throughout the life of a firm. Traditional effects stimulating a stock reaction include dividend and earnings announcements and stock splits (Charest, 1978; Aharony and Swary, 1980; Asquith and Mullins, 1983). Other, less common events, such as airliner crashes (Barrett et al., 1987), hurricanes (Lamb, 1995, 1998), earthquakes (Shelor, Anderson, and Cross, 1992; Kennedy and Lamb, 1997), the Chernobyl reactor accident (Fields and Janjigian, 1989; Kalra, Henderson, and Raines, 1993), the Three Mile Island incident (Hill and Schneeweis, 1983; Bowen,

Castanias, and Daley, 1983; Spudeck and Moyer, 1989), and bank failures (Aharony and Swary, 1983; Swary, 1986) have been shown to produce an industry-specific response.

Recently a new industry of publicly-traded firms has emerged. Professional teams from various sports - baseball, NASCAR, football, hockey, basketball - have begun to use the equity markets as a source of funds and, thereby, have made ownership available to investor-fans. While conventional industries generate only corporate announcements that provide insight into their financial condition, sports teams also produce game-related news that could translate to corporate performance and, hence, effect financial condition. For example, in their IPO registration statement filed in July 1997, Florida Panthers Holdings, Inc., a professional hockey team, disclose that the firm's revenue is primarily derived from (i) the sale of hockey tickets to home games, (ii) contracts with broadcast organizations and (iii) advertising and promotions. The firm further declares in the Risk Factors section that:

> *The financial results of the Company are expected to depend in part on the Panthers continuing to achieve success in the NHL. By achieving and maintaining success, the Panthers expect to generate greater fan enthusiasm, resulting in higher ticket sales throughout the regular season and capturing greater shares of local television and radio audience. Furthermore, any participation in the playoffs will provide the Panthers with additional revenue from sales of tickets for home playoff games and from broadcasts of playoff games under local media contracts. Conversely, revenue could be adversely affected by poor performance by the Panthers. There can be no assurance that the Panthers will perform well or qualify for the playoffs.* (Donaldson, Lufkin and Jenrette, 1997)

In this study we examine the stock market performance of the Boston Celtics, a professional basketball team. Like the Florida Panthers, the Boston Celtics generate income mainly from the sale of tickets to home games and the licensing and exploitation of television, cable network and radio rights (Standard & Poor's, 1997). Game-related information, such as wins and losses, making the post-season playoffs for the league championship, and performance in those playoff games is expected to effect attendance and broadcast contracts and, thereby, impacts on the ability of the firm to generate cash flows from fan and sponsor support. Consequently, the financial condition and resulting firm value are expected to be related to the success of the team in the arena. Since a winning team can potentially earn more revenue than a losing team because of increased fan attendance at games, more games through making the playoffs, increased concession and team merchandise sales, and increased demand for team-related paid endorsements, we expect to find that events endangering revenue from these sources would have a detrimental effect on stock returns. The market would likely interpret game losses and the elimination from the playoffs as negative because the corporation forfeits revenues generated by additional games. On the other hand, game wins and success in the playoffs would have a positive effect on the underlying stock because the stream of cash flows from game tickets, concessions and related sources is not interrupted.

Our choice of the Boston Celtics for evaluating the market response to team events is based on many factors. First, the Celtics are the first publicly-traded sports franchise, going public in December 1986 and, therefore, offer the longest sample period of announcements. Second, the

period since their IPO is of a length sufficient to include several winning and losing seasons, enabling the market to react to opportunities where the team could generate higher (lower) revenues from more (fewer) games and greater (less) passion in fan support. Third, the Boston Celtics are one of the most recognized sports teams and have a most distinguished record of championships, earning more titles (16) than any other franchise in professional sports. Coverage of news is widely circulated in the press, allowing investors access to information concerning team performance (and potential cash flows). The Boston Celtics are, therefore, a unique member of the new public sports franchise industry.

If the market is efficient in responding to new information, then we expect to find a significant relationship between game-related events and the value of the Boston Celtics. If the market does not respond to game-related news that may materially effect the financial condition of the firm, then perhaps the market is not efficient in interpreting the news, and/or the events are anticipated prior to their press coverage or occurrence, and/or investors do not consider the announcements as significant, and/or investors are aware of the financial implications of the announcements but choose to deliberately disregard their significance. If investors are wealth-maximizing, then this latter behavior would be irrational.

We find significant reactions on Boston Celtics stock around game-related announcements during the first two years of public life. After the first two years; however, the Boston Celtics stock becomes insensitive to game-related news that potentially may impact on future cash flows. Rather than conclude the market as inefficient in interpreting and responding to these announcements, we provide evidence that a client shift may be responsible for this unconventional behavior in the stock. While institutions actively traded and reacted to information that may affect their wealth during the early years of public life, they liquidated their holdings after the first two years. The remaining shareholders are investor-fans that find value in the mere ownership of the team, rather than from traditional cash flows or other financial rewards. As such, the investor-fan is a permanent shareholder with no intention of trading, regardless of what the implications from the information may be. The next sections describe the data and empirical design for the study, present the results of the market reactions to Boston Celtics' game-related news, and offer the Conclusions.

DATA AND EMPIRICAL DESIGN

The Boston Celtics raised $30 million through their IPO on the New York Stock Exchange on December 4, 1986. The sample period of our study includes the first day of trading and ends on May 5, 1995. The data spans eight complete seasons and one partial season (1986/87), and comprises 2,252 observations of daily returns, which are obtained from the Center for Research in Security Prices (CRSP). As the calendar year does not correspond to the basketball season, we organize the data to include a complete basketball year. This is analogous to a firm that has a fiscal year different from the calendar year. For our study, the basketball year begins on the day of the first official regular season game and ends on the day preceding the first game of the next season. For example, the 1992/93 basketball year begins on the day of the first regular season game and ends the day before the first game of the 1993/94 season. The CRSP value-weighted market index represents the returns for the market.

A dummy variable event study methodology is constructed to examine stock behavior around several variables. Equation 1 regresses daily Boston Celtics stock returns, (R), for the first trading day after any game-related information, (i), on the CRSP value-weighted index and two dummy variables representing good news (GNEWS) and bad news (BNEWS). GNEWS is coded 1 for favorable news and 0 otherwise. BNEWS is coded 1 for unfavorable news and 0 otherwise. These announcements include primarily wins/losses and playoff results. Wins in the regular season or playoffs are considered good game-related news (GNEWS) because they can translate into higher cash flows for the firm. Losses or injuries to starting players are unfavorable game-related news (BNEWS) because they could jeopardize the ability of the firm to produce higher cash flows. Since some consecutive games are scheduled for holidays or weekends, we treat two game wins during the market closure as a single win (good news). Two losses during the weekend or market closure are treated as a single loss (bad news). If the team had a win and a loss during the period where the market is closed, the first trading day is coded 0.

$$R_i = \alpha + \beta_1 MARKET + \beta_2 GNEWS + \beta_3 BNEWS \qquad (1)$$

Many different game-related news items are included in Equation 1. To isolate the impact of specific types of game-related announcements on firm value, we organize the data into four categories: (1) if the team won or lost during the regular season; (2) the performance of the team compared to expectations represented in the point spread of the betting line; (3) if the team won or lost when it was favored or the underdog; and (4) the performance of the team during the playoffs.

Equation 2 measures only the reaction of the stock to the team winning a game (WIN) or losing a game (LOSS). All other game-related announcements are excluded in order to expose the pure game performance impact on stock returns. We expect wins to be positively related to returns, and losses to have a negative relationship if investors believe that performance on the court effects cash flows and firm value. A (1,0) coding is assigned to the two dummy variables; 1 for WIN and 0 otherwise, 1 for LOSS and 0 otherwise.

$$R_i = \alpha + \beta_1 MARKET + \beta_2 WIN + \beta_3 LOSS \qquad (2)$$

Innovative adaptations of the traditional research testing stock market efficiency have been applied to the sports betting market, which is proxied as a quantitative measure of expectations (Tryfos et al, 1984; Zuber et al, 1985; Gandar et al, 1988; Camerer, 1989; Brown and Sauer, 1993; Brown et al, 1996). These studies examine the relationships between point spreads and the betting lines and stock performance. In our study, expectations about game performance are represented by the closing betting line from the Stardust Race and Sports Book obtained from Computer Sports World.

Sometimes a team meets expectations and wins when it is favored or loses when it is the underdog. A team can also underperform and lose when it is favored. A team that exceeds expectations is one that wins when it is expected to lose. However, the betting line provides more information than simply who is favored to win. The favorite is usually assigned a margin of points by which it is expected to win. Expectations are, thus, not merely formed as a win or a loss, but the magnitude of the win or loss are integrated into the prediction. A team could be favored to win, but

after winning it is still considered a loser according to the betting line because the margin of points is not reached. On the other hand, a team could lose the game it is expected to lose, but be classified a winner because it prevented the opponent from achieving the expected margin of victory. This would be similar to the conventional finance concept involving earnings expectations where a firm could have positive earnings – a winner – but still end up losing to expectations because the magnitude of earnings, although positive, is lower than expected. The usual stock response is to penalize the firm. Alternatively, a firm could produce negative earnings but experience a positive stock reaction because the margin of loss was less than expected.

In like manner, we test the relationship between stock performance and the betting line in Equation 3 to determine if investors consider this dimension of game performance in firm valuation. BEATLINE represents the team beating the line and exceeding expectations; LOSELINE is when the team falls short of expectations. The two dummy variables are coded 1,0 as above, depending on their performance against the line.

$$R_i = \alpha + \beta_1 MARKET + \beta_2 BEATLINE + \beta_3 LOSELINE \qquad (3)$$

In Equation 4, WINSURPRISE represents experts' belief that the Celtics will lose a game when, in fact, they win. This dummy variable regression is similar to that of Equation 3, but it does not incorporate the size of margin or line. It simply looks at which team is favored and the final outcome of the game. LOSESURPRISE is when a win is expected, but a loss occurs. If cash flows are related to game performance, then we would expect to find a positive stock response after an unexpected win and a negative reaction after an unexpected loss.

$$R_i = \alpha + \beta_1 MARKET + \beta_2 WINSURPRISE + \beta_3 LOSESURPRISE \qquad (4)$$

Equation 5 measures the relationship between returns and playoff performance. WINPLAY is a dummy variable representing the day following a win in the playoffs; LOSEPLAY is the day following a playoff loss. If the team wins a playoff game, then there is an increased chance of higher revenues and earnings through the various cash flow generators. A playoff loss is associated with a higher chance of lost (or forfeited) revenues and earnings. That is, the team is one game closer to the end of the season. WINPLAY is coded 1 for a win and 0 otherwise. LOSEPLAY is 1 for a loss and 0 otherwise.

$$R_i = \alpha + \beta_1 MARKET + \beta_2 WINPLAY + \beta_3 LOSEPLAY \qquad (5)$$

Equation 6 considers stock returns and the team's elimination from the playoffs. This is usually a disappointing event for two reasons. First, the cash flow stream that ticket and concession sales, and television and radio contracts produce has ended. The team has played their final game of the year. Second, fan passion and enthusiasm for a team that ultimately wins the championship is usually manifested in higher sales of apparel and other team-related merchandise that adds to corporate financials long after the season has ended. Upon playoff elimination, this source of revenue has likely peaked. LASTGAME is a dummy variable representing the termination of the team's season and, as a consequence, the certainty of no further (or higher) revenues and earnings generated

from additional games. Of course, only seasons in which the team qualified for the playoffs and was in contention for a championship can form this sample. The LASTGAME variable does not include years where the team was excluded from playoff participation.

$$R_i = \alpha + \beta_1 MARKET + \beta_2 LASTGAME \quad (6)$$

Each of the models presented above is designed to test the relationship between the performance of the sports team component of the Boston Celtics and the underlying stock. A significant relationship between the two provides evidence that investors believe that the financial condition of the Boston Celtics is directly tied to how well the team does on the court. Such behavior should not be surprising given that the product the Celtics offer is basketball games. If the product is perceived to be inferior (a loser) and goes out of favor, then cash flows should certainly be impacted. It would then not be surprising to find that stock returns and the prospects for lower cash flows are negatively related. On the other hand, a product of high quality that is enthusiastically purchased by consumers can also impact cash flows. We expect to find that success on the basketball court and stock returns have a positive relationship, and that losing on the court has a negative effect on stock returns.

RESULTS

Table 1 presents the results for the game-related announcements during the entire sample period. The data includes team performance, injuries, retirements, resignations, and any other news directly related to the team. A significant positive relationship is observed between returns and favorable game-related news. A weaker relationship is observed with unfavorable game-related news. The relationships during the overall sample period may not explain what is occurring in the individual years; however, so additional tests are performed.

Table 1
Market Reaction of Boston Celtics to Game-Related News
Ri = a + b1MARKET + b2GNEWS + b3BNEWS

Year	a	MARKET	GNEWS	BNEWS	R2	F
1986-95	0.0005	0.1793	0.0047	-0.0029	0.0163	12.462
	(1.804)	(5.604)	(1.953)	(-1.426)		

MARKET = CRSP value-weighted market return
GNEWS = favorable news
BNEWS = unfavorable news
t-statistics are in parentheses

Table 2 summarizes the investor response on Celtic's stock the first trading day after a game. If the financial condition of the firm can be impacted by the outcome of games, then we would expect returns to be positive following wins and negative after a loss. During the overall period, the market penalizes the firm for losses. Wins, on the other hand, are not related to returns. Upon closer inspection, however, we find that during the first two years of public life the firm responds significantly for three of the four variables. The only insignificant relationship is found for wins during the first year of public life. [Although the coefficient is insignificant at every reasonable level, the magnitude of the t-statistic is the third highest, by a wide margin, indicating that despite the finding of no significant relationship, some interaction between wins and returns during that year may still exist.]

Table 2
Market Reaction to Boston Celtics Game Performance
Ri = a + b1MARKET + b2WIN + b3LOSS

Year	a	MARKET	WIN	LOSS	R2	F
1986-95	0.0008	0.1878	0.0005	-0.0035	0.1210	15.529
	(2.481)	(5.869)	(-0.610)	(-3.546)		
1986/87	0.0016	0.2906	0.0033	-0.0127	0.0755	10.327
	(-1.258)	(4.652)	(1.159)	(-2.780)		
1987/88	0.0014	0.1681	0.0056	-0.0103	0.0089	6.779
	(1.372)	(2.113)	(2.376)	(-3.100)		
1988/89	0.0015	-0.1214	-0.0018	-0.0024	0.0223	0.745
	(1.561)	(-1.025)	(-0.672)	(-0.931)		
1989/90	0.0013	0.2194	-0.0017	-0.005	0.0127	1.893
	(1.139)	(1.919)	(-0.594)	(1.330)		
1990/91	0.0014	0.1183	-0.0006	-0.0036	0.0151	1.027
	(1.695)	(1.256)	(-0.298)	(-1.309)		
1991/92	0.0007	0.1190	0.0001	-0.0045	0.0224	1.270
	(0.882)	(1.107)	(0.003)	(-1.638)		
1992/93	0.0015	0.0599	-0.0046	-0.0045	0.0115	1.893
	(1.652)	(0.351)	(-1.926)	(-1.626)		
1993/94	0.0004	0.2226	0.0002	0.0028	0.0044	0.969
	(0.420)	(1.352)	(0.068)	(1.054)		
1994/95	0.0010	0.0817	0.0021	-0.0002	0.0117	0.368
	(1.293)	(0.522)	(0.855)	(-0.333)		

MARKET = CRSP value-weighted market return
WIN = team winning the game
LOSS = team losing the game
t-statistics are in parentheses

Consolidating the information presented in Table 2 shows that the firm responded in a significant way during the first two years to team performance on the court. Positive (negative) reactions to wins (losses) is consistent with the notion that the outcome of games can materially effect the cashflow stream of the firm and, correspondingly, stock returns. Curious, however, is the vanishing of a significant relationship between team performance and returns after the first two years. It seems irrational at worst, and perplexing at best, for investors to relate firm value to team performance during the early years of public life, and then deem the two unrelated for the remaining seven years of the sample period. Perhaps this philosophical change in valuation can be attributed to a shift in the demographic profile of the shareholders. We will return to this proposition later in the paper.

Table 3 presents evidence that no significant relationship is observed between the team beating or losing the line and the returns on Celtics' stock. This is consistent with the hypothesis that returns are related to the ability of the firm to generate cash flows. The critical determinant for future cash flows is whether the team wins or loses, rather than the degree by which the team wins (or loses). It should not be surprising, therefore, to find no relationship between the line and returns.

Table 3
Market Reaction to Performance of Boston Celtics Against the Betting Line
Ri = a + b1MARKET + b2BEATLINE + b3LOSELINE

Year	a	MARKET	BEATLINE	LOSELINE	R2	F
1986-95	0.0009	0.1836	-0.0005	-0.0021	0.0166	12.658
	(2.600)	(-5.731)	(-0.583)	(-2.276)		
1986/87	-0.0016	0.2831	0.0015	-0.031	0.0861	7.07
	(-1.237)	(4.450)	(0.446)	(-0.881)		
1987/88	0.0017	0.135	0.0011	-0.0017	0.013	1.096
	(1.602)	(1.649)	(0.389)	(-0.619)		
1988/89	0.0014	-0.1123	-0.0002	-0.0026	0.0086	0.72
	(1.411)	(-0.942)	(-0.067)	(-1.044)		
1989/90	0.0015	0.2215	-0.002	-0.0057	0.0275	2.348
	(1.327)	(1.943)	(-0.612)	(-1.774)		
1990/91	0.0014	0.1117	0.0001	-0.003	0.0127	1.066
	(1.629)	(1.187)	(0.053)	(-1.288)		
1991/92	0.0006	0.11	-0.0007	-0.0012	0.0057	0.479

	(0.760)	(1.103)	(-0.352)	(-0.518)		
1992/93	0.0016	0.0371	-0.0066	-0.0032	0.0298	2.542
	(1.735)	(0.217)	(-2.604)	(-1.201)		
1993/94	0.0003	0.2281	0.0011	0.0038	0.0142	1.193
	(0.293)	(1.387)	(0.369)	(1.319)		
1994/95	0.0012	0.0615	0.0001	-0.0008	0.0012	0.101
	(1.572)	(0.393)	(0.005)	(-0.349)		

MARKET = CRSP value-weighted market return
BEATLINE = team performing better than predicted by the betting line
LOSELINE = team performing worse than predicted by the betting line
t-statistics are in parentheses

Table 4 shows that during the first two years of public life, the Boston Celtics exhibit a significant negative reaction if the team is expected to win (favored by the line) but ends up losing. This observation is similar to that of "negative earnings surprise" that has received a great deal of attention in the finance literature (Latane and Jones, 1977, 1979). Specifically, firms expected to generate positive earnings are penalized if earnings come in as losses or less than expected. On the other hand, firms are not rewarded with significant positive returns when the team is expected to lose but, instead, wins the game. No significant positive reaction is associated with this "positive earnings surprise". Since wins increase the possibility of the firm attracting higher revenues through playoff money, concessions, etc., this result is puzzling. Perhaps the Celtics have a substantial permanent fan base that will support the team even in bad times. If this group is large enough (and passionate enough), then cash flows would not be significantly impacted when the team slumps because fan support - and the corresponding cash flows generated by these fans - is never in jeopardy.

Even more interesting, though, is that after the first two years of public life, returns no longer react to even the negative surprises. A possible explanation may be that during the 1988-1995 period, the team was not very good and most close to the game did not expect the team to win many games. This does not explain, however, the insignificant reaction when the team is expected to lose but wins. For a bad team to win a game, the "positive earnings surprise" should be substantial because of the rarity of such an occurrence. After the first two years, however, the market did not significantly respond to variation in game performance from that which was expected. Instead, it actually became insensitive to the unexpected outcomes of game performance. We will address this issue later in the paper.

Table 4
Market Reaction to Performance of Boston Celtics
Against Expectations and Game Outcomes
Ri = a + b1MARKET + b2WINSUR + b3LOSESUR

Year	a	MARKET	WINSUR	LOSESUR	R2	F
1986-95	0.0086	0.1855	-0.0018	-0.005	0.0209	15.968
	(2.861)	(5.804)	(-1.150)	(-3.751)		
1986/87	-0.0015	0.2807	0.0158	-0.0099	0.1089	9.166
	(-1.258)	(4.472)	(1.595)	(-2.041)		
1987/88	0.0022	0.1349	0.0064	-0.0122	0.0555	4.875
	(2.336)	(1.671)	(1.077)	(-3.214)		
1988/89	0.0011	-0.1237	0.001	-0.0037	0.0072	0.603
	(1.298)	(-1.044)	(0.163)	(-0.842)		
1989/90	0.0011	0.2244	-0.0041	-0.0038	0.0201	1.705
	(0.999)	(1.956)	(-0.832)	(-0.884)		
1990/91	0.0012	0.1152	-0.0021	-0.0015	0.0079	0.658
	(1.584)	(1.221)	(-0.494)	(-0.527)		
1991/92	0.0005	0.1226	0.0013	-0.0032	0.0086	0.719
	(0.661)	(1.135)	(0.362)	(-0.957)		
1992/93	0.0012	0.0417	-0.0102	-0.0059	0.0362	3.109
	(1.455)	(0.247)	(-2.691)	(-1.546)		
1993/94	0.0008	0.2416	-0.003	0.0076	0.153	0.003
	(0.819)	(1.461)	(-0.614)	(1.278)		
1994/95	0.0015	0.0674	-0.0032	-0.0052	0.0112	0.947
	(2.020)	(0.435)	(-1.038)	(-1.302)		

MARKET = CRSP value-weighted market return
WINSUR = team winning game that it was expected to lose
LOSESUR = team losing game that it was expected to win
t-statistics are in parentheses

If a win in the playoffs increases the possibility of higher revenues, then a significant market reaction should be observed. Table 5-Panel A provides evidence that during the first two years, the stock reaction was indeed related to the playoff performance of the team. Surprisingly again, however, after the first two years of public life Celtics' stock no longer reacts to playoff wins or losses. The fact that the team wins or loses in the playoffs and gains or forfeits the associated cash flows becomes a nonevent to investors. Consistent with several other relationships described above,

however, is the marked difference in the behavior of the stock during the first two years and in the subsequent years.

Table 5

Panel A

Market Reaction to Performance of Boston Celtics in the Playoffs

Ri = a + b1MARKET + b2WINPLAY + b3LOSEPLAY

Year	a	MARKET	WINPLAY	LOSEPLAY	R2	F
1986-95	0.0062	0.1872	0.0069	-0.0118	0.0263	20.242
	(2.139)	(5.873)	(2.560)	(-4.567)		
1986/87	-0.0015	0.2955	0.0075	-0.0211	0.1323	11.4332
	(-1.334)	(4.768)	(1.448)	(-3.262)		
1987/88	-0.0014	0.1396	0.0271	-0.0155	0.1066	9.908
	(-1.613)	(1.793)	(4.343)	(-2.710)		
1988/89	0.0011	-0.1259	*	-0.0147	0.0137	1.73
	(1.330)	(-1.068)		(-1.544)		
1989/90	0.0008	0.2272	0.0001	-0.0129	0.0197	1.668
	(0.752)	(1.982)	(0.002)	(-1.370)		
1990/91	0.0012	0.1121	-0.0006	-0.0048	0.0086	0.718
	(1.530)	(1.187)	(-0.094)	(-0.819)		
1991/92	0.0005	0.1094	-0.005	-0.0006	0.0076	0.639
	(0.675)	(1.019)	(-0.910)	(-0.075)		
1992/93	0.0005	0.0364	-0.0007	-0.0308	0.0008	0.069
	(0.618)	(0.213)	(-0.050)	(-0.405)		
1993/94	*	*	*	*	*	*
1994/95	0.0012	0.0671	*	-0.0014	0.0008	0.105
	(1.638)	(0.431)		(-0.174)		

Panel B

Market Reaction of Boston Celtics to Playoff Elimination

Ri = a + b1MARKET + b2LASTGAM

Year	a	MARKET	LASTGAM	R2	F
1986-95	0.0006	0.1855	-0.0177	0.0208	23.952
	(-2.169)	(-5.805)	(-3.878)		

MARKET = CRSP value-weighted market return
WINPLAY = team winning gaming in the playoffs
LOSEPLAY = team losing game in the playoffs
LASTGAM = team eliminated from playoffs
* = team not in playoffs or did not win a playoff game
t-statistics are in parentheses

A significant negative reaction by the market the day after the firm has been mathematically eliminated from playoff contention or actually eliminated from the playoffs themselves is presented in Panel B of Table 5. This result is expected since the ability of the firm to generate cash flows is largely dependent on the team participating in games. If a certainty emerges concerning the limitation of games in which the firm can produce revenues from tickets, parking, concessions and television coverage, then a negative reaction should occur. Once the team is eliminated from contention, little or no further revenues are produced from those sources. An opportunity cost is thus created whereby the firm forfeits potential revenue through its elimination from future games.

Some potentially disturbing relationships are observed between the performance of the Celtics on the basketball court and in the financial market. There appear to exist two Boston Celtics. Stock returns for the 1986-1988 Celtics respond significantly to wins and losses and playoff performance. When the team wins or loses during these first two years of public life, the stock price moves in the expected direction. Wins are related to stock gains and losses are related to stock declines. This behavior is comparable to that of traditional firms that generate information that is absorbed and interpreted by the market as cash flow increasing or cash flow decreasing. Wins are linked to higher cash flows and the market efficiently responds with positive movements. Losses translate to lower cash flows and the market penalizes the firm. This behavior is exactly as predicted in the registration statement of the Florida Panthers.

The Celtics following the 1987/88 season, however, exhibit no significant relationships between returns and team performance. The market does not respond to wins or losses. The market is not sensitive to the playoff performance of the team. It appears that the stock is immune to game-related information that could effect cash flows. This is surprising and suggests that either the market has been inefficient or investors have been irrational since 1989 in interpreting and valuing this information.

We believe, however, that the absence of a market reaction after the first two years to game-related information can be explained by a client shift that has occurred with the stock of the Boston Celtics. Institutions are often substantial and active owners of newly public firms. As such, during the first two years of the Celtics public life, institutions may have traded on information that would effect cash flows because their ownership is motivated by maximizing wealth. If the financial prospects for the firm change, institutions will buy or sell, based on impending improvement or deterioration in the cash flow stream.

Table 6 shows that a plunge in volume occurred after the 1986/87 season. The average daily volume during the first season is 9,468 shares.[3] The second year produced 4,689 traded shares on the average day. The following seven seasons reflect a steady decline in average daily volume, indicating that the stock has become substantially less liquid. The most recent trading activity for the

sample is 2,117 shares on the average day. This lack of volume and the insensitivity in the stock price to game-related news suggests that investors may not be concerned about the ability of the firm to generate cash flows. Such behavior would be irrational for wealth-maximizing investors.

Table 6
Ownership Profile of the Boston Celtics

Year	# of Shareholders	# of Shares Outstanding	Holdings per Average Shareholder	Institutional Holdings	% of Institutional Ownership	Average Daily Trading Volume1
1986	1,890	6,435,000	3,404.8	555,000	8.62%	12,306
1987	35,815	6,435,000	179.7	18,300	0.28%	9,468
1988	48,740	6,435,000	132.0	54,100	0.84%	4,689
1989	54,469	6,435,000	118.1	12,500	0.19%	4,794
1990	58,907	6,435,000	109.2	49,300	0.77%	3,755
1991	62,269	6,435,000	103.3	49,700	0.77%	3,247
1992	65,254	6,435,000	98.6	11,600	0.18%	4,203
1993	65,814	6,419,000	97.5	53,100	0.83%	3,160
1994	65,834	6,400,000	97.2	36,700	0.57%	2,973
1995	66,056	6,400,000	96.9	25,000	0.39%	2,117

All figures are through calendar year-end.
1 The average daily trading volume for the basketball-year is not materially different from that of the calendar-year.

We believe, however, that a different and unconventional ownership base in the Boston Celtics emerged after the first two years. The majority of new owners are investor-fans. They are proud to own a piece of sports history and may even display their Celtics' stock certificate in a conspicuous location in their home, rather than hold it in a safe deposit box or in street name with a broker. The primary value of ownership for these investors is in the title to the team, rather than in any potential cash flow stream the company may generate. Celtics' stock to these investor-fans is a piece of sports memorabilia, and they have no intention of selling. Ownership is permanent because the dominant value is not in the cash flow stream associated with it, but in the pleasure of being an owner of a legend in sports history. The investor-fan is loyal to the team when it wins or loses. Cash flows stimulated by more wins or losses are, therefore, irrelevant. As such, investor-fans do not motivate their trading based on game-related information and, hence, the volume and price sensitivity of the underlying stock show substantial declines.

To further support our contention that a client shift explains the curious returns behavior of the Boston Celtics, we find that the number of shareholders almost doubled during the sample period. Table 6 identifies the number of shareholders at the end of 1986 as 1,890. By 1995 that number grew to 66,056 (Moody's, 1995). With more shareholders, we would certainly expect more liquidity; however, we find the opposite. The higher number of shareholders actually accounts for only a fraction of the volume that was present when there were fewer shareholders, indicating that these current shareholders are not trading.

In addition, the number of shares outstanding throughout the sample period has remained constant at around 6,400,000 (Moody's, 1995). After the first two years, the number of shares held by the average Boston Celtics owner has steadily declined to the current 97 shares. Since the conventional unit of trading is in multiples of 100 shares, it is very unusual to find that the average share position is less. For comparison, the average ownership position of AT&T, the most widely held company, is almost 700 shares (ATT, 1995). If the stakes of insiders, officers and institutions were deducted, the average number of Boston Celtics shares held by the remaining ownership base (investor-fans) is even smaller. Finally, after the first year of public life, institutions liquidated almost their entire holdings in the Celtics. Table 6 also presents a summary of institutional holdings. During the first year, 1986/87, institutions owned about 9% of the outstanding stock. Since that year, they have held virtually no shares. The highest level of institutional ownership is in 1988/89 with 0.84%. Conversely, during the early life of the firm, non-institutions represent about 90% of share ownership. After the first year, this figure has averaged about 99%. The first two years of public life are associated with a significant relationship between returns and game-related news. The remaining years in the sample period, however, show no relationships. The only major structural difference between the periods is a demographic one – the apparent profile of shareholders. Since institutions liquidated most of their holdings during the first period, and stock returns show no relationship to news during the second subperiod, institutional trading during the first period must be responsible for the majority of sensitivity in those early returns. If the ownership profile of the average investor during the second period is that of an investor-fan, their passion for the Celtics may explain the lack of trading and insensitivity to news that may influence cash flows. They were present during the first period, but the active presence of institutions created the sensitivity. In effect, 9% of the owners (institutions) responded to the information produced by the court performance of the Celtics, while the other 91% of the owners (or the vast majority in this group) considered the information irrelevant given their reasons for becoming owners in the first place. After the departure of the institutional owners, there was no one left (or a number so small that it did not matter) that cared to respond to the financial information.

CONCLUSIONS

With more sports teams recently turning to the equity markets for funding, it appears that a new type of investor has emerged – one that is insensitive to traditional financial information. This investor may be a fan so passionate about the team, that mere ownership provides all of the value in the investment. The ability of the firm to produce cash flows may be an irrelevant issue. Passion exhibited by sports fans is not a new phenomenon. The news is filled with stories describing fan riots at European soccer matches. Individuals have even been killed and robbed for their shoes or jackets

endorsed by professional teams or specific athletes. Fans in transit to NASCAR events proudly fly the flag of their favorite driver on their car window. Basketball, baseball, football and hockey team apparel can be found in the closets of most homes. The heroes for many children and adults are professional athletes. It seems plausible that another dimension of this passion may be manifested through ownership in the beloved team. Although it appears that the market is inefficient in responding to important events in the life of the Boston Celtics, it may instead be that the profile of the investor has changed from one valuing the cash flow ability of the firm, to one finding value in simple ownership. The trading behavior of these investor-fans gives new meaning to the term "buy-and-hold strategy".

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THE RELATIONSHIP BETWEEN FINANCIAL STATEMENT RATIOS AND AUDITOR'S OPINIONS

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ABSTRACT

Several papers have examined the impact of auditor tenure and non-audit services and the impact of materiality of changes as a indicator of the type of an opinion that would be given on an audit. The main alternatives are an unqualified 'clean,' opinion, a unqualified opinion with explanations or a qualified opinion.

Frequently included in the various studies were the firm's debt ratio and size. This paper expands the financial statement analysis by examining the relationship between several standard financial ratios and the type opinion issued.

The analysis includes both t-tests for differences in means and logistic regressions. The time periods 1977-1987 and 1988-1996 were tested separately due to changes in audit reporting standards as a consequence of SAS 58. The results, in almost all cases, are as expected and significant at the 1% level of confidence. Qualified opinions or unqualified opinions with explanations are associated higher debt ratios, lower current ratios, lower returns on sales, and lower total asset turnover ratios. Qualified opinions were associated with smaller firms, as measured by either sales or total market value. Unqualified opinions, with explanations, were associated with larger firms.

The paper also examines the impact of SAS 58 which changed the requirements for a 'qualified opinion' and an 'unqualified opinion with explanation', and found a very significant change in the types of opinions issued after the release of SAS 58.

INTRODUCTION

When an auditor issues an opinion on a company's financial statements, it can issue a unqualified "clean" opinion if the financial statements are prepared on a consistent application of generally accepted accounting practices (GAAP) or if any changes are immaterial. SAS No. 58, issued in 1988, allowed an unqualified opinion with explanation in cases where the changes were material, but acceptable to the auditors. Prior to SAS No. 58, material changes would have required a qualified opinion. In all cases, changes or other factors that are not acceptable to the auditors, would require a qualified opinion, an adverse opinion or require the auditor to refuse to give an opinion, depending the severity of the changes [O'Reilly, et al, 1990].

Several papers have looked at the impact of various factors on the type of audit opinion that may be given on a firm's financial statements.

Ortegren, Reed and King [1998] found some weak evidence of relationship between the level of non-audit services and the type of audit opinion given. Included in the probit analysis was the company's debt ratio (long term debt to total assets) and size (natural log of total assets). Qualified opinions were positively related to both of these factors, and they were both statistically significant at a 5% level for the entire time sample studied (1977-1981).

Jordan, Smith and Clark [1998] found that auditors frequently add explanations to unqualified opinions even when the changes are immaterial. Included in the logit model were the log of the company's total assets and the total equity to total asset ratio (roughly the reverse of the debt to total asset ratio). The total equity to total asset ratio was statistically negatively related to the likelihood of a an explanation being added, ie, the more equity (less debt) the less likely an explanation would be required. The log of total size was positively related to opinions with explanations, however the coefficient was not significant.

This paper builds upon the results of the above mentioned papers that found that debt ratios and firm size may be related to the likelihood of receiving a clean opinion and adds several other standard financial ratios to the analysis.

DATA SET AND METHODOLOGY

The data for this paper was derived from the Compustat Industrial Annual datafile. All companies with SIC industry codes from 2000 (food and kindred products) to 5999 (retail stores) from 1977 to 1996 were included. Examples of excluded industries include financial firms, mining firms, construction firms, and service firms. The data set consisted of over 5,000 firms with an average of approximately 10 years of data per firm, over 50,000 observations.

The variables included current assets, current liabilities, total assets, total common equity, net income, dividends, shares outstanding and price per share. Since Compustat does not report total current assets and total current liabilities for companies that are required to consolidate financial subsidiaries, the sub-catagories for these accounts were downloaded and combined to give the values used in the analysis.

The variables were used to calculate the current ratio (CR = total current assets divided by total current liabilities), the debt ratio (DR = one minus total common equity divided by total assets), return on sales (ROS = Net Income divided by Total Sales), total market capitalization (MktCap = price per share times shares outstanding), Total Asset Turnover (TATO = Sales divided by Total Assets) and Dividend Yield (YIELD = Dividends per share divided by Price per share).

In addition, adjusted values for some of the ratios were computed to offset problems with skewness (natural log of total sales and natural log of MktCap were generated) and outliers. For Return on Sales, values less than -1.0 were recoded to -1.0 and values greater than 1.0 were recoded to 1.0 for variable ROS1. The extreme values for Return on Sales were usually associated with smaller firms. One company had recorded sales of $1,000 and a net loss of $4,500,000, giving a return on sales of – 450,000%. This was a new company that had just gone public and had not yet started selling its product. Likewise the current ratio and debt ratios were banded to eliminate extreme values.

Since many of the extreme value ratios seemed to be associated with smaller firms, an alternative approach to reducing their impact was to eliminate firms with sales or total market

capitalization less than $500,000 (eliminated 1,161 observations out of 51,914), less than $1,000,000 (eliminated 2,042 observations) or less than $5,000,000 (eliminated 7,515 observations).

The Compustat dataset includes a variable for auditor's opinion which is coded as unaudited, unqualified, unqualified with explanation, qualified, no opinion, or adverse opinion.

The results of this study are dependent upon the codes that Compustat has given to the opinions. Therefore the criteria that Compustat uses to determine the codes are given below to make it clear how they catagorize an opinion [Compustat, 1994].

The opinion is coded as unqualified if the financial statements reflect no unresolvable restrictions and the auditor has no significant exceptions as to the accounting principles , the consistency of their application and the adequacy of information disclosed.

An unqualified opinion with explanation is given when an auditor expresses an unqualified opinion but has added explanatory language to the auditor's standard report.

A qualified opinion is coded if the statements reflect the effects of some limitation on the scope of the examination or some unsatisfactory presentation of financial information, but are otherwise presented fairly. It is also given if the company is in liquidation, even if not otherwise qualified, or if the statements do not fairly present the financial position of the company.

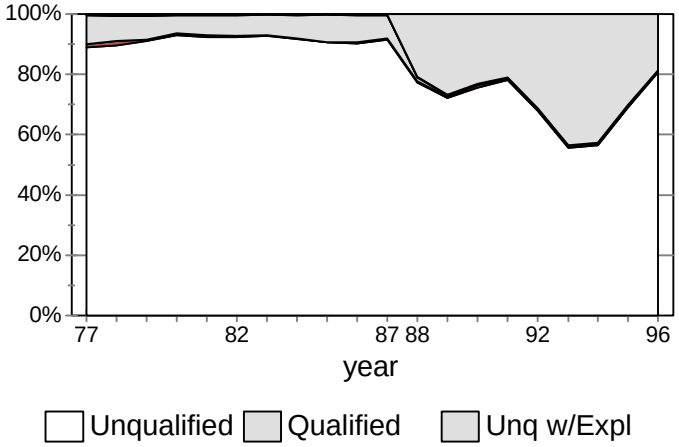
No opinion is given if the auditor refuses to express an opinion regarding the company's ability to sustain operations as a going concern.

Finally, an adverse opinion is given when the auditor expresses an adverse opinion on the statements.

Upon examining the data, it became clear that the analysis would have to be done in two sections. The introduction of SAS No. 58 in 1988 had a significant change on the type of opinions issued (See Figure 1). Before 1988, between 5% and 10% of the opinions issued were qualified with effectively no unqualified opinions with explanations. After 1987, unqualified opinions with explanations accounted for 20% to 45% of the opinions issued and qualified opinions dropped to less than 1%.

Figure #1

Type of Opinion, by Percentages



In each of the two periods, the data were divided into two groups, those that received an unqualified opinion and all others. Given the nature of the data, the 'all others' group is primarily qualified opinions in the pre-1988 period and unqualified opinions with explanations in the post-1987 period. There were 19,384 observations in the first period that had a complete set of data and 32,530 in the second.

T-tests for the difference in means for each of the ratios for the two groups for each period, and for each of the various subsets of data and types of adjustments were calculated. In addition, logit models were run using the ratios discussed above and the various adjustments.

As a final set of tests, the logit models were run using the ratios one year in advance and two years in advance of the auditor's opinion to see if the type of opinion can be anticipated.

RESULTS OF THE ANALYSIS

The t-tests found statistically significant differences (at the 1% level) between the means for the unqualified group and the 'all others' group for both of the periods for all of the following variables: sales, total market value and log of total market value, the current ratio and the adjusted current ratio, the debt ratio and adjusted debt ratio, return on sales and the adjusted return on sales, and the total asset turnover ratio, with the exception of the current ratio in the first period (2.46%) and log of total market value in the second period (17.4%). However Dividend Yield was not significant in either period.

Table #1

Univariate Comparisons

Pre - 1988				
	Clean	Other	t-value	Probability
Sales	1378.40	1005.69	2.85	0.43%
Market Cap	709.15	383.91	4.52	0.00%
Ln(Mkt Cap)	4.43	3.34	19.21	0.00%
Current Ratio	3.02	2.22	2.25	2.46%
Adj. CR	1.54	1.21	17.23	0.00%
Debt Ratio	0.51	0.85	-34.71	0.00%
Adj. DR	0.50	0.67	-31.66	0.00%
ROS (#1)	0.03	-0.13	27.01	0.00%
Adj. ROS	0.02	-0.17	40.94	0.00%
Total Asset Turnover	1.43	1.12	13.38	0.00%
Dividend Yield (#1)	0.026	0.021	0.70	48.43%
Post 1987				
Sales	1191.15	2258.92	-14.20	0.00%
Market Cap	1043.57	1642.57	-9.69	0.00%
Ln(Mkt Cap)	4.61	4.57	1.36	17.37%
Current Ratio	3.44	2.27	9.55	0.00%
Adj. CR	1.59	1.30	30.05	0.00%

Debt Ratio	0.52	3.60	-3.43	0.06%
Adj. DR	0.49	0.60	-37.33	0.00%
ROS (#1)	-0.08	-0.11	2.82	0.48%
Adj. ROS	-0.04	-0.10	18.03	0.00%
Total Asset Turnover	1.31	1.27	3.85	0.01%
Dividend Yield (#1)	0.016	0.018	-1.05	29.45%

#1: Only companies over $1,000,000 in Sales and Total Market capitalization due to outliers in the smaller companies.

The results (lower debt ratios, higher current ratios, higher return on sales and higher total asset turnover associated with a clean unqualified opinion for both periods) are consistent with the hypothesis that financial difficulties increase the likelihood of receiving less than a clean, unqualified opinion.

The size variables, sales and total market capitalization were interesting. The difference in means was significant (at the 1% level) in both periods, with the exception of the log of market capitalization in the second period. In the first period, firms receiving clean unqualified opinions were larger than the "all others" as measured by the variables but in the second period, they were smaller. It could be argued that in the first period, with primarily qualified opinions, smaller firms represented firms that were more likely to have problems and thus more likely to receive a qualified opinion. But, in the second period, primarily unqualified opinions with explanations, larger firms that may have many divisions or may be involved in mergers and acquisitions, are more likely to need to have an explanation added to explain changes that take place from year to year.

The results from eliminating the smaller firms by deleting those with sales or total market capitalization less than $500,000, less than $1,000,000 or less than $5,000,000 were comparable.

The logit models gave similar results. The coefficients were as expected and significant at similar levels as the in t-tests. The one exception is that the return on sales in the second period is less significant (5.5%) than in the univariate tests.

Table #2

Logit Regressions
Dependent Variable = type of opinion

Pre-1998				
Number of obs =	19,384			
chi2(5) =	1,172.58			
Prob > chi2 =	0.00			
Pseudo R2 =	0.11			
Log Likehood =	(4,640.4)			
	Coef.	Std. Err	z value	P>|z|
cr	-0.04533	0.0179	-2.5320	1.10%

dr	2.87676	0.1285	22.3800	0.00%
ros	-0.01565	0.0042	-3.7340	0.00%
mktcap	-0.00014	0.0000	-5.3910	0.00%
ato	-0.51307	0.0409	-12.5330	0.00%
_cons	-3.31663	0.1210	-27.4180	0.00%

Post 1987				
Number of obs =		32,530.00		
chi2(5) =		1,355.12		
Prob > chi2 =		0.00		
Pseudo R2 =		0.03		
Log Likelihood =		(1,898.0)		
	Coef.	Std. Err	z value	P>|z|
cr	-0.04492	0.0054	-8.3880	0.00%
dr	1.07590	0.0439	24.4960	0.00%
ros	-0.00034	0.0002	-1.9150	5.50%
mktcap	0.00002	0.0000	7.2900	0.00%
ato	-0.11695	0.0148	-7.9100	0.00%
_cons	-1.21552	0.0399	-30.4480	0.00%

The logit models were run with the subsets of data with the smaller firms eliminated and with the adjusted data and the results were basically consistent. The log of market capitalization in the second period did become statistically significant at the 1% level when included in the model, while it was not significant on a univariate basis. As above, larger firms in the earlier period and smaller firms in the later period were associated with clean unqualified opinions.

The next set of logit models used the auditor's opinion from the year following the year of the independent variables. For example, the opinion in 1978 was used as the dependent variable with the 1977 ratios. This gives an opportunity to see if the type of opinion can be forecasted a year in advance. The results were similar to the original models with the exception of the current ratio in the first period and the return on sales in the second period which were no longer statistically significant.

When the auditor's opinion two years in advance was used as the dependent variable, both the current ratio and the market capitalization in the first period, and the return on sales in the second period were insignificant, but the other variables remained significant at the 1% level.

SUMMARY AND CONCLUSIONS

Financial difficulties are not a requirement for a firm to receive an audit opinion that is less than a clean, unqualified opinion. However the results of the statistical analysis in this paper show that there is a strong relationship between financial weakness, as measured by the ratios, and qualified opinions or unqualified opinions with explanations. These results hold with both time periods, various subsets of the data, and various modifications of the data to adjust for extreme values. The one significant change that was noted was in the size variables. Clean, unqualified opinions were

associated with larger firms in the first period and with smaller firms in the second period. The results also hold, in general, even one and two years in advance of the opinion.

The results of the study are subject to the type of opinion as coded by Compustat and that the data consisted of the publicly traded companies that are in the Compustat dataset. The Industrial Annual dataset does not include companies that are no longer in business and thus there is a possible selection bias in the data. Further research could try to include companies that were in the Compustat dataset in the past, but are no longer there.

Another possible follow up to this study would be to look at the causes of the qualified opinion or the unqualified opinion with explanations to see if financial difficulties are listed as the reason for the qualification. Then the financial ratios could be examined for the subsets of data where the qualification or explanation is based upon financial difficulties and those where the qualification is based upon other factors.

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AN EMPIRICAL INVESTIGATION OF THE LONG-TERM EFFECTS OF PERMANENT LAYOFF ANNOUNCEMENTS

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ABSTRACT

The purpose of this paper is to investigate the long-term effect of layoffs on shareholder wealth. Layoffs can be viewed as the termination of negative net present value projects. Therefore, in the long term, layoffs should increase shareholder wealth. Previous studies have shown that there is a negative stock price reaction around the dates of layoff announcements. The findings of this research are consistent with previous studies in finding negative stock price reactions around layoff announcement dates. However, this research finds that the long-term stock price performance of firms announcing layoffs is significantly positive. The findings suggest that investors can earn significant abnormal returns by purchasing stock on layoff announcements.

INTRODUCTION

Analysts on Wall Street often view layoff announcements favorably. They see the layoff announcements as a sign that the company is serious about overcoming operating difficulties and they believe many of the companies will benefit from having a leaner work force. The layoff announcements usually include some explanation that the company is losing market share, is discontinuing a product line, or is streamlining its business operations to become more competitive. The strategic decisions to downsize the company are described as efforts to be more cost efficient.

Since the goal of the firm should be to maximize the market value of the firm's stock, managers announcing layoffs must believe the layoffs will lead to higher stock prices. The decision to lay off workers can be characterized as the termination of a project with a negative net present value. Finance theory tells us that positive net present value investments increase the value of the firm and negative net present value investments decrease the value of the firm. Therefore, the termination of negative net present value investments should also increase the value of the firm. Under this assumption, there should be a positive stock price reaction to layoffs.

Empirical studies on layoffs consistently find that there is a negative stock price reaction to layoff announcements (Elayan, Swales, Maris, and Scott (1998), Abowd, Milkowitch and Hannon (1990), Blackwell, Marr, and Spivey (1990), and Worrell, Davidson, and Sharma (1991)). For example, Abowd, Milkowitch and Hannon (1990) study the effects of various human resource decisions on shareholder wealth. They find significant negative abnormal returns around the date of the announcement of layoffs. Blackwell, Marr, and Spivey (1990) study the effect of plant closings on the market value of the firm. A plant closing is a very significant action by a company resulting

in a reduction of its work force. Blackwell, Marr and Spivey (1990) find statistically significant negative cumulative abnormal returns around the announcement date of plant closings.

Recent empirical studies distinguish layoffs based on the reason given for the layoff. These investigations attempt to categorize layoffs as being for efficiency enhancing/restructuring reasons or for declining demand/financial distress reasons. Worrell, Davidson and Sharma (1991) study the effects of layoff announcements on shareholder wealth. They also find a significant negative stock price reaction on the days immediately surrounding the dates of layoff announcements. They find that most of the negative price reactions are due to layoffs done for financial reasons. Layoff announcements attributed to restructuring and consolidation do not result in any significant stock price reactions around the announcement dates.

Palmon, Sun and Tang (1997) find significantly negative cumulative abnormal returns (CARs) associated with layoff announcements attributed to a declining demand for the firm's products and significantly positive CARs for firm's that announce layoffs to improve efficiency. Palmon, Sun and Tang (1997) also find higher return on equity (ROE) after the layoffs for firms announcing layoffs to improve efficiency.

Elayan, Swales Maris and Scott (1998) examine layoff announcements from January 1, 1979 to December 31, 1991. They find significantly negative CARs around the announcement date for all layoffs. The authors distinguish between the initial reaction to the layoff announcement by stockholders and the potential success of the strategy to layoff employees. They argue that investors may misinterpret the effect of a layoff on the firm's operations and view the layoff as a negative signal when, in fact, the layoff may a positive net present value decision that increases the efficiency of the firm in the long run. The authors find firms that announce layoffs, on average, have higher ROE's in subsequent periods.

If layoffs can be characterized as the termination of negative net present value projects, or the strategic decision of the firm to be more cost efficient, why do investors react negatively to the announcement of layoffs? It is possible that investors may be misinterpreting the information in a layoff announcement as suggested by Elayan et. al. (1998). This research will examine the long-term effect of layoffs on shareholder wealth. If firms lay off employees to be more cost efficient, these firms should perform better after the layoffs. If the initial stock price movement is negative (and according to previous research it is), the long-term stock price reaction should increase if the layoff strategy has been successful in cutting costs, making the firm more competitive, or terminating negative net present value projects.

The hypothesis to be tested is that there is a positive stock price reaction to layoff announcements over the long term. At the time of the layoff announcement, investors may be unable to correctly determine whether the news is good or bad. They don't know whether or not the cutbacks will make the company more profitable. If the long-term stock price reaction to layoffs is positive, this implies that investors tend to misinterpret the informational content of layoff announcements.

METHOD

Data

The events examined in this investigation are the announcements of layoffs. The NEXIS-LEXIS database was used to obtain information on firms announcing layoffs from 1980 to 1991. The

search was limited to layoff announcements reported in the Wall Street Journal. The search resulted in approximately 200 announcements of layoffs. In order to use the NYSE/AMEX daily return tapes of the Center for Research in Security Prices (CRSP), only firms with common stock traded on the New York or American stock exchanges were retained in the sample. This reduced the sample to 112.

The Wall Street Journal Index was used to determine if there were any other announcements within 90 days of the layoff announcements that could bias the results. Several firms were eliminated from the study because of negative earnings announcements within one week of the layoff announcement. Ten firms were eliminated because they did not have a sufficient number of trading day returns to be included in the sample. The final sample consists of 64 layoff announcements.

Procedure

Event study methodology is used to model stock price reactions. We employ a single factor market model using the following equation to calculate expected stock price returns:

$r_{jt} = a_j + b_j r_{mt} + e_{jt}$, where

r_{jt} = the continuously compounded rate of return on security j for period t,

a_j = the intercept term,

b_j = the covariance of the returns on the jth security with those of the market portfolio, divided by the variance of the market portfolio's returns,

r_{mt} = the continuously compounded rate of return on the CRSP equally-weighted market portfolio for period t, and

e_{jt} = the residual error term on security j for period t.

The parameters of the market model were estimated during a 220-day control period that began 266 days before the announcement date and ended 46 days before the announcement date. The announcement date (Day 0) is the date that the layoff announcement appeared in the Wall Street Journal. The market model parameters from the estimation period are used to estimate the expected returns for each day of the event period. The event period begins 10 days (Day -10) before the announcement date and ends 500 days (Day 500) after the announcement date.

The abnormal return (ABR_{jt}) is the difference between the actual return and the expected return. It is calculated by subtracting the expected return (which uses the parameters of the firm from the estimation period and the actual market return for a particular date in the event period) from the actual return (R_{jt}) on that date. The equation is as follows:

$$ABR_{jt} = R_{jt} - (a_j + b_j R_{mt}),$$

where each of the parameters are as previously defined. The average abnormal return for a specific event date is the mean of all the individual firm abnormal returns for that date:
where N is the number of firms used in the calculation. The cumulative abnormal return (CAR) for each interval is calculated as follows:

$$AR_t = \frac{\sum_{j=1}^{N} ABR_{jt}}{N},$$

$$CAR_{T_1,T_2} = \sum_{T_1}^{T_2} AR_t$$

The standardized abnormal return method was used to determine if the abnormal returns were significantly nonzero. The standardized abnormal return (SAR_{jt}) is calculated as follows:

$$SAR_{jt} = \frac{AR_{jt}}{s_{AR_{jt}}},$$

where s_{ARjt} = the estimated standard deviation of AR_{jt}. The standardized mean cumulative abnormal return ($SCAR_i$) is

$$SCAR_j = \sum_{T_1}^{T_2} \frac{SAR_{jt}}{T_2 - T_1 + 1},$$

where $T_2 - T_1 + 1$ = the number of days in the test interval and other variables are as defined earlier. The test statistic for $SCAR_{T1,T2}$ is shown:

$$Z_{T_1,T_2} = \frac{1}{\sqrt{N}} \sum_{j=1}^{N} SCAR_j,$$

where N is the number of firms in the sample.

We also perform a nonparametric rank test. The rank test we used is discussed in Corrado (1989). This rank test does not require that the distribution of excess returns be symmetrical.

Hypothesis

The hypothesis is formally stated as follows:

H_o: There is no long-term stock price reaction to layoff announcements.
H_A: There is a positive long-term reaction to layoff announcements.

The hypothesis is tested by calculating CAR's for the post-announcement period to determine if there are statistically significant positive CAR's. In order to determine if the sample is comparable to the samples used in previous empirical research, this study also tests for a significant negative stock price reaction around the announcement date.

RESULTS

First, the findings indicate that their is an immediate negative stock price reaction to the announcement of layoffs. The CAR's are presented in Table 1. The abnormal return for Day 0 is -.75 percent and is significant at the .001 level (Z = -3.30). This indicates that the dataset used in this study is comparable to the datasets for previous empirical studies.

Table 1
Cumulative Abnormal Returns

Event Period	CAR	Z-Value	Significance Level
Day 0	-0.75%	-3.30	< .001
+1 to +90	6.87%	2.87	< .05
+1 to +262	12.12%	1.87	< .05
+1 to +500	25.00%	2.33	< .01

More importantly, the CAR's for the post-announcement periods are positive and significant. For the period +1 to +90 the CAR is 6.87 percent and is significant at the .05 level (Z = 1.88). The CAR's get larger and more significant as the time period increases. The CAR for the period +1 to +262 (one year) is 12.12 percent and is significant at the .05 level (Z = 1.87). The CAR for the period +1 to +500 is 25.00 percent and is significant at the .01 level (Z = 2.33). Therefore, we reject the null hypothesis and conclude that there is a long-term positive stock price reaction to the announcement of layoffs. The long-term stock price reaction is extremely large and highly significant.

DISCUSSION

The results of this research indicate that layoff announcements do significantly affect shareholder wealth. The results support the theory that layoffs allow firms to become more competitive. These findings indicate that investors typically misinterpret the announcement of layoffs as a signal that the firm is on the decline. They view layoff announcements as “sell” signals. The initial negative market reaction to layoffs does not appear to be justified based on the performance of the firms in the sample subsequent to the layoffs.

Layoffs appear to be an effective method for stemming the tide against poor stock price performance. Based on this research, investors should see layoff announcements as strong "buy"

signals. Investors can earn excess returns for prolonged periods of time by investing in firms after layoff announcements.

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FINANCIAL REPORTING VIA THE INTERNET

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ABSTRACT

From May 1996 to November 1997, the amount of information on the Fortune 150 companies available on the Internet has increased dramatically. In 1997, Petravick and Gillet published their findings as to the number of the Fortune 150 firms in America that had a presence on the Internet, and the extent of that presence. This study retraces the steps of Petravick and Gillet for a period only 18 months later. For the period of the Petravick study, 68 percent of the Fortune 150 firms were participating in the Internet. By November 1998 our study shows that percentage up to 94 percent. However, this one number does not demonstrate the true scale of Internet usage by those firms. Yes, significantly more of the companies are participating in the Internet, but the levels of activity by each participant are also increasing.

The levels of participation by the Fortune 150 have increased immensely. Firms providing comprehensive financial information increased 250 percent. Whereas, in 1997, only 22 percent of firms provided the Internet user comprehensive financial information, 77 percent were doing so in November 1998. That statistic explains why the number of firms on "the net" that provided no financial information has been reduced by 90 percent, while those firms providing limited financial information has be reduced by 35 percent.

Growth of the volume of information available on the net is only part of the significant effect of the information explosion. A primary benefit of having financial information on the net is that the net is very cost effective. Companies may choose the net as the medium to inform stockholders, while avoiding the expense of mailing glossy printed statements. It is also easier and cheaper to provide the specific financial information needed by line managers.

Rapid growth of Internet information is causing some problems for management and regulators. Having financial information on the net makes the information available to competitors as well as investors. Also, regulating bodies are finding it difficult to apply generally accepted accounting procedures to a medium that is developing at such a rapid pace. All participants, however, realize that the clock cannot be turned back. The overall benefits of the new information age appear to be too valuable to be restrained significantly either by management or by regulators.

AN INVESTIGATION OF THE SIGNALING RELIABILITY OF GOING-CONCERN AUDIT REPORTS

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INTRODUCTION

A going-concern audit report (GCAR) (for purposes of this study, the term "going-concern audit report" includes disclaimers of opinion and "subject to" audit qualifications issued because of going-concern uncertainties) is generally viewed by financial statement users as an indicator of some degree of financial distress because the auditor has substantial doubts about the company's continued existence. Professional auditing standards define the auditor's responsibility to evaluate a client's going-concern status. This suggests that the profession views the GCAR as an important signal to financial statement users. Given the auditor's accessibility to client records and interaction with management and legal counsel, prior research studies have hypothesized that GCARs have information content beyond that reflected in the financial statements, and are reliable signals of subsequent company failure (Mutchler and Williams 1990; Hopwood et al. 1989; Levitan and Knoblett 1985; Altman 1982). The results, however, have been mixed and the reliability and usefulness of GCARs remains questionable.

This study explores whether GCARs can be viewed as a reliable signal of subsequent company failure. Developing a better understanding of factors affecting signaling reliability should help financial statement users assess the report's information content and relevancy in their own decision models. In this study, a research model was developed to test the prediction that the signaling reliability of the GCAR is associated with identifiable client- and auditor-specific factors suggested by related research. Companies that received GCARs between 1982 and 1988 were examined. The results provide evidence that a company's estimated probability of bankruptcy and mitigating actions or events that occur subsequent to the issuance of the audit report are associated with the report's signaling reliability. While the study finds evidence that other client and auditor-specific factors are associated with the company's subsequent failure/non-failure status in the hypothesized direction, the associated was not significant and suggests a need for further investigation.

RESEARCH MODEL AND HYPOTHESES

Auditing standards specify that the audit report should be modified if an auditor continues to have substantial doubts about the client's ability to maintain itself as a going-concern after all available evidence has been evaluated. However, no precise guidelines are provided as to what constitutes "substantial doubts". Asare (1992) presents evidence that auditors may judge a company's ability to continue in existence at the same level, but issue different audit reports. He surmised that auditors differ in their judgment as to what constitutes "substantial doubts". Lewis

(1980) suggests that decisions are a function of individual utility functions. Since auditors' utility functions are likely to differ, decisions could differ across auditors.

Libby (1981) states that judgmental and decision accuracy is, in part, a function of ambiguity and complexity in the decision-making environment. The ambiguous and complex nature of the information regarding a client's economic status likely affects the level of ambiguity and complexity in the auditor's decision-making environment. This interrelationship suggests that characteristics of both companies and their auditors will affect the reliability of going-concern reports. Therefore, client- and auditor-specific factors were examined for their contribution to variability in auditor judgments and decisions. Client-specific factors include the ambiguity and complexity of information regarding a client's economic status and mitigating actions or events that occur subsequent to the issuance of the auditor's report. Auditor-specific factors include the auditor's level of experience with respect to the client and the client's industry, and the auditor's loss function. This hypothesized relationship presented in functional form, is as follows:

P(R)	=	likelihood that the auditor's going-concern signal is reliable
A/C	=	ambiguity and complexity level of the client's information regarding its economic status
MF	=	mitigating actions or events that occur subsequent to the issuance of the going-concern audit report
AE	=	auditor's experience with respect to the specific client and the client's industry
LF	=	auditor's loss function

In regard to the dependent variable, only companies that received going-concern audit reports are considered. That is, the model is designed to explain only why an auditor signals substantial doubts concerning a client's ability to maintain its going concern status during the subsequent year and that signal, ex-post, proves to be unreliable. Once a going-concern opinion is issued, the reliability of that opinion as a signal of client failure can be a very useful piece of information for financial analysts and other users of financial statements.

In the audit process, the auditor likely uses some combination of financial and nonfinancial information to assess whether there are "substantial doubts" about the client's ability to maintain itself as a going-concern. Through the use of one of the traditional financial ratios-based bankruptcy models {Jones 1987; Zavgren 1983), the auditor can assess the client probability of bankruptcy, P(B). If the client's P(B) is assessed between some unobservable threshold levels, the auditor is more likely to encounter increased ambiguity and complexity with respect to client information. When P(B) falls above the upper threshold level or below to lower threshold level, the level of ambiguity should be sufficiently reduced, such that the auditor has an increased likelihood of sending a reliable signal of the company's subsequent economic status.

Between these two threshold levels, however, the auditor may have to consider additional quantities of information in assessing the clients going concern status, which could increase the level of ambiguity and complexity in the auditors decision-making environment. This increased ambiguity is likely associated with a decreased likelihood of the audit report reliably signaling subsequent failure. Since this study examines only the set of companies that received a going-concern audit report (i.e. distressed companies), it is likely that the higher the P(B), the greater the likelihood that the audit report will be a reliable signal of subsequent company failure. Thus,

H1: Given that a going-concern audit report has been issued, the estimated likelihood of a reliable signal increases as the company's probability of bankruptcy increases.

In situations where the auditor issued a GCAR for a company which subsequently does not fail, the auditor may not have reliably assessed the companies ex post position due to the auditor's inability to foresee subsequent mitigating actions or events that affected the company's failure/non-failure status. The relevance of subsequent mitigating actions or events for assessing a GCAR's reliability is tested in the second hypothesis:

H2: Subsequent actions/events that mitigate a company's financial problems decrease the likelihood of a reliable going-concern audit report.

The auditor's ability to reliably assess a client's going concern status may also be associated with certain auditor attributes that affect the auditor's decision-making environment. These factors include the auditor's experience with the client and the client's industry. An auditor would be remiss in issuing an audit report where he or she lacked knowledge of the client and the client's industry. It can be argued, however, that the longer the time that the current auditor has been auditing a specific client and the higher the auditor's client industry concentration, the more "expert" the auditor may be. (see Colbert 1989 review for studies on effects of experience on auditor's judgments).

In this study, measures of auditor/client relationship tenure and client industry concentration ratios serve as measures of auditor experience. If the auditor has more experience with the specific client and more experience auditing companies within a specific industry, he or she may be able to better assess the likelihood of the client maintaining its going-concern status. Given the issuance of a GCAR, it is hypothesized that an auditor with a longer auditor/client tenure and greater client industry experience has an increased likelihood of sending a reliable signal of the company's subsequent financial status to financial statement users.

The increased familiarity with the specific client could lead to a tendency not to issue a GCAR when necessary thereby decreasing the signaling reliability of audit reports in general. However since only financially distressed companies are considered in this study, the increased length of both the auditor/client relationship and the auditor's client industry concentration ratio are expected to be positively associated with the decreased risk of making a decision that is ex-post unreliable. Thus, the learning effects of increased experience with the client and its industry are hypothesized to have a positive influence on the reliability of the auditor's decision regarding the economic status of the company as follows:

H3: Given that the auditor has issued a going-concern audit report, the likelihood that the report is a reliable signal of subsequent company failure increases as the tenure of the auditor/client relationship increases.

H4: Given that the auditor has issued a going-concern audit report, the likelihood that the report is a reliable signal of subsequent company failure increases as the proportion of the industry audited by the client's auditor increases.

Measures of client size relative to the auditing firm's total client base may help explain why the GCAR is a reliable signal for some companies, while unreliable for others. Kida (1980) suggested that an auditor's decision to issue a GCAR is, in part, influenced by the perceived outcome of issuing a modified or clean audit report. Client size relative to the firm's total client base may be viewed as a measure of the relative risk of lost revenues resulting from the decision to issue a GCAR. This measure may also be viewed as a measure of the relative risk of litigation loss if the auditor fails to send a reliable signal to financial statements users. Thus, this measure can be viewed as a surrogate for the auditors loss function.

Mutchler and Williams (1990) reported that companies receiving GCARs tend to be smaller than companies receiving clean opinions. The increased riskiness of small companies likely results in an increased probability of failure given existing adverse conditions or events. Incurring costs to search for mitigating evidence above some reasonable, but minimal level, would likely increase to reliability of the auditor's signal. However, this outcome may not be cost-beneficial given the client's size relative to the auditor's total client base.

To the extent that smaller clients constitute the smaller portion of the auditors total client base, the auditor may be less concerned about the loss of client fees if a GCAR is issue. This suggests that auditors may issue GCARs with greater frequency for clients that constitute a smaller proportion of the total client base, with a lower incidence of signaling reliability. This final hypothesis is stated as follows:

H5: Given that a going-concern report has been issued, the likelihood that the report is a reliable signal of subsequent company failure increases as client size relative to the auditing firm's total client base increases.

RESEARCH DESIGN

The five research hypotheses are tested by estimating the coefficients in the following probit regression model (the hypothesized sign for each explanatory variable is enclosed in parentheses):

$$P(R)_i = \beta_0 + \beta_1 P(B)_i + \beta_2 MAE_i + \beta_3 TEN_i + \_\beta_4 CR_i + \beta_5 SZ_i + \epsilon$$

where for the ith company

	$P(R)_i$	=	Reliability of the going-concern audit report as a signal of subsequent company failure.
(+)	$P(B)_i$	=	Estimated probability of company bankruptcy
(-)	MAE_i	=	Subsequent mitigating actions and events
(+)	TEN_i	=	Length of the auditor/client relationship
(+)	CR_i	=	Proportion of industry audited by the firm (industry concentration ratio)
(+)	SZ_i	=	Company size relative to auditing firm's total client base

SAMPLE SELECTION

The sample of going-concern companies was identified using Compustat Annual and Research Files. For the selected test period 1982 through 1988, the data sources were examined to identify companies that received in audit report other than a standard unqualified audit report in event period t, while reporting a "clean" opinion in the preceding period. There were 201 going concern reports identified for companies with "clean" audit opinions in the preceding year. If the company reported a debt payment default or filing of bankruptcy in the same reporting period as the relevant GCAR, the company was excluded from the sample. (For purposes of this study, reporting a debt payment default or bankruptcy filing in the period of the initial GCAR is considered to be a Type II error. The focus of this study is on the determinants of Type I errors.)

The following data requirements were imposed on each of the companies in order to be included in the final sample:

Industry, sales, assets, liability, and annual earnings data are available on Compustat Annual or Research Files or from company annual reports for the year of the GCAR and the preceding two years.

Auditor information for current and preceding years is available on Compustat Annual or Research Files or from other verifiable sources such as Who Audits America.

3. Stock return data are available on the CRSP daily files.

After applying the restricting criteria, 129 GCARs were identified for companies with complete data as specified above. The identified going-concern companies were further classified as 1) going-concern companies that failed within the twelve months following the date of the financial statements on which the auditor is currently reporting (auditor issued a reliable going-concern audit report, RGCAR), and 2) going-concern companies that did not fail within the same time frame (auditor issued an unreliable going-concern audit report, UGCAR). The failure or non-failure status of each sample company was determined by examining the companies subsequent annual report and media disclosures reported in Predicast Index of Corporate Events. Table 1 details the sample composition in general. The specific test period and data sources were selected to insure compatibility with prior research studies.

VARIABLE MEASURES

Each company's probability of bankruptcy, P(B), is estimated using a probit model consisting of selected predictor variables. In a review of bankruptcy studies, Jones (1987) indicated that the most successful bankruptcy prediction models appear to be those that include financial ratios that serve as measures of profitability, financial leverage, and liquidity. The model used to estimate each going-concern company's probability of bankruptcy is based in part on Zmijewski (1984) which includes net income to total assets (NITA) as a measure of profitability, total debt to total assets (TDTA) as a measure of financial leverage, and current assets to current liabilities (CACL) as a measure of liquidity. The model also includes a control variable for size because of the previously

discussed relationship between the likelihood of company failure and size. The model used to estimate each company's probability of bankruptcy is as follows:

$$P(B)_{it} = \beta_o + \beta_1 NITA_{it} + \beta_2 \Delta NITA_{it} + \beta_3 TDTA_{it} + \beta_4 \Delta TDTA_{it} + \beta_5 CACL_{it} + \beta_6 \Delta CACL_{it} + \beta_7 Sz_{it} + \epsilon_{it}$$

where for each ith company

$P(B)_{it}$	=	The company's estimated probability of bankruptcy
$NITA_{it}$	=	Net income to total assets
$\Delta NITA_{it}$	=	Change in net income to total assets from year t-1 to year t
$TDTA_{it}$	=	Total debt to total assets
$\Delta TDTA_{it}$	=	Change in total debt to total assets from year t-1 to year t
$CACL_{it}$	=	Current assets to current liabilities
$\Delta CACL_{it}$	=	Change in current assets to current liabilities from year t-1 to year t
Sz_{it}	=	Natural log of sales

The auditing standards suggest that an auditor should evaluate client financial information over time (SAS No. 56, AICPA 1988). Based on this guideline and previous financial distress studies, the financial ratios used in the bankruptcy prediction model were each measured as both a level and rate of change. Financial ratio levels were measured as of the end of year t under audit. Ratio values that served as input to P(B) measure are presented for RGCAR and UGCAR companies in Table 2.

Evidence of subsequent mitigating actions are events, as previously discussed, was obtained by investigating media disclosures between the audit report date and the date of the subsequent period's financial statements. Media disclosures are reported in Predicast Index of Corporate Events. In addition, each company's subsequent period annual report was examined for evidence of mitigating actions or events. Each reported action or event that was judged as potentially mitigating was classified as a mitigating item "good news" if the news of the action or event was accompanied by positive abnormal security returns for company i for announcement date t_{-1} and t_0. A positive abnormal stock return implies that the market views the action or event as one likely to mitigate the company's going-concern problems. On the other hand, if the announcement of action or event was accompanied by a zero or negative abnormal returns, the action or event was classified as a non-mitigating item (no news or bad news). The dummy variable was created with the value of "1" if the company reported only mitigating action(s) or event(s) or if the company reported more mitigating than nonmitigating actions or events during the test period and "0" otherwise. Table 3 presents a general summary of the media disclosures reported in Predicast Index of Corporate Events.

In studies that examined the effect of experience on the quality of individual judgments and decisions, a range of three to five years has generally been used as an indicator of "experience" with respect to a specific task (e.g. Frederick and Libby 1986; Hamilton and Wright 1982). Since individual auditor experience measures are not available, audit tenure was operationalized as the number of years the auditing firm has auditing the client.

Bank loan officers appear to use industry expertise to assess auditing firm's credibility (Shockley and Holt 1983). Industry expertise was measured in their study by the auditor's industry market share. Thus, it follows that the auditing firms with a greater industry market share may issue

audit reports with greater signaling reliability. Auditor and industry information was obtained from *Compustat Annual Files* in order to approximate each auditing firm's industry concentration ratio, for each time period *t* in the test period.

In this study, company size relative to the auditing firm's total client base served as a surrogate for the auditor's loss function. This explanatory variable was measured as the client's total sales revenue relative to the auditing firm's total client base. The auditing firm's total client base was measured as the total sales revenues of the auditing firm's clients in reporting period *t* as reported in *Who Audits America.* These losses can be in terms of lost fees if the client switches auditor as a result of the issuance of a GCAR or potential litigation losses if a GCAR is not issued for a company that subsequently fails.

RESEARCH RESULTS

As reported in Table 4, on average, RGCAR companies (0.5381) appear to have a much higher estimated probability of bankruptcy than UGCAR companies (0.4601). Each company's estimated probability of bankruptcy was determined using traditional financial ratios and ratios change measures that have been identified in previous research is good predictors of bankruptcy.

On average, more media reports of "mitigating" actions are events were reported for UGCAR companies (0.4027) that for RGCAR companies (0.0714). Numerous media announcements were found for companies that either defaulted on debt payments or filed bankruptcy within twelve months of date of period t financial statements and the majority of these announcements were associated with negative unexpected security returns. The large number of nonmitigating news announcements for RGCAR companies may be attributed to the fact these companies tend to be larger and news sources may viewed their events as newsworthy to the investment community.

The length of the auditor/client relationship was included in the model as an indicator of auditor experience. The variable was measured as a continuous variable which ranged between a minimum of one year and a maximum of twenty (Compustat provides corporate data for a maximum of 20 years, thus the maximum auditor/client tenure in this study was twenty years). The mean tenure score for RGCAR companies was 8.9742 years, while the mean tenure score for UGCAR companies was 4.3095 years. These measures suggested that the length of the auditor client to tenure is positively associated with the signaling reliability of a GCAR.

Auditor experience was also measured by the proportion of the client's industry audited by the specific firm. As previously discussed, this explanatory variable was measured as the proportion of the client's industry audited by the client's auditor in year t, multiplied by 100 to create an industry concentration index. Contrary to expectations, auditors issuing the RGCARs exhibited less industry experience on average (0.1265) than those issuing UGCARs (0.1533).

Client size was measured as the company's total sales relative to total sales revenues of the auditor's client base, which gives an indication of the potential losses faced by the auditor. On average, RGCAR companies (0.72%) constitute a larger proportion of the auditors' total client base than UGCAR companies (0.13%). The data suggests that GCARs issued for companies representing a larger proportion of the auditor's total client base tend to be more reliable.

The results of the probit analysis of the relationship between the signaling reliability of the GCAR and identified explanatory variables are presented in Table 5. Consistent with preceding

literature, the results suggest that a company's probability of bankruptcy has the strongest relationship to subsequent company failure ($p < .05$). Intuitively, as the company's financial information reflects greater financial distress, the level of ambiguity and complexity of related financial information is reduced (relative to information for distressed companies with a lower P(B). Conservative decisions to issue to GCARs in the face of indicators of financial distress possibly resulted in a lesser reliable signal for firm's with the relatively lower P(B).

The results also suggests a strong negative relationship ($p < .05$) between the audit report's signaling reliability and subsequent mitigating actions and events. These results are consistent with the hypothesis that an auditor may be unable to reliably assess the company's ex-post financial situation due to an inability to foresee subsequent mitigating actions and events. The evidence suggests that companies receiving GCARs should be monitored carefully during subsequent periods.

As previously discussed, the auditor operates in a less ambiguous decision-making environment when the auditor is more familiar with the client's operation and management. Since only going-concern companies were considered in this study, auditor experience with the specific client was hypothesized to be positively associated with the GCAR's signaling reliability. That is, reports issued by auditors with longer auditor/client tenure were expected to be more reliable indicators of subsequent company failure than those issued by less experienced auditors. While the relation between the signaling reliability of the GCAR and auditor/client tenure was in the hypothesized direction, the association was not significant.

The reliability of audit reports issued by the more "expert" audit firms (with respect to the client's industry) was not consistent with the experience hypothesis using the industry experience measure. An auditing *firm's* experience with a given industry does not necessarily mean that the particular auditors or engagement partner had the same level of experience. In addition, auditing firms possibly favor a more conservative approach when there is increased exposure due to the firm's higher industry concentration.

Finally, the relation between GCAR signaling reliability and the size of the client relative to the auditing firm's total client base was in the hypothesized direction, however, the association was not highly significant ($p < .10$). The relation, however, provides some evidence that GCAR issued to companies that expose the auditor to greater losses are more reliable than reports issued to companies representing a smaller proportion of the firm's total client base.

CONCLUDING REMARKS

With the issuance of a GCAR, and auditor has signaled "substantial doubts" about the continued existence of a client. The extent to which financial statement users can rely on the report as a signal of subsequent failure, however, this not been satisfactorily investigated in the literature. The purpose of this study was to help explain why auditors frequently issue GCARs to companies that subsequently do not fail, thus sending what proves to be an unreliable signal to financial statements users. Identifying determinants of the ex-post reliability of GCARs should help financial statement users better assess the usefulness of the report in their own decision models. While previous research studies have reported descriptive statistics of the number and proportion of going-concern reports issued to non-failing companies, little evidence has been provided to explain whether

these situations are the result of the auditors failure to meet auditing standards or the unavoidable consequences of a dynamic business environment.

The results of this study suggest that GCARs issued to companies with higher probabilities of bankruptcy tend to be more reliable than those issued for relatively less stressed companies. In addition, the research also finds a significant inverse relation between the announcement of subsequent mitigating actions and events and the audit report's signaling reliability. The strength of these results suggests that Type 1 errors that occur when the auditor issues a GCAR for a company that subsequently does not fail, may more likely be the result of key information that was unavailable to the auditor at the time the report was issued, rather than attributable to audit failure.

The results of the examination of the experience effect on signaling reliability were mixed. Two measures of experience were used, auditor/client tenure and the auditor's industry concentration ratio. The length of the auditor/client relation was positively related to the report's signaling reliability, while the industry concentration ratio was negatively related, however, neither relation was significant. The relation between client size relative to total client base and signaling reliability was positive, but not significant.

With respect to future research, several areas seem to be of immediate interest given the results of this study. First, given the conflicting results regarding auditor experience, this topic warrants further investigation. Alternative measures of auditor experience could help determine where experience is a significant factor in signaling reliability. Auditor client information is readily available to financial statement users for use in their own decision models, so this relation should be explored further.

The issuance of SAS No. 59 has resulted in an increase in the number of GCARs issued (Raghunandan and Rama 1995). Compliance with the new standard may also affect the auditor's *approach* when examining the validity of the going-concern assumption. These consequence of the issuance of SAS No. 59 could be associated with increased or decreased audit report signaling reliability. Thus, companies receiving GCARs during a post-SAS No. 59 test period should be investigated.

Finally it should be noted that client size as measured in this study could be a weak surrogate for the auditor's loss function, which intuitively plays a role in the decision to issue a clean opinion or going-concern report. To the extent that the auditors opinion decision is influenced by the perceived outcome of issuing a modified or clean report, better measures of the auditor's loss function need to be developed and tested.

In conclusion it should be emphasize the issue of the usefulness of the going-concern report is not completely understood. Given that the auditing profession has assumed explicit responsibility to evaluate the going-concern status of clients, the reliability and usefulness of audit reports is an important issue that warrants further investigation.

A PRELIMINARY EXAMINATION OF THE RELATION BETWEEN MANAGEMENT'S DISPLAY CHOICES IN REPORTING COMPREHENSIVE INCOME AND EARNINGS MANAGEMENT

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ABSTRACT

The Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards No. 130 – Reporting Comprehensive Income in June 1997. This new standard requires companies to report comprehensive income and disclose its components in a financial statement with the same prominence as all other required financial statements. However, the new standard allows for management discretion in complying with the new display requirements. Previous earnings management literature suggests that there may be a relation between management's financial reporting choices (in this case, comprehensive income disclosures) and earnings management activity.

The purpose of this study is to provide a preliminary examination of management's comprehensive income disclosure decisions using 1998 quarterly financial reports and selective measures of earnings management. Discretionary accruals have been used in the literature as measures of earnings management [ ]. In this study, discretionary accruals are first measured as the change in non-cash current assets minus the change in current liabilities less depreciation expense (Healy 1985). A second measure of discretionary accruals is obtained using a modified version of the Jones (1991) model which has been reported by Dechow, Sloan and Sweeney (1995) as a model that provides the most power in detecting earnings management. Hirst and Hopkins (1998) suggest a relation between the choice of comprehensive income display (based on the new standard's original exposure draft) and the level of earnings management using available-for-sale marketable securities portfolio transactions. This suggests an examination of earnings management by analyzing a specific account (unrealized marketable security gains and losses) which has been recommended in the earnings management literature (Bernard and Skinner 1996).

The study consists of an examination of 395 1998 first and second quarterly financial reports obtained from the SEC's EDGAR database. Although a more thorough examination would be conducted using annual financial information because quarterly financial information is often unaudited and more condensed, an examination of the quarterly reports issued in the first year of required standard compliance can providc some preliminary descriptive information and provides a cursory view of the relation between management's display choices and earnings management measures.

FINANCIAL INSTITUTION AND THE INTERNET AS VIEWED BY TOP MANAGEMENT--THE NEXT TWO YEARS

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ABSTRACT

A random sample of 500 CEOs of financial institutions in the United States were asked their present and anticipated levels of involvement with online banking over the next two years. A response rate of 48.8 percent was obtained. This paper examines the perceptions of CEO's of financial institutions regarding their institutions' present and future activities on the Internet.

INTRODUCTION

Service industries are moving to the Internet. It is estimated that 13 Million households will be using PC banking by the year 2000 (Lebowitz, June 1996). Lebowitz was referring to the popularity of personal financial software, though it would be safe to assume that many of these will be using the Internet. The first total Internet bank, Security First Network Bank (SFNB), was established in 1995 and has the same protections and regulatory approvals of a bricks-and-mortar bank. (Gandy, December 1995) Brokerage firms have heavily moved onto the Internet. Presently only one major firm is not located on the Internet. Financial institutions will likely follow this lead.

BACKGROUND

The literature is mixed as to potential obstacles to the movement of financial institution onto Internet banking. While some articles identify possible problems, others suggest that problems so identified are not significant. Among obstacles identified by a literature review are high costs (Radigan, 1996), customer relationships (Sraeel, 1996), security (Monroe, 1996 and Radigan, 1996) and customer demand (Hall and Whitmire, 1997). These assertions are refuted, however, by Bankston (1998), Sraeel (1996), Orr (1995), and Lebowitz (1996) respectively.

In a comparison of banks and discount brokers, Gandy (1998) states that banks are wondering how Internet services can be used to generate more revenue. The problem, as Gandy sees it, is that electronic banking services are often limited to being simple electronic bulletin boards with interaction limited to requesting account balances or transferring funds between accounts. The revenue enhancement issue is acknowledged by some early Internet banks that say that, so far, the Internet is better at building customer relationships than at actually making money. None the less, the

demographics of the on-line customer cannot be ignored. The average on-line financial service user is about 39 years old and makes nearly $60,000 annually. About 77 percent are college-educated, 63 percent have children, 35 percent are self-employed and 40 percent are home-based entrepreneurs (Orenstein, 1998). If money is to be made then this group makes an excellent potentially profitable customer base.

In a study conducted in 1996, Lebowitz found that 754,000 households participated in computer banking during the prior year. Before the close of the millennium, the number of banks with Internet sites is anticipated to increase five-fold. More importantly, hundreds of banks will be handling full - fledged transactions via their site on the World Wide Web (*United States Banker*, 1996).

In general, the literature seems to indicate that the rush toward PC banking has begun, though no one has seemed to consult banks directly. The consulting firm of Booz, Allen & Hamilton Inc. in New York surveyed financial institutions that had an address on the World Wide Web, but excluded from the study all financial institutions that were not on the web. Unanswered questions thus far include what financial institutions themselves see as problems and whether they are presently planning to use the web and, if so, the extent of services they intend to provide.

Internet banking application software is now available in multiple versions. One such program, DirectNet (M&I Data Services, Milwaukee) is a suite of services to help banks design, implement, and maintain a customized Web site and offer Internet banking capability. Through this application software, on-line customers can access their accounts with their financial institutions, they then have the ability to view account statements, see check images, obtain information on deposits, print financial statements, transfer funds between accounts and pay bills electronically. (Amato-McCoy, 1998)

Customer demand seems to be a concern to managers in the financial community. Though studies show that customer adoption is rising steadily, it is likely to be years before even a bare majority of banking customers are regularly using either the Internet or the proprietary PC banking systems of large banks (Marshall, 1998). Odyssey L.P (1998), a research firm located in San Francisco conducted a recent survey of households. In January 1998, American households with personal computers reached 42 percent, up from 31 percent in 1995. In the same time span households with Internet connections went from 7 percent to 23 percent, an increase of 328.6 percent.

In a recent study by New York-based market research firm FIND/SVP, it was found that most consumers presently have no idea whether or not their bank offers on-line banking. The study never the less predicted that 16 million homes could be banking on-line by 2001 if the industry aggressively attempts to raise customer awareness (Ruotolo, 1998).

Some financial institutions seem to have had no problem in getting their customers to use Internet banking. Within 18 months of APL Federal Credit Union's introduction to Internet banking, 25 percent of the members at the Laurel, Md. credit union signed on in order to enable them to access their accounts and perform transactions from the comfort of their computers (Bankston, 1998). Thus, if banks can attract the correct customer group, and perhaps cross-sell other financial products, it seems likely that money can be made.

According to a study by Meridian Research (Needham, Mass.), the movement of financial institutions to the Internet will likely accelerate. A survey of the top 120 financial institutions in North

America, Europe, and Asia-Pacific found that 60 percent now offer static Web pages (electronic bulletin boards) and 33 percent offer online transactions. This study also found that by 2000, virtually all (90 percent) of North America's largest financial institutions plan to offer transactions via the Internet. In addition, the study suggests that "basic banking" transactions will soon include buying stocks, insurance, and other financial products (ORR, 1998).

Digital Insight's October, 1997 white paper entitled "Internet Home Banking: Market Penetration and Marketing Methods Study" reports on a Booz, Allen, & Hamilton study that found that the Internet is the least expensive financial services distribution channel, estimating cost-per-transaction at about a penny, compared to $1.07 for in-branch transactions. This white paper suggests that financial institutions will continue to be driven to reduce costs, and that the Internet now represents the lowest available cost for a distribution channel. Income enhancement may be achieved by reducing costs or enhancing revenues. Both would increase profitability.

PURPOSE OF STUDY

The purpose of this study is to determine the anticipated speed and degree of involvement of the movement of financial institutions onto the Internet, as well as perceived problems associated with this movement. Institutions presently not on the Internet as well as those that currently have an Internet presence were both included in the study.

METHODOLOGY

A questionnaire was mailed to a sample of 500 randomly selected CEOs of financial institutions in the United States. CEOs were targeted because it was felt that these individuals were the most likely in the institution to know the short- and intermediate-term goals and objectives of the firm. The survey instrument was numbered and sent in three different mailings, or until a response was received. Address labels were purchased from an outside research company that randomly generated the names of CEOs of financial institutions in the United States and its possessions. A single page front- and back-sided questionnaire was developed and pre-tested by a control group for ease of use and understanding. Modifications to the questionnaire were then made in response to recommendations from the control group. A copy of the final questionnaire is included in the Appendix. The questionnaire was first mailed to institution in August 1997. Mailings were then repeated in September and November, 1997. The mailings resulted in 244 useable responses, a response rate of 48.8 percent.

RESULTS AND DISCUSSION

Responses from the CEOs regarding their presence or intended presence on the Internet within the next two years were compiled and classified into four increasingly sophisticated levels of involvement. If a decision not to go on to the Internet was expressed, further questions attempted to ascertain why. If the respondent expressed intentions of going onto the Internet, but did not intend to offer full service banking facilities then again the questionnaire attempted to ascertain why.

The financial institutions were initially examined to determine the number of institutions on or planning to go one the Internet. Results are shown in Table 1. As shown, 29.1 percent are presently on the Internet in some form whereas an additional 25.8 percent plan to be on within two years. Thus, 54.9 percent of the respondents either have or plan to have some form of Internet involvement within two years as opposed to 45.1 percent who plan no participation.

Table 1
Internet Participation and Planned Participation of Respondents (n=244)

Internet Participation Status	Percentage of Respondents	Number of Respondents
Presently on the Internet	29.1%	71
Plan to be on the Internet within two years	25.8%	63
Subtotal	54.9%	134
No plans for going on the Internet	45.1%	110
Total Respondents	100.0%	244

The four previously specified levels of Internet sophistication for financial institutions are shown in Table 2. Each succeeding level identifies the incremental number of institutions at or going to that level. A level "1" Internet institution simply provides information about the institution without allowing interaction between the institution and the customer, not unlike a electronic bulletin board. Level 2 allows the customer to submit information, such as a loan or credit card applications, to the institution via the Internet. Level 3 allows sharing of information between the institution and the user, such as account or loan balances. Institutions at level 4 allow customers to process information that belongs to the institution,

Table 2
Present Level of Financial Services Offered by Total Respondents

Levels of Sophistication	**Respondents presently on the Internet (n=71)**	**All Respondents (n=244)**
Level 0 (Not On The Internet)	**0.0%**	**70.9%**
Level 1 (Provides Information)	**69.0%**	**20.1%**
Level 2 (Receives Information)	**26.8%**	**7.8%**
Level 3 (Shares Information)	**0.0%**	**0.0%**
Level 4 (Processes Information)	**4.2%**	**1.2%**
Total	**100.0%**	**100.0%**

such as fund transfers between accounts or loan payments. Level 0 was used to designate financial institutions that were planning no presence on the Internet.

At present 70.9 percent of all respondents are not on the Internet. Of those that are on the Internet, (29.1 percent of the total sample) most are presently offering only electronic bulletin boards. This comprises 69.0 percent of those institutions that are presently on the Internet. Another 26.8 percent of those presently on the Internet are able to receive information from the customer. These two levels together comprise 95.8 percent of the institutions on the Internet. The remaining 4.2 percent of the institutions on the Internet have skipped level three entirely and are all found in level four, reflecting an ability to interact actively with customers by processing information. These institutions comprise only 1.2 percent of the total sample responses.

When responding financial institutions were sub-classified into banks and credit unions and compared, as shown in Table 3, no statistically significant differences were found. The percentage of banks simply displaying information (72.6 percent) was higher than that of credit unions 44.4 percent. Credit unions were more likely to have information receiving capabilities (44.4 percent) than banks (24.2 percent). Of the remaining 4.2 percent of the responding institutions, none were limited to sharing information. Of those institutions that were able to process information, the breakdown was 3.2 percent and 11.1 percent of responding institutions of each type respectively. Though the percentage differences appear large, no significant differences were established because of the relatively low number of credit unions responding (n=9). It is interesting to note, however, that a larger percentage of responding credit unions are presently offering ”full service” (processing information) than are banks.

Table 3
Present Level of Financial Services by Type of Institution

Levels of Sophistication	Banks Respondents (n=62)	Credit Union Respondents (n=9)	All Respondents (n=71)
Level 1 (Provides Information)	72.6%	44.4%	69.0%
Level 2 (Receives Information)	24.2%	44.4%	26.8%
Level 3 (Shares Information)	0.0%	0.0%	0.0%
Level 4 (Processes Information)	3.2%	11.1%	4.2%

Note: There was no significant difference between the current level of services offered by banks and credit unions. No respondent reported "sharing information" (Level 3).

Table 4 compares Internet activity with asset size. As might be expected the larger the asset size of the institution, the more likelihood of future involvement. Only 17 percent of those with assets under $1,000,000 are presently on or have plans to be on the Internet. If financial institutions are divided into groups below $50,000,000 and above $50,000,000, the results indicate that 30.5 percent

of the smaller asset group reported present or planned Internet involvement. Conversely, this means that 69.5 percent of these smaller institutions express no plans for Internet participation. In the group above $50,000,000, ninety-five of the one hundred sixteen institutions (81.9 percent) are presently on or have plans to be on the Internet within the next two years. Of these larger financial institutions, only 21 (18.1 percent) report that they have no Internet plans. Asset size and Internet presence or future presence does offer a statistically significant relationship. Among respondents, financial institutions with asset size more than $50,000,000 have a significantly higher probability of embracing Internet activity.

Table 4

Internet Participation by Asset Size of Institution

Asset Size	Internet Presence Number of Institutions				
	Presently On	Plan to Be on	No Plans	Row Total	Percentage on or Plan on
<$1,000,000	3	1	19	23	17%
				9.4%	
$1,000,001 to	3	10	33	46	28%
10000000				18.9%	
$10,000,001 to	9	13	37	59	37%
50000000				24.2%	
$50,000,001 to	20	21	10	51	80%
100000000				20.9%	
$100,000,001 to	26	15	10	51	80%
500000000				20.9%	
$500,000,001 to	4	3		7	100%
1000000000				2.9%	
>$1,000,000,000	6		1	7	86%
				2.9%	
Column Count	71	63	110	244	
Column	29.1%	25.8%	45.1%	100.0%	
chi-square	Value	DF	Significance		
Pearson	83.82266	12	0.00000		

Thus, within two years, it is likely that almost all institutions with assets of more than $500,000,000 will be on the Internet. A conjecture might be made that banks with generally larger asset size are more likely to be on or moving onto the Internet than credit unions. Increased asset size reduces the number of credit unions in the total population of financial institutions. Internet expansion will be taking place among the larger financial institutions, whereas smaller institutions

apparently do not see a significant demand for Internet usage among their customers at this time. During the last several years, Internet stocks have experienced exponential growth, enabling companies such as Netscape to move into a profit position for the first time and making it virtually imperative that companies have an Internet presence.

Responses indicate that, the majority of all banks will be on the Internet within the next two years. The anticipated increase in levels of banking services provided on the Internet is to some extent a function of the institutions' current involvement. Of those financial institutions presently on the Internet, 60.6 percent anticipate offering the ability to process information (Level 4) within two years as shown in Table 5. Of those not now on, but planning to be on, fully one-third intend to offer full service banking within two years. A higher percentage of those presently on the Internet will be moving toward offering full service banking than institutions not now on but planning to be on. Moreover, this table indicates that within two years, 26.2 percent of all financial institution will offer full service banking on the Internet. Of all the new Internet involvement by financial institutions, 38.1 percent will be electronic bulletin boards with very low levels of sophistication. It may be that once on the Internet competitive pressures may provide an accelerating force toward more sophisticated services. It should be noted that of those financial institutions that are presently on the Internet, only 18.3 percent plan to remain as only electronic bulletin boards and only a total of 32.4 percent plan to remain at the lower two levels identified. When viewed by level of sophistication financial institutions presently on the Internet differ significantly from the financial institutions planning to be on the Internet. The tendency is for financial institutions to enter the Internet at lower levels of sophistication and, once there, gradually offer more services. In the future, it is likely that financial institutions will bypass lower levels of Internet involvement entirely as technology, costs, competition, and demand mandate more services. The sharing of information (Level 3) does not appear popular. None of the present institutions on the Internet is at Level 3 and only 11.1 percent of the institutions moving onto the Internet plan to operate at level 3.

Table 5
Planned Level of Services by Respondents

Levels of Future Sophistication	Present Internet Presence (n=71)	Future Internet Presence (n=63)	All Respondents (n=244)
Level 0 (Not on the Internet)	0.0%	0.0%	45.1%
Level 1 (Provides Information)	18.3%	38.1%	15.2%
Level 2 (Receives Information)	14.1%	17.5%	8.6%
Level 3 (Shares Information)	7.0%	11.1%	4.9%
Level 4 (Processes Information)	60.6%	33.3%	26.2%
Total	100.0%	100.0%	100.0%

Note: There was a significant difference between current and future groups' level of Internet sophistication as measured by Pearson Value: 34.79354 , D.F. 16, Significance .0042

A comparison by type of institution, as shown in Table 6, reveals a significant difference in present Internet activity between banks and credit unions. At present, banks are three times more likely (36.3 percent compared to 12.3 percent) to be on the Internet than credit unions. Though credit unions as a percentage were more likely to have full service sites, as a group, fewer credit unions have plans to be on the Internet. A higher percentage of banks (27.5 percent) than credit unions (21.9 percent) are planning to be on the Internet. The present dominance of banks, together with their higher rate of planned movement onto the Internet, will likely maintain their dominance in the future. Credit unions at present seem to have less desire to use the Internet as a marketing tool. Along with the recent court ruling against credit unions, the lack of an Internet presence may mean slower growth in the future. Nevertheless, over the next two years the 3:1 ratio of banks to credit unions will likely decrease to less than 2:1 (63.8 percent to 32.4 percent).

Table 6
Planned Internet Participation by Type of Financial Institution

Classification of Involvement	Banks **Respondents (n=171)**	Credit Unions **Respondents (n=73)**	All **Respondents (n=244)**
Presently on the Internet	36.3%	12.3%	29.1%
Plans to be on within 2 years	27.5%	21.9%	25.8%
Presently on + Plans to be on	63.8%	34.2%	54.9%
No Plans to be on the Internet	36.3%	65.8%	45.1%

Note: There was a significant difference between banks and credit unions future Internet Presence as measured by Pearson Value: 20.554 D.F. 16 Significance .00003

Among financial institutions with no plans for the Internet, the most frequently cited reason was a perceived lack of sufficient demand (53.7 percent), as shown in Table 7. Cost (35.2 percent) and security (32.8 percent) are also identified by over thirty percent of the respondents as perceived Internet obstacles. It seems reasonable, however, to expect that as the availability of Internet banking services grows, more customers will use these services.

Table 7
Perceived Obstacles to Participation by Institutions with no Internet Plans

Insufficient Demand	53.7%
Cost	35.2%
Financial Security	32.8%
Loss of Personal Contact	15.6%
Programming Difficulty	11.1%
Other Variables	7.0%

As this growth occurs, customers of institutions not offering these services are likely to either demand Internet service from their institution, or migrate to institutions offering such services. Thus, many institutions that perceive little demand presently may be forced defensively to provide Internet service. Internet banking service growth is predicted by most professionals (*United States Banker*, 1996). Interestingly, CEO's seemed unconcerned about loss of personal contact or program difficulty.

Perceived obstacles to full service banking by financial institutions on or planning to be on the Internet identify insufficient demand (88.2 percent) as the reason for not moving to total interactive banking, as shown in Table 8. This is surprising since those CEO's that are not going on the Internet (Table 7) cited the same problem, though at a lower percentage (53.7 percent). Cost was also identified as a problem by over 50 percent of the respondents in this group. It is interesting to note that the ranking of obstacles in Table 8 (1-5) was identical to the ranking shown in Table 7 for institutions with no Internet plans.

Among institutions on the Internet or planning to be on the Internet, the major reason cited for not progressing to fully interactive banking is reported as insufficient demand. Again, however, it seems reasonable to speculate that demand for this type of service may grow significantly beyond today's anticipation. Nonetheless, it seems shortsighted in light of the 328.6 percent increase in American households with Internet access over the last three years.

Table 8
Perceived Obstacles to Participation by Institutions On or Going Onto the Internet

Insufficient Demand	88.2%
Cost	50.9%
Financial Security	30.9%
Loss of Personal Contact	21.8%
Programming Difficulty	14.5%
Other Variables	10.9%

When financial institutions that are not going on the Internet are classified by type of institution (banks vs. credit unions), two significant differences emerge (Table 9). The perception of

cost and other variables as a deterrent is significantly different. Cost is perceived to be of concern by credit unions more often than by banks. Variables other than those specified are also significantly more of concern to credit unions (12.3 percent) than banks (4.7 percent). Even so, in both cases, this category was of the lowest concern. When ranking the obstacles to participation on the Internet, both banks and credit unions identify insufficient demand by customers as the primary obstacle. Banks identify security

Table 9
Perceived Obstacles to Internet Participation by Type of Institution

	Banks	**Credit Unions**
Insufficient Demand	51.5%	58.9%
Cost	29.8%	*47.9%
Financial Security	35.1%	27.4%
Loss of Personal Contact	17.5%	11.0%
Programming Difficulty	10.5%	12.3%
Other Variables	4.7%	12.3%*

*Note: There was a significant difference between banks and credit unions consideration of cost, as measured by Pearson Value: 7.360 , D.F. 1, Significance .007)

as the second most important obstacle, whereas credit unions identify cost second. This order was reversed in the category of next most importance to each. The importance of other identified potential obstacles is the same in both banks and credit unions.

Finally, an examination of obstacles to Internet participation by asset size of the respondents is shown in Table 10. A significantly greater concern for cost and lack of demand exists among institutions with assets of less than or equal to $50,000,000 as compared with those with $50,000,000 or more. Smaller financial institutions ($50,000,000 or lower) perceive a lower demand for Internet services (68.8 percent) in comparison to larger financial institutions (37.1 percent). In addition, the smaller institutions were more concerned with cost (45.3 percent) than the larger institutions (24.1 percent). Differences among the other four obstacles were not significant when compared by asset size. Interestingly security was viewed as a more serious concern than inadequate demand among institutions with assets in access of $1,000,000,000. To the extent that smaller institutions are more likely to be located in small towns with greater ease of customer access and more personal relationships, there may be some validity to these reasons. No significant differences existed between institutions that were federally chartered as opposed to those with state charters.

Table 10
Perceived Obstacles to Internet Participation by Asset Size

	Financial Security	Inadequate Demand*	Cost**	Loss Personal Contact	Program Difficulty	Other
ASSETS	Respondent count/percentage					
$1.00 to	39	88	58	21	16	13
$50,000,000	30.5%	68.8%	45.3%	16.4%	12.5%	10.2%
$50,000,001 to	41	43	28	17	11	4
$1,000,000,000	35.3%	37.1%	24.1%	14.7%	9.5%	3.4%
Column Total	80	131	86	38	27	17

*Significant difference in size and consideration of Demand, Pearsons value 10.775, df 3, Significance .013. Smaller institutions more likely to consider demand.

**Significant difference in size and consideration of Cost, Pearson Value 16.894, df 6, Significance .010. Smaller institutions more likely to consider cost.

CONCLUSIONS

Financial institutions are moving onto the Internet at an accelerating rate. Almost 55 percent of all financial institutions plan to be on the Internet within the next two years. Financial institutions of larger asset size are more likely to be on the Internet than are institutions of smaller asset size. Financial institutions that were on the Internet before 1997 are almost twice as likely to offer "full service" banking on the Internet as those financial institutions that were not on the Internet before 1997. Banks are three times more likely than credit unions to be presently on the Internet; but that ratio is declining with the increase in the number of credit unions participating. Financial institutions overwhelmingly perceive lack of demand as the primary reason for not moving toward or offering full service banking on the Internet. Typical demographics of on-line users as well as the rapid expansion of households with Internet connections show that American households are moving onto the Internet at a rapid pace. Interestingly, it was noted that among the largest financial institutions, the perception of lack of demand diminished. Assuming the Booze, Allen, & Hamilton study of transaction costs to be correct, the cost of one hundred seven Internet transactions would be less than one branch transaction. The increasing availability in sophistication of banking services through the Internet may indicate to some extent that financial institutions are taking their lead from the philosophy expressed in "Field of Dreams"-- "If you build it they will come".

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STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 130 REPORTING COMPREHENSIVE INCOME

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ABSTRACT

In June 1997, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards No. 130, Reporting Comprehensive Income. Effective for companies whose fiscal years begin after December 15, 1997, the new statement requires reporting and display of comprehensive income in a full set of general purpose financial statements. It also requires that all items considered to be components of comprehensive income be reported in a financial statement that is displayed with the same prominence as other financial statements. This statement does not require a specific format for that financial statement but requires that an amount totaling comprehensive income for the period be displayed in that financial statement. The Board in recent pronouncements has been moving toward market value and these new pronouncements help make up the "new" comprehensive income. The author will take the position that the Board is attempting to move valuation of financial statements from historical cost to fair market value.

INTRODUCTION

In June 1997, the Financial Accounting Standards Board (FASB) released the official *Statement of Financial Accounting Standards No. 130 – Reporting Comprehensive Income*. This statement establishes standards for reporting and display of comprehensive income and its components in a full set of general purpose financial statements. It requires business entities to include all items that qualify as comprehensive income under accounting standards in a financial statement. The financial statement should be displayed with the same prominence as other financial statements.

The purpose of this paper is to discuss the basic concept of *comprehensive income*, the environment that resulted in the issuance of the statement, the main components of the statement, and the significance of the statement.

CONCEPT OF COMPREHENSIVE INCOME

Statement No. 130 defines comprehensive income as "the change in equity of a business enterprise during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners" (Paragraph 8). This definition is in fact not a new concept. It has been in existence for almost two decades.

HISTORY OF COMPREHENSIVE INCOME

The term comprehensive income was first introduced and defined in 1980 in the FASB Concepts Statement 3, *Elements of Financial Statements of Business Enterprises*. Comprehensive income was defined as "the change in equity of a business enterprise during a period from transactions and other events and circumstances from nonowner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners" (Paragraph 70). This is the exact wording as in Statement No. 130. Later, Concepts Statement 3 was replaced by Concepts Statement 6, *Elements of Financial Statements*, which extended the definitions of Concepts Statement 3 to not-for-profit organizations. However, it maintained the definition of comprehensive income, as cited earlier.

Relating to the definition of comprehensive income, Concepts Statement 5, *Recognition and Measurement in Financial Statements of Business Enterprises* issued in 1984, further stated the concept of proper reporting and display of comprehensive income. "A full set of financial statement for a period should show: financial position at the end of the period, earnings (net income) for the period, comprehensive income (total nonowner changes in equity) for the period, cash flows during the period, and investments by and distributions to owners during the period" (Paragraph 13). However, prior to Statement No. 130, there was no requirement for either using the term of comprehensive income or display it in a full set of financial statements.

The concept of comprehensive income has its roots in the long-time debate between the concepts of so-called "all-inclusive-income" and "current operating performance" (Johnson, 1995, p. 130). The all-inclusive-income concept requires that all revenues, expenses, gains, and losses recognized during the period are to be included as income regardless of whether they are the results of operations of the period. On the other hand, under the current operating performance theory, extraordinary and nonrecurring gains and losses are excluded from the reported income. Research shows that in the early days, the Securities and Exchange Committee (SEC) strongly supported the all-inclusive-income approach, while the Committee on Accounting Procedure of the American Institute of Accountants (now AICPA) favored the current operating performance approach. Later, when the Accounting Principles Board (APB) replaced the Committee, it largely adopted the all-inclusive-income concept, as did the FASB when it replaced APB as standard setting body in 1973 (Foster, 1996).

Even though FASB has generally followed the all-inclusive-income concept, it made some exceptions from time to time by requiring certain items to bypass the income statement and be taken directly to the balance sheet. These exceptions are mainly reflected in the following FASB statements: Statement No. 52, *Foreign Currency Translation*, Statement No. 80, *Accounting for Futures Contracts*, Statement No. 87, *Employers' Accounting for Pensions*, and Statement No. 115, *Accounting for Certain Investments in Debt and Equity Securities*.

The following is a list of items required by FASB to bypass the income statement and go directly to the balance sheet before the issuance of Statement No. 130.

Foreign currency translation adjustments.

Gains and losses on foreign currency transactions that are designed as, and are effective as, economic hedges of a net investment in a foreign entity, commencing as of the designation date.

Gains and losses on intercompany foreign currency transactions that are of a long-term-investment nature (that is, settlement is not planned or anticipated in the foreseeable future), when the entities to the transaction are consolidated, combined, or accounted for by the equity method in the reporting enterprise's financial statements.

A change in the market value of a futures contract that qualifies as a hedge of an asset reported at fair value unless earlier recognition of a gain or loss in income is required because high correlation has not occurred.

The excess of the additional pension liability over unrecognized prior service cost (that is, net loss not yet recognized as net periodic pension cost.

Unrealized holding gains and losses on available-for-sale securities.

Unrealized holding gains and losses that result from a debt security being transferred into the available-for-sale category from the held-to-maturity.

Subsequent decreases (if not an other-than-temporary impairment) or increases in the fair value of available-for-sale securities previously written down as impaired.

(FASB Exposure Draft, 1996)

These exceptions caused some concerns among the accounting professionals as well as users of financial statements. Some people believed that there was no sound conceptual basis for the FASB's decision to bypass the income statement and take certain items directly to equity. "The practice of taking certain components of comprehensive income directly to equity before passing through an income statement," as pointed out by Johnson, "has gradually eroded that foundation [of all-inclusive-income concept]. That practice has been expanded on a piecemeal basis over a number of years, usually in response to particular urgent issues and without explicit consideration of possible long-term consequences of continuing and extending that practice" (Johnson, 1995, p. 131).

Other people, especially users of financial statements, felt that these exceptions had caused unnecessary confusion and difficulty in understanding financial statements. For example, the Association for Investment Management and Research (AIMR) argued, "We have profound misgivings about the increasing number of wealth changes that elude disclosure on the income statement. Yet individual items may be interpreted differently" (AIMR 1993, p. 63). Furthermore, due to the "increasing complexity of business, the diversity of businesses reported on, the controversial nature of the items on these FASB's agenda, and the sophistication of the user community" (Robinson, 1991, p. 109), many people urged the FASB to address the issue of reporting comprehensive income (Robinson, 1991, p. 109).

Based on those concerns and considerations, the FASB decided in September 1995 to add a project to its agenda to address the reporting of comprehensive income (Johnson, 1995). The objective of the project was to issue a FASB statement that would require business enterprises to report all components of comprehensive income in one or more statements for the period in which those items are recognized.

MAJOR COMPONENTS OF STATEMENT NO. 130

Statement No. 130 establishes standards for reporting and display of comprehensive income and its components in a full set of general-purpose financial statements. These standards set up the scope and purpose of reporting comprehensive income, the definition and the use of the term, the requirements for reporting and display, and alternative formats of reporting.

SCOPE AND PURPOSE

Statement No. 130 is effective for entities whose fiscal years begin after December 15, 1997. Earlier application is permitted. Statement No. 130 applies to all entities that provide a full set of financial statements including balance sheet, income statement, and statement of cash flows. This requirement, however, does not apply to entities that have no items of other comprehensive income in any period presented. Nor does it apply to not-for-profit organizations required to follow FASB Statement No. 117. Although Statement No.130 discusses how to report and display comprehensive income and its components, it does not specify when to recognize or how to measure the items that make up comprehensive income. In other words, Statement No. 130 is limited to the issue of reporting and display. It does not extend to the issue of recognition and measurement.

The purpose of the new standard is to "report a measure of all changes in equity of an enterprise that result from recognized transactions and other economic events of the period other than transactions with owners in their capacity as owners" (Paragraph 11). By requiring entities to report and display comprehensive income, the FASB hopes that it will assist investors, creditors, and other concerned parties to assess the "activities and the timing and magnitude of an enterprises' future cash flows" (Paragraph 12). Furthermore, by requiring companies not only to report the total comprehensive income but also report components that make up comprehensive income, the FASB hopes that users will be able to better understand the company's overall activities. The FASB believes that information about the components of comprehensive income often may be more important than the total amount of comprehensive income.

DEFINITION AND USE OF THE TERM

As mentioned earlier, the definition of comprehensive income in Statement No. 130 has used the original definition from the FASB Concepts Statement 3 (replaced by Concepts Statement 6). In using the term comprehensive income, Statement No. 130 distinguishes between *comprehensive income* and *other comprehensive income*. Comprehensive income refers to the total of all components of comprehensive income, including net income. Other comprehensive income refers to revenues, expenses, gains, and losses that are included in comprehensive income, but are excluded from net income.

Statement No. 130 further tries to distinguish the term *net income* from *other comprehensive income.* Net income refers to a measure of financial performance resulting from the aggregation of revenues, expenses, gains, and losses that are not items of other comprehensive income. To understand these rather circular definitions, perhaps one needs to identify items that used to bypass the income statement and go directly to the balance sheet. To be more specific, the 8 items that are

scattered in the FASB Statements, 52, 80, 87, and 115, as mentioned earlier, now should qualify as components of other comprehensive income. More items will be identified as components of other comprehensive income in the future as the FASB continues to issue new statements that will include such items. For example, items such as cash flow hedges of anticipated transactions included in the exposure draft on rules of derivatives should be classified as other comprehensive income (Stevens, 1997).

REPORTING AND DISPLAY OF COMPREHENSIVE INCOME

Statement No. 130 requires that all components of comprehensive income be reported in the financial statements in the period in which they are recognized. It also requires that a total amount for comprehensive income be displayed in the financial statement where the components of other comprehensive income are reported. In other words, FASB allows the separation of reporting other comprehensive income from net income. Net income is represented by the income statement which includes income from continuing operations, discontinued operations, extraordinary items, and cumulative effects of changes in accounting principles. Other comprehensive income, on the other hand, is classified based on the nature of the related items, such as foreign currency translation, minimum pension liability adjustments, and unrealized gains and losses on certain investments in debt and equity securities.

Due to the possible separation of reporting other comprehensive income from net income, Statement No. 130 requires *reclassification of adjustments*. Basically, entities need to make adjustments for items that are displayed as part of net income for a period that had also been displayed as part of other comprehensive income in that period or earlier periods. For example, gains or losses on investment for the current period is required to be reported in net income. The same gains and losses may have also been included in other comprehensive income as unrealized holding gains or losses in the period in which they occurred. As a result, there is double accounting. To avoid this problem, Statement No. 130 requires reclassification adjustments: These gains and losses are required to be deducted from other comprehensive income. The reclassification adjustments apply to all items of comprehensive income except minimum pension liability adjustments. Also, the reclassification adjustment for Statement No. 52 is limited to translation gains and losses realized upon sale or upon complete or substantially complete liquidation of an investment in a foreign entity. An enterprise may display reclassification adjustments on the face of the financial statement or disclose them in the notes to the financial statements.

ALTERNATIVE FORMATS FOR REPORTING COMPREHENSIVE INCOME

Statement No. 130 does not specify the format for reporting comprehensive income as long as it is displayed with the same prominence as other financial statements. The only requirement No. 130 has is that net income should be reported as a component of comprehensive income in that financial statement. On the other hand, the FASB does encourage companies to display the components of other comprehensive income and total comprehensive income below the total for net income or in a separate statement of comprehensive income that begins with net income.

There are different ways to report comprehensive income: one-income-statement, two-income-statements, and statement of changes in equity. The one-statement approach actually results in a new statement. This statement would incorporate the current concept of net income and adds to it, in a separate section, those items of other comprehensive income. Net income would appear as a subtotal before the section of other comprehensive income.

The two-income-statements approach will result in two separate income statements: one for net income, and one for comprehensive income. Report on net income would be the existing income statement. The second statement would be called comprehensive income. It would start with net income, and add to it items of other comprehensive income.

In the statement of changes in equity, the comprehensive income section would begin with net income and add to it items of other comprehensive income to reach the total of comprehensive income. Net income would appear between the section of retained earnings and dividends declared. Accumulated comprehensive income is included and is followed by items of other comprehensive income to get the total comprehensive income.

As mentioned earlier, Statement No. 130 encourages companies to display the components of other comprehensive income and total comprehensive income below the total for net income in a statement that reports results of operations, or in a separate statement of comprehensive income chat begins with net income. In other words, the FASB seems to favor either one-income-statement approach or two-income-statements approach.

Regarding tax issues, Statement No. 130 allows companies to display components of other comprehensive income either (a) net of tax effects or (b) before tax effects with one amount shown for the aggregate income tax expenses or benefits related to the total of other comprehensive income items. Companies should allocate to each component of other comprehensive income the amount of income tax expense or benefit and display the amount either on the face of the financial statement or disclose them in the notes.

SIGNIFICANCE OF REPORTING COMPREHENSIVE INCOME

The issuance of Statement No.130 has some profound implications on the accounting profession, the business community, and users of the financial statements. First of all, comprehensive income will reestablish the foundation of the all-inclusive-income concept. As mentioned earlier, the accounting practice of allowing certain items to bypass the income statement and go directly to the balance sheet caused the FASB to gradually erode from the all-inclusive-income concept. By issuing comprehensive income requirement, the FASB has brought itself back to its original track on a more consistent basis.

Second, comprehensive income will increase the usefulness of the financial statements to investors, creditors, financial analysts, as well as managers who run the company. By using comprehensive income, the users will be able to consider all factors instead of just net income that would affect a company's value and performance. Also, they will be able to assess the company with more consistent information. Furthermore, managers are forced to consider all factors that would affect owners' wealth, and act accordingly. Some experts suggest establishing a reward system that is based on comprehensive income (Linsmeier et al, 1997).

Third, comprehensive income will result in the integrity in the financial statements. Accounting is a system that periodically updates the value of owners' equity by closing all entries in the accounting cycle to the final equity number. (Linsmeier et al, 1997). By closing through one number – comprehensive income, "all sources of the change in owners' wealth (besides net distributions) are identifies in one number. This yields a clean articulation of the income statement and balance sheet" (Linsmeier et al, 1997, p. 122). As a result, the updating of owners' equity is explicit, which in turn will bring integrity to the financial statements.

Perhaps the most significant implication of issuing Statement No. 130 is that it has paved a way for the FASB to resolve some of the controversial accounting issues. For example, the FASB has been trying to address the issues of explicit financial institution, mark-to-market and other present value-based questions. "And it is not unreasonable to expect a re-emergence of the inflation accounting question; perhaps the price change accounting required by FAS No. 33 … will need to be addressed again for a more receptive user groups" (Robinson, 1991, p. 108). Statement No. 130, by requiring the report and display of comprehensive income, has provided a framework for resolving such pending or future accounting issues.

CONCLUSION

The FASB Statement No. 130 has established standards for reporting comprehensive income, a concept that was established in the FASB's Concept Statements about 20 years ago. The statement requires reporting as comprehensive income items that used to by pass income statement and go directly to balance sheet. Although the statement is not intended to cover a broad consideration such as issues of recognition and measurement, the FASB has provided a framework and established a foundation for addressing such issues in the future.

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IS BOARD QUALITY AN INDICATOR OF A FIRM'S FUTURE PERFORMANCE?

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ABSTRACT

This paper examines the link between the quality of boards of directors and future stock performance of firms. This paper investigates whether companies with better quality boards report higher stock return than those with worse quality boards in the period following the announcement of board quality ranking by a national business magazine.

INTRODUCTION

The world stock markets have shown extreme volatility in the first nine months of 1998. On August 31 the Dow Jones Industrial Average (DJIA) dropped 512.61 points (6.73%), the largest one-day point drop since October 1997. This came after a week which was the DJIA worst one-week loss in the history of the index. That day the Nasdaq Composite Index dropped to 1499.15, more than 25% off its all time high. The very next day, September 1, the DJIA was up 288.36 points, followed in one week (September 8, 1998) by another 380.53 increase.

What type of companies can maintain their stock prices and increase cumulative stockholder returns in times like these? This paper investigates whether it is those companies with the highest quality board of directors that perform best. This paper examines the future performance and other characteristics of companies with boards of directors considered to be the best and worst in the U.S. The 25 best and 25 worst corporate boards that were identified by a survey of professional stock portfolio and pension managers and corporate governance experts performed by the *Business Week* organization and published in December of 1997 (Byrne, 1997).

THE ROLE OF CORPORATE BOARDS OF DIRECTORS

Positive theory attributes increases in shareholder wealth to effective monitoring of companies by stakeholders independent of management. If the monitoring stakeholders are also experienced in the company's core business and in service to other boards, and spend enough time in the monitoring job, actions at the company that reduce shareholder wealth would be less likely to occur. The board of directors has been viewed as an important internal corporate governance mechanism (Fama, 1980).

To establish the relationship between the quality of boards and corporate performance, good measures of board quality are essential. However, as indicated by Weisbach (1993), it is difficult to construct such measures. Previous studies used the proportion of outside directors, e.g, Weisbach (1988) among others, or number of shares owned by board members, e.g., Shivdasani (1993), as indirect measures of the effectiveness of boards in monitoring the activities of management.

Weisbach (1988) found that a board dominated by outside directors increases the likelihood of a change in top management teams of poorly performing firms and attributes this to successful monitoring by outside directors. Shivdasani (1993) used the fraction of outside directors on the board as a measure of the effectiveness of the board of directors. Insider-dominated boards imply problematic self-monitoring and particularly weak monitoring of the CEO, since the CEO is likely to be in a position to influence an inside director's career advancement within the firm.

Accountability relates to equity ownership and non-receipt of pensions from the company. Shleifer and Vishny (1986) demonstrate that equity ownership by large minority shareholders helps solve the free-rider problem in takeover bids. Shivdasani (1993) used the equity ownership by outside directors as a second measure of the effectiveness of the boards of directors in his study. Subrahmanyam, Rangan, and Rosenstein (1997) show that the ownership of outside directors is positively related with the abnormal stock return in banking industry.

BEST AND WORST CORPORATE BOARDS OF DIRECTORS

This section explains the method used by *Business Week* to determine the best and worst corporate boards of directors. In scoring the best and worst boards, independence, accountability and quality of the corporations were considered from both the professional judgment view ("board performance poll") and from the governance standards view ("governance guideline analysis"). The professionals surveyed were asked to identify public corporations with the most and least effect boards and grade them on a scale of 0 (poor) to 10 (excellent) on four criteria: independence, accountability to stockholders, quality of the directors, and corporate performance, which comprised the judgment view.

For the "governance guideline analysis", the 224 companies singled out as having either the most or least effective boards go another round of scrutiny. Their boards of directors were measured by Business Week by examining proxy statements in terms of a set of guidelines, or "best practices", commonly articulated by corporate governance experts. These "governance guideline analysis" scores had three components "shareholder accountability", "board quality" and "board independence"

The results of the board performance poll are summarized as "Survey Score" and the results of judgments based on governance guidelines are summarized as "Governance Guideline Analysis Score". To produce an overall ranking, the raw scores from the poll (professional view) and the board analysis (governance guideline analysis) were combined. A maximum of 100 points could be scored, half based on the pool and half on the analysis of proxy data.

EMPIRICAL TEST DESIGN

The sample used in this study includes the 25 best board companies and 25 worst board companies identified by *Business Week*'s December 8, 1997 issue. Stock return data and other financial variables were obtained from the *Briefing Books* section of the Wall Street Journal Interactive Edition (http://www.wsj.com/). Historical stock price and Dow Jones Industrial Average data were obtained from the Web pages of Dreyfus Brokerage Services, Inc. (http://www.tradepbs.com/) and Dow Jones (http://www.dowjones.com/).

Stock performance of companies is measured by cumulative stock return (CR) for the period from January 1, 1998 to September 8, 1998. Market return for the corresponding period was subtracted from the individual company's cumulative stock return (CR) to calculate excess stock return over the market return (XMR). Excess stock return measures the relative performance of a company's stock to other companies in the market. Market return is the cumulative return of Dow Jones Equity Market Index over the corresponding period.

Return on equity represents the sum of net income for the most recent four quarters divided by the latest common equity. Debt-to-equity ratio is the ratio of long-term debt to common equity at the end of the most recent quarter in 1998. Total assets are reported as of the end of the most recent quarter in 1998.

TEST RESULTS

Table 1 reports the financial characteristics of best and worst board companies. Best board companies are larger in size than worst board companies. Median total assets for top 10 best board companies was $25,083 million, while top 10 worst board companies reported $6,930 million as the median total assets. Top 20 best companies were also larger than top 20 worst companies in total assets size.

Table 1
Financial Characteristics of Best and Worst Board Companies

Panel A: Top 10 Best Board Companies

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
Total Assets (million $)	78,805	25,083	108,103	6,051	318.882
Return on Equity (%)	28.9600	28.5500	23.2343	-23.50	71.70
Debt to Equity Ratio	1.2260	0.8600	1.8754	0.00	6.31

Panel B: Top 10 Worst Board Companies

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
Total Assets (million $)	15,042	6,930	18,862	397	57,447
Return on Equity (%)	35.0500	9.9000	146.3489	-155.60	422.50
Debt to Equity Ratio	17.8250	0.5750	53.3593	0.06	169.66

Panel C: Top 20 Best Board Companies

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
Total Assets (million $)	80,656	22,028	122,788	3,861	420,076
Return on Equity (%)	37.4100	26.4000	46.7682	-23.50	221.80
Debt to Equity Ratio	1.2295	0.4400	2.2299	0.00	8.62

Panel D: Top 20 Worst Board Companies (*)

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
Total Assets (million $)	14,959	8,023	16,164	164	57,447
Return on Equity (%)	20.8000	6.0000	111.2974	-155.60	422.50
Debt to Equity Ratio	10.7812	0.6000	40.9502	0.06	169.66

(*) The number of companies reported in this table is 17, because three companies were acquired by other companies in 1998.

Definitions of Variables:

Return on equity = The sum of net income for the most recent four quarters divided by the latest common equity.

Debt Equity Ratio = Ratio of long-term debt to common equity at the end of the most recent quarter in 1998

Total Assets = Total assets at the end of the most recent quarter in 1998

For return on equity and debt-to-equity ratio, worst board companies reported significantly wider ranges of ratios than those of best board companies. Return on equity for top 10 best board companies varied from -23.50% to 71.70% which was contrasted to top 10 best board companies whose return on equity varied from -155.60% to 422.50%. Wider variability was also noted for debt-to-equity ratio. The highest debt-to-equity ratio for top 10 worst companies was 169.66, which is substantially greater than the highest debt-to-equity ratio of 6.31 for top 10 best board companies.

Table 2 reports that best board companies report higher stock return than worst board companies. Mean cumulative stock return was 18.58% for top 10 best board companies and -7.00 % for top 10 worst board companies. The same relationship was noted when top 20 best board companies ware compared with top 20 worst board companies. Mean cumulative stock return for top 20 best companies, 12.07%, was higher than the mean for top 20 worst board companies, -1.27%.

Table 2
Stock Performance
for the Period from January 1, 1998 to September 8, 1998

Panel A: Top 10 Best Board Companies

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
CR	18.5840	15.3900	21.4010	-8.44	57.79
XMR	13.7240	10.5300	21.4010	-13.30	52.93
XIR	2.3840	3.3550	17.7209	-28.61	29.65

Panel B: Top 10 Worst Board Companies

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
CR	-7.0040	-8.7500	17.6765	-31.77	32.38
XMR	-11.8640	-13.6100	17.6765	-36.63	27.52
XIR	-5.5320	-7.2750	21.6279	-45.42	33.66

Panel C: Top 20 Best Board Companies

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
CR	12.0660	13.9250	21.0333	-21.20	57.79
XMR	7.2060	9.0650	21.0333	-26.06	52.93
XIR	-2.9945	1.1800	17.3851	-46.17	29.65

Panel D: Top 20 Worst Board Companies (*)

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
CR	-1.2665	-8.0400	20.5522	-31.77	40.41
XMR	-6.1265	-12.9000	20.5522	-36.63	35.55
XIR	-5.5341	-6.4500	19.4705	-45.42	33.66

(*) The number of companies reported in this table is 17, because three companies were acquired by other companies in 1998.

Stock returns are reported in percent.

Definitions of Variables:

CR = Cumulative stock return for the period from January 1, 1998 to September 8, 1998. Cash distributions are considered reinvested as of the Ex-dividend date.

XMR = CR - Market return for the same period

XIR = CR - Industry return for the same period

Panel A of table 2 shows that top 10 best board companies earned 13.72% higher cumulative stock return over the market return for the period from January 1, 1998 to September 8, 1998. During the same period, cumulative stock return for top 10 worst board companies was 11.86% lower than the market return.

SUMMARY AND CONCLUSIONS

This paper investigates the effect of board quality on the future performance of companies. The results show that companies with the best boards report higher cumulative stock return than for worst board companies in the period following the announcement of the board quality ranking.

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OFFSHORE BANKING AND TAX HAVENS

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ABSTRACT

Offshore banking and tax havens have received increasing attention in recent years and appear to be gaining in popularity. They are used by many large, well-known companies. This paper describes and discusses offshore banks and tax havens, U.S. vs. offshore banking, privacy issues and choosing an offshore bank. A brief description is also given of some offshore banking centers.

INTRODUCTION

An offshore bank, as its name implies, is a bank outside the USA although it may be owned, wholly or in part, by a U.S. entity or resident. To mention offshore banking and tax havens often has a connotation of drug-money, laundering, or some other unethical or illegal activity involving hiding large sums of money obtained under dubious circumstances. While activities of this nature possibly take place, the intent of offshore banks is to provide legitimate services to individuals and businesses who wish to bank in countries other than their own. A large number of big, well-known companies headquartered in the States or other countries either own banks in offshore financial centers or make use of their services. Banks which are owned offshore usually become profit centers, generating substantial profits.

OFFSHORE BANKS AND TAX HAVENS

Offshore banking means using a bank which is outside U.S. jurisdiction. Although this may seem quite simple, in reality a U.S. company might well use a foreign bank which has a branch in the U.S. and this bank branch would not really be considered an offshore bank as it is within U.S. jurisdiction. Tax havens are countries which do not have income tax treaties with the U.S. However, just because a country does not have a tax treaty with the U.S. does not guarantee that it is a tax haven. If a U.S. company wanted to shield some of its income from the IRS, for example, it would not want to use a foreign bank which has a tax treaty with the U.S.. It would want to use a foreign bank which has no treaty so that the U.S. government, and particularly the IRS, would not have access to the company's financial information. Since the IRS does not have access to the information, they can not be assured that the company is paying U.S. income taxes on its world-wide income. For this reason the IRS is not at all happy with companies and individuals who choose to keep foreign accounts or own foreign banks. A further feature of a tax haven is that the income tax rate for the U.S. company located there will be at least much lower than tax rates in the U.S. and possibly zero.

There may be a number of reasons for a U.S. company to establish or make use of the services of an offshore bank aside from illegal activities. Such reasons might include transferring large sums

of money to a subsidiary without U.S. government knowledge or providing certain banking activities that would not be allowed under U.S. government regulations. In the U.S., bank regulations are very strict and many companies would like to be able to conduct their banking business without such limiting restrictions.

With or without a tax treaty, the U.S. government may have access to a company's financial information as, for example, a company bank account in a U.S. territory or country which receives large amounts of U.S. aid. Although such countries may not have a specific, cross-government guarantee to exchange financial information, it may be difficult for such countries to withstand U.S. pressure to obtain information of any kind, including financial.

In general, offshore banks which are located in a tax haven are almost all located in small, poorly developed countries which have chosen this method of attracting investment in order to improve their economies. They have made themselves more attractive than other countries as investment centers by lower tax rates and/or fewer restrictions on banking and other financial businesses.

According to an Organization for Economic Cooperation and Development report, (Harmful Tax Competition), use of international tax havens is large and participation in such schemes is expanding at an exponential rate. (Herman, 1998)

Recently, the U.S. and other leading countries agreed to improve exchanges among tax officials to curb international tax evasion and avoidance. They expressed concern at the number of countries and territories which offer excessive banking secrecy and allow screen companies to be used for illegal purposes. They plan closer cooperation to stop tax cheats from using tax havens to hide money from authorities. (Anon., 1998)

The U.S. government in particular, and more specifically the IRS, is cool toward U.S. companies or individuals setting up bank accounts or banks in an offshore country, seeing it as an attempt to evade paying income taxes to the U.S. The IRS will tax interest earned by a U.S. resident anywhere in the world, but there are ways to structure an offshore corporation such as a bank combined with complex tax planning so that taxes from passive income such as interest and other earnings can be minimized. (Fisher, 1994)

U.S. VS. OFFSHORE BANKING

Let us look at some features of owning a bank in the U.S. compared with owning one offshore. To open a bank in the U.S., an investor needs $2 million or more in capital and must satisfy the state and federal governments of his or her personal integrity, that he or she has a history showing sound financial judgment, has adequate knowledge of banking regulations and can be supported by sufficient financial resources. The start-up period can take at least two years. Furthermore, U.S. banks are highly regulated by a number of government agencies including:

The SEC which governs the issue of securities. Once a bank issues securities to stockholders it is subject to regulation by the SEC.

The IRS governs payment and collection of taxes. All banks operating in the U.S. must pay U.S. income taxes. Also, cash transactions over $10,000 must be reported to the IRS.

The Office of Comptroller of the Currency (OCC) and state banking departments govern banks in their entirety. They require reports, conduct examinations of banking records

and closely scrutinize banking activities. Even the registration of bank securities must clear these agencies.

The U.S. Customs Service tracks the movement of cash into and out of the U.S.. Banks in the U.S. must report to Customs each cash transaction moving over $10,000 into or out of the U.S.

The Federal Deposit Insurance Corporation and the FBI monitor banks' activities. (Wilshire Publishing Company, 1995)

The bank must maintain at all times a reserve consisting of vault cash plus a deposit with the Federal Reserve Bank. Currently the reserve is set at 10 percent of total checkable deposits. In an offshore bank, the required reserve may be substantially less. Certainly, offshore banks are not subject to as many restrictions by regulatory and monitoring authorities as are banks in the U.S.. Even if they wished to, it is unlikely that many of the offshore banks have sufficient resources to control banks to the extent that they are controlled in the U.S.

Money in a bank account in a tax haven jurisdiction is subject to taxation laws and rules of that jurisdiction, which is chosen so that rates are lower than in the U.S.. Once an account has been opened, the client can open brokers? accounts anywhere in the world and trade under the guise of the bank's name. The client's anonymity is protected. Masking a client's stock market trade is a traditional trade of doing business in the Bahamas and other tax havens. The money can be used to invest in U.S. stocks, bonds and mutual funds, treasury bonds or other investment means. (Azzara, 1998)

Companies exist to make arrangements to set up bank accounts, either corporate or personal, in a tax haven jurisdiction. Other companies, with financial, accounting and legal experience, will undertake the management of the bank account, including making investments. Usually, the offshore bank requests a photocopy of the signatory's passport, a letter of reference from another bank and a minimum deposit. It is not necessary to be a resident. Many of the major banks of the world have branches in tax haven jurisdictions and accounts may be set up with them. Transactions can be conducted electronically from anywhere in the world by using a personal computer just as they can with domestic banks.

An offshore bank, which is not as tightly regulated and controlled as one in the U.S., can be much more profitable since it can engage in activities which carry higher risk than would be permitted in the U.S. Examples of high risk business are high-interest loans and speculation in the currency exchange market.

An individual or company with an account in an offshore bank can use the bank's services to invest in foreign stocks or mutual funds not registered with U.S. agencies. The costs of transactions may be lower than in the U.S. and precious metals and other assets may be traded through offshore banks. (Caribbean Capital Corporation, 1997) Offshore banks may also offer a large number of investment services not available in U.S. banks.

PRIVACY ISSUES

One of the freedoms in the United States which has been eroded in recent years is that of privacy. Not only does the government have access to an individual or business? financial information, it may also be available to others who may use such information against the individual

or business. For example, social security numbers are known by any number of individuals and businesses. Every time a person applies for a job, college admission, drivers? license, bank account, etc. the social security number becomes known to those businesses, government agencies, banks, colleges. There was even a short time when the federal government put social security numbers on the Internet. Armed with a name, address and social security number, both legitimate and not so legitimate enterprises can find out all kinds of information about an individual.

If this were the end of the story, it would not be so frightening. However, this is not the end; lawyers have been known to seek information about an individual's financial position in order to decide whether or not a lawsuit is advisable and, if advisable, what amount of money might be sought. Eager employers may be able to determine what employees do on their time away from work. Do they smoke dope? Cigarettes?

I believe that any one of us could provide other examples of our privacy being diminished, especially so as science and technology continue to blossom. As a result, many individuals and businesses would like to have at least some of their financial information hidden from the prying eyes of those who might wish to breach our privacy. Setting up an account at a bank in a tax haven jurisdiction can provide many advantages, including privacy from potential creditors and lower taxes.

As a result, the much publicized feature of secrecy can be very attractive. Many offshore jurisdictions have strict secrecy laws that shield bank records from the eyes of government agencies, tax officials, legal claimants or inquisitive business competitors from other countries. A privately owned offshore bank in a favorable jurisdiction is safe from intrusion such as may occur in the U.S. from government agencies.

As an example of the use of an offshore bank for privacy only, we can think of the famous Swiss bank accounts where depositors were identified by number only; even names of depositors were secret. Swiss bank accounts, and those in many other countries, are not considered tax havens as Switzerland has a tax treaty with the U.S., permitting U.S. authorities access to some financial information of U.S. citizens. In spite of this access, Swiss bank accounts are still considered more private than those accounts located in the U.S. Switzerland has no advantages for expanded financial transactions and would, therefore, be less desirable than perhaps some other countries as a place to keep bank accounts for many U.S. companies as Switzerland has the same kind of limitations and restrictions as those found in U.S. banks. This is true of many countries.

Unlike Swiss bank accounts, bank accounts in tax haven countries are designed to provide privacy for individuals and companies who wish to engage in more liberal banking transactions such as speculative transactions. Secrecy laws for tax havens provide protection for:

a. books and records held by professionals
b. books and records held by a bank
c. bank records and transactions
d. records held outside the jurisdiction and
e. records of communication held by common carriers. (Wilshire Publishing Company, 1995)

Caution is necessary. For example, if a person holds an account in a branch of an offshore bank but is located in the U.S., privacy may be lost. The U.S. branch is subject to all U.S. banking laws and regulations. (Caribbean Capital Corporation, 1997)

Assets placed in an offshore bank are usually safe from judgments and court orders from other countries. The offshore bank is in an independent country and not subject to the laws of another country such as those of the U.S. Also, the bank cannot be compelled to divulge records of assets or transactions made by or through the offshore bank.

Taxes are always a consideration. A U.S. business or citizen who makes a profit from a deposit in an offshore bank is subject to U.S. tax regulations. Profits must be reported, or else the company or individual can be severely punished under U.S. tax laws.

In summary, offshore bank accounts in countries considered tax havens have several advantages that some companies and individuals would not be able to obtain if their funds were placed with U.S. banks. Such advantages cannot be obtained from, say, Swiss banks.

CHOOSING AN OFFSHORE BANK

A corporation or an individual does not usually have to have a physical presence in the offshore jurisdiction. They may be resident anywhere in the world but they must be registered in the offshore jurisdiction. Some U.S. nationals have acquired citizenship in tax haven countries and place their money there to avoid paying U.S. taxes. They may be subject to taxes in the tax haven country but these are lower than in the U.S. or even non-existent.

Probably about fifty jurisdictions considered as tax havens exist in the world, all with different laws and requirements for those seeking to establish a business in them. Qualities to look for in an offshore jurisdiction to set up a bank or to register a corporation are:

a. political stability
b. low annual licensing costs
c. high quality of banking regulation
d. paid-in capital requirements sufficient to protect and preserve the integrity of the jurisdiction without encumbering the working capital
e. good facilities for communicating with the rest of the world
f. little or no taxes on international banking income
g. effective, well-protected secrecy laws
h. a record of good financial policy and integrity. (Wilshire Publishing Company, 1995)

OFFSHORE LOCATIONS

Care must be taken in selection of jurisdiction of offshore banking. Requirements vary greatly and tax treaties can eliminate or reduce potential tax savings.

Some of the many offshore locations are:

Angouilla. Situated in the Leeward Islands in the Caribbean, Angouilla is a British colony with a stable government. The annual license fee is $3,800 for banks with a physical presence and $7,000 without a physical presence. Fees are assessed on a calendar year with an advance payment for the first year. It is easy to comply with the Companies Act which governs the licensing and operations of banks. No previous banking experience is required but the government demands assurance that the bank is for legitimate purposes.

The government requires owners of new banks to show they can meet a minimum cash asset requirement of $47,500 for a physically present bank and $187,500 for banks not physically present. Very strict secrecy laws are enforced and no income taxes are levied on residents or nonresidents.

The Bahamas. The Bahamas consist of a large number of islands to the southeast of Florida. They were formerly a British colony but are now independent and have a stable government. Tight control is exercised over banks and strict secrecy laws are enforced. At $25,000 and $2 million, respectively, the annual licensing and paid-in capital requirements are high. No income, capital gains, estate or inheritance taxes are paid. To prevent money laundering, depositors may be asked to explain the sources of deposits.

Barbados. Situated in the Caribbean, Barbados is an independent state within the British Commonwealth. Taxes on banking income are low and strict secrecy laws are in place. Banking regulations are rigorous. The annual licensing fee for non-resident owned banks is $15,000 and the paid-in capital requirements are $1 million. No previous banking experience is necessary but the government must be satisfied that the banking activities are legitimate.

British Virgin Islands. A British Colony, the British Virgin Islands are situated in the Caribbean. The license fee is $4,500 and the paid-in capital requirement is $125,000. While no law governing secrecy is in place, in practice secrecy is observed. No taxes are paid on international banking income but a 12 percent tax is imposed on dividends. The government does not grant nonresidential charters.

Cayman Islands. The Cayman Islands, a British colony, are located in the Caribbean and are home to a very large number of corporations and banks. The quality of banking laws is excellent but suspicion has been raised over money-laundering, tax evasion and fraud. Strict secrecy laws are imposed on banks. The annual licensing fee of $25,000 is high, as are the paid-in capital requirements of $500,000 in cash and $1 million in capital assets. The government is reluctant to grant charters to private international banks sought by those with no banking experience.

Nauru. A former Australian territory, Nauru is now independent. It is situated in the South Pacific. There are no taxes on income, inheritance, property or real estate acquisition and secrecy laws are enforced. The annual license fee for banks is $1,500 and $500 local agent's fee is payable while the paid-in capital requirement is $150,000. The laws favor private international banks.

Vanuatu. Formerly a UK-France condominium, Vanuatu is an independent country in the South Pacific. No taxes are imposed on international banking income and secrecy laws are adequate. The paid-in capital requirement is $150,000 and the annual license fee is $3,000. Banks are well regulated and Vanuatu encourages the establishment of banks.

Most sites set up for offshore banking are rather remote from major financial centers in developed countries but this is of little importance. Electronic, telephone and fax systems can provide satisfactory communication. By these means, money can be transferred and transactions accomplished instantly.

CONCLUSION

Many large multinational companies find that owning or using the services of an offshore bank to be beneficial to them in their business dealings internationally. This paper has discussed the meaning of offshore banking and tax havens, the potential advantages of using offshore banking, some

privacy issues facing multinational corporations, how to choose an offshore bank and some potential locations for offshore banking activities.

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TAX RETURN PREPARATION PROBLEMS IN ACCOUNTING CLASSES: AN INNOVATIVE APPROACH TO GENERATING MULTIPLE PROBLEMS AND SOLUTIONS

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ABSTRACT

Accounting instructors often assign tax-return preparation problems to teach students how to apply tax concepts in "real world" settings. The AICPA Model Tax Curriculum Task Force also recognized the importance of tax return preparation skills by including it as an objective of its six semester hour Model Tax Curriculum (AICPA 1998). Widespread inclusion of tax form problems in textbooks and/or supplemental material corroborates their popularity as an instructional tool. However, use of these tax return problems is not free from problems. The paper discusses these problems faced by instructors who teach undergraduate tax courses and proposes and demonstrates software specially written for this purpose to take care of the shortcomings.

INTRODUCTION

Tax instructors often assign tax return preparation problems to teach students how to apply tax concepts in a "real world" setting. A review of current undergraduate taxation textbooks (e.g., Hoffman et al. 1998; Pope et al. 1998; Willis and Davis, 1998) indicates that the inclusion of tax form problems in textbooks and/or supplemental material (e.g., Frankel 1996) is widespread and attests to their popularity as an instructional tool. In addition, upon recommendation of the Accounting Education Change Commission, the Model Tax Curriculum Task Force of the AICPA recently identified knowledge skills needed by public, private and governmental employers of accounting graduates and developed course syllabi based upon those identified needs. Their objectives included enabling students to prepare tax returns using software.

The use of tax return problems to simulate a "real world" setting suffers from some limitations. First, most textbook problems are narrative, with the required information presented to the student in the order it is needed to complete the assignment. That is, the problems are structured problems. Students are not required to sort through taxpayer records to determine what is relevant to the preparation of a tax return. Nor do they become familiar with the forms on which items of income, deduction and withholding are reported.

Another problem is that there may be a mismatch between the content and complexity of textbook problems and the knowledge of students based on content of the course. Textbooks

provide either end-of-chapter tax return problems or comprehensive tax return problems in an appendix. These problems may encompass material that the instructor has chosen to omit from the course or, conversely, may not encompass material from an earlier chapter that the instructor would like to have in the problem.

Finally, there may be a lack of instructional control due to student collusion or the generation of a "correct" solution. These problems exist because instructors often assign the same problem to all students. Students may work together despite the admonitions and efforts of the instructor. This problem is exacerbated by the availability of tax preparation software at relatively low prices. The danger to the students who collude or successfully acquire a solution is, of course, that they fail to profit fully from the exercise.

We attempted to address these potential problems by designing a tax "generator/solver" using integrated spreadsheet, word processing and database-management applications. The generator/solver uses a random number generator to design a tailor-made tax return problem depending on the instructor's needs. The first phase, which has been completed, entailed writing a Visual Basic 4.0 program to provide the Single Document Interface (SDI) needed for the application (see Appendix A). The interface establishes link to an MS-Excel spreadsheet and provides the capability of printing the spreadsheet. Two different modules written in VB 4.0 are attached to the partly pre-formatted 1040 look-alike. Module 1 (Appendix B) enforces the constraints or parameters set by the instructor. Module 2 (Appendix C) provides the "auto-execute at load" feature. At the present time, the instructor is able to set upper and lower bounds on certain items (e.g., Wages, tips, etc., in line 7 greater than $20,000 and less than $100,000), run the application, and generate solutions for several projects.

The second phase of the development process will link the present interface to an MS-Word application to create the W2s, the 1099s, and other supplementary material. Finally, we propose to link the application to an MS-Access database, which will contain the various tax-tables.

Thus when complete, an instructor would be able to specify all the constraints and generate W2's, 1099's and other supplementary material, and a completed 1040 according to the specifications of the instructor.

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ACCOUNTING PRACTICES FOR CONTINGENT LIABILITIES FOR HONG KONG H-SHARES

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INTRODUCTION

International financial markets are rapidly becoming a single global market. For these markets, most large institutional users are not satisfied with the existing levels of general disclosures by multinational firms (Taylor, 1995). This study will examine the contingent liability accounting practices including footnote disclosures for H-shares in Hong Kong. The flexibility allowed companies under the existing general rules for contingencies may allow different companies to treat similar events in different ways. This inconsistent treatment may make financial comparisons very difficult. For example, certain financial measures such as solvency and debt ratios may be effected. Some companies may interpret accounting events in such a manner that the events are not reflected on the company's balance sheet. In some cases, information about an event may be disclosed in a footnote depending on certain criteria. Related accounting areas may be effected by the procedures for contingent liabilities.

Some countries handle gain and loss contingencies differently. In Hong Kong, contingent losses are accrued only if likely or probable. If the contingency is probable but the amount is not able to be estimated, then the contingency is disclosed. Otherwise, related information is disclosed in the notes if it is possible that the event will occur. Contingent gains are disclosed if likely or probable, but the gains are not accrued, but may be disclosed prior to realisation. Other countries handle the treatment differently. In some countries including Spain, Sweden and Indonesia, gains are not disclosed or accrued prior to realisation (Coopers and Lybrand, 1993). The approaches for Hong Kong (HKSA, 1984), United States (FASB, 1975), United Kingdom (ASB, 1980) and international practices (IASC, 1974) are similar.

PURPOSE

The general purpose of this project is to investigate the accounting practices for contingent liabilities for H-shares in Hong Kong and to determine if the practices are similar for H-shares and other companies traded on the Hong Kong Stock Exchange (HKSE). The shares for the first H-share company, Tsingtao Brewery, were sold in 1993. Chinese companies are allowed to sell their shares to foreign investors on the Hong Kong Stock Exchange (HKSE) and these shares are called H-shares. All companies traded on the HKSA must prepare their respective financial statements using either the HK or international standards. The H-Share financial statements must include a reconciliation between the statements prepared according to PRC accounting standards and either the Hong Kong or International accounting standards. Today over thirty Chinese companies sell their shares in Hong Kong. Two other types (A and B shares) may be owned only by Chinese citizens or foreign investors

respectively. These shares are traded on either the Shanghai Securities Exchange or Shenzhen Stock Exchange in China that were opened only in 1990 and 1991 respectively. It may be useful for accountants and investors from other countries to become aware of the accounting practices in Hong Kong for the H-shares. Very little detailed information is known about the accounting practices for H-shares. The lack of transparency for the H-shares has been cited as a factor behind the poor performance that saw counters touch new lows in the second half of 1995 (Leung, 1996). China has been criticised for having the worst disclosure regulation. The number of China related companies including both H-shares and so called red chip companies (Chinese mainland companies doing most of their business in the mainland, but headquartered in Hong Kong) listed in Hong Kong has grown from five in 1990 to 97 in 1997. The percentage of China related companies in Hong Kong has, also, increased from 2% in 1990 to 15% in 1997. Funds raised by China-related companies represented 83% of the total funds raised in 1997 (Ward, 1997). In 1996, the head of Coopers & Lybrand's China Audit Technical Group, stated, "It's not a problem of standards - it's a problem of practice". However, Hong Kong has been rated as having the best shareholder communications regime in Asia (Fung, 1997). A literature search will be conducted to determine if any previous studies have been completed. Part of the objective is descriptive. The study will provide statistics about the type and number of events that require disclosure in for the H-shares in Hong Kong. Information from annual reports for this study will be examined to test a number of hypotheses. Descriptive statistics will also be included in the study.

METHODOLOGY

Information about the accounting practices for contingent liabilities was gathered from annual reports for years ending in 1996. Twenty-seven H-share companies were selected for the study (see Table 1 for complete company list).

(Table 1 About Here)

The twenty-seven companies represent all of the H-share companies traded on the Hong Kong Stock Exchange in 1996. Annual reports were not available for the other thirteen companies listed in Table 1 because the companies were not traded until after 1996. All companies had 31 December 1996 year ends.

Data had to be hand collected in most cases. This lack of available information makes any analysis more difficult and inefficient. In the future, the development of a more complete database would be useful for research.

RESEARCH QUESTIONS

Several research issues were examined during this study. In the first section, descriptive statistics will be provided. In the second, tests to determine if the disclosure level for contingent liabilities for H-shares are different for other Hong Kong companies is conducted.

As discussed, the disclosure levels for these H-shares have been critised. If the accounting practices are similar for H-shares and other shares traded on the HKSE, then the specific disclosures

for contingent liabilities would be expected to be similar. This study investigates the existing disclosures to determine if the levels are, in fact, similar. The hypothesis to be tested follows:

> H1: The disclosure levels for contingent liabilities are the same for H-shares as compared to other companies traded on the HKSE.

A Z-test will be conducted to determine if **H1** can be rejected statistically.

RESULTS

In the first section, descriptive statistics are provided. The second section presents the results of hypothesis testing.

I. Number of Disclosures

Approximately 40.7 percent of the H-share companies had, at least, one contingent liability disclosed in a financial statement footnote. Eleven companies disclosed information about a future event that was classified as, at least, a possible occurrence. If the amount can not be estimated with reasonable accuracy and the event is probable, the contingency should, also, be disclosed. No contingent gains were disclosed. Examples of disclosures included liabilities related to 1) debt guarantees, 2) legal action and 3) insurance claim. Please see Tables 1 and 2 for details.

(Table 2 About Here)

More detailed descriptions of some of the categories follow.

1) Debt Guarantees

Twelve disclosures related to a debt guarantee.

Table 3

Types of Contingencies	Frequencies
1. Banking Guarantees	12
2. Legal Disputes	1
3. Insurance Claim	1

One company included the following:

At 31 December, the Group had the following contingent liabilities (Shanghai Petrochemical, 1996):

1996 HK$'000	**The Group**	**1996 RMB'000**	1995 RMB'000
	Guarantees issued to banks in favour of:		
108,312	Joint ventures	**116,100**	--
15,487	Third parties	**16,600**	390,900

37,783	Guarantee issued to third party in favour of a joint venture	**40,500**	--
161,582		**173,200**	390,900

Another company included the following footnote:

The Company has guaranteed the repayment of loans totaling Rmb243,144,000 (1995: Rmb251,769,000) on behalf of various subsidiaries. (Yizcheng Chemical, 1996)

2) Legal Action

Only one company included a disclosure related to a legal situation as follows:

CONTINGENT LIABILITIES

On 30 June 1995, a Group's vessel "Xin Hua 7" collided with a Panama registered vessel, the "Alexander" in Pusan Port in South Korea. The "Alexander" sank as a result of this collision. Claims amounting to US$12,370,000 were brought by both the shipowner of the "Alexander" and the chartering agent. The court at first instance in Pusan decided in favour of the shipowner and the chartering agent, and the Group has appealed against this decision. An appeal decision is expected by the end of June 1997. "Xin Hua 7" was fully insured with the Shanghai branch of China Property Insurance Company and the China Shipowners Mutual Insurance Association against losses and third party claims. The directors have been advised by PRC legal counsel that the claims would be fully covered by the Group's insurance policy. (Shanghai Hai Xing Shipping, 1996)

3) Insurance Claim

Shanghai Hai Xing Shipping also included information about an insurance claim related to another shipping accident as follows:

On 10 August 1996, a Group's vessel "Xin Tai" collided with a Korean registered vessel "Kai Yang" enroute from Dalian to Zhangjiagang. The "Xin Tai" sank as a result of this collision. The Group has paid compensation of RMB2,100,000 to the consignor's insurer and the Group received net compensation of RMB8,260,000 from the Pu Tuo branch of China Property Insurance Company in return for a subrogation of the Company's rights in the proceedings. The Group and the shipowner of "Kai Yang" are now negotiating the amount of compensation to the shared in respect of the extent of both parties' liabilities. In addition, a provision of RMB8,173,000 has been made in the financial statements for the year ended 31 December 1996. The directors are of the opinion that the provision is sufficient to cover any contingent loss that may arise from this incident.

In the next section, the results of the statistical tests are presented.

II. Results for Hypothesis Testing

Eleven H-share companies (11/ 27) had at least one contingency disclosed in their 1996 annual reports. In a recent study (Miller, 1997), 90.7% of the selected Hong Kong companies had at least one contingent liability event disclosed in their respective 1996 annual reports. The data from

this study and the 1997 study were used to conduct a test of proportions to determine if the null hypothesis can be rejected. The null is that p1 equals p2. The hypothesis stated in a different form is repeated as follows:

H1: The level of disclosures for H-shares for contingent liabilities is the same as the level of disclosures for other Hong Kong shares.

The alternative hypothesis can be stated as p1 < P2. P1 is defined as the proportion, number of h-share companies with a contingent liability for 1996 divided by the total number of h-share companies (11/ 27). P2 is the number of other HK companies with contingent liabilities for 1996 from the 1997 Miller study divided by the total number of other HK companies (59/ 65). The companies selected for the two studies are considered stratified independent samples for all companies traded on the HKSE in 1996. The test of proportions yields a z-value of -4.5466. At a 5% confidence level, the critical z is -1.645. The null hypothesis can be rejected.

These results provide evidence that the disclosure levels for contingent liabilities for H-shares are significantly lower than the levels for the other HK shares. Because of the small sample sizes, any conclusions need to be carefully considered. Further research needs to be conducted to determine the possible reasons for the disclosure level differences.

In the next section, the conclusions are presented. Additional details about other types of contingencies are in Table 1.

CONCLUSIONS

H-Share companies in Hong Kong are, generally, following the standard related to contingencies. Many companies disclose, at least, one contingent liability each year. However as discussed, the general level of disclosures for the H-shares is significantly lower than for the other companies traded on the HKSE. The most common type contingency observed in this study was for debt guarantees. Legal disputes and insurance claims were the second most common type (see Table 1 for details). However almost all contingent liabilities related to debt guarantees for the H-shares.

Companies vary in the level of details disclosed. Firms are required to provide a dollar estimate of the related outcomes. If an estimate is not practical, the reasons for the lack of estimate must be disclosed. Not all firms are following these procedures.

In other cases, the classification procedures for certain areas may not be applied on a consistent basis. The Hong Kong Society may need to evaluate the accounting practices for contingencies. More guidance needs to be provided in related areas. Comparisons among Hong Kong companies may be difficult. The reporting challenges for Hong Kong may increase more than in other parts of the world because of the lack of guidance in related areas. Cha, Securities and Futures Commission (SFC) executive director, has stated it is important to adopt international standards as part of the SFC and stock exchange's commitment to maintaining Hong Kong's competitiveness (Ibison, 1995). Consistent accounting practices for contingencies may be critical in the future. It is hoped that this study has provided some helpful information about the status of corporate financial reporting for contingencies in Hong Kong.

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CORPORATE GOVERNANCE IN HONG KONG: ETHICAL CONSIDERATIONS, LEGAL RESPONSIBILITIES AND BOARD STRUCTURE

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INTRODUCTION

The Hong Kong Society Of Accountants has recommended that a general statement about corporate governance should be included in Hong Kong financial annual reports (HKSA, 1995). Many publicly traded companies in different countries including the United Kingdom do already include such a statement and it may be important for Hong Kong to be in line with the rest of the world concerning corporate governance as this may be one factor investors investigate in deciding whether to buy or sell in the international financial markets.

Cha, the Securities and Futures Commission's (SFC) executive director for Hong Kong, has stated that it is important to adopt international standards as part of the SFC and the stock exchange's commitment to maintaining Hong Kong's competitiveness. Yet if the condition of corporate governance is significantly different in Hong Kong as compared to other countries, then this difference may affect Hong Kong's future ability to compete in world markets. Therefore, it is important to examine corporate governance practices in Hong Kong. At present, apparently very little is known about certain aspects of the Hong Kong situation. Chow, chairman of the HKSA Working Group on Corporate Governance, has stated little work has been carried out in Asia (Chow, 1997).

Corporate governance is defined in the Cadbury Report (Cadbury, 1992) as the system by which companies are directed and controlled. Boards of directors are generally considered responsible for the governance of their companies. The responsibilities of the board or boards include setting the company's objectives, supervising the management of the business and reporting to shareholders on their stewardship. The concept of independence is a recurring theme in the Cadbury Report. For example, it is recommended by the Report that non-executive directors should bring an independent judgment to bear on many topics. Others have described corporate governance somewhat more explicitly. Donaldson (1990) has stated corporate governance is the structure whereby managers at the organizational apex are controlled through the board of directors, its associated structures, executive incentive, and other schemes of monitoring and bonding.

BACKGROUND AND RATIONALE

Researchers have studied various aspects of corporate governance. For example, some have investigated variables that may effect a firm’s corporate governance such as the need for independent non-executive directors on the board of directors (Keasey and Wright, 1993; Tricker, 1994). Other studies have focused on ownership structure and board characteristics in relation to corporate

governance (Cochran and Wartick, 1988). In the next sections, the discussions have been broken down by general topic.

A. Theories of Corporate Governance

Many studies are partly based on either the stewardship or agency theory. A separation of ownership and control gradually occurred in the United States between the Civil War in the late 1800s and the Great Depression around 1920 to 1930 (Berle and Means, 1932). Other countries experienced similar changes. Several theories were developed to help explain the preferred corporate structures.

i. Stewardship Theory

The first approach, stewardship theory, is based on the idea that man is basically trustworthy and he will protect the interests of others including shareholders (Donaldson and Davis, 1989). Managers are considered team players. Stewardship theory is derived from the Theory Y economic model of man (Donaldson, 1990). For example under this theory, higher corporate financial performance would be predicted when the chairperson and CEO are the same person. Other researchers such as Vance (1983), Vinten and Lee (1993) have supported this approach.

ii. Agency Theory

Some believe a different view helps explain the behavior of managers. Under the agency theory, managers cannot be trusted to protect the public or shareholders. It is assumed the manager will act primarily only in his best interests. Jensen and Meckling (1976), supporters of the agency theory, defined the shareholder relationship as one of agency when they stated, "a contract under which one or more persons (the principals) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. If both parties to the relationship are utility maximizers there is good reason to believe the agent will not always act in the best interests of the principal...". Examples of corporate board practices under this theory include independent directors, separate audit and remuneration committees and the separation of the roles of chairman and chief executive officer. However, results are somewhat mixed about the success of some of these practices. For example, some studies have shown that having outside independent directors may not be the "best" idea.

B. International Experience - Some Background

i. Stock Ownership

The percentage of common stock controlled by management varies substantially throughout the world. For example, the chief executive officers' of the one thousand largest companies in the United States ranked by market value in 1991 controlled only an average (median) 2.7 percent of common stock (Murphy, 1992). The United States has relatively widespread ownership and the CEOs' do not typically own a significant percentage of the outstanding common stock. As a result, managers in the US system may face challenges from boards of directors, shareholders and the general market.

ii. Performance Goals and Awards

Other countries are facing problems concerning corporate governance. Professor Hilmer, a non-executive director for several Australian companies and dean of the Australian Graduate School of Management, has stated a board's key role is to ensure management is continuously and effectively striving for above average performance by meeting specific criteria (Hilmer, 1993). Above average performance can be an appropriate goal but by definition not all companies can be above average. According to Hilmer, remuneration for directors needs to be defined carefully by each board. For example in Hong Kong recently, Wharf Holdings announced directors received compensation including stock options exceeding HK$ 22 million. Perhaps this level of compensation may be considered excessive. Some stockholders have called for additional controls because of this and other cases of apparent excessive compensation.

C. Hong Kong Experience

In Hong Kong, there have been many discussions about different aspects of governance. As discussed, a proposal has been announced by a committee of the Hong Kong Society of Accountants (HKSA) that was submitted to the society's council in April 1996 that included nineteen changes in corporate governance for immediate implementation (HKSA, 1995). In 1992, the Cadbury Report was published in Great Britain. Many recommendations were detailed in this report such as the need for regular meetings, non-executive directors, the issue of regular statements to the shareholders and independence of the board of directors. Members of the HK working group (1995) based their report on the Cadbury Report's recommendations, but modified the focus to address the somewhat unique characteristics of the Hong Kong's financial markets. The working group report states, "While the principle is sound (group of recommendations), it must be recognized that a vast majority of listed companies in Hong Kong are subject to dominant family or individual control. It is unrealistic to expect that the Cadbury concept of independence in the board can be superimposed on such a corporate culture and environment where it is deep-seated, by direct importation of the rule on independent directors, and that this will achieve the desirable effect in the short term".

Dominance of family or individual control can be further illustrated by the fact the ten wealthiest families in Hong Kong own 47.3 percent of the total market capitalization of the Stock Exchange of Hong Kong (Staff, THKEJ, 1996). As a group the board of directors in Hong Kong held an average of 43.5 percent of the total shares on the Hong Kong Stock Exchange on 30 June 1994 (Staff, THKEJ, 1995). Fifty-three percent of all listed companies have one shareholder or one family group of shareholders that own 50% or more of their entire issued capital (HKSA, 1997). The Hongkong and Shanghai Bank is apparently the only firm with no majority controlling interest by one group that is traded on the Stock Exchange of Hong Kong. Furthermore, the ownership control for most of the traded companies has remained basically the same since their respective initial public offerings (Xiang, 1996).

The general corporate culture and capital structure in Hong Kong are quite different from other countries. The culture is traditional Chinese even though Hong Kong has a British style company law and accounting system and American style regulatory body overseeing the stock market (Tricker, 1994). Hong Kong corporate structure is also unique in certain characteristics and has certain advantages. For instance, the high level of managerial ownership in Hong Kong may constitute an effective deterrence to certain types of fraud such as kickbacks to management. The

existence of majority shareholders can ease the free-rider problem in monitoring (Shleifer and Vishny, 1986) and can align the interest of managers and shareholders (Jensen and Meckling, 1976). However, other studies have shown a majority owner can expropriate corporate resources in many ways (Farma and Jensen, 1983). In extreme cases, the owner manager can run a company as a virtual dictatorship (Holderness and Sheehan, 1991).

The dominance of the owner manger in Hong Kong raises additional questions about corporate governance practices. One of many issues has been the existence of prior legal problems for some directors. Several corporate directors were convicted on various criminal charges and the existence of these legal problems was not disclosed properly. A few directors failed to reveal their previous criminal records in their application prospectuses. Some directors have resigned.

Others have different concerns about establishing international standards for corporate governance in Hong Kong. Paul, senior partner with Price Waterhouse in Hong Kong, stated "safeguards and systems designed to improve boardroom accountability in Hong Kong may have little more than a cosmetic effect, and non-executive directorships could prove futile. A key weakness in setting up compulsory corporate governance standards might be the concentration on form over substance" (Heath, 1995). He does believe that non-executive directors can help but if the chief executive does not want to listen, no benefit is added.

Clearly more information about governance practices in Hong Kong is needed to evaluate current recommendations for changes in Hong Kong practices. Au, chief executive of Hang Seng Bank, argues that attention needs to be paid to the differences between the UK and HK business environments to avoid imposing inappropriate regulations on Hong Kong companies (Au, 1996). Increased knowledge should help present and future investors who have a financial interest in Hong Kong. In 1994, Hong Kong market capitalisation was $2,241 billion that was the second largest market in Asia and seventh largest internationally. Other countries are facing similar issues. It is hoped results from this study can be useful in evaluating the situation in these other countries.

PURPOSE

The general purpose of this research is to seek the views of key executives about the desirability of certain changes in governance practices and investigate existing corporate governance practices in Hong Kong. Corporate financial officers were selected for the study because these officers will play a critical role in the development of new governance practices. The HKSA (1995) supports this claim. If financial officers do not agree with any proposed changes, it may be difficult to obtain widespread support from others. It is realised other groups such as shareholders will also play an important part of the process and that other research will be needed to provide such additional information. An annual report review was conducted to investigate some of the present practices because this information is not presently available. From the literature review, critical issues were identified and these helped to develop the questions to be put to the financial officers. Issues including the need for non-executive directors were examined. Other issues such as board size, ethics and legal liabilities were, also, identified as critical topics for examination.

METHODOLOGY

There were two parts to this project. In the first, a questionnaire was developed to gather information regarding financial officers' opinions about corporate governance practices in Hong Kong. A cover letter was included to provide some background information to the financial officers. Each company secretary was asked to pass the study on to the accounting official who is responsible for financial reporting. Seventy-three percent of the responses were signed by the secretaries for their respective companies. Telephone calls were made to several companies to determine the actual process. In each case, the secretary indicated that if information was not known then someone else with specific knowledge was consulted before the questionnaire was completed.

For the questionnaire, a systematic random sample of one hundred companies traded on the Hong Kong stock exchange was selected by including every fifth company starting at a random point for the study. Systematic sampling helps spread the sample evenly over the universe. Also, some confidence about the sample being representative of all companies is obtained because a relatively large percentage of the entire population was selected for the sample (one hundred companies selected out of a total population of approximately five hundred and fifty companies, 18%). Each company had an equal chance of being included in the sample. Critical issues were identified and incorporated into the final questionnaire. A copy of the questionnaire is found in Appendix I.

The questionnaire was developed from a set of assumptions concerning the issues under investigation. The questionnaire is written so that the extent to which respondents agreed or disagreed with a statement can be evaluated. A seven point scale is used so respondents can indicate the strength of their beliefs about each issue under consideration. "Strongly Agree" is assigned a scale number of 1 and "Strongly Disagree" a scale number of 7.

For the second part of the project, one hundred and thirty-four annual reports were examined to determine the actual number of non-executive directors, independent non-executive directors and total number of directors at this time. A systematic random selection process was used to select the companies for this part of the study. The one hundred and thirty-four companies also represent approximately twenty-four percent of all the companies traded on the Hong Kong Stock Exchange.

RESULTS

First Part of Study - Questionnaire

Respondents are asked to react to or answer seven questions or statements in the first part of this research study. The questionnaire is designed to elicit responses that, in most cases, can be statistically evaluated. A seven point scale is used for assessment purposes.

Seventy-three percent of the respondents were signed by the secretaries for their respective companies (see question 7). Another eighteen percent were signed by either the finance or managing director. The HKSA has stated it supports current corporate governance developments. Also, the HKSA believes the accounting group has a positive and important role to play with its' 9,800 strong membership serving the business community as corporate managers including secretaries and auditors for many of the listed companies (HKSA, 1995). In most cases, company secretaries have a strong accounting background. These secretaries along with finance or managing directors are considered financial representatives that are concerned about corporate governance practices.

A response rate of 42% or 42 questionnaires was obtained. Non-response basis was tested by identifying the "late" returned questionnaires (last 15 returned). SMS scores for the "early" and "late" responses were compared and no significant differences were identified. A scaled mean score (SMS) is computed: Mean Score of the Sample - 4.0/ Standard Error of the Mean. The SMS follows a normal t-distribution. Abdel-Khalik (1981) used this statistical technique in the research report he prepared for the Financial Accounting Standards Board in the United States. An SMS with an absolute value of 1.96 or greater at the 5% significance level provides a critical value against which the significance of the scaled mean score can be evaluated. Thus a scaled mean score greater than +1.96 indicates a significantly unfavorable attitude toward the question and a scaled mean score below -1.96 indicates a significantly favorable attitude. Also a scaled mean score among +1.96 and -1.96 indicates the respondents are not sure or are indifferent about the specified statement. See Table I for the SMS and mean scores.

Table I
Summary of Responses

Question Number	Reference	SMS*	Mean
1	Code	+ 9.95	5.61
2	Price Sensitive	- 9.94	2.09
3	Responsible	+ 7.64	5.52
4	Complaints	- 8.99	2.55
5	Convictions	-12.91	2.15
6	Objectives	- 7.47	2.60
7	See below		

* All SMS scores significant at 5% level.

Question 7	73%	Company Secretary	31
	27	Other	11

I. Ethics (Questions 1, 2, 4 and 6)

A set of questions examined beliefs about some of the responsibilities of the board of directors. One statement asked respondents to reply to the statement, "Firms need to develop their own ethical code of practice" (question 1). The actual statement is in the negative form (firms do not need) to test if respondents read the statements carefully or were just saying that they agreed with every statement. Results are analysed to determine if the responses were internally consistent. It appears that, in fact, the respondents did read the questions carefully to determine the appropriate response. In this case, the respondents indicated significantly that they disagreed with the statement firms do not need to develop their own code of practice. Apparently, respondents in my study do support an effort to formalize a firms' policy on ethics.

As part of the ethics area, respondents are asked to react to the statement "Price sensitive information should be given to the Hong Kong Stock Exchange at the same time as it is released

elsewhere" (question 2). The respondents in my study indicated at a statistically significant level that price sensitive information should be released at the same time to all parties.

In another question, respondents indicate agreement with "All companies should have a policy for dealing with investor complaints" (question 4). Some investors may have a complaint but because there is no policy or established guidelines to follow for most Hong Kong companies, the investor has no way to notify the firm of his problem (Price Waterhouse, 1995). Additional research is needed to investigate this situation. Possibly the firms do not want to hear about any potential problems so it is easier not to have any policy.

Apparently, no data concerning the desirability of executive evaluation is available for Hong Kong companies at this time. Therefore, the same question is asked the respondents in this study and the respondents agree the boards should set clear objectives for evaluating the performance of their respective chief executives (question 6).

II. Legal Liabilities and Responsibilities (Questions 3 and 5)

Issues related to legal liabilities and responsibilities are examined during the study. One statement related to the legal responsibilities for directors (question 3). The entire board of directors is responsible for maintaining a system of internal control and for preventing or detecting fraud. Apparently, the respondents to this survey believe the entire board is responsible as the respondents disagreed the board is not responsible.

There is no distinction between executive and non-executive directors in the Companies Ordinance in Hong Kong. However, all directors must act with integrity, openness and good faith in directing the company in the best interests of the shareholders. Directors may, in court, be asked to prove that the director has acted in his capacity, given his background as an attorney, accountant or other profession, in the best interest of the shareholders. Apparently, the responsibilities for directors have increased significantly in recent years. Reasons for the change would include corporate increases in aggressive competition, adverse economic conditions, technological changes and global financial markets. Also, more companies are part of group ownership and board structures that have become more complex (Hilmer and Tricker, 1990). Many directors will not be willing to serve on a board unless there is proof that adequate insurance is purchased for the director.

In another question, respondents are asked if "Individuals should disclose any legal convictions before accepting a corporate directorship" (question 5). Several directors have resigned after it was discovered these directors were convicted of a criminal charge, but had not disclosed this fact at the time of being appointed a director. The rule mandating disclosure already exists, but a measurement of the strength of the agreement or disagreement may be useful. The respondents did agree that disclosure of prior convictions should continue to be mandated. At this time, the rule is basically self regulated as no statements are checked by Stock Exchange representatives.

Second Part of Study- Corporate Annual Reports

Financial company information about the number of directors is obtained by examining annual reports. Financial company information from Wardleycards was used to supplement information if detail was not sufficient in the annual reports. A systematic random sample technique was used to assure each company had an equal chance of being selected for the study.

The listing of the chairman and managing director was noted for each company. For thirty companies (22%), the chairmen and managing director are listed as the same person. There were two different people as chairman and managing director for fifty companies (37%). For fifty-one companies (38%), only the chairman is listed and the managing director is not identified. Three companies did not disclose any information about their chairman or managing director in the material available for this study.

Data including the total number and number of non-executive directors was collected during the study. There was a total of 1,221 directors for an average of 9.11 directors per company.

In the next section, a discussion of the results of this research study is presented.

DISCUSSION OF RESULTS

The following three major categories were identified in this study, ethical considerations, legal liabilities and structure of the board.

First Part of Study - Questionnaire

I. Ethical Considerations

Respondents did agree that companies need to develop their own ethical code of practice. Guidelines should be provided so directors know their rights and responsibilities. The HKSA has stated the board should have a formal schedule of which matters can be delegated to management and which matters need to be handled by the board. In addition, a declaration of independence by the independent directors should be made on initial appointment and on an annual basis.

In this study, respondents indicated price sensitive information should be given to the Hong Kong Sock Exchange at the same time as it is released elsewhere. A PW (1995) survey indicated that only 46% of the Hong Kong firms had a formal policy for releasing price sensitive information. Only 54% of the firms do release information to outside parties including the Hong Kong Stock Exchange at the same time. Almost 33% of the firms surveyed stated information given to analysts is restricted. This situation will need to be changed if Hong Kong is to remain competitive in the international financial markets.

Two other questions were asked in this area. Respondents agree all companies should have a policy for dealing with investor complaints. Many companies do not have a formal policy at this time (PW, 1995). Again, companies do need to establish a written document and process to ensure investors have the opportunity to notify companies of any problems. Respondents also indicated individuals need to disclose any legal convictions before accepting a directorship. The procedures by HKSE should be changed to include the checking of statements by Stock Exchange representatives. At this time, these statements are not checked by anyone.

II. Legal Liabilities and Responsibilities

In this study, respondents did agree the entire board of directors is responsible for maintaining a system of internal control and for preventing and detecting fraud. However, at this time, no statement on internal control by the board of directors is required to be included in the annual report. In the UK, there have practical difficulties in developing such a public statement on internal control. The HKSA has stated that questions such as the need for and the added benefit of an internal control

statement need to be answered before a statement requirement should be mandated. Therefore, the HKSA supports the idea, but believes the internal control statement should not be required until adequate guidelines are developed (HKSA, 1995).

It was also agreed individuals should disclose any legal convictions before accepting a corporate directorship. The HKSA has made several recommendations in this area. The HKSA believes the board should be encouraged to develop a code of ethics to provide guidance to directors. Also companies should run internal and external training courses for their directors (HKSA, 1995).

Second Part of Study - Examination of Annual Reports

III . Structure of the Board

a. Board Size

There were an average of 9.11 directors and 2.34 non-executive directors per company for this study. Some researchers have investigated the effects of board size. Koontz (1967) indicated the optimal size for a board was between five and thirteen members. Others have argued there should be larger boards because there would be a larger pool of expertise (Jones, 1986). Opinions do differ, but most evidence suggests a board can have too few members or too many members. Perhaps, no one board size is ideal for all companies.

b. Numbers and Types of Directors

The range for any type of directors was a low of three and a high of fourteen. For non-executive directors, there was a low of zero and a high of nine. The distinctions between executive and non-executive provided by the published sources were relied upon for purposes of this project. Probably there are varying degrees of independence for directors for different companies. Many companies already meet the new 1995 requirement that all companies must have at least two non-executive directors.

For the one hundred and thirty-four companies in the sample, there were 314 non-executive directors with an average of 2.34 non-executive directors per company. At one time, most board of directors were dominated by insiders or non- independent directors.

There has been a dramatic shift internationally. For example in the United States, a study determined that outsiders represented sixty-three percent of all the directors for a sample of Fortune 500 companies (Kesner, 1988). This trend is partly based on the support of the agency theory where it is believed the inside directors may be self serving and therefore can not be trusted. Also other management personnel who are insider directors may not challenge any decisions made by the chief executive because of their relative power positions. However, some researchers have discovered different results. Vance (1983), supporter of the stewardship theory, found that some outside directors may be even less likely to disagree with the chief executive because of the obligation the outside director may feel towards the chief executive. Some also argue that outside directors may not devote enough time to be able to understand the critical issues face by a corporation. An average director of a publicly held company in the United States spends approximately one hundred and twenty-three hours per year on board duties (Korn/ Ferry, 1983). Perhaps this is not enough time to be able to protect the interests of outside parties. In another study, Schmidt (1975) discovered no relationship between the percentage of outsiders on a corporate board and corporate economic performance and financial policy. Therefore, there is some empirical evidence that indicates it is not clear if increasing the number of independent directors will help protect the interests of outsiders.

The presence of outside independent directors has been a consistent recommendation in the literature. However, as discussed, some researchers have questioned the effectiveness of outside directors. For another example, Sullivan (1988) concluded that boards composed mainly of executive managers leads to superior economic performance for the company and shareholders. These outside directors should bring an independent objective view to the board. Non-executive directors are expected to monitor management and bring expertise to the board of directors (Vinten and Lee, 1993). The empirical results about the effectiveness of independent directors have been mixed (Vance, 1983; Cochran and Wartick, 1988; Mangel and Singh, 1993). Possibly the outside directors may not be truly independent because in many cases the directors have been picked by the CEO.

The behavior of some directors with major share holdings is explained by the alignment of interests with outside shareholders or by the increase in power with respect to outside shareholders. Results of studies in this area have found support for both arguments (Kosnik, 1990; Morck and Vishny, 1988). Some studies have found that boards have permitted management to earn undeserved compensation (Mizruchi, 1983; Wade et. al., 1990).

c. Separation of Duties

For this study, the chairman and managing director were listed as the same person for 22% of the companies. Two different people were listed for 37% of firms surveyed. Only the chairman was listed for 38% and for the remaining companies the information was not available.

Donaldson and Davis (1991) indicate, based on accounting measures, that performance is superior when one person is both the chairman and chief executive. However, Rechner and Dalton (1991) conclude that performance is superior based on accounting measures when two different people hold the position of chairman and chief executive. The issue remains an open question without a clear answer.

SUMMARY AND CONCLUSIONS

Many of the issues discussed in this research study remain controversial topics. In summary for the first part of the study, the respondents agreed to the following statements broken down into categories:

Ethics

1. Price sensitive information should be given to the Hong Kong Stock Exchange at the same time as it is released elsewhere.
2. All companies should have a policy for dealing with investor complaints.
3. Hong Kong's corporate governance is improving.
4. Boards should set clear objectives for evaluating the performance of the chief executives.

Legal Liabilities and Responsibilities

1. Individuals should disclose any legal convictions before accepting a corporate directorship.

The respondents disagreed with the following statements:

1. Firms do not need to develop their own ethical code of practice. (discussed in Ethics Section)
2. The entire board of directors is not responsible for maintaining a system of internal control and for preventing and detecting fraud. (discussed in Legal Liabilities Section)

Again, some of the issues discussed in this research study remain open issues. In most cases as discussed, there are no clear conclusions. Once the existing governance practices are identified, the next step will be to determine the most effective alternative. For example, in the second part of the study, the number of independent non-executive directors for many Hong Kong companies is probably not adequate if it is concluded the increase in outside directors will be effective partly based on the implications of agency theory. Some companies will need to make substantial changes in the near future. The expectation of support is based on the results of the questionnaire. As discussed, this may be a problem in Hong Kong because of the difficulty in identifying qualified non-executive directors. Also, the financial officers will apparently support these changes. The next step will be to evaluate if the changes in the number are effective in improving corporate governance in Hong Kong.

The chairman and the managing director posts should possibly be held by different people to increase both the actual and the apparent independence of the different board of directors. There are other issues. Additional research is needed in the future. The somewhat unique situation of individual or family control of publicly held companies in Hong Kong must be considered carefully when guidelines are established by the Hong Kong Stock Exchange.

Possible conflicts will continue to exist in Hong Kong. The respondents in this study indicate support for changes such as the creation of remuneration, audit and investor complaint policy committees in corporate governance practices in Hong Kong. However by reviewing the actual situation in Hong Kong, it can be seen there is a conflict between what the financial officers indicate should be done and what is actually being done in Hong Kong. Changes must be made or Hong Kong may not remain competitive in international financial markets! Paul, senior partner with Price Waterhouse, has stated that the very fact that corporate governance is a "live' issue in Hong Kong is, in itself, a plus for Hong Kong (Paul, 1996). These issues will remain important to those interested in Hong Kong financial markets. It is to be hoped that this study has provided some helpful information about corporate governance practices in Hong Kong and provides some insight as the direction future research should take. These issues may become particularly critical because of the 1 July 1997 reunification with China.

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Appendix I
Questions For Part I # (See Note Below)

1. Firms do not need to develop their own ethical code of practice.

Strongly Agree	Agree	Mildly Agree	Not Sure	Mildly Disagree	Disagree	Strongly Disagree

2. Price Sensitive information should be given to the Hong Kong Stock Exchange at the same time as it is released elsewhere.

3. The entire board of directors is not responsible for maintaining a system of internal control and for preventing and detecting fraud.

4. All companies should have a policy for dealing with investor complaints.

5. Individuals should disclose any legal convictions before accepting a corporate directorship.

6. Boards should set clear objectives for evaluating the performance of the chief executives.

7. What is your position with the firm?
   Company secretary
   Chairman
   Chief executive
   Managing director
   Finance director
   Other main board director
   General manager
   Chief accountant
   Financial controller
   Other

Note: For questions 1- 6, seven point scale was provided.

NO-RISK PORTFOLIOS TO EXPLOIT MISPRICING OF OUT-OF-FAVOR STOCKS

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ABSTRACT

It has been suggested that financial institutions like to get rid of stocks from their portfolios that are currently out-of-favor. This is especially so when they have to report their holdings to shareholders in their quarterly and annual reports. This herd mentality tends to overly depress stock prices of these out-of-favor stocks. On the other hand, portfolio managers of financial institutions tend to bid up excessively the prices of stocks that are currently is favor. This paper has two objectives: firstly to examine if stocks that are out of favor are capable of providing excess returns, especially as compared to stocks that are currently in favor. Secondly, to examine the profitability of following a hedging strategy to buy the out-of-favor stocks and sell short the stocks that are currently in favor. This study will examine these strategies over a twenty-year period with a variety of holding periods.

THE LEVERAGE MULTIPLIER, EQUITY LEVELS, AND MANAGERIAL POLICY CHOICES

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ABSTRACT

Trading on equity, or the optimal use of debt plays a key role in maximizing stockholder value. However some conservative managers are unwilling or unable to use high levels of debt to enhance their firm's returns to stockholders. This paper investigates the premise that managers of firms with low leverage will make equity reducing accounting and managerial policy choices in order to transform their return on assets to a higher return on equity. The results indicate that firms with low leverage are more likely to take charges against equity when compared to firms with high leverage. A study of firm specific characteristics suggest that high tax rates, low profitability, high growth rates and size are some factors that influence equity write-offs.

INTRODUCTION

Financial leverage, defined as the extent to which a company uses debt, is a significant factor in optimal capital structure decisions. Debt financing is profitable because it provides a corporate tax shield on interest, and focuses management on value creation. However, as a firm increases its leverage, it also increases the likelihood of financial distress, where it is unable to meet interest or principal repayment obligations to its creditors. Consequently, a firm's optimal capital structure is one that balances the positive and negative consequences of leverage, and accordingly maximizes stock price.

Prior research has emphasized high degree of leverage (extensive debt) and the attendant problems of debt covenant restrictions and accounting choices made to avoid contract violations. This paper examines companies with low leverage (very little debt) and the choices made by managers of such companies. The premise investigated here is that, under certain circumstances, managers of firms with low leverage will make equity reducing accounting or managerial policy choices in order to maximize return to shareholders.

BACKGROUND AND THEORY DEVELOPMENT

Capital structure is the equity and debt financing of a company. It is often measured in terms of the relative magnitude of the various financing sources. A company's financial stability and risk of insolvency depend on its financing sources and the types and sizes of its various assets.

The prominence of analyzing capital structure is significant because of the differences between debt and equity. Equity is the risk capital of a company. Characteristics of equity include its uncertain or unspecified return and its lack of any repayment pattern. Equity capital contributes to a company's stability and solvency. It is characterized by a degree of permanence, persistence in times of adversity, and lack of any mandatory dividend payment.

Debt capital, which demands periodic, mandatory payments, has three important advantages:

1. Tax advantages: In the US and many other countries, tax laws provide a form of government subsidy for debt financing which does not exist for equity financing. This arises from the corporate tax deductibility of interest against income. Therefore, debt financing has an advantage over equity, since the interest tax shield provides additional income to equity holders. This higher income translates directly into higher firm values for leveraged firms in relation to unleveraged firms.
2. Fixed debt payments: Debtholders get a fixed return (the interest payments) so the stockholders do not have to share their profits if the company is extremely successful. This feature once again translates into higher shareholder value for the firm.
3. Management incentives for value creation: When firms have excess cash, but few good investment opportunities, managers have a tendency to make investments that are of little value to stockholders, such as big corporate offices and corporate jets. Debt can reduce managers' incentives to over-invest and overspend by reducing resources available for these types of spending, since firms with relatively high leverage face pressures to generate cash flows to meet payments of interest and capital.

Apart from the above advantages, a long -term debt position can yield other benefits to equity holders. For example, a growth company can avoid earnings per share dilution through issuance of debt. In addition, if interest rates rise, a leveraged company paying a fixed lower interest rate is more profitable than its nonleveraged competitor. Correspondingly, in times of inflation, holding monetary liabilities yields price level gains.

Nevertheless, as a firm increases its financial leverage, it also increases the likelihood of financial distress, where it is unable to meet interest or principal repayment obligations to its creditors. This may force the firm to declare bankruptcy or agree to restructure its financial claims. Financial distress may be expensive due to the following reasons:

4. Administrative costs of financial distress: When a firm is in serious financial distress, its owners' claims are likely to be restructured. Restructurings can be costly, since they involve lawyers, bankers and accountants to represent the company's interests.
5. Costs of foregone investment opportunities: When a firm is in financial distress, it may be difficult for it to raise additional capital for new investments, even though they may be more profitable for the firm's owners.
6. Costs of conflicts between creditors and stockholders: When a firm is in financial difficulty, creditors are worried about receiving their interest and principal payments, while shareholders are concerned with stock value. Managers may be pressured into making short term decisions to satisfy the creditors. As a result, shareholder value may suffer.

The above discussion implies that an optimal capital structure, which trades off the benefits and disadvantages of leverage, will maximize shareholder value. However, there are practical difficulties in arriving at the optimal capital structure, resulting in companies operating at sub-optimal

levels of debt. The consequences of high debt have been well documented. This paper looks at the consequences of low leverage, principally on shareholder value.

Financial Analysis and Leverage: The value of a firm, and therefore its stock price is determined by its profitability and growth. The starting point for a systematic analysis of a firm's performance is its return on equity (ROE), defined as:

ROE = Net income/Shareholders' equity.....(1)

ROE is a comprehensive indicator of a firm's performance because it provides an indication of how well managers are employing the funds invested by the firm's shareholders to generate returns. Return on equity serves a key role in equity valuation, as can be seen from the accounting based stock valuation formula:

$$V_t = BV + \frac{(ROE_{t+1} - k)\, Bv_t}{(1+k)} + \frac{(ROE_{t+2} - k)\, Bv_{t+1}}{(1+k)^2} + \ldots + \frac{(ROE_{t+n} - k)\, BV_{t+n-1}}{(1+k)^n}$$

where V = value of a firm at period t; ROE = return on equity; k = rate of growth for a firm; BV = book value of the firm; and t, t +1 .....t+n = time periods.

The value of a firm is based on the excess return it earns; therefore, it becomes important for firms to maximize their return on equity. A company's ROE is affected by two factors: (1) how profitably the company employs its total assets (ROA) and (2) the size of the firm's asset base, relative to its shareholders' investment (financial leverage). To understand the effect of these two factors, ROE can be broken down as the product of these two factors:

ROE = ROA x Financial leverage .....(2)
= (Net income/Total Assets) x (Total Assets/ Shareholders' Equity).....(2a)

ROA tells us how much profit a company is able to generate for each dollar of assets invested. Financial leverage indicates how many dollars of assets the firm is able to deploy for each dollar invested by its shareholders. Given the fixed nature of interest payments and the tax shield available, leverage acts as a multiplier in this analysis. Even with the minimal use of debt, the leverage is always greater than one, its effect is to increase ROE relative to ROA. The higher the leverage, therefore, the higher is the ROE. Consequently, analysts check to see if the company is exploiting the potential benefits of debt.

Financial leverage, therefore is the use of debt to increase earnings to equity holders. For a company successfully utilizing leverage, a higher financial leverage ratio enhances return on equity. There are two major means of increasing the leverage multiplier. One is to increase debt levels; the other is to reduce equity (the denominator in Eqn. 2a above) so as to increase the multiplier. For some companies, managerial conservatism may result in low levels of debt and a low leverage multiplier. To mitigate the effects of low leverage, managerial policy may lead to reducing equity levels. Equity levels can be reduced by (1) income decreasing accruals (2) write-offs against earnings,

and (3) direct write-offs against retained earnings. The first two choices reduce net income, which in turn lowers ROE; an enhanced leverage multiplier (due to reduced equity) may not be able to counteract the lowered income levels. Consequently, managers would resort to direct charges against retained earnings to reduce equity levels and increase the leverage multiplier. Examples of direct charges against retained earnings would include holding losses on available-for-sale securities, foreign currency gains and losses, stock buybacks and additional pension liabilities.

Nonetheless, not all financially conservative firms tend to make such equity reducing policy choices. There is potential for cross-sectional differences between firms, depending on the target optimal capital structure of each firm and its individual characteristics. Leverage is considered to be advantageous for:

(1) firms with high tax rates since they can take advantage of tax-subsidized interest payments
(2) firms with low profitability where the leverage multiplier will magnify the return to stockholders
(3) high growth firms, which face great uncertainty, and are therefore unable to secure high levels of debt
(4) firms with a high tangible asset base, which makes it easier to provide collateral for loans
(5) large firms, where the visibility is high, resulting in tremendous pressure for high stockholder returns and
(6) firms with high P/E ratios and therefore low risk, which may be perceived as too conservative.

The managers of such firms have the incentive to increase their leverage multipliers through equity reducing policy choices in order to maximize ROE and stockholder value. This paper explores the managerial policy choices and their effects on the leverage multiplier for firms with low debt.

PRIOR RESEARCH

Research in this area has focused almost entirely on troubled companies and debt covenant violations. DeAngelo et.al (1994) found that accounting choices made by managers of troubled companies primarily reflected recognition of their firms' financial difficulties, rather than systematic attempts to inflate earnings to avoid debt covenant violations or to otherwise portray the firm as less troubled. DeFond and Jiambalvo (1994) found substantial evidence that was consistent with positive manipulation of accounting accruals in the year prior to a debt covenant violation. El-Gazzar et al (1989) found that covenants place restrictions on dividends, additional debt, production and investment decisions and the pattern of payoffs. Because covenants are frequently written in terms of accounting numbers and violations of covenants are costly, managers of firms that are close to violating debt covenants make accounting choices that reduce the likelihood of default (Watts and Zimmerman, 1986).

Sweeney (1992), Healy and Papepu (1990) and Koch (1989) examined the accounting choices of NYSE firms with persistent losses and dividend reductions. They found that managers of these firms make income decreasing accounting decisions even though dividends are under pressure due to private debt agreements. A number of other papers studied accounting choices in troubled companies – for example, Liberty and Zimmerman (1986) and DeAngelo and DeAngelo (1986) on union negotiations, DeAngelo (1988) on proxy contests and Moyer (1990) on troubled banks.

Results have been mixed as to the income increasing/decreasing accounting choices made by managers. Firms with low debt levels do not face covenant restrictions and the threat of violating them, and therefore are not under excessive pressure to manipulate their financial statements to meet the restrictions. However, as the earlier discussion shows, low leverage is not always the optimal level for a given firm.

Other studies have looked at financial ratios in conjunction with industry norms. These studies found that ratios of individual firms tend to revert to their industry norms. Lev (1969) and Frecka and Lee (1983) used partial adjustment models to show that ratios adjusted to industry norms. Short term ratios adjusted faster and the stability of the industry target was positively associated with the degree of adjustment. Lee and Wu (1994) and Davis and Peles (1993) analyzed the adjustment process in the presence of costly information and adjustment uncertainty. Their findings reiterated the ratio adjustment process and also found that larger firms found it easier to adjust their ratios. If the ratios of the individual firms were widely divergent from industry norms, managers resorted to voluntary accounting accruals and accounting changes to bring the ratios closer to industry norms (Ramaswamy, 1998). Firms with debt levels lower than the industry norms may face the perception that they are not taking advantage of leverage. This paper extends prior research on ratios and debt levels by focusing on firms with low debt levels.

HYPOTHESES DEVELOPMENT

Return on equity (ROE) is of great interest to the shareholders of a company. The common shareholders have an interest in the residual earnings of a company after all other financing sources are paid. Trading on equity (using financial leverage) increases the return to stockholders for two reasons:

(7) Interest on most debt is fixed. If interest incurred is less than the return earned from debt financing, the excess returns goes to the benefit of equity investors.

(8) Interest is a tax - deductible expense, whereas dividend is not tax deductible.

A levered company is successfully trading on equity when its return on assets (ROA) is less than its return on equity. A firm that makes effective use of debt is able to magnify and maximize its return to shareholders, and therefore stockholder value increases. If levels of debt are low, managers have to strive to increase profitability, which may not always be possible, or increase leverage in any way they can. An elementary, inconspicuous method of increasing leverage would be to decrease equity by taking write-offs directly against retained earnings. This premise leads to the development of the first hypothesis:

> H_1: Firms with low leverage will exhibit a higher tendency to take write-offs against retained earnings when compared to similar firms with high leverage.

The following are some of the charges that are taken directly to the statement of retained earnings, rather than through the income statement:

1. Certain types of accounting changes: In certain circumstances, a change in accounting principle may be handled retroactively. Under the retroactive treatment, the cumulative effect attributable to prior years is presented by adjusting the beginning balance of retained earnings.

Examples of such accounting changes are (a) a change from the LIFO inventory method to another method; (b) a change in the method of accounting for long term construction contracts.

2. Prior period adjustments: Adjustments necessary to the financial statements due to prior period errors or incorrect use of accounting principles are treated retroactively, and are adjusted directly through retained earnings.
3. Available for sale securities: These are investments in stocks and bonds which the company expects to hold for more than a period of one year. Holding gains and losses related to these investments are recognized through retained earnings. Further, transfers from Held to Maturity investments to the Available for Sale category involve the recognition of holding gains or losses through retained earnings.
4. Foreign currency transaction gains and losses: Gains or losses due to the remeasurement of foreign currency transactions are charged through retained earnings.
5. Additional pension liability: An increase in the pension liability is recognized through retained earnings.

The methods discussed above involve accounting changes and adjustments. Apart from these, managers may resort to certain policy changes to reduce their equity without affecting the income statements. These equity reducing charges involve payments to stockholders. Since there is very little debt in these low-leverage companies, there are no fixed interest or principal repayment commitments – and ROA is roughly equal to its ROE. If ROA is lower than expected, managers will try to keep stockholders happy by issuing a higher dividend or with stock dividends or by purchasing treasury stock. Agency theory also suggests that stockholders will demand higher returns to prevent managers from squandering the excess cash on unproductive investments. Companies with low leverage will attempt to emulate high leverage and trading on equity without actively increasing debt levels.

High leverage comes closely associated with high risk and its attendant fears of debt covenant violations, financial distress costs and bankruptcy. Not all firms are willing to assume high levels of debt. The optimal capital structure is different for each firm. The need to meet shareholders' perception of a profitable leverage multiplier changes from firm to firm, depending on the specific economic characteristics of each firm. Debt is productive for firms with particular attributes, for example high tax rates or low profitability. The managers of such firms will be under pressure to augment their leverage multiplier in order to maximize shareholder value. The second hypothesis developed here is that certain firm specific factors will increase the tendency to take equity write-offs:

6. High tax rates: One of the greatest advantages of high leverage is the tax shield that are available for high interest payments. Companies with high tax rates will benefit the most by using high levels of debt. However, if such companies have low leverage, then the shareholders may perceive them as not trading on equity which may lower stock value. These companies will then try to increase the leverage multiplier.
7. Low profitability: Companies with low ROA need to amplify the return to stockholders in any way they can. One way to do this would be to reduce the equity levels.
8. High growth companies: High growth companies are perceived as high risk, and therefore may not be able to secure high levels of debt. They are under pressure to show high returns to stockholders to increase their value and thereby obtain more funding.

9. High tangible asset base: If a company has high levels of tangible assets (property, plant and equipment) it is easier to use debt since they have the general and specific collateral available. If such companies do not use debt, they may be perceived as extremely low risk companies, which may lead to lower value.
10. Large size: Larger companies come under greater scrutiny by all users of financial information. Their policy decisions and resultant effects on financial statements are crucial to stock valuation. Such companies are impelled to show optimal capital structure and trading on equity due to external pressure from investors and analysts. If such large companies have low level of debt, they will perceive the necessity to increase leverage to take advantage of the concept of trading on equity.
11. Low risk: Low risk is usually associated with low returns. If a company is perceived as a low risk company, and has low levels of debt, the optimal capital structure may not have been reached, and therefore shareholder value may not have been maximized. These companies may have to make the maximum use of leverage to enhance return to stockholders.

The cross sectional differences across firms can be restated in terms of the following hypothesis:

H_2: The write-offs against retained earnings will be higher for firms with the following characteristics:

(a) High tax rate
(b) Low profitability
(c) High growth
(d) High tangible asset base
(e) Large size
(f) Low risk

The leverage multiplier plays an important role in increasing stockholders' return, which in turn plays a significant role in augmenting shareholder value. Accordingly becomes important for managers to optimize Return on Assets as well as financial leverage in order to maximize stockholder value.

DATA SELECTION AND METHODOLOGY

Initially, a sample of 1100 firms was selected from Compact Disclosure data for 1997. The debt equity ratio for these firms was computed. The debt equity ratio was used to determine leverage and was defined as Interest Bearing Debt/Total Shareholders' Equity. The interest bearing debt was significant since the tax deductibility of interest is one of the main factors contributing to the advantages of leverage. The sample firms were then ranked according to the debt/equity ratio. The bottom 10% was selected as the study sample – these were firms with extremely low debt or low leverage levels. The middle 10% was selected for a comparative sample of firms with mid levels of leverage, while the top 10% was selected for a comparative sample of firms with high levels of leverage. Firms were excluded from the sample due to the following reasons:

a) Lack of data necessary to test the hypotheses
b) Firms which took write-offs against income including (1) firms which reported changes in accounting methods and firms which reclassified their investments from "trading" to "available for sale". These firms were excluded because this paper focuses on companies with charges against equity

The final sample showed 98 firms in the low leverage group, 101 in the mid-leverage group and 92 in the high leverage group (See Table 1).

TABLE 1: SAMPLE SELECTION

DESCRIPTION	NO. OF FIRMS		
Initial selection		1,100	
from COMPUSTAT			
	Low lev.	Mid lev.	High lev
	low 10%	(mid. 10%)	high 10%
Firms selected for level of leverage	110	110	110
Firms deleted due to:			
Lack of data	4	7	5
Use of income write-offs	3	2	6
Use of Accounting changes in	4	0	5
income statement			
Reclassification of securities	1	0	2
Total deleted	12	9	18
Final sample	98	101	92

For these firms, the following data were compiled:
c) the amount of charges against equity
d) the types of charges against equity
e) data for the firm specific characteristics analysis:
   i) the effective tax rate, defined as income tax expense/pretax income
   ii) profitability, or return on assets, defined as net income/total assets
   iii) growth, defined as five year compound sales in growth
   iv) tangible asset base, defined as tangible assets/total assets
   v) size, defined as total sales for the firm
   vi) risk, defined as the firm's P/E ratio

The firm specific characteristics were combined in a regression analysis as follows:

$$CE = \beta_0 + \beta_1 TAX + \beta_2 PROF + \beta_3 GROW + \beta_4 ASSET + \beta_5 SIZE + \beta_6 RISK$$

Where CE : total charges against equity
TAX : effective tax rate
PROF : profitability
GROW : five year growth rate
ASSET : tangible asset base
SIZE : size of the firm
RISK : risk level defined as the PE ratio of the firm

The variables in the regression analysis, their definition, and the hypothesized direction of the relationship are in Table 2.

TABLE 2: REGRESSION VARIABLES

DESCRIPTION	NAME	DEFINITION	HYP.DIR.
Charges against equity	CE	Negative charges against equity or retained earnings	Dependent variable
Tax rate	TAX	Income tax expense/ Pretax income	+
Profitability	PROF	Net income/ Total Assets	-
Growth	GROW	Five year compound growth in sales	+
Tangible asset base	ASSET	Tangible assets/ Total assets	+
Size	SIZE	Natural logarithm of sales	+
Risk	RISK	Market price of each share/EPS (P/E ratio)	-

The regression analysis has potential for multi-collinearity problems. Firms with high tax rates are very likely to have high levels of reported net income, and therefore profitability. Therefore, there

is a likelihood of a high correlation between TAX and PROF. However, when tested, the effective tax rate of a company and its ROA showed a correlation coefficient of .27. Tangible asset base showed a very high degree of correlation with total assets (.71 correlation coefficient). Therefore, Sales was used to measure the size of the firm, and not the usual measure of total assets, in order to avoid the multi-collinearity problem. A test for normalcy of the variables showed that Sales was not normally distributed. The variable was consequently transformed to the natural logarithm of Sales to obtain the normal distribution.

The sample selected (in the three groups) had an average asset level of $4.7 billion and mean sales of $ 3 billion. Sales levels ranged from $ 9.7 billion to $ 44 million. The debt equity ratio was at a maximum of 0.97 and a minimum of 0.03. Average charges against equity was $ 5 million, with a median of $ 2.16 million and a standard deviation of 15.8. Tax rates ranged from 51% to 24%, while profitability ranged from 36% to 2%, with an average of 11%. The five year sales growth showed an average of 3.87%, with a wide variance of 54.21. The market price per share ranged from $ 112.5 to $ 9.21.

TABLE 3: DESCRIPTIVE STATISTICS OF THE SAMPLE

DESCRIPTION	MEAN	STD. DEV	MEDIAN	MAX	MIN
1. Total Assets ($ billions)	$4.72	32.37	$2.58	$9.27	$0.81
2. Sales	$3.04	22.32	$2.31	$9.78	$0.44
3. Log Sales	7.43	1.64	5.85	8.71	2.71
4. Debt/Equity	46.20%	33.1	57.10%	97%	3%
5. EPS	$1.23	2.35	$1.42	$6.87	($3.23)
6. Charges against equity	5	16	2	9	1
7. Tax rate	38.20%	5.45	35.21%	51.26%	24.13%
8. Profitability	14%	2.25	11%	36%	2%
9. Growth	3.87%	54.21	1.87%	78.26%	-5.46%
10. Market price per share	$47.31	24.91	$31.90	$112.50	$9.21

Table 4 shows the types of charges taken by the three groups. The low leverage group took the maximum number of charges. The highest frequency was foreign currency losses, followed by holding losses from available-for-sale securities. Accounting changes and stock buybacks were next.

Nine firms (out of the sample size of 98) showed an increase in dividends, while 4 firms paid a stock dividend. The mid leverage firms showed lower frequency of charges. Here also, foreign currency losses were the highest number. The reason for this could be the fluctuating US dollar in the foreign exchange market in1997, along with the crisis in the Far East. Very few firms paid out stock dividends, or had an increase in dividends. For highly leveraged firms, the frequency of charges was extremely low. Only one firm showed an increase in dividends, while 8 firms bought back stock and 7 firms paid out stock dividends. The reason for this could be that high leverage firms are under strict debt covenants and cannot increase dividends easily. Eleven high leverage firms reported an accounting change in the equity section, while 27 firms reported foreign currency losses. As can be seen from Table 4, low leverage firms took twice the number of equity charge, on average, as did the mid-leverage firms and almost two-and-a -half times the changes taken by the high leverage firms.

TABLE 4: TYPES OF CHARGES AGAINST EQUITY

DESCRIPTION	LOW LEV (No. of firms)	MID LEV	HIGH LEV
1. ACCOUNTING CHANGES	28	19	11
2. PRIOR PERIOD ADJUSTMENTS	13	5	4
3. AVAILABLE FOR SALE SECURITIES	45	19	16
4. FOREIGN CURRENCY LOSSES	63	31	27
5. PENSION LIABILITY	15	9	4
6. INCREASE IN DIVIDENDS	9	5	1
7. STOCK BUYBACKS	25	17	8
8. STOCK DIVIDENDS	4	2	7
Total	202	107	78
No. of firms in the sample	98	101	92
Avg. per firm	2.06	1.06	0.85

RESULTS AND CONCLUSIONS

Initially, the total charges taken by the three groups were compared on a group by group basis: Low leverage (Group I) and Mid leverage (Group II); Low leverage (Group I) and High leverage (Group III); Mid leverage (Group II) and High leverage (Group III). An analysis of variance (ANOVA), using the framework of General Linear Models (GLM) was performed on the charges taken by each group. The GLM procedure was used since the number of observations in each group was different. A pairwise comparison of all the groups under study was performed using Scheffe's test - the results are in Table 5.

TABLE 5: ANALYSIS OF VARIANCE

DESCRIPTION	I & II	PR>F	I & III	PR>F	II & III	PR>F
1. Total charges	0.41	0.05	0.024	0.01	0.017	0.15
2. Accounting changes	0.1	0.01	0.027	0.01	0.064	0.1
3. Prior period adjustments	0.02	0.05	0.018	0.05	0.015	0.25
4. Available for sale securities	0.031	0.05	0.063	0.05	0.015	0.25
5. Foreign currency losses	0.066	0.05	0.051	0.01	0.024	0.1
6. Pension liability	0.036	0.05	0.026	0.01	0.059	0.1
7. Increase in dividends	0.053	0.05	0.032	0.01	0.029	0.05
8. Stock buybacks	0.042	0.05	0.022	0.05	0.007	0.1
9. Stock dividends	0.011	0.15	0.023	0.1	0.058	0.05

The charges against equity were standardized by dividing them by total assets. The ANOVA showed that there was a significant difference between group I and II (at the 5% level). Group I and III showed the highest significance (at the 1% level) while Group II and III were not significantly different (15% level) for the total amount of charges taken. The charges taken for each item were then compared separately. Group I and II showed the highest significance for accounting changes (at the 1% level); all other charges were significant at the 5% level, except for stock dividends which did not show any significance. Groups I and III showed significant differences at the 1% level for accounting changes, foreign currency losses, pension liability, and stock dividends. All the others were also significant at the 5% level. Groups II and III showed very little difference. The most significant variables were accounting changes, foreign currency losses and stock buybacks at the 10%

level. The most interesting variables were increase in dividends where the groups were significantly different at the 5% level and stock dividends. As mentioned earlier, highly leveraged firms cannot increase dividends with ease. The results of the ANOVA indicate that low leverage firms are more likely to take charges against equity as tested in Hypothesis 1.

The firm specific variables were then combined together in a multiple regression analysis. (See Table 6) Initially, the firms in all three groups were tested together. The regression model showed an R^2 of 9%. The most significant variables were profitability (PROF) and SIZE, which were significant at the 5% level. The other significant variables were TAX and GROW (10% level). Separate regressions were run for the three groups. Low leverage firms showed the highest level of significance (R^2 = 21%). TAX, PROF, GROW, and SIZE were all significant. Mid leverage firms showed significance for TAX and PROF at the 10% level. High leverage firms showed significant results for TAX, PROF, AND SIZE. However, the direction of the relationship was opposing. High levels of TAX showed a negative relationship with equity reducing charges. The results of the regression support the conclusion that for low leverage firms, tax rates, profitability , growth rates and size affect the amount of charges taken against equity.

TABLE 6: REGRESSION ANALYSIS
FIRM SPECIFIC FACTORS AFFECTING CHARGES AGAINST EQUITY

DESCRIPTION	ALL FIRMS	LOW LEV	MID LEV	HIGH LEV
R-Square	9%	21%	11%	16%
1. TAX	0.271	0.193	0.141	-0.244
	0.1	0.01	0.1	0.01
2. PROF	-0.132	-0.116	-0.109	-0.127
	0.05	0.01	0.1	0.05
3. GROW	0.0055	0.0046	0.0041	0.0061
	0.1	0.05	0.15	0.15
4. ASSET	0.018	0.011	0.09	0.015
	0.25	0.15	0.15	0.25
5. SIZE	0.224	0.199	0.179	0.217
	0.05	0.05	0.15	0.1
6. RISK	-0.095	-0.017	-0.011	-0.091
	0.15	0.1	0.25	0.25

Leverage and its role as a -multiplier is an important ingredient for increasing stockholder value. For firms with low leverage, reducing equity levels is a simple means of increasing the leverage multiplier. Firm specific characteristics of tax rates, profitability, growth levels and size influence the measure of charges taken against equity. This paper looked at general charges against equity and did not make a differentiation between accounting charges and charges due to managerial policy changes. Nevertheless, the results clearly show a number of charges against equity. In addition, these low leverage firms exhibited the expected characteristics of being driven to these equity charges by high tax rates, low profitability, high growth, and large size.

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ACCOUNTING STUDENT PERCEPTIONS OF CHARACTERISTICS NECESSARY FOR SUCCESS: A COMPARISON WITH THOSE CITED BY PROFESSIONALS

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ABSTRACT

The popular stereotype of the accountant as a repressed, socially inept introvert has long held. The portrayal of Rick Moranis's character in ***Ghost Busters*** *is a prime example. One currently running commercial for an office supplies store, Office Max, notes that the prices are low enough to prevent, "that vein in the accountant's forehead from bursting." This typecasting of accountants would be little more than amusing fodder for fiction if it were not instrumental in the public's perception of accountants and the job accountants do. Young people entering the field of accounting may make career choices based on this perception of accountants (Lowe et al, 1995). If it can be shown that accounting students base their choice of a profession on this popular stereotype, it might help explain why accounting firms find it difficult to hire young accountants that meet their requirements. Accounting firms have complained that graduates are consistently deficient in communication skills, socialization and team participation skills, and in creative problem solving skills (LaFrancois, 1992). The purpose of this research is to examine the moderating effect of personally knowing an accountant, or of being a student with accounting as a declared major on the perception of the need for practicing accountants to possess these attributes.*

INTRODUCTION

The inability of accounting firms to recruit, hire, and maintain accounting professionals that possess the technical, analytical, communication, and social skills needed by accounting firms prompted the formation of the Accounting Education Change Commission. The Bedford Committee of the American Accounting Association (1986) and the so called "white paper" of the then Big-Eight accounting firms (Perspectives...,1989) laid the blame for this crises on educational institutions. They charged that colleges were not attracting sufficient numbers of quality students into the accounting profession, the accounting curriculum lacked relevance, and that the skills and attributes of students were not being adequately developed. These charges may have been leveled against accounting

education without consideration for other factors that might influence the characteristics of accounting graduates.

Of the many factors that influence students' career choice, it seems top students perception of accounting plays a large role in the decision to major or not major in accounting. In attempts to develop programs to attract sufficient numbers of quality students into accounting it is critical to understand what role these perceptions play. That top non-accounting students have a negative perception of accounting has been documented (Hermanson et al., 1995)

Students in all business disciplines tend to choose an area of study either in high school or soon after entering college with less than 15% delaying the decision past the sophomore year (Hermanson et al., 1995). This evidence of the early selection of a career seems to indicate that the choice is often made on general knowledge and perceptions developed before students enter the more strenuous and technical intermediate and upper level classes in their chosen field. Introductory classes in all business disciplines are required of most business majors. These classes are most often of general nature and fulfill introductory requirements of students in many business disciplines. They are, therefore, often presented to classes attended by students with a wide variety of declared business majors. One must suspect then, that all students have been exposed to similar amounts and quality of information before the career-choice decision is made. The questions that beg answers are, "Why do some students choose accounting while others eschew it as boring?" and, "Do the perceptions of accounting upon which career choices are made differ for accounting and non-accounting students?"

RELEVANT LITERATURE

Considerable research has been done on why students choose accounting as a profession, why they transfer into or out of the discipline, and what they expect of an accounting career. In a study comparing accounting majors to other business majors Case (1988) found that although earnings potential was the top criteria attracting freshmen to accounting, they also place high emphasis on career options as the number two choice, and on aptitude, intellectual challenge, and interesting subject matter as other important criteria. In an examination of the importance accounting and non-accounting business students place on job characteristics, it was found that accounting students place a higher value on long term financial rewards than do non-accounting students (Hermanson et al., 1995). Accounting students also perceived the prestige of accounting, the contributions accountants make to society, and the level of ethics practiced by accountants to be higher than did non-accounting business students. The authors point out that accounting fails to attract the "best and brightest" students because students in other business disciplines: (1) are influenced by more immediate rewards available in other fields due to relatively higher starting salaries, (2) are concerned about the personal liability and litigation risks of accounting, (3) perceive other business areas to be more exciting than financial accounting, (4) are repelled by the bookkeeping approach used in the first accounting classes, (5) think that accounting firms are sweat shops, and (6) accept the "bean counter" image of accountants. These perceptions are not, however, compared and contrasted, with the perceptions of accounting students. Is it possible that there is little difference in the image of the accounting profession that is held by future accountants and their peers? Accounting students may accept this same stereotype of accounting, yet, find the prospect of joining the profession more suitable.

In a study comparing accounting and finance majors (Inman et al., 1989) accounting majors rated as more difficult both their intermediate and upper-level accounting courses, than did finance majors. Accounting students rated their courses as *less interesting* at all levels than finance majors did. Accounting students characterized liberal arts and natural sciences classes as "a waste" and indicated a strategy of taking the easiest courses possible to allow them to concentrate fully on accounting. Inman et al. reported the results of a survey on the importance attached to eight areas of college and personal goals comparing groups that either had transferred into accounting and those that had always been accounting majors with finance majors, and with liberal arts or social sciences majors. Of the groups surveyed Liberal Arts and Social Sciences majors attached the most importance to appreciation of liberal arts, self-directed learning, creative capabilities, influencing social values and helping others in difficulty. Transferees into accounting attached most importance to developing the ability to think clearly, and Finance majors attached most importance to being well off financially and mastery of technical knowledge in their discipline. They found that off all the groups surveyed, students who were always accounting majors attached the least importance to mastery of technical knowledge, self-directed learning, clear thinking ability, the development of creative capabilities, and being able to help others in difficulty. They were tied with finance majors on attaching the least importance the appreciation of liberal arts. Finance majors attached the least importance to being able to influence social values. There did not appear to be any clear-cut patterns of similarities or differences in the groups that were discernable over the range of attributes considered in the analysis.

Accounting and finance students were poled on the most important factors affecting their choice of career (Inman et al., 1989). Career advancement opportunities, interesting work assignments after two years, and long-range earnings potential were viewed as the three most important factors by both groups. A reasonable work schedule was viewed as least important by both. Both groups included career advancement opportunities, interesting assignments after two years, long-range financial rewards and professional development in the top five. Of the fifteen factors that were ranked in order of importance no more than three levels separated the position of each factor as ranked by Accounting majors and Finance majors. In contrast to the view that accounting fails to attract the "best and brightest" due to low starting salaries Finance majors in this study ranked starting salary at twelfth place in importance compared to tenth place for Accounting majors. All in all, this seemed to indicate that accountants shared many of the same career goals as finance majors and were aware of the rigorous demands of the accounting profession. Despite this evidence of willingness to work long hard hours, accounting students may not be adequately prepared for the reality of accounting as a profession. A preliminary report was issued of a four-year study by Konstans and Dean that found CPA's newly hired by public accounting firms suffer from "reality shock." It contends that graduates have technical knowledge, but are lacking in communication and reasoning skills (Journal of Accountancy, 1992).

This view is consistent with the complaint of public accounting firms that they are unable to hire graduates that are adequately prepared for careers in accounting, and it brings attention to the lack of general skills in accounting graduates. It is also consistent with the attitude outlined by Inman et al. (1989) that accounting students place very little value on these skills. This is evidence of general agreement that a deficiency in non-technical skills exists in accounting graduates.

Before the problem of insufficient qualified candidates choosing professional accounting can be addressed and alleviated it behooves those affected to try to determine its source. Several steps are involved in the evolution of a high school student into a CPA and a fundamental error in the development of suitable young CPA s might occur at any of those steps. If accounting firms base the choice of potential job applicants on inappropriate criteria they may pass over potentially successful candidates for those who are doomed to fail. If colleges and universities do not fully understand the demands of public accounting and the needs of potential accounting students they will be unable to guide the development of potential accountants. Initially, if appropriate high school and college students are not attracted to the profession there is little chance of producing an adequate supply of accounting graduates.

Public accounting and the role of the accountant is changing rapidly (Boress, 1994). Firms are now offering an entirely new range of services, many of which may be in relatively new areas where little guidance is available on what will be expected of the practitioner or how to choose employees and prepare them for success (Crumbly, 1993). There is also evidence to indicate that recruiters for accounting firms, which have formal criteria upon which to base hiring decisions, do not adhere to firm policies. Most recruiters for major firms are in close agreement upon the importance of certain characteristics of potential employees (Lewis, Shimerda, and Graham 1983). However, the ability of individuals to remember and accurately report complex cognitive or judgmental processes have led researchers to conclude that recruiters, "probably do not use the priories in recruiting decisions that they self-report," (Hassell and Hennessy 1989). This lack of objectivity leads to a high likelihood of poor selection in the recruiting process.

Accounting schools have been criticized by the profession for the lack of preparedness of graduates (Williams, 1991). A major criticism of the current accounting curriculum is its failure to cover the common body of knowledge needed for success in practice. Specifically accountants need more instruction in basic economics, marketing, management, and uses of information technologies (AAA, 1986). Partners in accounting firms attach tremendous importance to the role communication skills, interpersonal skills, practice development and administrative skills, as well as technical competence has played in their ability to advance to partner (Bhamornsiri and Guinn, 1991). This highlights the need for a broader educational background for accounting students.

Unfortunately, neither the selection process nor the educational process described here is able to affect the selection of the individual into accounting. This selection into accounting as a career is a self-selection process often completed before either collegiate educators or accounting professionals have a chance to influence the process. If students are not given adequate information upon which to base career-choice decisions, if they hold inaccurate perceptions of accounting as a career, they will make poor decisions. Some studies have been done toward identifying what characteristics students bring into accounting. For the most part, they have been done with instruments designed to measure learning styles or traits that make up portions of the personality (Brown and Burke, 1987). It is accepted, as mentioned earlier, that other business professionals may have a poor image of the accounting profession, describing it as boring, without intellectual challenge, requiring a lot of rote memorization, and as requiring rigorous study to complete the course work, Herculean effort to pass the CPA exam, and the prospect of a future that, "all you get out of it is that for the rest of your life, you can just keep doing it more and more," (Inman et al. 1989). Even though this view of

accounting is attributed to those students who have chosen other professions, there is little research to indicate whether or not accounting students themselves share this view.

PURPOSE

This study measures the degree to which accounting and non-accounting students in business classes perceive a necessity for professional accountants to possess the three types of general skills desired by accounting firms, whether there is a difference between the accounting and non-accounting students, and whether knowing an accountant personally moderated the degree to which they attribute these skills to the professional accountant. This should help the professional accountant and the accounting educator determine whether there is a difference in the degree to which the groups recognize the need for accountants to possess the characteristics firms value in employees.

If it can be shown that there is no difference between the degree to which accounting and non-accounting students attribute a need for these characteristics to accountants, it supports the premise that both groups accept the same stereotype of accountants. Whether knowing an accountant personally has a moderating effect will provide additional knowledge about possible sources of information used by students to form opinions that affect their choice of accounting as a career.

The three areas chosen for consideration were communication, verbal and writing skills; socialization skills; and creative problem solving skills. These are the areas in which public accounting firms report they most often find new CPA's lacking. The responses were evaluated based on whether or not the respondent was an accounting student, and on whether or not the student personally knows a professional accountant. This measures the moderating effect of these two conditions on the degree to which the students attribute a need for these skills to accountants. The results of this study will be significant in determining whether students are adequately informed about the necessity for successful public accountants to possess these skills, and whether or not this knowledge is greater in students who are accounting majors or who know accountants personally.

METHODOLOGY

A questionnaire was completed by 146 students in introductory accounting, management and marketing classes in a mid-sized southern university. The instrument consisted of a series of statements about the characteristics of accountants. The statements were designed to determine the degree to which the respondent attributed a need for accountants to possess communication skills, socialization or interpersonal skills, and creative problem solving skills. These responses were recorded on a 7-point Lacerate scale. Demographic statements indicated whether the participant was or was not an accounting student, and whether or not the student had a family member or close friend who is an accountant.

Two sets of hypothesis were tested. Stated in the null they are:

H_1: Accounting and non-accounting students exhibit no difference in the degree to which they recognize a need for practicing accounting to possess communication skills.

H2: Accounting and non-accounting students exhibit no difference in the degree to which they recognize a need for practicing accounting to possess socialization skills.

H3: Accounting and non-accounting students exhibit no difference in the degree to which they recognize a need for practicing accounting to possess creative problem solving skills.

H4: Students who know an accountant personally, and those who do not, exhibit no difference in the degree to which they recognize a need for practicing accounting to possess communication skills.

H5: Students who know an accountant personally, and those who do not, exhibit no difference in the degree to which they recognize a need for practicing accounting to possess socialization skills.

H6: Students who know an accountant personally, and those who do not, exhibit no difference in the degree to which they recognize a need for practicing accounting to possess creative problem solving skills.

The data was analyzed by use of Analysis of Variance to determine if there was a difference in the perception of accountant's possession of the three areas of skills between accounting majors and non-accounting majors and between those who know an accountant personally and those who do not. The mean aggregate score on the combined statements concerning these three abilities or personal characteristics of accountants sought by public accounting firms and upon which accounting firms base hiring and promotion were then compared.

The mean response of the groups is presented in tabular form.

Mean Response by Group

	Communication Skills	Interpersonal & Socialization Skills	Creative Problem Solving Skills
Accounting Majors	2.6066	4.0861	3.7377
Other Majors	3.125	3.25	3.0104
F	2.11	10.25	8.74
P – Value	0.1484	0.0017	0.0036
Know a CPA	2.6697	4.0688	3.7454
Do Not Know a CPA	2.7568	3.5946	3.2432
F	0.08	4.37	5.62
P – Value	0.7766	0.0383	0.0191

If it is assumed that accounting students should have a better knowledge of the need for accountants to possess high levels of communication skills, interpersonal skills, and creative problem solving skills, then accounting students should attribute these skills to accounting professionals to a greater degree than do non-accounting students. As is seen from the table the accounting students surveyed attached a lower importance to accountants use of communication skills than did non-accounting students. This result was not significant at the chosen level of alpha = .05. The accounting students surveyed did attach a higher importance to the possession of socialization skills and problem solving skills for professional accountants than did the non-accounting majors, and the differences between accounting and non-accounting students were significant at alpha = .05.

If it is assumed that knowing a CPA personally would provide the student with better insight into the need for accounting professionals to possess high levels of the skills in question, then those

students who know an accountant personally or have a family member who is an accountant should have rated these skills higher. Again, the need for professional accountants to possess strong communication skills was given more importance by those students who did not know an accountant personally, but this difference was not significant at the chosen level of alpha = .05. Students who knew an accountant personally did rate the need for accountants to possess interpersonal or social skills and creative problem solving skills as being more important to the practice of accounting than did those students without a personal relationship with an accountant. These differences were significant at a level of alpha = .05.

Hypothesis 1 and Hypothesis 4 dealing with the perceived need for communication skills could not be rejected. In fact, the difference in the mean response of the groups was in the opposite direction than that which was expected. All of the other hypotheses could be rejected. This supports the conclusion that, as a group, accounting students do not recognize a need for successful accountants to possess strong communication skills. Further, the results suggest that students who know an accountant personally are no better informed about the need for these skills than are those who do not know an accountant. The results indicate that accounting students are more cognizant of the need for professional accountants to possess interpersonal skills and creative problem solving skills than are non-accounting students. Likewise, students who know an accountant personally are aware of the need for accountants to possess these skills.

The results of this survey, although very limited, indicates that those students who know an accountant personally have a better knowledge of the skills required of professional accountants than students who do not. This seems to reinforce the need for accountants as individuals to be involved in the promotion of accounting as a career choice. Accounting students appear to be aware of the need for accountants to possess interpersonal and creative problem-solving skills, but lack information on the necessity for accountants to be skilled in communications. This problem is currently being addressed by accounting education with attempts to promote writing assignments and reinforce the need for communication skills in the accounting curriculum. These results reinforce the need for these programs. With the possible exception of the need for communication skills, the results indicate that accounting students are more aware of the non-technical demands of a successful accounting profession than are non-accounting students. This survey supports the conclusion that accounting students do not perceive professional accountants to be socially inept introverts. One might draw from that conclusion that accounting students do not perceive themselves as being below average in socialization skills or creative-problem solving skills.

It is still unclear why accounting firms are unable to hire sufficient numbers of young accountants possessing the degree of communication, socialization, and creative problem-solving skills they require. This work does indicate that it is not because accounting students perceive these skills to be unnecessary in the practice of accounting.

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ACTIVITY-BASED BUDGETING: A FLEXIBLE TOOL FOR TRANSFORMATIONAL LEADERS

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ABSTRACT

The practice of tranformational leadership has grown, in many cases replacing the more traditional methods of transactional leadership. Educational institutions, especially, are finding that transformational leadership is congruent with the concept of shared governance that is well-accepted in institutions of higher learning. This paper explains how leaders in educational institutions can use multidimensional budgeting as a tool in the process of transformational leadership.

INTRODUCTION

A number of tools have become available to managers in recent years that can help them do a better job of planning and controlling. Many of these tools are based in computer technologies that make reporting, summarization, and analysis of operating results easier (Johnson and Kaplan, 1987; McKinnon and Bruns, 1992).

One of these enabling technologies is online analytical processing (OLAP) software (Callaway, 1995; Fairhead, 1995; Ricciute, 1994). The use of OLAP software enables managers to compile and analyze their planned and actual numeric results in a variety of ways.

The new multidimensional budgeting techniques that OLAP software enables allow managers to use budgeting in new ways. Traditionally, the budget was the tool of the transactional manager; the person who did not lead subordinates into new areas of endeavor, but rather maintained the status quo. These managers were charged with creating and maintaining stability in the organization (Barker, 1997). Existing budgetary tools provided transactional managers everything they needed to manage routine activities, implement incremental change, and to plan, organize, staff, direct, and control in a stable environment. Often, budgets incorporated standards for prices, quantities, labor rates, and hours that had been developed over years of time-and-motion study and product engineering. Today's product and service life cycles, which have become ever shorter, have destroyed any hope of generating meaningful benchmarks using such techniques.

Transformational leaders need tools that support them as they navigate the shoals of strategic change. Strategic change is frequently non-routine, not incremental, discontinuous, and anything but stable. To lead people into new structures, new patterns of action, and even new belief systems, a manager needs tools that support information flow in the midst of these changes. Multidimensional budgeting provides one such tool for transformational leaders.

TRANSFORMATIONAL VS. TRANSACTIONAL LEADERSHIP

Burns (1978) argued that we knew far too little about leadership. He offered as a remedy his idea that leadership is more than just the traits and observable behaviors of leaders. He argued that leadership was a process of mobilizing persons and resources to realize goals.

Bass (1985, 1990) and Bass and Avolio (1993, 1994) have taken Burns' ideas and distilled them into the concept of transformational leadership. Although critics have taken Bass and Avolio to task for a variety of issues (Barker, 1997; Rost, 1991), transformational leadership has become widely discussed and implemented as an alternative to traditional, or transactional, leadership models (Sashkin and Fulmer, 1997; Tichy and Devanna, 1990).

Wright and Taylor (1994) note that an essential difference between the two types of leadership models is that transactional leaders tend to use closed and leading questions in their interactions with subordinates; transformational leaders use a higher proportion of open and reflective questions in their interactions with subordinates.

Barker (1997) explains that leadership might be best understood in political terms; that is, as a nexus of political relationships. Burns (1978) noted that common welfare often emerges from chaotic interactions among people that have conflicting or potentially conflicting goals and accompanying value structures. As people mutually influence, bargain with, build coalitions with, and struggle for scarce economic resources with each other; they engage in a non-rational, uncontrolled process. Barker (1997) points out the futility of applying rational problem-solving approaches to activities that take place in such environments.

Transformational leadership engages and accepts the chaotic interaction of competing forces (Bass, 1985; Rost, 1991). Rost (1993) argues that transformational leadership is the creative influence relationship of leaders with their collaborators that is directed at achieving a set of common goals.

In transactional leadership, one could easily develop organization charts that showed the flow of information and authority. Clear demarcations between responsibility levels exist in a traditional management structure. The accounting systems used by most large organizations follow this hierarchical plan, since the accounting systems of an organization ideally models the structure of that organization. Organizations that have moved, or are moving, to a transformational leadership model will need to find new ways to plan and control the financial elements of their organizations. Since the financial reporting structure plays such a large role in the control of scarce resources, developing new and congruent ways of handling this part of the internal organizational information flow is essential.

TRANFORMATIONAL LEADERSHIP IN EDUCATION

Transformational leadership strategies are becoming an integral part of successful educational administration initiatives. For example, Cooley (1997) notes that the implementation of technology is not about computer equipment, but is about empowering people to engage in a true transformation. Indeed, technology implementations often provide the impetus for school administrators to move from transactional to transformational leadership. As educational administrative structures take on the characteristics of the transformational model, they will need to adopt new resource management capabilities that are consonant with that model. The classic budgeting and variance reporting models that educational institutions adapted from the corporate world will no longer suffice (Matkin, 1997).

Educational institutions, with their historical grounding in models of shared governance, are prime candidates for transformational leadership models. As educational institutions face the uncertain future expectations of varying constituencies, the transformational model offers hope for finding new paths that make sense for all concerned stakeholders in the educational process and the educational investments required. Distance learning, accreditation standards, new missions, and other sea changes in the environment of educational activity are requiring educational institutions to develop what management theorists call "organizational plasticity" (Freeman and Hannan, 1983; Gioia and Thomas, 1996; Kimberly and Bouchikhi, 1995).

Denison, et al. (1995) note that a key survival element of the plasticity characteristic is that it enables organizations to satisfy multiple and dynamic sets of stakeholders. Since stakeholders often have conflicting criteria for assessing organizational performance, the continued legitimacy and survival of the organization depends on finding ways to adapt and satisfy the most pressing needs of the stakeholders that have become critical at any given point in time. Denison, et al. (1996) describe a first-rate leader as a person that can exhibit contradictory behaviors as appropriate or necessary while maintaining stakeholder perceptions of integrity, credibility, and direction.

A highly plastic organization has the ability to modify itself in response to niche changes. In some cases, that might mean expanding or contracting activities within an established niche.

Educational institutions spend a great deal of time and money in their budgeting processes. In this regard, they are similar to large business organizations who spend millions of dollars and involve hundreds of employees in budgeting activities (Schmidt, 1992). In the traditional model of budgeting activities, educational institutions find themselves consuming resources and becoming preoccupied with the mechanics of budgeting rather than dealing with the strategic issues involved. Transactional managers often tend to focus on incremental costs and revenues; assuming that the previous year's budget amounts are solid fixtures on which they can build. In many schools, the only thing that budget committees discuss is the incremental change in budgeted numbers. Full program review or zero-based budgeting techniques are seldom used in educational institutions.

TRADITIONAL APPROACHES TO BUDGETING

The classic approach to budgeting is to plan for incremental growth in specific areas of planned revenue and expense (McKinnon and Bruns, 1992). Managers take past experience and combine it with expected revenues to devise an integrated plan that provides for products or services to be available to customers at the time of anticipated desire. Budgets include plans for acquiring the factors of production and paying for them in an acceptable and timely manner. If short term working capital loans are required, the budget specifies when these will be obtained and when they will be repaid.

Managers engaged in the traditional budget exercise obtain information from strategic plans devised by the organization's top management in a process called top-down budgeting. Alternatively, or in addition to top-down budgeting information flows, managers can obtain information from the sales and operations personnel of the organization. This technique is called bottom-up information flow. However, budgets created in either a top-down or bottom-up mode often fail to enable the organization to adequately respond to sharp changes in the operating environment or to shifts in the expectations of key stakeholders with interests in the organization's performance.

ACTIVITY-BASED COSTING, MANAGEMENT, AND BUDGETING

A great deal of cost accounting research and development, inspired by works such as Johnson and Kaplan (1987) and Kaplan (1984), has been accomplished in the last decade.

Activity-based costing requires that managers identify key activities or processes that underlie the revenue-generating capability of the firm. It is worth noting that educational institutions can be analyzed using activity concepts. In many cases, educational institutions have revenue-driving activities as a focus. In other cases, a revenue proxy can be developed that allows the same kind of activity analysis used in for-profit firms (Horngren, et al., 1997).

After identifying these activities, managers gather the costs of the activities. By creating cost pools for each activity, the system allows managers to then combine, in a multiple-stage process, the activity participation of each product or other cost object. Although cost objects in manufacturing enterprises are usually specific products or product lines, in service businesses and not-for-profit organizations, the cost objects can be almost anything about which the organization desires cost information. For example, an educational institution may want to know its costs by student, by program, by major, by academic unit, or by research institute. Since each of these cost objects consumes or uses a specific set of activities, the cost of each activity element is traced to the cost object.

Note that multiple cost objects, including those with overlapping definitions, can co-exist simultaneously. This is a dramatic departure from the rigid hierarchical structure of traditional cost accounting systems. It allows managers to focus their attention on controllable activities and the economic resources that those activities consume. Activity-based costing systems allow organizations to truly "manage" their costs by adjusting the activities that drive those costs. When used in this way, these systems support what is called "activity-based management" (Kaplan, 1992; Swenson, 1997).

Once managers define specific activities and have gathered historical cost information on those activities for a sufficient time period, they can begin to plan for the costs of those activities. This process is called "activity-based budgeting" (Borjesson, 1997; Connolly and Ashworth, 1994). In the hands of a transformational leader, the activity-based budget can enable all collaborators to envision ways in which the economic resources of the entity, characterized as activities, can be brought to bear on the new and unusual problems and opportunities faced by the organization.

When the budgeting system is used to examine multiple possibilities at the planning stage, the process is often called multidimensional budgeting (Schmidt, 1992; Unruh, 1994). Since all cost objects have revenues and costs traced or assigned to them from activity cost pools, a true matching of resource consumption to measured use occurs. This enables creative planning and consideration of alternative uses for the economic resources of the organization. Software that permits easy implementation of multidimensional budgeting is now available for many platforms (Callaway, 1995; Fairhead, 1995; Ricciute, 1994).

CONCLUSIONS

The extant literature on transformational leadership has tended to focus on the characteristics and behaviors that might or ought to be exhibited by leaders that engage in this form of management. Very little has been written on how to implement transformational leadership and how to provide

transformational leaders with the tools they need to accomplish organizational change in chaotic and political environments. This paper suggests that one such tool is multidimensional budgeting. We hope that the paper provides help to those engaging in transformation leadership and inspires other researchers to identify practical tools that can enable further use of this approach to organizational leadership.

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ETHICS IN INVESTMENT ANALYSIS AND ADVISING

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ABSTRACT

This paper examines the issue of investment analysis and advising. A survey instrument containing thirteen scenarios is administered to university business students at various levels. The scenarios are developed from the Standards of Professional Conduct of the Association for Investment Management and Research. The Standards are then used as an objective basis of comparison in evaluating the student responses.

The results should be useful to faculty wishing to incorporate the study of ethics into a finance course. The results overall indicate a moderate level of ethical congruence on the part of the students, but several particularly weak areas are identified.

INTRODUCTION

The issue of ethics in investment analysis and advising will be examined in this paper. A survey methodology will be used and the surveys were administered to university students at various levels. Studies of the ethical business decision making on the part of university students have been conducted before, but generally focus on a broad range of business topics. This study has a much narrower focus and therefore is expected to provide more useful information for faculty teaching in the are of finance and investments.

The issue of ethics in finance is receiving increasing attention from lawmakers as well as academic researchers. As financial engineering progresses and new and complex financial instruments are developed, the task of the investment advisor becomes more difficult and the opportunity for unethical behavior to occur is greater. Accrediting agencies for business schools such as the American Assembly of Collegiate Schools of Business are also placing increased attention on the issue of ethics.

It is difficult to define ethical behavior and unethical behavior in many situations. One person may see the actions as ethical and another person may see the same actions as unethical. Some authors have attempted to define ethical behavior, but a widely accepted definition does not exist. As a result, most professional organizations require their members to abide by a strict code of ethics and standards of professional conduct which govern specific behavior in the discipline. This research utilizes the code of ethics and standards of professional conduct set forth by the Association for Investment Management and Research (AIMR) as the basis for the vignettes used on the survey to provide an objective basis for comparison.

LITERATURE REVIEW

Most studies in the area of business ethics are general in scope rather than focusing on a particular functional area of business. Of those studies conducted, few are based on a published code of conduct which helps to provide a basis for objective comparison. One exception is a study Green and Weber (1997) which provides some evidence about the ethical development accounting students prior to, and immediately following ethics oriented versus non-ethics oriented accounting courses. They found the ethical reasoning ability of accounting students to be improved when they took an auditing course which emphasized the AICPA Code versus those who had not taken the course. No difference in the reasoning level was noted between accounting and non-accounting majors prior to an auditing course. They concluded that when an auditing course emphasizes the "spirit" of the Code, there is a positive impact on the ethical reasoning ability of the students completing the course.

Of those studies with a focus on general business ethics, the scenarios given to the respondent typically involved a corporate action, employment situation, advertising or sales. Respondents were asked to complete demographic profiles in most cases and then the responses were correlated with the demographic information to determine in different demographic groups viewed a particular situation as more or less ethical than another. Typical demographic variables evaluated include gender, age, race, major, income and religious conviction. The following are some of the findings from studies of this nature.

Schminke and Ambrose (1997) evaluate ethical asymmetries in the way men and women approach ethical decision making in both business and non-business settings. They conclude that the models employed by men and women appear to differ in both business and non-business settings and that women are better predictors of both sex's most likely ethical model.

Ruegger and King (1992) and Dawson (1997) also evaluate gender as a differentiating factor in ethical decision making. Ruegger and King study the effect of age and gender upon student business ethics by evaluating 2,196 students enrolled in business courses at the University of Southern Mississippi. They conclude from their sample that gender is a significant factor in ethical decision making and that females are more ethical than males in their perception of ethical situations in business. With respect to the age of the respondent, their results indicate that older students (40 years and older) are the most ethical in their business decision making. Dawson (1997) evaluated ethical differences between men and women in the sales profession by surveying 209 subjects. Each subject responded to 20 ethical scenarios of which 10 were relational (clearly involving or affecting the interests of others) and 10 were non-relational (situations essentially confined to ones own conscience). He found significant differences between the sexes in situations involving relational issues, but not in situations involving non-relational issues. Secondly, he found that ethical differences based on gender change with age and years of experience.

McNichols and Zimmerer (1985) attempt to find differences in undergraduate student attitudes toward ethical situations based on gender and major and were unable to identify any significant differences with respect to either variable.

Barnett, Brown and Bass (1994) evaluate the ethical judgements of college students and attempt to differentiate the responses based on academic major, gender, age and income. They found no significant differences in the ethical responses based on academic major or age. With respect to gender, they found the ethical responses of males to be less harsh in all 24 of the scenarios presented.

Males consistently evaluated the actions as less unethical than females. The authors suggest that this could mean that the moral development of males is somewhat slower than that of females. With respect to the income variable, the study found that in 23 of the 24 scenarios, students in the higher income group rated the situation as less unethical.

Some studies have addressed possible cultural differences in the way respondents evaluate an ethical business scenario. Allmon, Chen, Pritchett and Forrest (1997) evaluate cultural differences in the business ethics perceptions of students in Australia, Taiwan and the United States and concluded that "although statistically significant differences do exist there is significant agreement with the way students perceive ethical/unethical practices in business". They suggest that there appears to be "a universality of business ethical perceptions".

Whipple and Swords (1992) conduct a cross-cultural comparison between students in the United States and the United Kingdom. They conclude that "differences in the students' demographic profiles do not influence their ethics judgements". They do note consistently higher business ethics of female students from both countries.

METHODOLOGY

Most survey research on the issue of ethics utilizes vignettes to present an ethical or unethical situation to the respondent and then asks the respondent to rate the situation on a scale. Typical rating scales vary from 5 to 9 points. A 5 point rating scale is used in this research.

The mean response score can be evaluated in two ways. First, it will be compared with the AIMR Code of Ethics and Standards of Professional Conduct to determine if the respondents' evaluations of the ethical dilemma are in agreement with the code and standards. Second, the mean response scores will be computed for each demographic category of respondent to see if there is any significant difference in the respondents evaluation of the ethical dilemma by demographic category. The various demographic categories analyzed include the respondents sex, age, race, class, major, grade point average, household income level, primary environment and type of school attended. Past studies of ethics in a general business context have found some of these demographic variables to be significant and others to be insignificant.

The survey was be administered to university students at medium sized state universities and consists of mostly business majors. Hypothesized relationships are as follows. With respect to gender, age and income, it is expected that students will exhibit significantly different responses to the ethical scenarios presented. Those of female gender, older age and higher income are expected to exhibit responses more consistent with the AIMR Standards of Professional Conduct. With respect to race, class , major, GPA and environment,it is expected that students will not exhibit significantly different responses to the ethical scenarios presented and therefore will be equally consistent with the AIMR Standards of Professional Conduct.

The survey instrument contains 13 scenarios which relate to various standards set forth by AIMR in their Code of Ethics and Standards of Professional Conduct. The respondent will complete a profile containing eight response categories: sex, age, race, class, major, GPA, household income and environment. Each scenario is ranked by the respondent on a scale of 1 to 5 with 1 being fully ethical or appropriate behavior and 5 being fully unethical or inappropriate behavior.

RESULTS

With respect to the characteristics of the respondents, 53 percent were male and 47 percent were female. Sixty one percent of the respondents were black and 36 percent were white while 63 percent attend an historically school and 37 percent attend a predominantly white school. Six percent of the respondents were under age 21, fifty nine percent were age 21 to 25, twenty one percent were age 26 to 30, thirteen percent age 31 to 40 and one percent over 41.

All respondents were juniors, seniors or graduate students. Fourteen percent were juniors, 64 percent were seniors and 21 percent were graduate students. Nine percent of respondents were accounting majors, 14 percent general business, 3 percent marketing, 56 percent finance, 4 percent management, 4 percent management information systems and 7 percent other majors.

Grade point averages of the respondents were reported as follows: 13 percent had GPA's from 2.0 to 2.5, fifty percent had GPA's from 2.51 to 3.0, twenty three had GPA's from 3.1 to 3.5 and 14 percent had GPA's from 3.51 to 4.0. With respect to household income, 31 percent of respondents had an income under $20,000, thirty four percent had an income between $20,000 and $40,000, sixteen percent had an income between $40,001 and $60,000, eleven percent had incomes between $60,001 and $80,000, four percent had incomes from $80,001 to $100,000 and 3 percent had incomes over $100,000. Forty percent reported being raised in a rural environment, 34 percent reported being raised in a suburban environment and 26 percent reported being raised in an urban environment.

The responses are analyzed with respect to the five categories contained in the Standards of Professional Conduct of the Association for Investment Management and Research: fundamental responsibilities, relationships with and responsibilities to the profession, relationships with and responsibilities to the employer, relationships with and responsibilities to clients and prospects, and relationships with and responsibilities to the investing public.

Only one of the scenarios on the survey related to fundamental responsibilities and involved a foreign based analyst employed by a U.S. company trading on inside information in a country where there were no insider trading laws. This scenario received a mean response of 3.1 which would indicate that respondents thought that it was moderately unethical.

Four of the scenarios concerned relationships with and responsibilities to the profession. These involved such behaviors as misuse of a professional designation, repeated arrests for minor misdemeanors, and citation of references used in a report. Mean response scores for these four scenarios were 3.1, 2.5, 3.471 and 2.614. Interestingly, the third scenario in this category with a mean score of 3.471 is the only one of the three which is not a violation of the Standards of Professional Conduct and yet respondents ranked it as most unethical in the category.

With respect to relationships with and responsibilities to the employer, there were 5 scenarios posed to the respondents. Mean scores for these four scenarios were 2.4, 2.786, 3.271, 3.086, and 3.243. Each of the scenarios described a situation where the person in question was not acting in a manner with the Standards of Professional Conduct. These scenarios involved informing employer of your duty to abide by a code of conduct, taking clients with you when leaving an employer, conflicts of interest, and disclosing confidential nonpublic information.

The fourth category examined was relationships with and responsibilities to clients and prospects. There was only one scenario for this category and the mean response score was 3.1. The

scenario described a situation where the analyst had made some estimates based on information he believed to be reliable, but then presented these estimates as factual information in a report prepared for public dissemination, which is a violation of the Standards of Professional Conduct.

The final category involves relationships with and responsibilities to the investing public. Two scenarios were presented in this section and they had mean response scores of 2.9 and 3.1 which would indicate that respondents viewed them as moderately unethical. Each of these scenarios involves the use of material non-public information to make a trading decision.

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THE 150 HOUR RULE: OUTCOMES AND ASSESSMENT

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ABSTRACT

The majority of states have now enacted legislation to require 150 hours of education for candidates sitting for the CPA exam. The merit of requiring another year of college for public accountants was and continues to be hotly debated. A number of states have already implemented the change and have graduates from the new programs who have entered the work force.

This study reports the findings of a survey of CPAs located in the post-implementation states. The questionnaire had two main sections. The first elicited opinions about the quality of employees under the new 150 hour rule relative to those under the prior system and the need for an additional year of education. The second focused on a cost/benefit analysis of the fifth year requirement. Having thousands of accounting students remaining in school for another year will cost the states and their taxpayers hundreds of millions of dollars. Students with an advanced degree will also expect employers to offer a higher starting wage. Given the dollar amounts involved and their work experience with graduates from the 150 hour programs, respondents were asked whether the 150 hour rule appeared to be worthwhile. The results by state were then analyzed in relation to that location's specific course work requirements for the fifth year.

TESTING THE RELATIONSHIP BETWEEN INTERNATIONAL STOCK MARKET INDICES

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ABSTRACT

Financial advisors and publications often tout the benefits of international portfolio diversification for minimizing risk. Many early studies provided evidence that foreign markets were not highly correlated with those in the United States. However, more recent research indicates a significant increase in the correlation between major stock markets around the world since the 1987 stock market decline in America.

This study investigates the relationships between the major stock market indices from 1987 to the present to empirically test whether the trend towards increased co-movement is continuing. A year by year analysis will also be conducted to ascertain the stability of the relationships from one time period to another. Since many of the recent drops in foreign markets corresponded with currency devaluation, changes in major international indices relative to the U.S. markets will be tracked against fluctuations in translation rates to test whether relative currency values are a major factor in market movements. If world markets are becoming closely correlated, then the perceived benefits of international portfolio diversification in terms of reduced risk may be largely illusory.

THE IMPACT OF USE-ORIENTATION ON FINANCIAL ACCOUNTING THEORY

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ABSTRACT

Accounting is a pragmatic discipline. Its purpose is to provide information useful for economic decision making by stakeholders. Since accounting is concerned with user needs, a set of objectives relating to user needs stands at the apex of the metatheory.

According to the Statement of Financial Accounting concept (SFAC) No. 1, the primary objective of financial statements is to provide information that is useful to various stakeholders. Useful corporate information helps investors and other users to assess the amounts, timing, and uncertainty of the prospective net cash inflows of a firm. Financial Accounting Standard Board, SFAC No..2, indicated that users are the ones that should judge the usefulness of the corporate information. The judgments of the users are influenced by many factors such as the decisions they will make, the decision making methods to be used, the information already possessed or obtainable from other sources,, as well as the decision maker's capacity to use information. This raises important issues that need clarification such as : Who are the users of accounting information? What are their information needs? How can these needs best be satisfied?

The primary purpose of this research is to evaluate the impact of user orientation on financial accounting theory and research. Subjects such as: the evolution of user-orientation from ASOBAT to SFAC No. 2, the alternative research approaches that are consistent with a user perspective, and future directions of that user-oriented research were covered in this paper.

THE EFFECT OF ACCOUNTING INFORMATION ON INVESTMENT DECISIONS: INTERNATIONAL FINANCIAL STATEMENT ANALYSIS

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ABSTRACT

Increased international financial activity produces different information needs for investors and other users outside the enterprise's home country. The need for a common language of business in financial statements is increasing in urgency (Purvis, Gernon & Diamond, 1991). Understanding differences in accounting and business traditions therefore has become much more important with the growth in international portfolio investment, and the continuing wave of mergers and acquisitions (Gray & Roberts, 1991).

Although corporations increasingly are conducting worldwide activities, financial reports of companies in different countries generally are not comparable because of differences in accounting standards and reporting procedures. This situation presents a serious problem for international financial statement analysis. Important questions here include the extent to which international accounting differences make a significant impact on the measurement of earnings and assets. To what extent are such differences incorporated in assessment of profitability, liquidity, and solvency by analysts and investors located in different countries? To what extent do accounting differences raise the cost of capital internationally? To what extent do accounting differences impact upon foreign portfolio investment decisions?

The purpose of this paper is to analyze the problem of how accounting differences affect international financial statements analysis with the hope that investors, and financial analysts will become more aware of the pitfalls. With a better understanding of foreign accounting and environmental differences, companies should be able to lower their cost of capital through the greater availability of long-term funds in the international market, a supply which far exceeds that available if these firms were limited to using their home capital markets.

HOW THE IRS RESTRUCTURING AND REFORM ACT OF 1998 AFFECTS TAXPAYERS

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ABSTRACT

The IRS Restructuring and Reform Act of 1998 is a far-reaching tax law which makes many significant changes and profoundly affects taxpayers. It was approved by an overwhelming majority in both the House and Senate and signed into law on July 22, 1998. The new law is a major attempt to restructure the IRS through a ground-up reorganization. In addition, the act creates a wealth of planning opportunities and makes many technical corrections to Taxpayer Relief Act of 1997. Another major section in the Act establishes the "Taxpayer Bill of Rights 3", which gives taxpayers many new rights and protections. The new law also contains a separate "Electronic Filing" section, which focuses on the increasingly important role of electronic filing. This paper summarizes these important changes and discusses the impact of these changes on individuals and businesses in tax compliance.

THE EFFECTS OF TAX REFORM ON THE RELATIONSHIP BETWEEN CORPORATE EFFECTIVE TAX RATES AND INVESTMENT RISK

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ABSTRACT

This study examined the effects of the Tax Reform Act of 1986 (TRA86) on the relationship between average effective tax rates (ETRs) and investment risk (beta) for a sample of U.S. corporations. When measures of ETR fail to account for the differences in the level of corporate investment risk, research results may be misleading due to the failure to equalize corporate tax burdens.

The results showed that cross-sectional average effective tax rates were constant across investment risk levels both prior to and following TRA86, and that TRA86 did not systematically alter this relationship. However, the variability of average effective tax rates for corporations with equal levels of investment risk increased significantly following TRA86. This result suggests that TRA86 may have caused the risk premia of corporations to increase based not on the true risk of investment, but due to a higher tax burden.

FINANCIAL ASSET DEFLATION AND THE LENGTH AND SEVERITY OF RECESSIONS

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ABSTRACT

Stock price indexes have long been used as a 'leading' indicator of economic activity. It is also of interest to determine, in addition to the index level, whether the magnitude of change, the longevity of negative movement, and the length of time to index recovery have any ability to indicate the severity and duration of the recessionary periods with which they are associated.

The purposes of this study are to (1)explore alternative theories of severe versus mild recessions to highlight the role of financial asset values in preceding and/or contributing to the length and severity of recessionary periods and (2)examine evidence from recessionary periods in order to frame a general premise about the explanatory ability of stock price movements.

INTRODUCTION

A variety of studies have been published regarding the question of whether or not stock price fluctuations are capable of producing useful predictive information about the macroeconomy. Higgins (1988) presented 28 episodes of declining stock prices and/or recessions. Higgins concluded that the "stock market has successfully predicted recessions about 41 percent of the time since 1900. Of the 21 appreciable declines in stock prices before last year, 11 successfully predicted an imminent recession. Of the remaining 10 stock declines, two provided no lead times and eight gave false signals of a recession. Six recessions were not preceded by a decline in stock prices." (Higgins,p.14) Higgins also approached the purpose of this paper by testing the ability of more severe stock price declines to predict a recession. The number of false signals declined, but the predictive ability declined as well, thus providing little additional insight. Higgins did not address the correlation between severe and lengthy stock price declines with severe and lengthy recessions. Pearce (1983) discusses the record of stock prices in predicting business cycle turns. Using industrial production as a coincident indicator and stock prices (S&P 500) as a stock price indicator, he indicated that, stock prices generally (not always) started to decline prior to recessions, stock prices started rising prior to the beginning of an economic expansion (in the six recessions studied), and the stock price index occasionally gave false signals of contraction. Pearce observed other industrialized countries as well, and concluded that the stock index was even less reliable as a predictor in those countries.

A variety of theories linking the financial and real sectors of the economy provide a basis for the leading nature of stock prices. The more popular ones to include in leading indicator arguments include J.M. Keynes' General Theory (1936), Ando and Modigliani's Life Cycle model (1963), Friedman and Schwartz' monetarist model (1963), and Tobin's q (1969). The theories in combination

substantiate an underlying basis for the link between stock price movement and real economic changes.

There is wide agreement on several possible mechanisms. First, Stock prices are generally thought to be composed of the sum of the discounted future expected cashflows from an ownership interest in the stock. If cashflow estimates change, then the stock value should change. Because expectations do not necessarily reflect what actually comes about, further adjustments may occur later. Second, the discount rate used is usually assumed to follow some pattern of risk adjustment. If the perceived level of riskiness rises, then the discount rate rises, lowering the price investors are willing to pay. Third, the value of stocks are thought to be perceived as wealth by the owners. If the price falls, these owners presumably feel less weathy, and vice-versa. The reaction of stockholders to these fluctuations is thought by some to manifest itself in consumer spending decisions, a component of GNP. Fourth, lower stock prices increase the cost of equity financing for firms wishing to invest. Finally, a less popular but interesting notion is that consumers and business decision makers, as they hear disturbing news about stock price movements, will experience a lower confidence level and react by spending and investing more conservatively, reducing GNP.

Two specific theories are of particular interest here, because of the nature of the question. The theories were selected based on their ability to provide differentiation between normal cyclicality and severe or extended recessionary periods, since the length and severity of the recessions is of interest. Two contrasting models are presented. Irving Fisher's Debt-Deflation theory of Great Disequilibria (1933) presents a general equilibrium collapse as the means of transmission between the financial markets and macroeconomic phenomena. Fisher places the blame for a 'great disequilibrium' on a general state of over indebtedness combined with commodity price deflation. Hyman Minsky (1964, 1975, 1985, 1986) presents a Post Keynesian view of financial market crisis and the resulting effect on the macroeconomy. Minsky asserts that the key to understanding the role of asset deflation on the macroeconomy has to do with entrepreneurial expectations in a world of uncertainty (contrasted with the idea of 'risk'). Minsky establishes an intimate link between the values of financial assets and the entrepreneurial investment decision.

Somewhat guided by these two theories, a correlation model is specified. Variables of interest are the length and depth of recessions and time to recovery from recessions, and their relationships to the length and depth of financial market stock price deflation and the time to recovery of stock prices. Data from the United States is then used to form conjectures based on the results. An interpretation of the results in light of the two theories follows the application of data to the model.

ALTERNATIVE THEORIES

Irving Fisher understood economic theory as encompassing both 'equilibrium' and 'disequilibrium' conditions. Fisher felt that theories of the business cycle were simply a study of the economy in disequilibrium. Conditions other than full employment were the result of coexisting, self generating cycles, complementing one another or offsetting one another to varying degrees (Fisher,1933. p.338).

Fisher's view that the economy is characterized by an eventual return to full employment is entirely consistent with classical economic theory. In fact, recessions and depressions that were severe and extended were referred to by Fisher as "great dis-equilibrium."(Fisher,1933. p. 340) In other

words, his explanation for great depressions was still rooted in the overriding belief that given time, the economy would find its own way back to full employment.

At first glance, one might interpret a 'debt-deflation' caused recession as a contraction resulting from rapidly falling bond and loan values. This was not Fisher's intent at all. Fisher, as most classical economists did, applied the term deflation to commodity prices, not asset prices. Fisher's 'debt-deflation' referred to what initiates a great contraction in production: namely, a state of over indebtedness in conjunction with commodity price deflation. The degree of indebtedness appears to be thought of as an equilibrium target in itself (Fisher,1933.p.341). Fisher envisioned a state of over indebtedness that leads to debt liquidation, characterized by distress selling of produced goods in order to pay off loans on productive processes. This, Fisher asserted, slowed velocity and contracted the amount of money in circulation.

This result is consistent with the quantity theory formulation from Fisher's earlier work in summarizing his understanding of the classical economy. For Fisher, half of the equation of exchange represented the financial sector activity necessary to pay for goods, i.e. MV, or money times velocity of money. If the aggregate volume of bank deposits falls and the turnover rate of these deposits decreases, then the equation of exchange indicates that PT, or price times the physical volume of trade (transactions) must fall as well.

Fisher argued that during a debt deflation the quantity of money and the velocity of money decrease. This leads to an accelerated fall in the "net worths of business" and therefore to a fall in profit. The fall in profit induces entrepreneurs to reduce output.

The remaining effects approximate a description of a large scale recession and depression. "Losses, bankruptcies, and unemployment lead to...Pessimism and loss of confidence, which in turn lead to...Hoarding and slowing down still more the velocity of circulation."(Fisher,1933. p.342)

Fisher then reinforced his belief in the price system as a flexible means of reconciling forces of supply and demand. He said that "...except for...debt and interest on debts, all the fluctuations listed come about through a fall of prices. When over-indebtedness stands alone, that is,"and "does *not* lead to a fall of [commodity] prices...the resulting "cycle" will be far milder and far more regular."(Fisher,1933. p.344) Fisher seems to be advocating intervention by the monetary authority for price support in 'great dis-equilibria.'

Fisher did not directly address stock price deflation, although he touched on the basis for which wealth is destroyed by indicating that deposits fall and that bankruptcies occur. Overall, what appears to capsize the economic boat is the fall in prices of newly produced goods in combination with the magnifying effect of indebtedness. This can be compared to asset deflation, where the nominal value of secondhand assets falls for reasons not necessarily related to over indebtedness, but related to the commodity price level changes.

In sum, Fisher drafted a scenario that places the fault of great disequilibria on those phenomena that lead to over indebtedness. The return to equilibrium is assumed to eventually occur by adjustments in market clearing variables; i.e. the producible goods price level, wage level, and interest rates. Fisher differentiated between cyclical fluctuations and extended recessions (length and depth of recessionary periods) in that milder recessions are not characterized by distress of business and financial market reactions to the condition of businesses. This indicates that a possible link between the aggregate value of stocks and the subsequent recessions has one of two characters; milder recessions, characterized by smaller disturbances or variation, and more severe recessions,

characterized by large negative influences of price deflation, over indebtedness, and stock price deflation reflecting this severity.

MINSKY'S ENTREPRENEURIAL EXPECTATIONS THEORY

Hyman Minsky approaches the link between financial assets and the economy through a framework of 'positions' that investors hold in assets. The equity portion of the position reflects the position holder's wealth, and also reflects the 'margin of safety' for the lender, or creditor (Minsky,1986. p.177). Minsky asserts that a system of levered positions in assets exists throughout all levels of asset investment. The stability of the system of asset values becomes crucial to the wealth that consumers perceive to have. This is because the equity position experiences only subordinate (residual) return from an asset, which is often extremely sensitive to small fluctuations in the cashflow patterns of productive processes.

Because of the position held in the financial asset, the possibility exists for multiple levels of debt financing. This can result in an overall condition of financial fragility which Minsky indicates is an endogenous result of normal functions within the economy. Minsky also embraces J.M. Keynes' unsynthesized (i.e. not as neoclassical synthesis interpreted) theories. Minsky particularly holds that "Keynes put forth an investment theory of fluctuations in real demand and a financial theory of fluctuations in real investment" (Minsky,1975. p.57). If we order these according to the cause and effect that they suggest, it is financial market conditions that are the major determinant of whether or not investment takes place, and whether or not that investment takes place largely determines economic conditions.

Minsky's theory links the financial crisis to recessions in that "recessions either are triggered by or they soon lead to a threatened breakdown of some significant set of financial markets--without a crunch no recession takes place"(Minsky,1981. p.14). The severity of the recession depends on the severity of the preceding effects of financial market conditions. The mechanism of economic reaction, therefore, is the entrepreneurial decision about whether or not to raise funds in financial markets and invest in productive processes.

CONSTRUCTION OF CORRELATION MODEL

The above theories appear to suggest that price deflation in financial markets is closely associated with recessions. Presumably, larger and more persistent financial asset deflation should be mirrored by larger and more persistent recessions. Minsky suggests a cause and effect transmission through the entrepreneurial function, where it appears plausible that a more severe financial crisis could easily affect the severity of a recession or could affect the ability of the economy to recover quickly. Fisher describes a great contraction as one associated with considerable distress in financial markets, and milder recessions with milder financial market variation.

Many economic variables could be utilized to represent the role of stock prices, and many others to represent economic conditions. A common measure of the performance of common stocks is found in the Standard & Poors 500 index, representing a widely diversified portfolio of common stocks. Unsystematic influences presumably are fully diversified and therefore the index captures systematic price changes. The values of this index with a base year of 1941 are used to represent

stock price movements. A bewildering assortment of economic variables describing the macroeconomy are also available. Of particular interest to this study are those that capture the magnitude of recessionary periods, and also indicate the points at which the 'economy' peaks, troughs, and fully recovers. The logical candidate data series is a coincident series. The Department of Commerce and Bureau of Economic Analysis publishes a composite index of four coincident economic indicators, consisting of Real Manufacturing and Trade Sales, Real Industrial Production, Real Personal Income less Transfer Payments, and Millions of Employees on Nonagricultural Payrolls. This index is used as a proxy for the severity of recessionary periods, and to indicate the peaks, troughs, and recovery periods.

A total of eight recessions have occurred since 1952. These eight appear to be suitable to represent modern recessions. Although many structural changes have occurred during the time frame for this study, it is not intended to highlight differences in the recessionary periods; rather, the objective is to identify characteristics common to these recessions.

Obviously, eight observations do not represent a statistically adequate number to draw conclusions of great substance. Potential problems such as a high degree of error and unsubstantiability of normality of errors are present. The statistical results should serve only to indicate consistency or lack of consistency in the variations over the eight periods studied.

Financial market variables are all derived from the 500 stock price index monthly figures from Survey of Current Business. The percentage decrease in the index associated with each recession was computed (from peak to trough). In addition, the number of months during which the index deflation occurred was recorded, and the number of months passing before recovery of the index (to its prior peak level) was recorded. Variables representing economic conditions were derived from the Composite index of four coincident indicators monthly figures from Survey of Current Business. Associated measures to the stock price index were calculated for the coincident index: percentage decrease in the index associated with each recession, the number of months during which the index deflation occurred, and the number of months passing before recovery of the index (to its prior peak level).

EMPIRICAL APPLICATION OF CORRELATION MODEL

Of particular interest is whether or not measures of the stock market index values correlate positively with corresponding measures of the coincident index. Specifically, it is first of interest to examine the correlation between the magnitude of the fall in stock index value and the magnitude of the fall in the coincident index value. To allow for the differences in initial index number, the changes are converted to percentages. Second, it is of interest to examine the correlation between the number of months from peak to trough in the stock index to the months from peak to trough in the coincident index. Third, it is of interest to examine the correlation between the number of months from trough to recovery in the stock index and the months from trough to recovery in the coincident index. Fourth, the total time in months from the peak to recovery for the stock index is correlated to the same measure for the coincident index. Finally, since easily reported information about the degree of correlation between each measure versus any other measure may be of interest to the reader, these will be included as well, although no particular pattern is sought in these areas.

The model consists of a correlation matrix where the covariance of the indicated measures of the two sets of data is divided by the product of their standard deviations. The closer to 1 or -1 the coefficient is, the stronger the relationship between the two sets of data. A value closer to zero indicates that little correlation exists. The results of the correlation procedure are summarized in table 1.

S % Decrease	S Mo. to trough	S Mo. to recover	S Trough to Rec	C % Decrease	C Mo. to trough	C Mo. to recover	C Trough to Rec
1							
0.7493	1						
0.9175	0.8818	1					
0.8798	0.5846	0.8981	1				
-0.4884	-0.4052	-0.4238	-0.3512	1			
-0.2987	0.3431	0.0003	-0.3194	0.1920	1		
0.5224	0.5343	0.4713	0.3125	-0.4147	0.0865	1	
0.6255	0.2574	0.4052	0.4572	-0.4700	-0.5152	0.8093	1

Some interesting results are readily apparent from the correlation table. Surprisingly, it appears that a negative correlation exists between the percentage decrease in the stock price index and the percentage decrease in the coincident index. The expectations were that a more severe financial asset deflation would correlate positively with a more severe recession. Although the coefficient was not close to 1.0, it was neither close to zero (which would indicate little relationship).

Another curious result is that the highest of the coefficients, .6255, indicated positive correlation between the number of months for the coincident index to reach its former peak and the percentage decrease in the stock price index. Although this result by itself might serve to suggest a type of general behavior over business cycles, in combination with the negative correlation discussed above, it may have little meaning. Overall, the correlations between stock price index and coincident index measures were not indicative of strong relationships.

Two of the graphical representations in Figure 1 appeared to warrant further investigation. The percent decrease in the stock index relative to the corresponding measure for the coincident index appeared to be not only negative, but also nonlinear. A variety of transformations were run on the data. An inversion of the coincident index not only strengthened the correlation but also straightened the data plot (Figure 2).

FIGURE 1

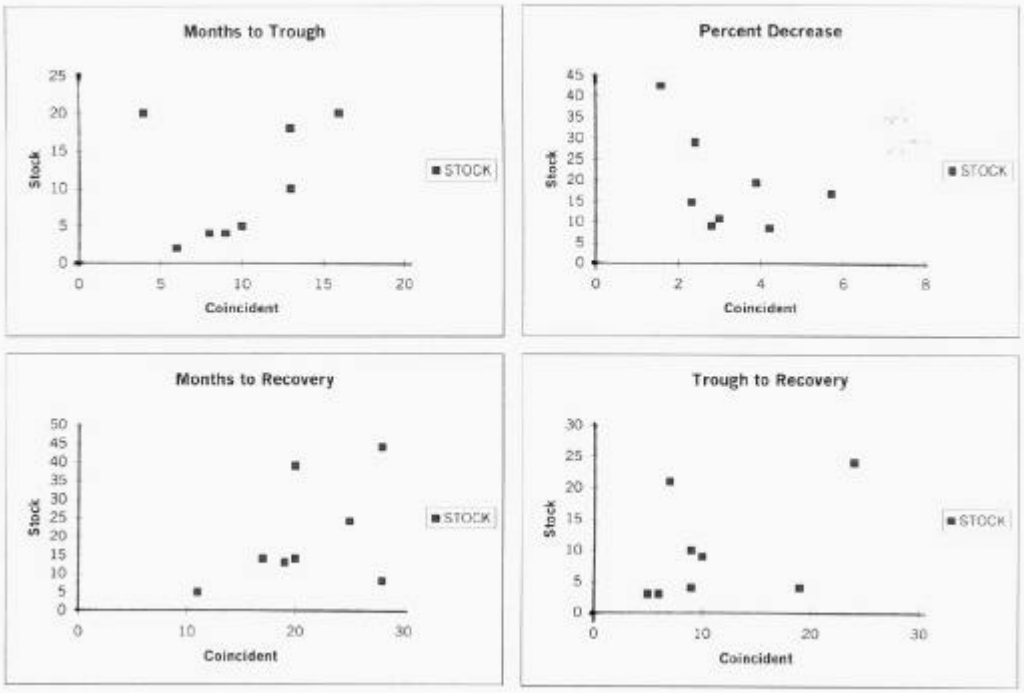
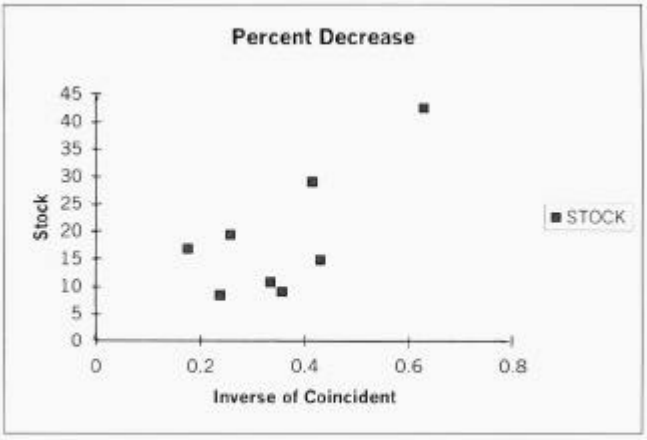


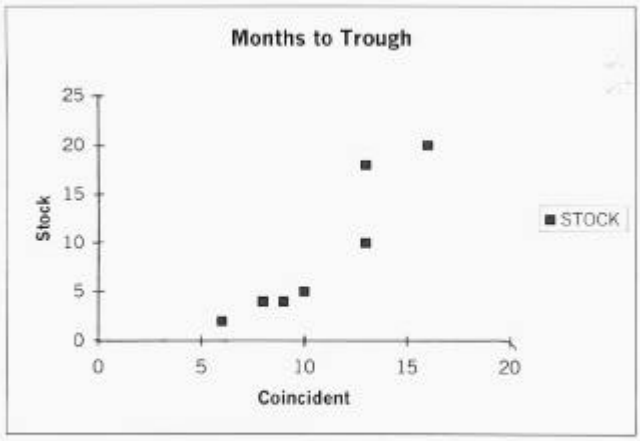
FIGURE 2



	STOCK	1/COIN
STOCK	1	
1/COIN	0.73177359	1

The correlation suggested by the number of months from peak to trough (Months to Trough) implied the presence of an outlier. The removal of the outlier produced a more consistent plot and increased the correlation coefficient to .9223 (Figure 3). The number of observations fell to only seven, weakening any inference even further than the prior weak condition. The magnitude of the coefficient, however, is indicative of a fairly strong correlation.

FIGURE 3



	COIN	STOCK
COIN	1	
STOCK	0.92228524	1

The number of months from stock index peak to index recovery (Months to Recovery) appeared to have little or no relationship to the corresponding coincident index measure. The number of months from trough to recovery (Trough to Recovery) was not appreciably indicative of an identifiable relationship between the two indices, either.

Other results of interest may include the extent to which the percent decrease in the stock price index correlated with the months to trough, months from trough to recovery, and months from peak to recovery. For the stock price index, coefficients of .7492, .8797, and .9175 suggest that large initial magnitudes of decrease are consistent with longer time periods of negative movement and longer periods before index recovery occurs. This is not an unexpected result and appears to be generally consistent with common statements from market participants. On the other hand, the behavior of the coincident index yields some bewildering coefficients. The percent decrease in the coincident index appears nearly uncorrelated with the number of months to trough with a coefficient of .1920. The magnitude of the decrease is mildly negatively correlated with the number of months to recovery and the number of months from trough to recovery. Due to this dubious result and to the weakness in inference resulting from the few observations, little insight is apparent from the coefficients.

INTERPRETATION AND CONCLUSIONS

The real world use of stock index information as a leading indicator suggests that theorists are justified in examining its effectiveness as a leading indicator. The result of this simple correlation analysis provides some promise for additional study, perhaps as case studies, where recession specific events could be better developed.

The analysis suggests that the magnitude of stock index deflation is not mirrored by the magnitude of decrease in the coincident index. In fact, the negative correlation between the two measures even suggests an opposite effect. The relationship was also curvilinear, and appeared to straighten and change signs when an inverse transformation was performed on the coincident index measures. There are a number of possible reasons for this, but a few are worth mentioning here as a direct involvement with the model. First, the limited number of observations constrain the interpretation and the number of possible explanatory variables. Second, the measures employed to represent 'stock prices' or 'economic conditions' could simply be insufficient or inaccurate conveyors of the information of interest to the study. Finally, it is possible that institutional and governmental forces are brought to bear in reaction to severe stock index deflations that lessen the severity of the economic downturn, or that an absence of intervention occurs under milder stock index deflations, and therefore the severity of the coincident decrease is greater.

The number of months from stock index peak to trough appears to closely reflect the number of months from peak to trough in the coincident index, if the outlier is omitted from the model. Interestingly, the omitted observation (1973 recession) *is* unique from all others in the way the measurement was made. The level of the peak in the stock index prior to the recession was not reached again until *after* the *following* recession, eight years later. Because this anomaly occurred, this one recession's measures of peak to recovery and trough to recovery were not calculated based on the index regaining its former peak, but on the highest point in the index movement prior to the next recession. Even after making this adjustment, the 1973 recession resulted in the longest measure of number of months from peak to recovery, from trough to recovery, and months to trough. The 1973 recession was also the most severe in terms of the percentage decrease in the stock price index; it peaked prior to recession at a higher index value than the following recession did eight years later. These characteristics differentiate the 1973 recession from the others enough to justify its implication as an outlier. The resulting high correlation suggests a possible hypothesis that the bottoming out of the stock index could be a valid predictor of a corresponding bottoming out of the coincident index, perhaps involving a similar timing as the time from the peak in the stock index to the time of the coincident index peak for any given recession. There appears to be no apparent conclusion about the relationship between the recoveries of the stock index and the coincident index.

The overall result of the analysis verifies that there may exist some consistent interrelationships within the realm of additional investigation. Further exploration of the premises developed here might include a case study approach to identifying particular mechanisms unique to each of the recessions. An autoregressive approach to the movements in these indexes may also be in order. A search for better indicators of financial market leading indicators or better measures for general economic conditions may prove fruitful as well.

NOTES

1. Irving Fisher, "The Debt Deflation Theory of Great Depressions," Econometrica (1) 1933, p.342. The initiation of such an event is difficult to discern from Fisher's 1933 paper. He assumes a "state of over-indebtedness" and says that this state leads to "liquidation, through the alarm of either debtors or creditors, or both." Although this is the initiator as described by Fisher, the alarm of economic agents is not directly related to prices. It is possible that Fisher is considering a coincidental state of "general overproduction" because he discussed this overproduction in the immediately preceding section (p340). If this is the case, it would appear logical for debtors and creditors to expect that the debt servicing ability of the debtor might diminish.

2. An accompanying fall in prices caused by the distress selling would indicate that both prices and output fall in a great disequilibrium, in Fisher's view (p. 342).

3. We can draw this conclusion despite the fact that Fisher stresses the over-indebtedness as the condition that starts the ball rolling. His subsequent discussion indicates that it is the price level deflation that is really the culprit, which is only magnified by the presence of debt.

4. This contrasts sharply with the Post Keynesian rejection of general equilibrium frameworks and the contention that modern economies do not tend toward a stable long term path. Minsky demonstrates that fragile financial structures result from normal capitalist activities when economic agents finance capital asset ownership and investment (Minsky, 1986).

5. Although Fisher differentiated two states (mild cycles versus great disequilibria), here we allow for a range of recessionary lengths and severities. If midrange recessions were omitted, the empirical application would have even fewer observations. interpretation of the results of the empirical observation should be limited to the 'range' notion.

6. The idea of causality is another concern for the expected results of this study. In econometric data, variables are often correlated but are coincidentally determined by other causal variables. Since the idea here is not necessarily to hypothesize causality but to simply suggest that a consistent relationship between the variability of the measures under consideration is present, a correlative model appears to be appropriate.

A SOCIO-ECONOMIC MODEL FOR OUTCOME ASSESSMENT IN HEALTH CARE MANAGEMENT

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ABSTRACT

The role of management accounting and accountants has experienced dramatic changes in the last decade. Business, government, and nonprofit organizations continually find new ways to use the management accountant and his information to improve the creation and delivery of goods and services. However, this usefulness is not limited to traditional organizational settings. Management accountants are continuing to expand into new areas to help provide information for decision-making. This paper presents the results of moving management accounting into new frontiers in the healthcare industry. The principles and constructs of activity-based costing were used to develop a socio-economic cost model for determining both the cost effectiveness and clinical effectiveness of different depression treatments. Our results indicate that psyschological treatment is significantly more cost effective than either Prozac or a combination drug and counseling treatment.

INTRODUCTION

Management accounting has undergone quite the renaissance in the past 10 years. Our role as management accountants continues to evolve as business, nonprofit, and governmental organizations find new ways to use our unique talents to improve the creation and delivery of goods and services. Our usefulness, though, is not restricted to traditional organizational settings. We also have a social and ethical responsibility to use our skills for the betterment of society as a whole. This paper presents an application of activity-based costing to the health care profession and our society.

The Chief and Assistant Chief of Psychology at our V. A. Hospital were having difficulty convincing the medical profession about the clinical effectiveness of treating depression with Prozac as compared to other nondrug treatments. They believed that to move the profession toward better treatments, they would have to appeal to the health care industry's cost management concerns. Many of the radical changes in this industry, such as the rise of health care management as a profession, managed health care plans, and HMO's, have resulted from an emphasis on cost effectiveness. In this era of managed health care and limited financial resources, proposed treatments must demonstrate both cost effectiveness as well as clinical effectiveness. Our goal was to develop a socio-economic cost model, which can be used to evaluate different depression treatments. While our model is used in evaluating the differential costs of depression treatments, it is suitable for evaluating any medical treatments in improving health care management.

THE GROWING PROBLEM OF DEPRESSION IN AMERICA

A 1990 study reported depression affects at least 11 million Americans every year and costs the U. S. economy an estimated $44 billion dollars annually. These figures continue to grow. By 2020, one study projects depression will be the number two killer in our country. Over the past 15 years, medical studies have estimated between 3% and 20% of our adult population experience at least some depressive symptoms at any given time. Between 20% and 55% of us will suffer from depression at some time during our lives. Depression affects twice as many women as compared to men.

The effects are devastating: productivity losses; mental, physical, and familial abuses; increased accidents; substance abuse; additional outpatient treatments and hospitalization; somatic illnesses; and suicides. Over half of the serious adult medication overdoses involve antidepressants. They are also the most common agents used in suicide by poisoning.

Side effects from antidepressants are harder to document as many go unreported and untreated. Some reported side effects include agitation, nausea, and sexual problems. Of a much more serious nature, antidepressants can increase the risk of miscarriage and complications in newborn children, if taken during the first trimester. This is especially disconcerting as 70% of prescribed antidepressants are for women.

TREATING DEPRESSION: THE ALTERNATIVES

The most common treatment is with antidepressant drugs. Prozac, for instance, is the most prescribed medication in America. It is simple. It's convenient (a medical doctor can prescribe it). It is relatively inexpensive (current cost at our local pharmacy is $2.49 per pill, normally taken twice a day). It offers an immediate "fix," and, sadly, Americans like taking pills.

The second treatment option combines drugs with counseling. Those supporting this alternative believe the causes of depression are psychological as well as physical. This alternative is not as convenient, however. Many medical doctors are not trained in psychiatric or psychological methods. Psychiatrists can prescribe antidepressants, as well as provide counseling. Psychiatric treatment, though, may be viewed by many as a sign of personal failure, whereas taking a pill may not.

Many mental health professionals believe treatment should not involve prescribing drugs. One non-drug approach involves treating the cognitions depressed patients have. These practitioners believe that it is not necessarily adverse events that lead to depression. Rather, it is a person's cognitions about those events. Common thinking patterns lead to depressed states, such as: overgeneralizing, perfectionistic rationalizing, and the tendency to catastrophize. Another non-drug approach emphasizes behavioral aspects, such as social skill development and engaging in pleasant activities.

TREATING DEPRESSION: THE EVIDENCE

We wouldn't take medication unless it works. Aspirin cures our headaches. Antacids cure our heartburn and gas. Prozac cures depression. Or so the common man believes. In reality, none

of these medications are cures. They only relieve the painful symptoms. Not surprisingly, then, when we consider treatment success versus failure, existing scientific evidence shows psychological treatment, particularly cognitive behavioral therapy (CBT), is at least as effective as drug treatments. Many studies involving thousands of patients provide evidence that CBT is more effective than drugs, and at least as effective as combination treatments.

In addition to looking at treatment success and failure rates, we should consider dropout rates. The dropout rate during drug treatment is over 75% greater than CBT treatment. Combination treatment dropout rates are over 35% higher than CBT. This is an important consideration if you believe that a patient completing treatment, but failing to recover, at least received some relief during the treatment. A dropout receives little or no relief.

Studies also have investigated relapse rates. Many treatment plans involved two years of medication, counseling, or both. Even after this time, a significant proportion of "cured" patients ultimately relapsed. CBT had the lowest relapse rate, antidepressant drugs the highest, and the combination treatment in the middle. Surprisingly, many practitioners argue that the high relapse rate from antidepressant drugs indicates that depression should be treated as a chronic medical disease. They want long-term, high dosage, drug treatments indefinitely! Even in follow-up treatments, though, the preponderance of evidence shows CBT again to be more clinically effective than drug treatments.

We collected evidence from over 80 clinical studies of depression. While the vast majority are current (1990's), some went back as far as 1960. Six of the most important comparative statistics are summarized in Table 1.

Table 1

Success Rate Comparisons For Three Treatments

Statistics	CBT treatment	Drug treatment	Combination
Success rates	47%	29%	47%
Partial successes	23%	19%	19%
Failures	11%	17%	8%
Drop-outs	19%	35%	26%
"Successes" relapsing	27%	59%	29%
Subsequent treatments	31%	57%	44%

These statistics, from a management accounting perspective, are events. They are the structural cost drivers for the socio-economic expected cost model presented later.

Given the clinical evidence supporting CBT as the most effective treatment when all these factors are considered, why are antidepressant drugs the treatment of first choice? We can only speculate. This is an issue for future scientific research. Our best guess?

* Not everyone is aware of the results from "adding-up" all these research studies. Each study investigates one, or a limited subset, of these statistics. No study has looked at the "big picture."

* There are more medical doctors than psychologists and psychiatrists. Patients are more likely to see a physician who will use the most familiar and comfortable treatment.

* Drug manufacturers have a vested interest in alternative one. Conservative estimates suggest that the $63 billion pharmaceutical industry spends $5 billion annually on drug promotion.

* Taking a pill is a private activity. Taking time off from work for psychological treatments may become known to others.

* Drugs may be seen as more convenient.

* Looking only at the cost of a pill, drug treatments appear to be less costly.

It is this last issue that will be investigated next. How would a non-accountant look at the cost question? Based on the medical research we discovered, and common sense, we believe only two costs have been considered: the cost of medication versus the hourly rate charged by a medical doctor, psychologist, and/or psychiatrist.

CREATING A SOCIO-ECONOMIC COST MODEL

The model begins with an analysis of the comparative treatment costs on three activity levels:

1. Direct treatment costs to the patient (or third party provider),
2. Direct costs to the community from being treated for depression,
3. Indirect costs to society.

These three levels are analogous to activity-based costing's activity classification (unit level, batch level, and product line or facilities support). By considering all three levels, we created a socio-economic model. Previous research addressing the cost issue, which are very few, only considered the cost of taking medication versus the cost of psychological treatment sessions. These are the first two costs considered in our model. When all three cost levels are considered, though, psychological (CBT) treatment is not only the most clinically effective alternative, it is also the most cost effective. Prozac treatment is 30% more expensive than CBT. A combination treatment plan is 32% more expensive. The results are presented in Figure 1.

Figure 1

COMPARATIVE COST ANALYSIS OF DEPRESSION TREATMENTS

	TOTAL COSTS BY TREATMENT TYPE FOR 2-YEAR TREATMENT PLAN			COST DIFFERENCES COMPARED TO CBT:	
	CBT	**Prozac**	**Combination**	**Prozac**	**Combination**
Direct patient/third party provider costs					
Health care provider charges	$2,000	$1,120	$2,800	($880)	$800
Medication	0	3,629	3,629	3,629	3,629
Lost wages	334	214	356	(120)	22
Travel costs	60	72	84	12	24
Comorbidity costs	4,874	7,703	7,703	2,830	2,830
Total costs to the patient/third party provider	**$7,268**	**$12,738**	**$14,572**	**$5,470**	**$7,305**
Percentage cost difference from CBT				**75%**	**101%**
Direct costs to the community					
Economic multiplier effect from lost wages	$718	$459	$766	($258)	$48
Reduced taxes due to lost wages	136	87	145	(49)	9
Reduced community service work by patients	400	400	400	0	0
Total costs to the community	**$1,253**	**$946**	**$1,310**	**($307)**	**$57**
Percentage cost difference from CBT				**-25%**	**5%**
Indirect costs to society					
Lost productivity during treatment	$3,729	$4,256	$3,781	$527	$53
Economic multiplier effect from lost productivity	8,017	9,150	8,130	1,133	113
Reduced taxes due to lost productivity	1,516	1,730	1,537	214	21
Lost income potential from suicide	1,913	1,913	1,913	0	0
Total costs to society	**$15,174**	**$17,049**	**$15,362**	**$1,874**	**$187**
Percentage cost difference from CBT				**12%**	**1%**
TOTAL TREATMENT COSTS	**$23,696**	**$30,733**	**$31,245**	**$7,038**	**$7,549**
Percentage cost difference from CBT				**30%**	**32%**

The vast majority of the costs are not direct treatment costs, as we might have expected. Direct treatment costs only ranged from 31% to 47% of the total socio-economic costs. The indirect costs to society represented from 49% to 64% of a treatment's total cost. These "ABC-level" costs are summarized in Table 2.

Table 2

ABC-Level Costs Summary

	CBT		Prozac		Combination	
Direct patient costs	$7,268	31%	$12,738	41%	$14,572	47%
Direct costs to the community	1,253	5%	946	3%	1,310	4%
Indirect costs to society	15,174	64%	17,049	56%	15,362	49%
Total costs from Figure 1	$23,696	100%	$30,733	100%	$31,245	100%

To build this model, we first identified the activities, and their cost drivers, involved in treating depression. These include:

1. The counseling by a psychologist for the CBT treatment ("Health care provider charges" in line 1 of direct patient costs, Figure 1), or a more limited meeting with the doctor or psychiatrist to obtain and renew a prescription for Prozac (column 2), or CBT counseling by a psychiatrist in combination with Prozac treatment (the combination treatment plan in column 3),
2. The costs of medication (line 2),
3. Time off from work (line 3) and traveling to and from the doctor for all three treatments, and to the pharmacy for drug-related plans (line 4),
4. Related illnesses and treatments from being depressed ("comorbidity costs," line 5),
5. The economic and tax effects on the community from lost wages (lines 1 and 2 in community costs)
6. The reduction in community service work due to being depressed (line 3),
7. Lost productivity (wage, economic, and tax consequences in lines 1-3 of the society costs), and
8. The potential risk of suicide due to depression (line 4).

Each of these activities consumes resources, which are costly. The resource costs for each activity are considered next. All resource costs are based on current costs. In some cases, we had to estimate amounts. When we had to do this, we used two estimation criteria: ask the people most likely to know, and bias against the CBT treatment. Using a spreadsheet program to construct this model, any parameters can be changed to reflect changing resource costs, add activities overlooked, or change estimates to suit the needs of a particular user (e.g., located in a different geographic area with a different cost structure). Our objective was to construct a model that can be used to evaluate the cost effectiveness of different treatment plans under changing conditions. We do not claim a perfect model and absolute numbers. For example, we used a two-year treatment plan. The model can be used to evaluate a different length of treatment with varying doses of medication.

DIRECT TREATMENT COSTS

The most commonly used treatment plans in these studies last two years, including follow-up sessions. During this time, 20 one-hour CBT patient sessions are conducted with a psychologist at $100 each. For the drug-only treatment (middle column of Figure 1, line 2), Prozac currently costs $2.49 per pill (2 per day). However, to get and renew the prescription, a patient must see the doctor every six weeks (current charge is $70). The doctor does not just renew a prescription over the phone. The patient and doctor spend an average of ½ hour together during each meeting. For the combination treatment, every six weeks the patient and psychiatrist meet for a one-hour session (current rate is $140 per session).

We estimated a one-hour travel time to and from the doctor for each session. A $15.00 per hour average gross wage rate, less 40.65% in incremental payroll taxes (FIT, SIT, FICA) resulted in the $8.90 net pay rate used to compute lost wages. Travel costs only included the mileage costs (10 miles round-trip to the doctor and 5 miles to the pharmacy at 30¢ per mile).

Comorbidity costs (the costs of other illnesses and side effects actually treated) came from a 1986 V. A. hospital study. These costs differed depending on the treatment ($1,030 per year with CBT, $1,628 with the other two treatments). They were adjusted to "retail" prices that would be charged to a regular patient or third party provider (insurance company), and to current cost levels.

DIRECT COSTS TO THE COMMUNITY

The lost wages used in the previous section are based on net wages because that is the amount directly lost by the patient. Additionally, the economic multiplier used in line one of this section is based on net wages (2.15 times net wages received). Thus, lost income taxes and FICA taxes have to be separately considered.

"Those in the know" believe the average person donates 40 hours per year in community service work. Replacing this free time is estimated to cost $10.00 per hour. On average, a depressed person still volunteers his or her services, but we estimate only half as much as a non-depressed person.

INDIRECT COSTS TO SOCIETY

Two activities drive this cost: lost workdays from being depressed, and suicide. In 1993, 7.8 million workers lost 290 million workdays due to depression. Over a two-year treatment period, 52 workdays are lost by depressed patients being treated with CBT. For Prozac, this is 60 days lost, and it's 53 days lost for those undergoing the combination treatment.

The same research study providing this information also estimated the cost to society from depression-caused suicides. The 18,400 depression-related suicides in 1990 resulted in lost income potential of $7.5 billion. No information exists, though, about how many were being treated with the three different methods. Thus, we had to use the same amount for each treatment. This is another issue for future research.

EXPANDING THE MODEL TO INCLUDE EXPECTED COSTS

The Figure 1 model is still incomplete.. It needs to be expanded into an expected costs model. The expected costs of various treatments should include probability distributions associated with the following outcomes:

- The expectation of treatment success, partial success, and failure;
- The expectation that a certain percentage of patients will relapse; and
- The expectation of subsequent treatments if the first treatment results in a relapse.

The six summary statistics reported above in the "Treating depression: the evidence" section are used to develop the expected treatment costs in Figures 2 through 4. Three new costs are added to the model: Post-treatment costs to society from relapsing patients, partial treatment costs for dropouts, and subsequent treatment costs.

RELAPSE RATES AND POST-TREATMENT COSTS TO SOCIETY

When a previously "cured" patient relapses, this person and society incur differential costs as compared to a recovered, healthy person. This cost is the same regardless of which treatment produced the temporary success. Three activities drive the post-treatment relapse cost: lost productivity, comorbidity, and suicide. One medical study reported 37 more lost workdays per year for relapsed people versus non-depressed people. We used the average $8.90 per hour net wage rate in calculating this cost. Lost taxes and the economic multiplier effects from lost work make-up the rest of this activity's cost. Comorbidity treatment costs (cost of related illnesses caused by depression) were reported in a 1995 study for depressed versus non-depressed people. The third activity cost, suicide, was taken from the Figure 1 model. The sum of these costs is $1,230 per month.

This relapse cost is the same for all three treatments. However, the probability of relapse is different for each treatment. The other difference between treatments is the time to relapse. Of those relapsing, patients successfully completing CBT were "cured" the longest (12.1 months average time until relapsing). We used this as an anchor point to calculate the differential cost associated with relapsing sooner following the other two treatments. In other words, if a Prozac patient relapses sooner than a CBT patient, a differential cost to society results ($1,230 per month for the difference in time). To illustrate this, consider Figure 3, line 2. Of the patients successfully completing Prozac treatment, 59% will relapse in an average of 6.6 months. This is 5.5 months sooner than CBT patients. From Figure 4 (line 2), only 29% of patients successfully completing the combination drug and counseling treatment will relapse. However, they relapse 2.5 months sooner than CBT patients. Because we are considering differential costs associated with relapse, the CBT cost is zero (Figure 2, line 2).

Figure 3

CALCULATION OF PROZAC EXPECTED TREATMENT COSTS

Patient's expected outcome	%age of patients		Expected cost
Treatment success	29% x	$30,733 Treatment cost =	$8,913
	29% x	59% Relapsing x $1,230 Post-treatment cost to society x 5.5 Months relapsed =	1,158
Partial success	19% x	$30,733 Treatment cost =	5,839
	19% x	0.5 Post-treatment cost to society of $1,230 x 12.1 Month relapse period =	1,414
Failures	17% x	$30,733 Treatment cost =	5,225
	17% x	$1,230 Post-treatment cost to society x 12.1 Month relapse period =	2,531
Drop-outs	35% x	$3,891 Partial treatment cost =	1,362
	35% x	$1,230 Post-treatment cost to society x 18.89 Months to end of 2-yr treatment period =	8,135
Sum	100%		
Subsequent treatment	57% x	$4,281 Treatment cost =	2,440
FLUOXETINE EXPECTED TREATMENT COST			**$37,017**

Figure 4

CALCULATION OF COMBINATION EXPECTED TREATMENT COSTS

Patient's expected outcome	%age of patients		Expected cost
Treatment success	47% x	$31,245 Treatment cost =	$14,685
	47% x	29% Relapsing x $1,230 Post-treatment cost to society x 2.5 Months relapsed =	419
Partial success	19% x	$31,245 Treatment cost =	5,936
	19% x	0.5 Post-treatment cost to society of $1,230 x 12.1 Month relapse period =	1,414

Failures	8% x	$31,245	Treatment cost =		2,500
	8% x	$1,230	Post-treatment cost to society		
			x 12.1 Month relapse period =		1,191
Drop-outs	26% x	$5,020	Partial treatment cost =		1,305
	26% x	$1,230	Post-treatment cost to society		
			x 20.17 Months to end of 2-yr treatment period =		6,451
Sum	100%				
Subsequent treatment	44% x	$988	Combination treatment cost =		435
COMBINATION EXPECTED TREATMENT COST					**$34,337**

Relapse rates are only reported for patients successfully completing any treatment. Research has not yet addressed what percentages of partial successes relapse. Here, we had to make an assumption. Patients completing a treatment, but only partially "cured," do not relapse. They do, though, incur one-half the societal costs of a depressed person. While this cost does not differ between the three treatments, its expected cost does because of the different probabilities for partially successful treatments.

Our expected cost model now considers two time periods: the two-year treatment period, and the 12.1 month relapse period. Because we considered a second relapse time period, the model should include the post-treatment costs to society over this time period for those who unsuccessfully completed a treatment. While this cost is again the same for each treatment, its expected cost is different between treatments due to the different probabilities of failure.

DROPOUT COSTS AND PARTIAL TREATMENT COSTS

These costs differ between the three treatments for two reasons. First, the costs of each treatment are different. Second, treatment time until a patient drops-out differs among the three options. The average time until dropping-out for CBT patients is 6.58 months. It's 5.11 months for the drug treatment, and 3.83 months for the combined treatment.

Using the Figure 1 model, treatment costs were calculated for the time until drop-out. Once a patient drops-outs, the post-treatment costs to society are incurred. These costs last for a different length of time as dropping-out occurs at different times depending on the treatment. To demonstrate these calculations, consider Figure 2, Drop-outs line 2: 19% of CBT patients drop out after 6.58 months. Still depressed, they incur $1,230 per month in post-treatment costs to society for the remaining 17.42 months of the two-year treatment period.

Figure 2

CALCULATION OF CBT EXPECTED TREATMENT COSTS

Patient's expected outcome	%age of patients		Expected cost
Treatment success	47% x	$23,696 Treatment cost =	$11,137
	47% x	27% Relapsing x $1,230 Post-treatment cost to society x 0 Months relapsed =	0
Partial success	23% x	$23,696 Treatment cost =	5,450
	23% x	0.5 Post-treatment cost to society of $1,230 x 12.1 Month relapse period =	1,712
Failures	11% x	$23,696 Treatment cost =	2,607
	11% x	$1,230 Post-treatment cost to society x 12.1 Month relapse period =	1,638
Drop-outs	19% x	$5,109 Partial treatment cost =	971
	19% x	$1,230 Post-treatment cost to society x 17.42 Months to end of 2-year treatment period =	4,072
Sum	100%		
Subsequent treatment	31% x	$988 Treatment cost =	306
CBT EXPECTED TREATMENT COST			**$27,892**

SUBSEQUENT TREATMENT COSTS

The final cost in our model concerns those returning for subsequent treatment. Research only provides return rates for CBT patients and drug patients. We assumed the average return rate for combination patients. Subsequent treatment costs differed depending on the initial treatment. For example, 28% of CBT patients will repeat CBT, 29% will seek drug treatment, and 43% will seek "any" treatment. We used the average cost of the three treatments as the "any" treatment cost. For those initially receiving drug treatment, 33% seek CBT, 29% drugs, and 38% any treatment.

CBT patient subsequent treatment time averages 4.2 weeks. Drug patients' length of subsequent treatment averages 20.3 weeks. Using these subsequent treatment times, we returned to the Figure 1 model to calculate the cost of each type of subsequent treatment. Then, we calculated the weighted-average subsequent treatment cost for a returning CBT patient and a returning Prozac patient. Because no research is available for combination treatment patients subsequently returning, we biased against CBT by assuming the same cost as CBT.

Finally, no research exists about when patients return for subsequent treatment. Because the research reports return rates and durations for patients completing an initial treatment, we assume

subsequent treatment does not begin until after the first two-year treatment ends. Thus, we ignored the possibility of drop-outs returning for subsequent treatment during the initial two-year treatment time. This also biases against CBT.

OTHER CONSIDERATIONS

To help mental health practitioners and researchers, and health care management policy-makers better understand the expected costs in Figures 2 - 4, the information was reformatted into a timeline presentation. This more graphical approach is illustrated in Figure 5.

[Figure 5 available upon request]

A final issue concerns group counseling versus individual counseling. Currently, no research addresses the relative clinical effectiveness of group and individual CBT treatment. Figures 1 - 5 are based on individual CBT treatment. We re-ran the analyses substituting group therapy sessions for individual sessions. Two differences exist. Individual CBT sessions average one hour, group sessions average two hours. Group therapy charges are only $30 per patient, while individual session charges are $100. Figure 6 presents the comparative results.

Figure 6

COMPARISON OF SOCIO-ECONOMIC COSTS

Individual treatment	**CBT**	**Prozac**	**Combination**
Treatment costs	$23,696	$30,733	$31,245
Cost difference from CBT		$7,038	$7,549
Percentage difference from CBT		30%	32%
Total expected treatment costs	$27,892	$37,017	$34,337
Cost difference from CBT		$9,125	$6,445
Percentage difference from CBT		33%	23%

Group treatment	**CBT**	**Prozac**	**Combination**
Treatment costs	$23,120	$30,733	$31,245
Cost difference from CBT		$7,613	$8,125
Percentage difference from CBT		33%	35%
Total expected treatment costs	$27,296	$36,867	$34,308
Cost difference from CBT		$9,571	$7,012
Percentage difference from CBT		35%	26%

Group vs. individual cost savings	CBT	Prozac	Combination
Treatment costs			
Cost difference (individual - group)	$576	$0	$0
Percentage difference	2%		
Total expected treatment costs			
Cost difference (individual - group)	$596	$150	$29
Percentage difference	2%	0%	0%

In the top panel of Figure 6, we first compare the socio-economic costs from Figure 1. The second comparison in this panel is the expected costs from Figures 2 - 4. The expected cost of CBT is $27,892 per patient. Surprisingly, the expected combination treatment cost is only 23% higher than CBT, while Prozac treatment is 33% greater than CBT. We also were surprised by the group CBT cost comparisons with Prozac and combination treatments (the middle and bottom panels in Figure 6). In comparing group and individual CBT, the higher cost of individual sessions combined with the shorter session length yielded no significant cost difference to the lower group rates which lasted twice as long. The expected cost difference between group and individual CBT treatments is only $596 (2%).

SUMMARY AND CONCLUSIONS

Psychological treatment for depression, given the assumptions and limitations of our model, is significantly more cost effective than either Prozac or a combination drug and counseling treatment. This conclusion is driven by five activity cost differences:

- The direct costs of counseling and medication (Figure 1),
- The direct costs of comorbidity (Figure 1),
- The indirect costs to society from lost productivity while being treated (Figure 1),
- The costs of subsequent treatments (Figures 2 - 4), and
- The differential success rates of the three treatments, especially as captured in the comparative drop-out rates and failure rates (Figures 2 - 4).

Too often historically seen in business, a great fear exists concerning the “bean counters” causing decisions to be made based primarily on cost calculations, without considering the other two critical success factors of quality and customer service. Strategic cost management evolved in our profession to provide a more balanced focus to management accounting, as captured in its customer-based success factors of quality, service, and cost.

The “cost drives the decision” fear also is extremely strong in the medical and mental health professions. Too often “health care management” has a negative connotation. Comparative cost advantages alone should not drive medical practice decisions. Here, though, the activity-based expected cost model is based on the clinical effectiveness of the three major alternatives for treating depression. By combining clinical and cost effectiveness in one model, we can provide strong evidence about the relative superiority of treatment options.

Cost does not drive our model, however. Cost results from the activities associated with depression and its treatment options. Sadly, looking directly at success and failure rates of the various treatments has not led medical and mental health practitioners to optimal treatments. Instead treatment choice appears to be driven more by simplicity. Does this sound similar to the phenomenon seen in business concerning overhead cost allocations? Activity-based costing has been developed to replace the simple direct labor-based overhead cost allocations, which have led to suboptimal management decisions. By using ABC ideas to replace the more simplistic approaches used in the past, management accountants can contribute to better health care management. In a very real sense, we have an ethical responsibility to come out of the corporate closet, and use our expertise to improve the quality of life.

GOVERNMENT PROVISION OF GOODS AND SERVICES vs CONSUMPTION EXPENDITURE: A CAUSAL RELATION

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ABSTRACT

The conventional macroeconomic literature holds that the magnitude of goods and services provided by the government is not significant in explaining consumption decisions made by consumers. This conventional specification of the consumption function has been criticized in recent studies. According to the new views, consumers, in the process of maximizing their utility, take into account the goods and services which are provided by the government. More specifically, consumption expenditures decline due to provision of goods and services by the government. This would imply that fiscal policies are not as effective as the conventional analysts assume them to be.

This study used United States data for the 1947-1997 period to empirically examine the possible causal relationship between government expenditures on goods and services and private consumption expenditures.

SHOULD THE RULES FOR INTERIM REPORTING IN HONG KONG BE CHANGED?

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ABSTRACT

The purpose of this research was to investigate the need for changes in the requirements for interim reporting in Hong Kong. In order to partly fulfill the purpose, data was gathered from company accounting officials about the need for interim financial reporting in Hong Kong. Company financial officers were selected for the study because these individuals will play a critical role in the development of interim statements guidelines. A questionnaire was developed to determine if accounting officials believe changes in interim reporting requirements are needed. Many countries already require interim reporting but the reporting details vary form country to country. At present, companies in Hong Kong report on a semi-annual basis, but these reports are not officially reviewed. Also only limited information is provided. Some have argued this situation should also change.

Company financial officers believe changes are needed related to interim statements. One major conclusion is that respondents believe interim reports should be reviewed. Most countries already require that interim financial statements must be reviewed. Other issues will need to be resolved. Changes may need to be made or Hong Kong may not remain competitive in international financial markets.