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FINANCIAL STAKE AND SUPPORT FOR EXPANDING GOVERNMENT INTERVENTION INTO CORPORATE GOVERNANCE OF NONPUBLIC ENTITIES

Paul W. Allen, Mississippi State University, Meridian
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ABSTRACT

Allen and Ng (1997) determined that the financial stake of a Certified Public Accountant (CPA) in the practice of public accounting was significantly related to her/his support for relaxing certain ethical rules which banned varied types of fee collections and some types of advertising. The relationships found suggested that CPAs with a higher financial stake favored revising ethics bans in a manner that permitted them to protect and/or raise potential revenue streams. Allen and Ng (2001), building upon the 1997 study, found that self-interest among CPAs might be adversely impacting their moral reasoning. The backdrop for these collective results was an intrusion by the Federal Trade Commission (FTC) into the self-regulatory activity of CPAs via a consent order with the American Institute of CPAs (AICPA) that changed/relaxed certain ethics bans in the AICPA professional code of conduct.

The current study was performed utilizing a different backdrop, namely the Sarbanes Oxley Act of 2002 or SOX, created by Congress and administered under the authority of the Securities and Exchange Commission (SEC). Like the FTC's consent order, the SEC's decree of SOX intruded upon the self-regulatory activity of the CPA profession by mandating certain changes aimed at improving corporate governance and the audit function. Again, the financial stake of CPAs was examined to determine whether it behaved as a significant variable relative to CPAs' support for a specific issue concerning SOX, that being an extension of SOX requirements to nonpublic entities. Findings show that CPAs with higher financial stake in the practice of public accounting favor expanding SOX's reach to nonpublic entities less than do CPAs with lower financial stake. When coupled with former studies, the current study adds credence to the notion that financial stake of CPAs serves as a significant element in CPAs' preferences toward ethical issues. Since CPAs, as professionals, are to be objective and independent in judgment, especially as auditors, a continued finding that financial stake is in play in a backdrop of changing ethics-based regulation is something to be taken seriously. In the present highly unstable economic environment, the public must be able to count on the CPA to exercise judgments in their best interest.

REFERENCES

Allen, Paul W. and Chee K. Ng (1997). Financial Stake and Support for Banning Trade Names, Commissions, Referral Fees and Contingent Fees. *Accounting Horizons*, 11, 1-6.

Allen, Paul W. and Chee K. Ng (2001). Self Interest Among CPAs May Influence Their Moral Reasoning, *Journal of Business Ethics*, 33, 29-35.

THE AGENCY COST OF FREE CASH FLOW AND DIRECTOR STOCK OPTIONS

Anwar Boumosleh, Lebanese American University

ABSTRACT

This paper examines the role of director stock options in mitigating the free cash agency problem. I find that director stock option compensation is related to the accumulation of excess cash. Specifically, firms tend to reduce dividend payout after directors accumulate sizable equity from stock option grants. Even after controlling for the level of investment opportunity the relation remain consistent. The results indicate that director stock options align interest of directors and shareholders that manifest in better monitoring of management. It also suggests that director compensation constitute a major incentive to changing corporate policies.

VALUE RELEVANCE OF POSTRETIREMENT BENEFIT OBLIGATIONS

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ABSTRACT

This paper investigates how the implicit nature of employee claims for postretirement benefits relates to firm valuation. A cross-sectional equity valuation model incorporating components of both pension and postretirement benefit (PRB) obligations is used to test hypotheses predicting reported obligations will be more value relevant when: 1) underlying implicit contracts are more likely to be honored; and 2) implicit claims are important to firms. The results extend prior accounting literature which focuses on the implications of measurement error in pension and postretirement benefit obligation metrics reported in financial statements. This implicit contract analysis demonstrates that, despite measurement error, incorporating firm-specific information related to the fundamental economic nature of postretirement benefits affects the value relevance of the obligations. The findings contribute to policy considerations regarding the appropriate nature and extent of footnote disclosures when information cannot be fully reflected by point estimates.

THE ACCRUAL ANOMALY: TESTS OF THE NAÏVE INVESTOR HYPOTHESIS USING DISCRETIONARY ACCRUALS

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ABSTRACT

I re-examine the accrual anomaly documented by Sloan (1996) and test the naïve investor explanation for this anomaly. Overall, the results are mixed. Consistent with the naïve investor hypothesis, I find that this anomaly is driven by discretionary accruals, suggesting investors fail to see through earnings management. However, I find little support for the hypothesis that the anomaly should be less pronounced in firms held by sophisticated investors who should be better equipped to see through manipulation. However, the latter result could indicate that even sophisticated investors may fixate on earnings, ignoring other relevant information contained in financial statements.

INVERSE ETFS

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ABSTRACT

Exchange Traded Funds (ETFs) are about 25 years old in the US. Inverse ETFs, also known as short ETFs or contra ETFs, are a very recent phenomenon. These inverse funds seek to move opposite to a stated sector or market. Many of the offerings can be found in the most volatile areas such as commodities and financials. Like traditional ETFs, the inverse ETFs attempt to track an index; only in their case they track the negative or a multiple of the negative of an index. We discuss the advantages and risks of these funds. Our paper investigates how well in 2008 the inverse funds have tracked the negative of movements in their indices and to what extent the fund's performance has fallen short of expectations. In fact some inverse funds have underperformed substantially. We show that these poorly performing inverse ETFs tend to be ultra or multiple funds and to be funds in relatively illiquid markets. We discuss the relative merits of alternatives to inverse ETFs.

In this paper we discuss the development of exchange traded funds (ETFs) and inverse ETFs. We list the names of the funds, their trading codes, the indices the funds target, the sponsors, and the date of inception. We pinpoint the advantages of inverse funds and their notable risks. Performance is compared to a measure of implied performance, given the mandate of the funds. We indicate which types of funds severely underperformed. Alternatives to the use of inverse funds are explored. We would like to acknowledge and thank Chris LaCasse for research assistance.

As exchange listed investment company funds, exchange traded funds (ETFs) began in the US in 1993 with the listing on the AMEX of the Standard and Poor's Depository Receipts Trust Series known as the Spider and trading as SPY (Hoffman, 2008). This ETF indexes the S&P 500. Inverse ETFs are short a sector or index of the market. These ETFs are a rather recent development, clearly reflecting the desire to profit from bearish sentiment.

The bear funds cover general markets: large caps, mid caps, and small caps. They cover these sectors: financials, oil & gas, basic materials, consumer goods, consumer services, health care, industrials, real estate, semiconductors, telecommunications, and utilities. Geographical areas outside of the US include Japan, China listed stocks in Hong Kong, emerging markets, and EAFE (Europe, Asia, Far East). The inverse funds target proprietary indices from Dow Jones, Russell, and Standard and Poor's. During the current bear market offerings exploded and one can assume there will be additional offerings in 2009. The three main sponsors are Direxionshares, Proshares, and Rydex. ProShares is the biggest player in the inverse field.

We now consider how inverse ETFs work. Inverse ETFs use swaps and futures. With swaps they promise to pay a fixed amount and will receive an amount that depends upon the performance of a stock index. When the market or sector declines on a given day, the counterparty payments increase. Typically the counterparty is a large swap bank such as Goldman Sachs, Morgan Stanley, or Merrill Lynch (Kay, 2008b). The counterparty in turns wishes to hedge out its risk by shorting

the stocks in the index. At least one inverse fund had to suspend trading when it could not find willing counterparties in the financial crisis of 2008 (Kay, 2008b). Also, the government prohibition against shorting 799 financial stocks compromised the ability of the counter parties to hedge (Kay, 2008b). Using swaps affords more flexibility for the fund than using futures, as futures require standard amounts and standard times to expiration. However, futures have an important credit risk advantage. In forming a futures contract the fund's contract is restated with the clearing corporation as the counter party. The creditworthiness of the clearing corporation is almost beyond question or at least perceptively greater than banks. In swaps the counterparty is usually a large bank and there is credit risk. Futures exchanges require mark to market accounting and maintenance of margin, whereas plain vanilla swaps do not (Brown and Smith, 1993). So clearly futures exchanges manage and reduce risk exposure (Brown and Smith, 1993). While inverse funds employ both swaps and futures, swaps predominate by a wide margin. For example, ProShares Short S&P 500 (SH) held swap positions valued at 91% and futures at 9% of its total exposure (ProShares, 2008b), a higher than average futures position.

The inverse ETFs aim to have a performance on a daily basis that is opposite to the movement of the underlying index. Subsequently to the introduction of these inverse funds, the industry developed funds, frequently called ultra funds, which multiplied the performance of the index two or even three times. Thus the ultra fund would aim to achieve double the negative performance of the index. For example ProShares Short QQQ (PSQ) attempts to have exactly the opposite performance of the Nasdaq-100 index, whereas the Ultrashort QQQ (QID) aims for twice the opposite performance for the same index.

There are certainly virtues to inverse ETFs. The funds allow investors to pursue a bearish strategy or hedging long positions without having to go short any securities. For instance an investor could short the S&P 500 by shorting the iShares S&P 500 ETF, trading as IVV. Alternatively the investor could go long an inverse fund such as the ProShares Short S&P 500 fund, trading as SH. Essentially in the first case the investor does the shorting, whereas in the second case the fund shorts. "But shorting has become increasingly cumbersome." (Luxenberg, 2008). There is an assortment of practical problems with shorting. First, the broker may not find the shares. Second, the broker has the right to terminate the short position anytime it wishes. Third, the accounting for the investor, especially for tax purposes, may become distinctly more difficult or time consuming. These aforementioned problems relate to practicalities experienced with investor shorting and not to the basics of the bearish investment strategy.

Furthermore retirement accounts disallow the holding of short positions. An inverse ETF is considered a long position, even if it economically is shorting a market or sector. Hence, inverse ETFs represent a financial innovation that overcomes a regulatory prohibition. Finally the worst performance possible for an investor going long an inverse fund is negative 100%, whereas directly shorting stocks expose the investor to unlimited risk.

While there are virtues of inverse ETFs there are certainly significant risks. ProShares, Rydex, and Direxion list "principal risks" in their fund prospectus (ProShares, 2008a; Rydex, 2009; Direxion, 2008). Some of these are general to all funds and some apply specifically to inverse funds. In summary the risks comprise losses, costs, credit issues, and tracking. We will see that correlation risk can be a very significant reality for inverse ETFs. Moreover, certain types of inverse ETFs may greatly underperform (Yates, 2007: Oberg, 2008; Oberg, 2009).

Two interrelated problems vex the double or leveraged funds when they aim to multiply the daily performance of the index. The first is "the constant leverage trap. In brief, this 'trap' refers to a magnified compounding problem." (Trainor, 2008). The second effect "is the fact that accumulated wealth from continuously compounded daily returns is lognormally and not normally distributed. This effect becomes more pronounced over an extended period . . . " (Trainor, 2008). When the inverse funds increase the bet on the daily index performance they increase tracking error and underperform on a longer term basis.

In addition to the poor tracking and severe underperformance, some funds could not retain a traditional ETF advantage during 2008. Deferment of gains is one of the advantages of investing in individual stocks and in ETFs as compared to mutual funds. "That means that investors will generally realize capital gains only when they sell ETF shares for a profit. This isn't always the case, though. In 2008, a group of smaller ETFs made capital gains distributions ranging from 12% to 86% of their assets. These were all leveraged inverse funds that aim to provide a return equal to two times the opposite of their index. Due to their complicated nature and small asset bases, these ETFs were unable to reduce their capital gains exposure in the way that more traditional stock and bond ETFs generally could." (Iachini, 2009). Another tax disadvantage of inverse ETFs relates to their holdings. Normally ETFs, as index funds, have low turnover. This means that the seller of the ETF generally will have long term gains, which are taxed at a favorable capital gains rate. Unfortunately the higher short term capital gains rate applies to the gains of inverse ETFs as they generate their gains based on daily swap positions (Kay, 2008a).

We define outperformance as the actual performance minus the implied performance, where the latter is calculated by multiplying the index performance by the targeted multiple. We expect inverse ETF performance for a year such as 2008 to be positively related to the liquidity of the securities in the index. A broad market such as the S&P 500 should result in better inverse ETF performance than a more narrow part of the market such as an industrial sector. We expect the inverse funds where the intended daily multiple is (negative) one to fare better than those funds where the daily multiple is (negative) 2. The triple inverse funds should do even worse but they are of too recent vintage for us to test.

Table 1. Inverse Fund Performance and Indices

ETF	ETF Return	Index	Index Return	Multiple	Implied Return	Out performance
DOG	30.68	DJIA	-33.84	1	33.84	-3.16
DXD	45.36	DJIA	-33.84	2	67.68	-22.32
DUG	-10.71	DJ US Oil & Gas	-35.77	2	71.54	-82.25
REW	94.45	DJ US Technology	-42.87	2	85.74	8.71
SRS	-50.08	DJ US Real Estate	-43.40	2	86.80	-136.88
FXP	-53.61	FTSE/Xinhua China 25	-47.80	2	95.60	-149.21

Source: ProShares.com, finance.yahoo.com, dowjonesindices.com.

In our study we exclude any funds that did not exist throughout 2008. We have reproduced a representative cross section of our results. The table shows rates of return in 2008 for broad market measures, industrials sectors, and one foreign fund. All are ProShares funds. The first two ETFs listed track the Dow Jones 30: DOG and DXD. The next three funds track sectors: DUG, REW, and SRS. The last sector, SRS, tracking real estate, and the FXP, tracking the FTSE/Xinhua China 25, represent the worst performing inverse funds.

The two Dow 30 funds differ in the mandated multiple. DOG attempts to produce the negative of the Dow Jones 30, while DXD attempts to produce twice the negative of the index. The double inverse fund produced a higher return, but not twice. DOG's rate of return was 30.68%, less than the ultra DXD, which achieved 45.36%. The former fell 3.16% short of the implied return and the latter fell 22.32% short of the implied return. This pattern was repeated in the whole study for all pairs representing a broad measure of the market. In each case the double inverse fund produced higher returns but underperformed in terms of achieving the doubling of the index.

When we look at industrial sectors or market niches we find considerably worse performance compared to the broad market. A few of the inverse sector funds performed quite well. Among them were REW, technology; SIJ, industrials; SSG, semiconductors; and SZK, consumer goods. Very poor performance was found in the following: DUG, oil & gas; SKF, financials; SRS, real estate; and UPW, utilities. The underlying stocks in oil & gas, financials, and real estate exhibited extremely high volatility during 2008. These markets exhibited high volatility, which depressed ultra fund performance for a relatively long period such as a year. Moreover, the funds targeting less liquid markets should find it difficult to arrange swaps on favorable terms when the counter parties face markets with high volatility and low liquidity.

We can explore certain alternative investment strategies that may be superior to the use of bear ETFs. We will confine our investigation to the use of ETFs. Here are two alternatives:

1. short ETFs instead of holding inverse ETFs
2. hold inverse ETFs instead of ultra inverse ETFs

In respect to strategy 1 we would go short the fund that tracks the index instead of going long an inverse fund. For the broad market we could short the ultra Dow 30 fund DDM which returned -61.84%. Assuming shorting would provide a comparable positive return, this strategy would provide a superior return to the ultra short fund DXD which returned 45.36%. For the oil and gas market we would short DIG, the long ultra fund for oil & gas. Its performance for 2008 was -72.32%. Assuming shorting would provide a comparable positive return, this strategy would have been far superior to holding the ultra short fund DUG which returned -10.71%. Essentially it is best to avoid the ultra short fund in a sector.

Strategy 2 aims to exploit the fact that in every case the double achieved higher returns, but far less than twice the return. Suppose we had increased our capital and invested in single inverse funds instead of the ultra inverse funds. The profit would have increased substantially, although we would have to allocate a cost to the increased use of funds. Essentially if our opportunity cost of funds is not too high, then there is a clear advantage to increasing capital to a single inverse fund instead of holding a double inverse fund. As an example, assume we placed $100,000 in the Dow 30 ultra inverse fund (DXD). At the end of the year our wealth would have increased by .4536 x

$100,000 = $45,360. Instead had we doubled up our investment in the single inverse Dow 30 (DOG), our profit becomes .3068 x $200,000 = $61,360. If we place an opportunity cost of 10% on the use of the extra $100,000, then this cost is $10,000 for a net profit of $51,360. This amount exceeds the DXD profit by a relatively modest $6,000.

In conclusion, the bear market in 2008 has seen the expanding popularity of inverse ETFs. Their returns, however, left much to be desired. For funds tracking broad market measures the returns were about as expected. For those ultra short funds the returns fell about midway between the index and double the index. In contrast the ultra sector funds frequently grossly underperformed.

REFERENCES

Brown, K and D Smith 1993. Default Risk and Innovations in the Design of Interest Rate Swaps. *Financial Management*, 22(2 Summer), 94-105.

Direxion 2008. Direxion Trust ETF Shares Prospectus (Oct 1).

Hoffman, D 2008. Once a mere curiosity, ETFs now outshine mutual funds. *Investment News*, (June 9).

Iachini, M 2009. ETFs: A Cautionary Tale. *Schwab Investing Insights* (January).

Kay, B 2008a. Morningstar's Take: Rydex Inverse 2x Russell 2000. *Morningstar*, (Nov 26). Retrieved http://quicktake.morningstar.com/etfnet/morningstaranalysis.aspx?country=usa&symbol=rrz, (Dec 2, 2008).

Kay, B 2008b. Short-Sale Restrictions and Inverse ETFs. *Morningstar*, (Sep 19). Retrieved http://news.morningstar.com/articlenet/printArticle.htm, (Oct 19, 2008).

Luxenberg, S 2008. How to Get Around Short-Sale Ban. *TheStreet.com*, (Oct 6). Retrieved http:www.thestreet.com/print/story/10440883.html, (Oct 18, 2008).

Oberg, E 2008. Why Short Sector ETFs aren't so Smart. *TheStreet.com*, (Dec 23). Retrieved http://www.thestreet.com/print/story/10454678.html, (Dec 29, 2008).

Oberg, E 2009. The Perils of the ProShares UltraShorts. *TheStreet.com*, (Jan 13). Retrieved http:www.thestreet.com/print/story/10457663.html (Jan 18, 2009).

ProShares 2008a. ProShares Trust Prospectus (Oct 1).

ProShares 2008b. ProShares Trust Semiannual Report (Nov 30).

Rydex 2009. Rydex ETF Trust Prospectus (Mar 1).

Trainor, W and E Baryla 2008. Leveraged ETFs: A Risky Double that doesn't multiply by Two. *Journal of Financial Planning*, 21(5 May), 48-55.

Yates, T 2007. Leveraged ETFs: A Value Destruction Trap? *Seeking Alpha.com*, (Apr 2). Retrieved http://seekingalpha.com/article/31195-leveraged-etfs-a-value-destruction-trap (Feb 22, 2009).

SMALL FIRM GOVERNANCE AND ANALYST FOLLOWING

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ABSTRACT

Prior research strongly indicates that small firms receive reduced security analyst coverage relative to large firms. In this study we ask whether corporate governance in small firms is related to the number of analysts who follow the firm. After controlling for a variety of firm- specific factors that could influence analysts' incentives, we find that small firms with better corporate governance (superior shareholder rights) are indeed followed by a greater number of analysts. Our findings are consistent with analysts exhibiting a preference for covering firms with reduced agency conflict and better information disclosure. Additional evidence suggests that analyst following increases with trading volume and revenue growth, but decreases with share price momentum, firm complexity, and share ownership by inside board members.

APPLYING THE FREE CASH FLOW TO EQUITY VALUATION MODEL TO COCA-COLA

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ABSTRACT

In this paper we provide a detailed example of applying the free cash flow to equity valuation model proposed in Damodaran (2006). Damodaran (2006) argues that the value of a stock is the discounted present value of the future free cash flow to equity discounted at the cost of equity. We combine the free cash flow to equity model with the super-normal growth model to determine the current value of Coca-Cola. In addition to computing free cash flow to equity, we show how to calculate the sustainable growth rate, the long term growth rate, beta, and the cost of equity.

Free Cash Flow to Equity

In this paper, we combine the concept of the super-normal growth rate model of stock valuation with the Free Cash Flow to Equity model from Damodaran (2006, pp. 491-493) (See Damodaran, Aswath. "Applied Corporate Finance," Second Edition, John Wiley& Sons, Inc., 2006). The FCFE model defines FCFE as net income minus net capital expenditures minus the change is working capital and plus net changes in the long-term debt position. Net income is taken from the income statement. Net capital expenditure equals capital expenditures minus depreciation both taken from the statement of cash flows. The change in working capital is the difference of accounts receivable plus inventory from one year to the next less the difference in accounts payable from one year to the next.

$$FCFE = NI - (CE\text{-}D) - (\Delta WC) + (NDI\text{-}DR)$$

FCFE   = Free Cash Flow to Equity
(CE-D)   = Net Capital Expenditures
(ΔWC)   = Changes in non-cash working capital accounts: accounts receivable, inventory, payables
(NDI-DR)   = new debt issues are a cash inflow while the repayment of outstanding debt is a cash outflow. The difference is the net effect of debt financing on cash flow.
NI – Net Income
CE – Capital Expenditure
D - Depreciation
ΔWC – Change in Working Capital
NDI – New Debt Issued
DR – Debt Retired

Computing Free Cash Flow to Equity for Coca-Cola for 2000 to 2007

The following table shows the computation of FCFE for Coca-Cola for the period from 2000 to 2007. Net income is taken from the income statement and depreciation is taken from the Statement of Cash Flows. Capital expenditure is the difference between purchases of Property, Plant, and Equipment and depreciation. The change is working capital for each year is calculated by taking the difference in each of the working capital accounts for each year from 1999 to 2007. The working capital accounts are accounts receivable, inventory, and accounts payable and the change in working capital is defined at the net change in accounts receivable plus inventory minus accounts payable. When net income, depreciation, capital expenditure and the change in working capital are combined we have FCFE before changes in debt. Net cash flow from debt equals new debt financing minus old debt retirement which is added to FCFE before debt to compute FCFE after debt.

Year	NI	Depr	Cap Exp	ΔWC	FCFE(BD)	NCFFD	FCFE(AD)
2000	2177	773	-678	242	2514	-1939	575
2001	3969	803	-678	-340	3754	-1039	2715
2002	3050	806	-782	-441	2633	-1340	1293
2003	4347	850	-725	414	4886	-1435	3451
2004	4847	893	-414	24	5350	168	5518
2005	4872	932	-811	49	5042	-4107	935
2006	5080	938	-1295	39	4762	-3672	1090
2007	5981	1163	-1409	551	6286	4122	10408

The Free Cash Flow to Equity for 2007 is $10,408 million. However, because Free Cash Flow to Equity for Coca-Cola over the period from 2000 to 2007 is volatile, we use the average value for the period from 2000 to 2007 of $3,248 million to estimate the future values of Free Cash Flow to Equity for the five year super-normal growth period assumed in the following table.

Year	FCFE	PV(FCFE)
2008	3684	3347
2009	4179	3449
2010	4740	3554
2011	5377	3662
2012	6099	3773

Column 1   Year
Column 2   Projected Free Cash Flow to Equity for Years 2008 to 2012, assuming a growth rate of 13.43%.
Column 3   Present value of FCFE for years 2008 to 2012 discounted at the required rate of return for equity for Coca-Cola.

The projected Free Cash Flow to Equity for year 2013 is $6,504 million. The terminal value for year 2012 is $188,509 million which is equal to $6,504 million divided by the required rate of return, 10.08% minus the anticipated growth rate of 6.63% and equals $116,625 million.

Year	FCFE	P5	PV(FCFE)
2013	$6,504	$188,509	$116,625

Thus, the current value of Coca-Cola is the sum of the five anticipate Free Cash Flow to Equity plus the present value of the value of the firm at time t=5. The discounted present value of the Free Cash Flow to Equity for the super-normal growth period for the five years from 2008 to 2012 is $ 21,502 million and the present value of the terminal value is $106,165. The total value of Coca-Cola is $129,643 million.

$17,875	PV(FCFE)
$116,625	PV(terminal value)
$134,410	Total value

When we value a stock that has a period of super-normal growth, that value of the equity is the discounted present value of the expected free cash flow to equity during the super-normal growth period plus the terminal value of the stock at the end of the super-normal growth period. In the case of the KO valuation, I assume that the super-normal growth period will last five years. This is standard in the valuation industry. Projections beyond five years are very uncertain. The value of the stock at the end of the super-normal growth period is the discounted present value of all of the future free cash flow to equity and is computed from the $P_0 = FCFE_1/(k-g)$. The difference is that the present value of a share of stock at time=t is equal to the anticipated free cash flow to equity at time=(t+1). Beginning with time=(t+1), the investment returns to the long-term growth rate with both k and g becoming constant and k being strictly greater than b. Since we are using a super-normal growth period of five years, the terminal value of the stock is $P_5 = FCFE_6/(k-g)$. The value of P_5 is five years into the future and must be discounted to the present using the cost of equity.

$$
\begin{aligned}
FCFE_6 &= FCFE_5(1+g)^1 \\
&= \$6,504 \ (1+.0663)^1 \\
&= \$6,504 \\
P_5 &= FCFE_6/(k-g) \\
&= \$6,504/(0.1208-0.0663) \\
&= \$6,504/(0.0345) \\
&= \$134,410 \\
PV(P_5) &= P_5/(1+k)^5 \\
&= \$134,410/(1+.1008)^5 \\
&= \$116,625
\end{aligned}
$$

Summary and Conclusions

In this paper, we have combined the concepts of equity valuation, super-normal growth, required rate of return on equity, and sustainable growth to determine the long-term value of Coca-Cola Corporation (KO). The value of the equity of a firm is defined as the present value of all future cash flows from the firm to the shareholders. The value of the firm is FCFE divided by the sum of the required rate of return for equity minus the growth rate of the firm's earnings. Free Cash Flow to Equity is defined as net income minus net capital expenditures minus the change in net working capital plus the net change in long-term debt financing. The required rate of return for equity is computed using the CAPM using a five-year monthly rate of return beta relative to the S&P500 index. Sustainable growth for the super-normal growth period is computed with the extended DuPont model. The long-term growth rate is assumed to be the same as the growth rate of the economy. The table in Appendix C shows the results of this analysis.

REFERENCES

Brigham, Eugene F. and Michael C. Ehrhardt. *Financial Management, Theory and Practice*, Twelfth Edition, Thomson/Southwestern, Mason, OH, 2008.

Damodaran, Aswath. "Applied Corporate Finance," Second Edition, John Wiley& Sons, Inc., 2006.

Graham, John R. and Campbell R. Harvey. "The Theory and Practice of Corporate Finance: Evidence form the Field," *Journal of Financial Economics*, 2002, pp. 187-243.

http://nobelprize.org/nobel_prizes/economics/laureates/1990/press.html

Ross, Stephen A., Randolph W. Westerfield, and Bradford D. Jordan. Fundamentals of Corporate Finance, Eighth Edition, McGraw-Hill Irwin, New York, 2008.

William R. Sharpe, Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk, *The Journal of Finance*, September 1964, pp. 425-552.

Stocks, Bonds, Bills, and Inflation, Market Results for 1926 -2006, 2007 Yearbook, Classic Edition, Morningstar, 2007.

Appendix 1
Calculating the Present Value of Free Cash Flow to Equity for Coca-Cola

FCFE0	$3,914	
RROR	9.96%	
g	5.50%	
g*	13.43%	
Years	5	
Year	FCFEt	PV(FCFEt)
0	$3,914	
1	4,440	4,037
2	5,036	4,165
3	5,712	4,296
4	6,479	4,432
5	7,349	4,572
6	7,754	
PV5	169,291	
PV(P5)		104,735
PV0		$126,165

$FCFE_0$ Free cash flow to equity at time zero.
            FCFE is used as the initial cash flow, $FCFE_0$.
$FCFE_t$ The Free Cash Flow to Equity at each year in the future.
            $FCFE_1$ to $FCFE_5$ grow at the super-normal growth rate.
            We use a super-normal growth rate of 13.43% which is the average growth rate for Coca-Cola over
            the company's life.
$FCFE_6$ The Free Cash Flow to Equity in the sixth year grows over the Free Cash Flow to Equity in year five
            by the long-term real growth rate of GDP, 3.6%. Assume that in the long-term, all large firms grow
            at the GDP growth rate.

RROR   The required rate of return is derived from the CAPM and is 10.08%.

DOES SARBANES-OXLEY ACT CHASE AWAY FOREIGN FIRMS? EVIDENCE FROM ADR TERMINATIONS

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ABSTRACT

This paper provides empirical evidence of the impact of Sarbanes-Oxley Act of 2002 (SOX) on the determinants of American Depositary Receipts (ADR) terminations between 2000 and 2004. The results suggest that the implementation of SOX increased the propensity of foreign firms to terminate their ADR programs and decreases the optimal duration of ADR programs. Pre-SOX, foreign firms with high Market-to-Book and high Sales Growth are less likely to terminate their ADR programs from U.S. capital markets explainable with a need to finance their growth opportunities. Post-SOX, high Market-to-Book and two years annualized sales growth firms are more likely to terminate existing ADRs and likely seek bonding with other large capital markets not subject to SOX regulations. The increased propensity of firms with high sales growth to delist after SOX is attributable to the common law legal tradition of the country of domicile. Consistent with the prediction of bonding hypothesis, firms form civil law countries need to bond with the stronger regulatory environment of US listing. The results further suggest that compared to OTC listed ADRs, exchange listed ADRs are more likely to terminate as result of the implementation of SOX.

INTRODUCTION

Foreign firms cross-list ADRs in U.S. to achieve greater capital access, overcome market segmentation, increased shareholder base, greater liquidity, and transparency (Doidge, Karolyi, and Stulz, 2004; Foerster and Karolyi, 1999; Miller, 1999). In addition, legal literature offers an explanation for cross-listings from the functional convergence stand point, also referred to as bonding hypothesis (Coffee, 1999, 2002; Stulz, 1999). According to bonding motivation, by cross-listing in U.S. foreign firms "rent" U.S. regulations but retain their domestic country allegiance, and therefore only functionally converge to U.S. There are two types of bonding – legal, by listing shares on exchange and fully complying with exchange and SEC rules and reputational, which implies reputational benefit from being present in the U.S. capital markets (usually OTC) but not fully legally complying with the regulations mandated by U.S. exchanges.

The implementation of Sarbanes-Oxley Act of 2002 (SOX) introduced a shift in the set of bonding benefits for foreign firms. The main purpose of SOX was to increase the corporate governance standards in U.S. by mandating stricter disclosure and monitoring of accounting practices. It considerably toughened accounting and disclosure requirements for the listing firms, raising the "rent" on U.S. laws (Ribstein, 2003). Compliance with SOX provides increased benefits by bonding with stronger regulatory environment as well as increased compliance costs (Doidge,

Karolyi and Stulz (2007) find a decline in the foreign listings in U.S. post-SOX, however they show that SOX did not erode the benefits of listing in U.S.)

Foreign firms listing shares in US capital markets are facing the increased costs associated with compliance with SOX (Li,2007; Litvak, 2007).As a result there has been an increased trend in foreign delistings from US (Pozen, 2004; Marosi and Massoud, 2006). These delistings lead to value decrease. Due to the restrictive requirements imposed by SOX, there has been a shift in foreign listing from NYSE to European exchanges – mainly London and Luxemburg (*WSJ*, Sept.17, 2004). Furthermore, Witmar (2006) shows that firms are more likely to voluntarily cross-delist after 2001, and that overall firms that cross-delist have higher proportion of trading volume in their home market, are from countries with weaker investor protection, and have lower Tobin's Q. Li (2007), Piotroski and Srinivasan (2007), and Witmer (2006) all report increased levels of foreign delistings following the adoption of SOX.

With the implementation of SOX, foreign firms benefit from cross-listing as they are subject to better corporate governance and disclosure regulations. However, SOX is associated with high compliance costs. Therefore, studying the decision to delist will provide a clarification on the question of cost benefit trade of SOX for the international issuers.

My study is the first to examine the impact of SOX on the determinants of ADR terminations based on the location of the ADR placement – exchange versus OTC markets. SOX has differential impact on the propensity of foreign firms to delist from OTC and exchange. In addition, I study the impact of SOX on duration of listing. My findings show that:

1) After SOX, foreign firms are generally more likely to terminate their ADR programs and SOX decreases the duration of optimal ADR listings
2) Pre-SOX, firms with high Market-to-Book ratio and high Sales Growth are less likely to delist from U.S. capital markets, consistent with a need a raise capital at a broader investor base to finance the potential growth.
3) Post-SOX high Market-to-Book and Sales Growth firms are more likely to delist
4) The increased propensity of firms with high Sales Growth to delist post-SOX is attributable primarily to firms from common law countries. Firms from civil law countries post-SOX still benefit from ADR listing, consistent with the bonding hypothesis.
5) Before the implementation of SOX, foreign firms cross-listed in U.S. are more likely to delist after 7 years of listing and even more so after the implementation of SOX.
6) After the implementation of SOX, foreign ADRs cross-listed on U.S. exchanges are more likely to delist compared to OTC listed ADRs.

Overall, my study suggests that SOX on its own impacts the propensity of foreign firms to terminate ADR programs and that this impact is different depending on the location of listing, the type of firm, and the duration of the existence of the ADR program.

REFERENCES

J.,Coffee (1999). The future as history: the prospects for global convergence in corporate   governance and its implications. *Northwestern University Law Review,* 93, 641-708

J.,Coffee (2002). Racing towards the top? The impact of cross-listings and stock market competition on international corporate governance. *Columbia Law Review,* 102, 1757-1831

Doidge, C., Karolyi, A. & R., Stulz (2004). Why are foreign firms listed in the U.S. worth more? *Journal of Financial Economics,* 71, 205-238

Foerster, L., & G.,Karolyi (1999). The effects of Market Segmentation and Investor Recognition on Asset prices: Evidence from Foreign stocks Listing in the U.S.. *Journal of Financ,e* 54, 981-1013

X., Li (2007). The Sarbanes-Oxley Act and Cross-Listed Foreign Private Issuers. *Working paper, University of Miami*

K.,Litvak (2007). The Effect of the Sarbanes-Oxley Act on Non-Us Companies Cross-Listed in the U.S.. *Forthcoming, Journal of Corporate Finance*

Marosi A. & N. Massoud (2006). You can enter but you cannot leave… – U.S. Securities markets and foreign firms. *Working paper, University of Alberta*

D., Miller (1999). The market Reaction to International Cross-Listing: Evidence from Depositary Receipt. *Journal of Financial Economics,* 51, 103-123

Piotroski, J., Srinivasan, S., 2007, "The Sarbanes-Oxley Act and the Flow of International Listings", Working paper, University of Chicago

R.,Pozen (2004) Can European companies escape U.S. listings?*Working paper, The Harvard John M. Olin Discussion Paper Series*

L.,Ribstein (2003) International implications of Sarbanes-Oxley: raising the rent on U.S. Law.*Journal of Corporate Law Studies*, Vol. 3, No 2

Sanger, G., & J., Peterson (1990). An empirical analysis of common stock delistings. *Journal of Financial and Quantitative Analysis*, 25(2)

R., Stulz (1999). Globalization, corporate finance and the cost of capital. *Journal of Applied Corporate Finance*, 12, 8-25

Witmer, J.L., 2006Why do Firms Cross-(de)list? An Examination of the Determinants and Effects of Cross-delisting. *Working Paper, Bank of Canada*

WHAT DOES BOOK-TO-MARKET PROXY, RISK OR INVESTOR SENTIMENT?

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ABSTRACT

Debate persists over the long run impacts of systematic risks versus investor sentiment on asset returns (Griffin & Lemmon, 2002; Vassalou and Xing, 2004). At the center of this controversy is the book-to-market ratio, which our study decomposes into three parts. This approach allows us to better investigate whether book-to-market is a proxy for risk factors or investor sentiment. Time-series regression analysis is applied to ten industries over 1934-2003. In contrast to prior research on investor over-/under-reaction, we find the component of book-to-market correlated with investor sentiment has only marginal explanatory power. The component of book-to-market correlated with systematic risks better explains the time variation of industry portfolio returns.

ISSUES EFFECTING FINANCIAL STATEMENTS AFTER CONVERGING INTERNATIONAL FINANCIAL REPORTING STANDARDS AND FINANCIAL ACCOUNTING STANDARDS BOARD PRACTICES FOR COMPANIES TRADED IN THE USA

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ABSTRACT

The most significant event in nearly a century affecting the professions of accounting and financial analysis is the planned adoption of International Financial Reporting Standards (IFRS) scheduled for full implementation on the SEC roadmap by 2014. The technical convergence between Generally Accepted Accounting Principles (GAAP) and IFRS will be cumbersome and the interpretations and analyses by financial analysts will require a great deal more research. While this paper cannot fully address all differences or give justice to their corollary issues, it can possibly render some perspective on the effects upon financial statement analysis such as comparability, consistency, and transparency.

QUALITY COST'S CONSTITUTION AND EFFECTS ON FINANCIAL DECISION IN ENTERPRISE: A RESEARCH IN CORUM'S ENTERPRISES

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ABSTRACT

In last years, with turn to quality produce, investigate that necessary of quality produce and producing quality product cost is going up in total cost. Certainly all this costs' supplement are growing up in total cost day by day, and they reach rather total at least. But, the our accounting system being in force, is not including quality costs. Quality costs' dimensions which are reach in total cost, show us, that there must be special studies on quality costs. In this case, we study on quality cost and we try to bringing some offer about accounting of quality costs in our accounting system.

In this study, different method to measure the quality costs are investigated, their deficiencies are pointed out and analyses were made through activity based costing which is used to minimize these deficiencies with other techniques. This research deals with the managerial uses of accounting information for quality improvement purposes. Quality cost data are part of the information sources adopted by accountants to help managers make better quality-related decisions.

Key Words: *Quality, Total Quality, Quality Costs, Accounting Of Quality Costs*

INTRODUCTION

The most important managerial criteria in supply chains are how to manage product, information and cash flows, and how to maximize profits by either increasing the revenue or decreasing the costs. Although the maximum benefits can be achieved if everyone follows the central planner's suggestions; unfortunately, the individual maximum profits may not be guaranteed.

Rapid and important changes in economical and technical fields happened in the second half of the 20th century carried the competition to global dimension. This process increased the importance of quality and however, brought many new problems about quality. As the importance of the quality increases, enterprises began to adopt total quality management philosophy. Part of this management type is quality cost and the measurement of quality cost. Quality cost information can be used to show the real opportunities for true activities and to obtain promotion for developing quality. For this reason, measurement of quality cost, preparing reports and make them accountable are necessary for the effectiveness of quality systems.

Measuring Quality Costs has been emphasized as an important part of quality improvement efforts since the early 1950s. A chapter on Quality Costs seems to be almost compulsory in every book pertaining to Total Quality Management, Business Process Improvement, and similar topics.

There is no doubt that measuring Quality Costs is useful in order to direct improvement efforts, the problem is that the concept is not as valid today as it used to be. While customer requirements and production systems have changed considerably during the last decades, Quality Cost measurement is advocated nearly the same way as it was forty years ago.

Companies can lose money because they fail to use significant opportunities to improve their costs of quality. Most cost accounting data are not revealed to the public and are rarely exchanged among businesses, and there is no known study testing the effect of organization size, i.e., small and medium enterprises (SMEs) and large organizations, on quality costs. The study identified important factors and measures contributing to a successful quality cost program implementation and developed an empirically based model for quality costs in the manufacturing environment.

Investigation of cost accounting, decision making, and quality analysis methods point to a weakness in the business decision-making process and more specifically with the lack of business decision-making tools that are readily available. Computer programs could be used to overcome these weaknesses and to standardize the decision-making process.

In last years, with turn to quality produce, investigate that necessary of quality produce and producing quality product cost is going up in total cost. Certainly all this costs' supplement are growing up in total cost day by day, and they reach rather total at least. But, the accounting system being in force is not including quality costs. Quality costs' dimensions which are reaching in total cost show us, that there must be special studies on quality costs. In this case, we study on quality cost and we try to bringing some offer about accounting of quality costs in our accounting system.

Business decisions sometimes appear to be made without first performing a thorough analysis of the problem and ascertaining the impact of that decision on the organization. An organization should make every effort to use available data and effective analysis techniques when making business decisions. We contribute to the research on the quality cost sharing contacts in several dimensions. First, we expand the definition and modeling of quality on a decentralized supply chain to include product failures resulting from design related imperfections. Secondly, we investigate a larger set of external quality cost sharing contracts than what has been studied in the previous literature. We also discuss how to prepare the right contracts in order to avoid the inefficiency of asymmetrical information. Thirdly, we investigate the profitability under the market competition, quality improvement and the external quality cost sharing contract.

QUALİTY UNDERSTANDİNG SETTLE IN TO MANAGEMENT

Total quality management can qualify that became a united whole of two process's. These are;

1. Quality management
2. Quality of management

Finally of the mature of management techniques, quality of management has increased. End of mature of quality techniques, reached to Quality Management increased.
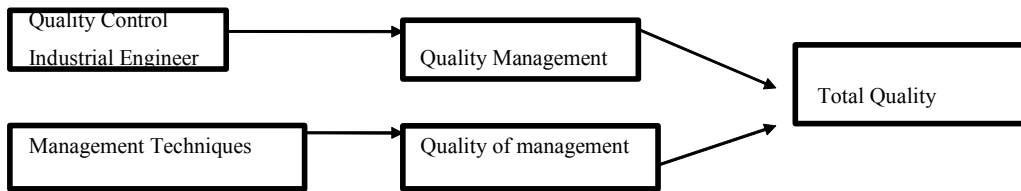
Figure 1: Total Quality = To Become a Whole of Two Approach (Renault, 1991:301.)

During expound of Quality of Management, Classical and Total Quality Management approaches are comparing and constituting a "Quality Strategy" (Efil, 1996:53).

From Tailor to Total Quality
There are several research have been completed for increasing to productivity in the factories. These researches include F. Tailor's working principles. He accepted to founder of Industrial Engineering. He explored his basis of organization and management understanding in his book "Principles Of Scientific Management" publised in 1911 (Stora, 1986:21).

Deming's Quality Approach
There was three step on Tailor's controlling system named "Control". Its steps are "Planning-Do- See = Control. Deming, has added fourth step to this process and described for real controlling. He added "Make a Move" for real control. (Efil:54-55).

Deming Circle
Planning (P)
Do (Apply) (A)
Control (C)
Make a Move (M)
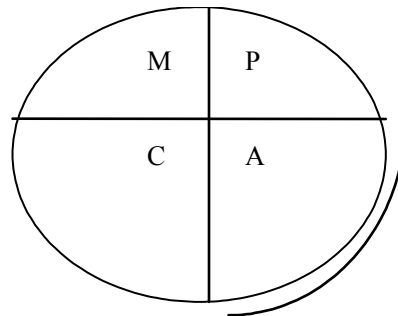
Figure 2: Deming's Circle

Juran's Quality Approach
We can summarize to Juran's "Total Apply" opinions like this; (Yenersoy, 1993:17.)
Quality must be a project began from management.
Quality education must given began from top management under bottom.
Quality must interest in all the function of the firm.
Quality project must apply with all to getter.
Annual quality developing plans must do and these project must apply step by step.

There must be two main process during the application; 1- Identification 2- Finding a way . Quality projects reach to success.

Total Quality Control and A.V. Feigenbaum

He published his book "Total Quality Control" in 1961 and he explained his opinions in this book. Dr. Feigenbaum has described TQM in this book "This is an effective system as producing product and service in most economical level. But it also keeps the quality grooving, keeps the quality, makes the quality better and it regards the customer satisfaction."

Ishikawa and Quality Circle

Ishıkawa; completed opinion of Juran, Deming and Feigenbaum about quality management, in to Japanese opinion. His pinion's basis is, answering the all needs of the customer. And he used "The Fish Bones Diagrams" for solving the problems.

COMPARISON TO CLASSICAL MANAGEMENT UNDERSTANDING WITH TQM

Aim of classical management approach is making a standard and producing according to this standard and taking it under control. TQM accept any standard and its aim is grooving and being better continuously. It is being in conflict with classical management approach in every topic. In classical management understanding, quality and cost is in contradiction. Because producing over the standard quality is need more cost. In the figure 3, minimum cost is becoming in optimum quality (becoming in standard mistake percent). In classical management, decreasing the mistake needs more cost. May be it is impossible to reach to zero mistake. (Peker, 1993:50-51.)
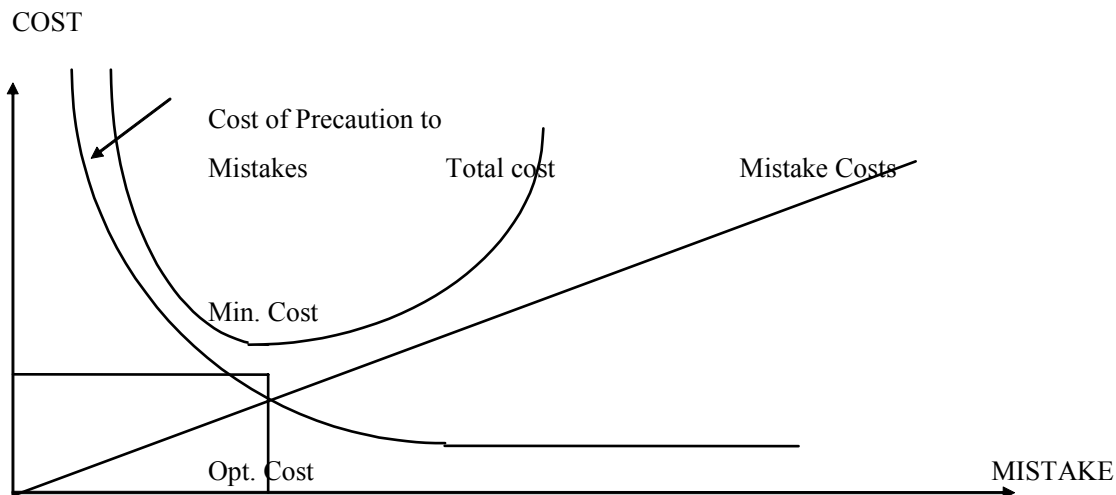

Figure 3: Quality-Cost Relation in Classical Management

In figure 4 there are two mistakes. First one "Cost of Precaution to Mistakes" is increasing extreme levels because of management understanding. For decreasing this cost, have to give up from

"Inspection". And must approximate with cost of precaution to mistake. Second mistake is on "Mistake Costs". Measurable costs are less than immeasurable costs. In "Quality Iceberg" figure is showing the immeasurable costs. This cost will show itself with loosing the selling and customer (Efil, 1997:61).

Measurable
Quality
Costs
(Measurable by the time)

Junk
2. Quality Product
Promotion
Loosing Product
Entering the Quality Control

Immeasurable
Quality
Costs
(Feeling the effects in the future)

Loosing the Customer
Loosing the Market
Loosing the Image
Loosing the Truth
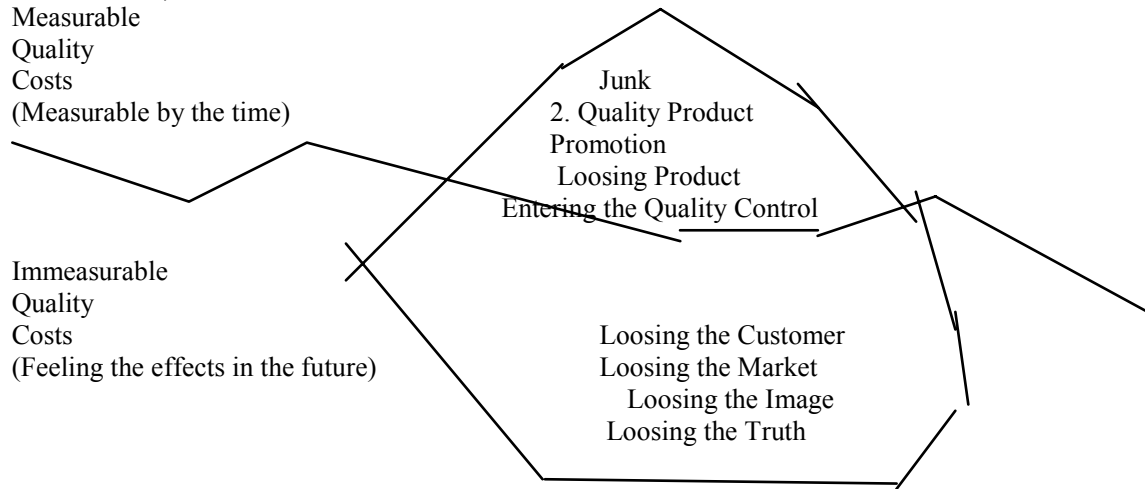
Figure 4: Quality Iceberg

For minimum cost must apply the management understand to based on auto control system and apply precaution quality control systems. Consequently, it will reach to high quality and zero mistake (Efil, 1997:62).

Cost   Total Cost

Minimum
Cost   Immeasurable Cost of Mistakes

                                                          Measurable Cost of Mistakes

                                                          Precaution to Mistakes

Zero Mistake   MİSTAKE

Figure 5: Quality- Cost Relation

Quality is meaning that, all of the feature of a product or service which is cover to a need. Quality control is meaning that, is including supply to quality cover, research and developing, market research, product, sale and after sale service and all like these standards (Doğan, 1991:5). Summarize, quality control understanding is combining with TQM. TQM is meaning; it is an effectivel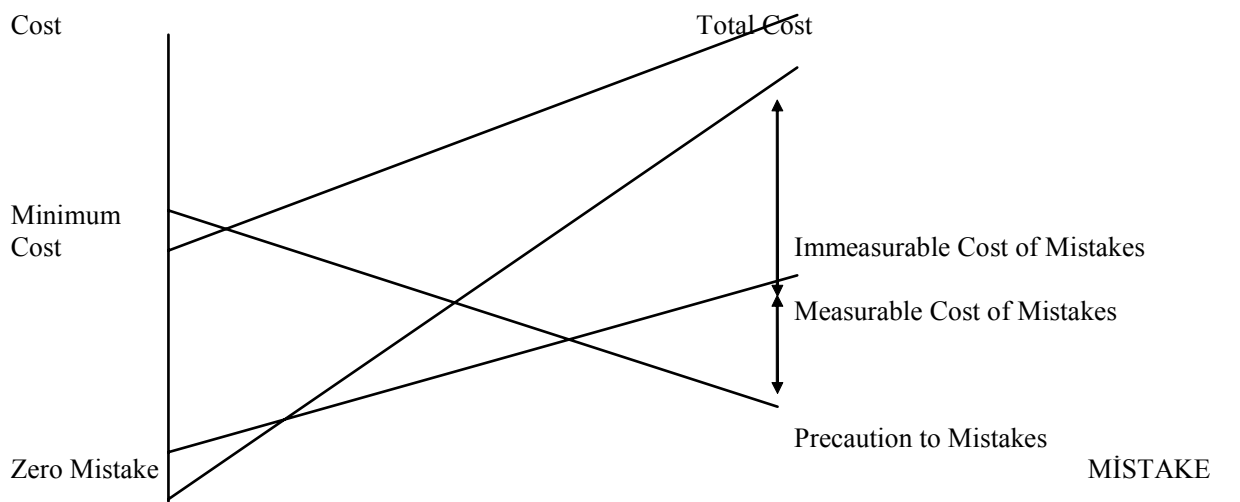y system, which is, creating, living and developing the quality in the entire department for making the success to customer needs in most economical level (Kobu, 1993:12).

In TQM, all the workers must attend the TQM process (Yükçü ve Doğanöz, 1994:64.) Documentation department must prepare quality developing activity in a systematic system. At least enterprise must establish quality system. There are two important points for establishing the quality system. First, decade to the area of responsibility about quality. Determine to working and organization about on quality. Second is, working on documentation. Documentation is including, quality hand book, operation process and support documentations (Bozkurt, 1993:33).

If the quality control systems costs has determine and control with different tools by management, it can be useful about decreasing the producing cost of product or service. In classical approach, enterprises are just calculating the measurable costs. High quality is bringing more costs together. According to this, for minimum cost, have to produce in optimum quality. But in TQM, enterprises have to take in to consideration to immeasurable costs. And they will determine a new quality level (Yükçü ve Doğanöz, 1996:67-342). If quality costs observe in carefully and use in cost accounting system, it will decrease to total costs.

IDENTIFICATION AND REPORTING THE QUALITY COSTS

Quality cost is an extensive financial measurement of quality suitable. Quality costs can calculate a department of enterprise or all departments. For Juran, quality costs can identified in four level.

*   Precaution Costs, cost of process of precaution workings.
*   Evaluation Costs, cost of measuring the level of quality.
*   Internal Failure Costs cost of correction to faulty outputs.
*   External Failure Costs. Cost of faulty outputs which are distributing to customers.

An enterprise can report the quality costs in different ways. The management have to take into consideration to quality topics. According to this, it is taking in to priority place for management. (Lammert ve Ehrsam, 1988:36). Reports which ones prepared on quality costs analyze have to includes clear and able understand with all the personnel. These reports and analyze must encouraging to personnel about developing the quality (Doyle, 1994:153). Quality reports and analyze must complete with non financial parameters. These non financial parameters can includes like this ; (Shank ve Govindarajan, 1993:222).

Measurement about Dealer
- Frequencies of faulty product by every dealer.
- Frequencies of sending for every dealer.

Measurement about Product Design
- Number of pieces in producing process
- Ratio of pieces in producing process.

Measurement about Producing Process;
- Ratio of productivity,
- Quality productivity
- Churn of the producing,
- Recycling,
- Machine breaking out of program,
- Frequencies of deviation in producing and sending,
- Number of personnel,

Measurement about Marketing;
- Frequencies of customer complain,
- Level of customer satisfaction,
- Guarantee orders,
- Frequencies and number of return of product.

Measurement of non financial is, supplying the feedback to managent in TQM. But TQ costs reporting expose a general photo of enterprise (Üstün, 1996:352.).

Reports which are preparing in TQM;
- Technical, statistical and non financial parametric reports,
- Financial reports about quality costs,

QUALITY COST'S CONSTITUTION AND EFFECTS ON FINANCIAL DECISION IN ENTERPRISE: A RESEARCH IN ÇORUM'S ENTERPRISES

Invention
Aim of the research is; to investigate of Çorum entrepreneurs' how they are looking to the quality cost. Are they using quality cost on their financial decisions?

Hypotheses
Here is the supposition of the research;
- The knowledge's are reflecting truths which are given by entrepreneurships.
- We suppose that the entrepreneurs have understood the questionnaire correctly and exactly.

And here are the hypotheses of the research;
> $H°$ = *Enterprises in Çorum are aware of the quality costs*
> $H¹$ = *Enterprises in Çorum are using cost accounting*
> $H²$ = *Enterprises in Çorum are planning and controlling about cost*
> $H³$ = *Enterprises in Çorum are using quality cost for their financial decisions.*

Method and Extension

Generally, the study is including two divisions. First division is including theoretical knowledge, second is including application. We put all the Çorum SME's owner or partner to extension of the investigation. We made questionnaire for picking up to datum. Questionnaires practiced by survey takers to face to face and evaluated one by one. We benefited from SPSS 11.0 program for evaluating the results.

We took the SMEs in Çorum. There are 368 enterprises all over the Çorum. (http:// www. kosgeb.gov.tr/ veritabani/default.aspx). We have reach 180 enterprise in this context. We try to reach all the enterprise, but backwards enterprises didn't full the questionnaire. So that we reach the 49% of all the enterprises. We have got these finding after our questionnaire which are explaining in the tables. Here is the knowledge about the SNEs, which are joining our questionnaire in table 1.

Table 1: Knowledge About the SMEs		
Areas Which Are Tested	Number of the joining questionnaire	Ratio%
A. Statute in Law		.
Join stock company	--	--
Anonym Corporation	48	26,66
Limited Corporate	90	50,00
Personal Firm	31	17,22
Other	11	6,11
TOTAL	180	100
B. Sector of the SME		.
Food	49	27
Textile	20	11
Paper Industry	7	4
Rock-Soil Industry	63	35
Machine	27	15
Other	14	8
TOTAL	180	100
C. Who is the manager of SME		.
Owner	64	35,4
One of the Partner	75	41,5
Professional Manager	41	23,1
TOTAL	180	100
D. Education level of the manager		.
Elementary School	8	4,6
Secondary School	6	3,1
High School	30	16,9
Vocational High School	8	4,6
Faculty	128	70,8
TOPLAM	180	100

In table 1, we can see the statue of the Çorum SME. Generally they become to organize in capital corporate. %50 of the SMEs are organized on limited corporate, %27 of the SMEs are organized on anonym corporate. Çorum SMEs are working in three sectors generally. These are rock-soil industry (%35), food industry (%27) and machine industry (%15). These SMEs are

managing by their owner (%35,4) or one of by their partner (%41,5) especially. These managers are graduate from university especially (if we add the vocational high school, it is becoming %75.4).

Table 2: Looking for accounting and cost accounting in Çorum SNEs		
Areas Which Are Tested	Number of the joining questionnaire	Ratio%
A. Do you hold the accounting in your enterprise		.
Definitely Yes	27	15
Yes	108	60
Partially	36	20
No	6	3,3
Definitely No	3	1,7
TOTAL	180	100
B. Who is the responsibility about on accounting system		.
Owner	47	26,1
One of the Partner	113	63,7
Accounting Department	16	9,4
Professional Manager	3	1,7
Other	--	--
TOTAL	180	100
C. In which department do you charge on an independent personnel		.
Revenue of the cheque-written certificate	14	7,8
Warehouse	39	21,5
Cash Register	87	48,5
Front Accounting	40	22,2
TOTAL	180	100
D. Is there a cost accounting in your SME?		.
Definitely Yes	--	--
Yes	2	1,1
Partially	10	5,5
No	168	93,4
Definitely No	--	--
TOTAL	180	100
E. Do you constitute any standard for making comparison in your SME?		.
Definitely Yes	104	57,8
Yes	69	38,3
Partially	--	--
No	2	1,1
Definitely No	5	2,7
TOTAL	180	100
F. Who is supervising the standards		.
One of the partner	81	45
Internal auditing personnel	3	1,7
Accounting department	10	5,8
Manager of the SME	80	44,2
Other	6	3,3
TOTAL	180	100
G. Which areas did you develop standards on?		.
Purchasing	42	23,3
Selling	110	61,1
Managing	25	13,8

Producing	3	1,7
Accounting	--	--
TOTAL	180	100
H. Do you take external help from any one/where about accounting		**.**
Chartered Accountant	10	5,5
Professional Accounting Firm	--	--
Certified Public Accountant	109	60,5
Public Accountant	61	34
TOTAL	120	100

In table 2, we can understand that, Çorum SMEs holding on their accountings in their firm. But they are keeping on their accounting just about for front accounting or for their owner. Their formal accountants are at the outside (They are professional accountants). In Çorum SMEs, enterprise owner is also financial responsible in the same time. Because, total of owner and one of the partner is equal to %89, 8.

In Çorum SME, % 48 of enterprises are charging personnel for cash register. %22 of firms are charging personnel for front accounting and % 21 of enterprises are keeping a personnel for warehouse. As far as we can see, one personnel can do different task in the same time. They are not charging a personnel stand alone.

In Çorum enterprises, firms don't keeping cost accounting especially. They have got knowledge about cost, or they have got knowledge about accounting methods of costs. But they are not keeping on cost accounting especially.

By the time, our fist hypothesis "Enterprises in Çorum are aware of the quality costs" is requiring qualification partly. They know about cost, but they don't know so much about quality costs. Our second hypothesis "H[1]= Enterprises in Çorum are using cost accounting" is incorrect. Because, they are not holding on cost accounting especially in Çorum SMEs.

General of the enterprises are developing some standards for making comparison (%96). These standards are supervising by owners or one of the partners (%45). In this question, %42,2 of Çorum enterprises' managers are supervising the standards. If we remember Table1, in Çorum SMEs, especially owner or one of the partner is manager of the firm. So that, in supervising the standard, owner of the firm is supervising the standard especially (%99, 2). But these managers don't know so many knowledge about cost accounting. These standards are increasing the enterprises perform. Firstly Çorum enterprises are taking on external assistance from Certified Public Accountant (%60), secondly from Public Accountant (%34). We can say, Çorum SMEs are keeping on their accounting outside of the firm (External assistance). They are holding on just front accounting in the firm for the owner.

In our 3rd and 4th hypothesis;

"H[2]= Enterprises in Çorum are planning and controlling about cost", Çorum enterprises developing some standards and they are supervising these standards. So that they are planning about standards. If we can say the budget "it is compliment of the standards", they are using these standards for controlling and planning their works.

"H³= Enterprises in Çorum are using quality cost for their financial decisions.", Çorum enterprises don't have got largely knowledge about quality cost. Because of that, they can't use the quality cost for their financial decisions.

SUMMARIZE AND SUGGESTIONS

In TQ applications, every one speaks about personnel. But for achievement of application, top managers have to include in to application. And they must believe and work effectively in the application. They have to be leadership for all the workers. If the firms give more importance to quality, they are becoming more priority place in hard competition. In other way, the enterprises must produce the product or service, in most suitable cost. For minimum cost (not optimum cost), they must obey the TQM orders. Firms can calculate the measurable costs. It is easy. But they must calculate immeasurable cost also. Because, in the long term, immeasurable costs will return to the firm as a measurable cost (with loosing the customer, paying more service for after sale etc.).

We offer to Çorum SMEs these suggestion;
- Çorum SMES must learn about "Cost Accounting"
- They have learn about "Quality Cost Accounting". They have to learn about TQM. They have to use TQM orders in their enterprises.
- For learning cost accounting, they can make cooperation with university. They can employ the graduate students in their firms.
- They have to use cost accounting system in their enterprises.

REFERENCES

BAŞ, İ. Melih (1992), "Kalite Ekonomisi",*Standart Dergisi*, Yıl:31, Sayı:370. BOZKURT, Rıfat (1993), "ISO 9000 ve Belgelendirme", Kalite Özel Sayısı, *Verimlilik Dergisi*.

DOĞAN, Üzeyme (1991) **Kalite Yönetimi ve Kontrolü**, İstiklal Matbaası, İzmir.

DOYLE, David (1994), **Cost Control-a Strategic Guide**, Kogan Page Limited, London.

EFİL, İsmail (1997), **Toplam Kalite Yönetimi ve Toplam Kaliteye Ulaşmada Önemli Bir Araç: ISO 9000 Kalite Güvencesi Sistemi**, Bursa: Uludağ Ü. Güçlendirme Vakfı Yayınları.

ERSOY, Ayten (1996), "Çağdaş Maliyet Sistemlerinin Maliyet Muhasebesinde Meydana Getirdiği Değişiklikler", *Yaklaşım Dergisi*, Yıl:4, Sayı:41, ss.93-100.

ERSOY, Ayten (1996), **Tekdüzen Maliyet Sisteminin Çağdaş Gelişmeler ve Amaçlar Açısından Değerlendirilmesi,** Ankara.

KOBU, Bülent (1987) **Endüstriyel Kalite Kontrolü,** İstanbul Üniv. Yayınları, İstanbul.

LAMMERT, Thomas B; Robert **Ehrsam** (1988), "The Human Element: The Real Callange in Modernizing Cost Systems", *Management Accounting*, New York.

PEKER, Ömer (1993), "TKY ve TS ISO 9000 Standartları." *Verimlilik Dergisi*, Kalite Özel Sayısı, ss.50-51.

SHANK, J.K; Vijay GOVINDARAJAN (1993), **Strategic Cost Management-The New Tool For Competitive Advantage**, The Free Press, New York.

STORA, G. Jean M. (1986), **Toplam Kalite Yönetimi**, Paris.

ŞİMŞEK, M.Şerif (1997), **Yönetim Organizasyon**, Damla Matbaası, Konya.

ÜSTÜN, Rıfat (1996), **Maliyet Muhasebesi**, Gözden Geçirilmiş 5. Baskı, Bilim Teknik Yayınevi, İstanbul.

YENERSOY, Gönül (1993), "Toplam Kalite Yönetimi." *TÜSSİDE*, 14-16 Mayıs 1993. s.17.

YÜKÇÜ, Süleyman (1993), **Maliyet Muhasebesi(Yönetim Açısından)**, Anadolu Matbaacılık, İzmir.

YÜKÇÜ, Süleyman (1994), Leyla DOĞANÖZ; "Kalite Maliyetlerinin Muhasebe Sistemi İçindeki Yeri", *Standard Dergisi,* Sayı: ...., Kasım.

WEAK-FORM MARKET INEFFICIENCY AND FRAUDULENT FINANCIAL REPORTING

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ABSTRACT

The purpose of this study is to determine if the security prices of firms that are revealed to have engaged in fraudulent financial reporting (FFR) are weak-form inefficient. Incentives of institutional investors to incur information processing costs that can reveal biases (including fraud) in reported accounting information provide a rationale for hypothesizing weak-form inefficiency for FFR firms.

Results support the hypotheses that security prices of firms accused of FFR are weak-form inefficient both before and after the public announcement of fraud. Additionally, results suggest the frequency of weak-form inefficiency for fraud firms is significantly greater than that of nonfraud firms.

Since results suggest that FFR firms systematically fail the weak-form of market efficiency before the public revelation of fraud, both investors and auditors can use the FFR-weak-form market inefficiency tests to improve trading and auditing.

FRAUD IN STATE GOVERNMENT:
A CASE STUDY

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ABSTRACT

All types of organizations-public, private, for profit, not-for-profit, governmental-are potential targets for fraud. Fraud is generally classified as either fraudulent financial reporting or defalcation. Fraudulent financial reporting results when the financial statements and associated disclosures contain materially false amounts and/or misleading information. Many frauds of this type show up in the popular press because of the size and impact on investors, e.g. Enron. Defalcation occurs when management, employees or others in an organization misappropriate assets such as cash. For many reasons, fewer cases of defalcation make the popular press headlines.

The purpose of this research is to present the results of a fraud case perpetrated against the State of Georgia. The presentation will show the individual(s) involved, how the fraud was developed and executed, the missing internal controls, the way the fraud was discovered, recommendations for improvements in the financial reporting procedures and controls, and the results of the legal process.

The primary tools to minimize the occurrence of fraud or to detect the fraud if occurring are hiring practices that result in the employment of honest human resources, the implementation and maintenance of a strong system of internal control , an internal audit function, and the retention of an external audit firm. Educators should use actual frauds like the one presented here to educate future accountants and auditors and prepare them to be alert to the possibility of defalcation and the various ways frauds are perpetrated.

USING VECTOR AUTO-REGRESSIVE AND VECTOR ERROR CORRECTION MODELS

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Regressions between levels of variables may have high covariation because of persistence in the base levels rather than persistence in the changes. Taking the first differences of the variables may eliminate, or at least reduce the dependence. Gross national income from period to period is an integrated process but the changes in GNI are not. The first differences of GNI are an independent, identically, distributed process which are only weakly dependent. An alternative transformation to differencing is to take the natural logarithm of the ratio of the two levels to generate the percentage rate of change.

Ordinary Least Squares regression requires that the time series being evaluated be stationary. Otherwise, OLS is no longer efficient, the standard errors are understated, and the OLS estimates are biased and inconsistent. Stationarity requires that the time series values for the mean, the standard deviation, and the covariance, be invariate over time.

$E(\mu_{t-1}) = E(\mu_t)$, i. e., μ_t is constant over time,

$E(\sigma_{t-1}) = E(\sigma_t)$, i. e., σ_t is constant over time, and

$E(cov_{t-1}) = E(cov_t)$, i. e. the covariance of (x_t, x_{t-1}) is constant over time.

That is, the mean for any time (t-1) will equal the mean for any time (t), the standard deviation for any time (t-1) will equal the standard deviation for any time (t), and the covariance for any time (t-1) will equal the covariance for any time (t).

One method to test for stationarity is the unit root test of Dickey-Fuller (1979). To test for a unit root of a stochastic time series, the value of the random variable is regressed against lagged values of the same random variable.

$$x_t = \alpha + \beta x_{t-1} + \varepsilon_t \qquad [1]$$

where, x_t is the value of the time series at time (t), α is the intercept term, β is the regression coefficient, x_{t-1} is the lagged value of the time series, and ε_t is the residual. If β is equal to one, then, the process generating the time series is non-stationary. The null hypothesis is that H_0: $\beta=1$ and the alternative hypothesis is that β is less than one, H_1: $\beta<1$. The actual test is run after subtracting x_{t-1} from both sides of Equation [1]. The regression is

$$\Delta x_t = \alpha^* + \beta^* x_{t-1} + \varepsilon^*_t \qquad [2]$$

where the (*) indicates the parameters from the regression adjusted by subtracting x_{t-1}. The null hypothesis is that H_0: $\beta^*=0$ and the alternative hypothesis is that β is less than zero, H_1: $\beta^*<0$.

This model is only valid for AR(1) processes. If the underlying return generating process exhibits serial correlation of order greater than one, Augmented Dickey-Fuller tests must be used. Higher order terms are included in the regression.

$$\Delta x_t = \alpha^* + \beta^* x_{t-1} + \beta_1 \Delta x_{t-1}\ \beta_2 \Delta x_{t-2} + \dots + \beta_n \Delta x_{t-n} + \varepsilon^*_t \qquad [3]$$

where, the additional terms are derived from the higher order AR() terms. The null hypothesis is that H_0: $\beta^*=0$ and the alternative hypothesis is that β^* is less than one, H_1: $\beta^*<0$.

Co-integrated processes are processes that are random in the short-term but tend to move together in the long-term. Wooldridge (2003) shows that six month Treasury bill rates and three month Treasury bill rates are both unit root processes that are independent in the short-term but do not drift too far apart in the long-term. If either rate moves too far from equilibrium, too high (too low), investors move money from the low (high) rate alternative to the high (low) rate alternative. This process will raise (lower) the rate in the low (high) rate market.

Engle and Granger (1987) show that if, a linear combination of non-stationary time series are stationary, the time series are co-integrated. If two time series are integrated of order one, the time series resulting from adding the two is integrated of order one. If $y_t \sim I(1)$ and $x_t \sim I(1)$, then $(y_t + x_t) \sim I(1)$. However, if a beta, β, exits such that $(y_t - \beta x_t) \sim I(0)$, then, y_t and x_t are said to be co-integrated. This co-integration equation reflects the long-term relationship between y_t and x_t.

If we can construct a linear combination of y_t and x_t such that the difference of the two variables has a unit root, the two variables are co-integrated and the regression coefficient is the co-integration parameter.

$$y_t = \beta_0 + \beta_1 x_t + u_t$$

If u_t is I(0), then y_t and x_t are co-integrated. The model for testing for co-integration with a time trend includes a time variable.

$$y_t = \beta_0 + \beta_2(t) + \beta_1 x_t + u_t$$

If u_t is I(0), then y_t and x_t are co-integrated.

Error correction models are a class of models that provide insight into the long-term relationship between variables in terms of the "impact propensity, long run propensity, and lag distribution for Δy as a distributed lag in Δx."[1] The independent variable is x and the dependent variable is y. An error correction term is computed based on the past values of both x and y. If past values of y are over-estimated, future values will be moved back toward equilibrium by the error correction factor. In the example of the six month and three month Treasury bill rates, the error correction term is computed from the difference of the one period lagged, six month rate and the two period lagged, three month rate. Thus, if either of the two rates drift too far from the long-term rate, the error correction term shows the tendency of the rates to return to the long-term rate.

If two variables are cointegrated, we can construct a variable, s_t, which is I(0). The resulting error correction equation is

$$\Delta x_t = \alpha^* + \beta^* x_{t-1} + \gamma^* y_t + \gamma^* y_{t-1} + \delta^* s_{t-1} + \varepsilon^*_t \qquad [2]$$

where, s_{t-1}, equals $(y_{t-1} - \beta^* x_{t-1})$ and is the error correction term.

We can analyze the short-term effects of the relationship between the two variables. If the value of $\delta < 0$, the error correction term serves to return the process to the long-run value. That s, if $(y_{t-1} > \beta^* x_{t-1})$, the process was above the long-run value in the pervious period and has been moved back by the error correction process.

Generating the Simulated Data

We use and Excel spreadsheet and the Excel function Rand() to generate four times series of numbers of 1000 observations each. Rand() generates a number from zero to one. In order to create a random number series with a value of zero, the random number generated by Rand() is

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[1] Wooldridge (2003), page 621.

transformed into a zero value function by subtracting 0.50 from each Rand() value, Rand(*)=(Rand()-0.50). This random number generated by Rand() and transformed to a zero value number is used to create and Index value with the following equation:

Index(i,t) = Index(i,t-1) (1+Rand()(Return)+Trend)

Index(i,t) = Index(i,t-1) = 1.0000(1+0.0025+.005)

Index (i,t) is the index value for each period "t" that is calculated from the previous Index (i,t) value plus a randomly generated value with an expected value of zero plus the trend. The trend is a long-run trend added to the random index change in order to create both a random component of the Index plus a trend. Four Indexes are generated using this function with 1001 observations each.

Returns are calculated from each Index (i,t) using the natural logarithm function. Return(i,t) is the natural logarithm of the ratio of Index(i,t) divided by Index (i,t-1).

Return(i,t) = (Index(i,t)) / (Index (i,t-1))

Each return series has 1000 observations that have both a random component and a trend component. The random component is the value of Rand(*)(Return) that is added to each previous Index (i,t) plus a trend.

Analysis of the Generated Returns

The four return series are analyzed using EViews. Figures 1 to 4 show the probability distribution for each of the four return series. Figure 1 shows the sample statistics and analysis for Return(1,t) which has a mean value of 0.04981 with a standard deviation of 0.005108. The skewness statistic equals -0.022106 and the kurtosis statistic equals 2.8937. The Jarque-Bera statistic to measure normality is 0.55 indicating that the probability distribution for the Return(1,t) is normal. All four Return(I,t) series have expected values and standard deviations that are similar and Jarque-Bera statistics that do not reject normality. That is, all four Return(i,t) series exhibit the probability distribution statistics that one would expect given the method used to construct each of the four Return(I,t) series.

Table 1 contains the correlation matrix for the four Return(i,t) series. The four Return(i,t) series are constructed with a short-run random component and a long-run trend component. The correlation coefficients for the four Return(i,t) series reflect the short-run relationship between each of the Return(i,t) series. Thus, we see in table one that the correlation coefficients for the four Return(i,t) series are all low and none are statistically significant.

Generally, the first step in analyzing the relationships between time series is to determine if each Return(i,t) series has a unit root. The Augmented Dickey-Fuller test for a unit root is performed for each of the four Return(i,t) series and the empirical results are detailed in Table 2. For the Return(1,t) series, the ADF test statistic is -14.63 and the critical value for the ADF test statistic is -3.97 which indicates that Return(1,t) series does not have a unit root. None of the four lagged Return(1,t) series variable regression coefficients are statistically significant but the intercept term is and equals 0.5014. The adjusted R^2 for the regression is 0.4798 and the F-statistic is 152. These results reject the presence of a unit root. That is, Return(1,t) series does not have a unit root which is consistent with the method of creating the Return(i,t) series. The results for all four Return(i,t) series are similar to the results for Return(1,t) series.

The next step in the time-series analysis process is to determine if the four Return(i,t) series Granger cause each other. Table 3 contains the Granger causality statistics for the four Return(i,t)

series. There are six combinations of Granger causality between the four Return(i,t) series such as a determination if Return(1,t) series Granger causes Return(2,t) series and vice versa. In all six cases, Granger causality is rejected as would be expected since the short-run component for each of the four Return(i,t) series are randomly generated.

Once one has determined that the four Return(i,t) series are normally distributed with no statistically significant correlation, that the four Return(i,t) series are stationary with no unit roots, and that the four Return(i,t) series do not Granger cause each other, the four Return(i,t) series are tested for cointegration. Cointegration tests to determine if the four Return(i,t) series have a long-run relationship that is not random as is the short-run relationship. Given that the four Return(i,t) series are constructed with an equal trend, we expect that the four Return(i,t) series with exhibit cointegration which means that the four Return(i,t) series have a long-run relationship, i. e. the four Return(i,t) series follow the same long-run trend. Table 4 contains the results of the Johansen cointegration test. The test results indicate that there are four cointegrating equations at the 1% level of statistically significance.

The Vector Error Correction Model[2]

Vector AutoRegression technique cannot be applied to the four Return(i,t) series because the four Return(i,t) series are cointegrated, that is the four Return(i,t) series follow the same long-run trend but the short-run trend is random. Figure 2 shows the eight options for running the VEC model. The VEC model can be run with no trend is the VEC but with an intercept included or not. The VEC model can be run with a trend in the VEC and an intercept and/or a trend in the cointegration equation. The vector error correction equation uses lagged deviations for each of the four Return(i,t) series as independent variables for each of the four Return(i,t) series in a regression that also included lagged deviation variables for each of the four Return(i,t) series. Each set of VEC estimated regression includes the cointegrating equation plus a series of deviations from past changes in the four Return(i,t) series with up to two lags, unless more lags are specified. In addition, each VEC analysis can include a trend in the VEC and/or an intercept or a trend for each VEC. Table 5 contains the empirical results for the VEC model with a trend in the data and both an intercept and a trend in the error correction model. Given that the four Return(i,t) series are constructed with an intercept and a trend, the model with a trend in the data and a VEC model with both an intercept and a trend would seem to be most appropriate. This empirical results for this model show that the error correction equation is statistically significant but the trend is not statistically significant because the regression model accounts for the long-run trend effect across the four Return(i,t) series. Although the error correction variables are mostly statistically significant, the signs are random. This supports the hypothesis that cointegration is statistically significant but random in effect. The other three models provide similar results.

Summary and Conclusions

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[2] The Vector AutoRegression results are not statistically significant, adjusted R2 for each of the four Return(i,t) series being low and not statistically significant and only two of the thirty-two regression coefficients being statistically significant. The empirical results are consistent with the method of constructing the four Return(i,t) series such that the short-run relationship is random.

In this paper, we generated four Return(i,t) series using Excel that have both a random component and a trend component for each of the four Return(i,t) series. We applied a series of tests for time series analysis – correlation, normality, unit root, Granger causality, cointegration, and vector error correction regressions.

The empirical results are consistent with the method used to create the four Return(i,t) series. Each of the four Return(i,t) series has the same expected value and standard deviation, a low correlation with the other Return(i,t) series, which reflects the short-run random effect built into the four Return(i,t) series, no unit roots, and cointegration between the four Return(i,t) series, which Return(i,t) series is consistent with the method of constructing the four with a trend. Since the four Return(i,t) series are cointegrated, by construction, a vector error correction model is appropriate for analysis of the long-run relationship between each of the four Return(i,t) series. The coinetegration equation is statistically significant as are the error correction variables, but in a random fashion with some of the regression coefficients being positive and some of the regression coefficients being negative.

In this paper, we show how to use the time series paradigm currently being used to conduct time series analysis currently. The basis of this analysis is the work in time series analysis done by noble laureate Engle and Granger. We demonstrate each of the steps designed to allow the researcher to determine if a relationship exists between two time series and to define the nature of that relationship.

Table 1 Summary Statistics Time Series Analysis Simulation				
	ROR01	ROR02	ROR03	ROR04
Mean	0.004981	0.00498	0.004978	0.004979
Median	0.005108	0.004945	0.005077	0.004838
Maximum	$0	0.01857	0.019341	0.021767
Minimum	0	0	-0.010689	-0.010496
Std. Dev.	0	0	0.004985	0.004988
Skewness	0	0	-0.117149	-0.018847
Kurtosis	3	3	3.031226	2.991698
Jarque-Bera	1	2.229754	2.327943	0.062075
Probability	0.758757	0.327956	0.312244	0.969439
Observations	1000	1000	1000	1000

Table 2 Correlation Matrix Time Series Analysis Simulation			
ROR01	ROR02	ROR03	ROR04
1	-0.040348	0.001985	0.034449
-0.040348	1	0.023084	-0.039111
0.001985	0.023084	1	0.03108
0.034449	-0.039111	0.03108	1

The bibliography and tables are available from Dr. McGowan at cbmcgowan@yahoo.com.

REFORMING PROFESSIONAL ETHICS THROUGH THE USE OF ACADEMIC HONOR CODES

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ABSTRACT

The issue of accounting ethics is much like the presence of an elephant in the living room—a problem that never seems to go away. Most research focuses on behavioral issues that predict or explain unethical behavior. However, little is written about the actions that are likely to reinforce or improve ethical behavior. This paper builds upon the Enterprise Risk Management- Integrated Framework, for building a structure within which ethical behavior must exist and be nourished. The paper then uses another framework, student-driven honor code systems, as a mechanism for socializing prospective accountants into behaviors that develop and enhance ethical behavior. The culture of the honor code, preferably inculcated midway through a student's undergraduate career, provides a basis for understanding ethical behavior as being more than compliance with a code of behavioral conduct. Ethical behavior then becomes internalized as part of a global responsibility to all relying upon financial data, much along the lines of Kohlberg progression of moral cognitive development. What results not only is a more ethically-sensitive future accountant, but also a mechanism through which prospective employers may screen job applicants based upon the ethical culture from which the applicant comes.

THE IMPACT OF THE SARBANES-OXLEY ACT ON PRIVATE DEBT CONTRACTING

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ABSTRACT

This paper examines whether aspects of debt contracting have been affected by the provisions of the Sarbanes-Oxley Act of 2002 that increased monitoring of management's activities by independent directors, auditors and regulators. Using a sample of 4,610 new private debt contracts, I document a significant decrease in the cost of debt after the implementation of Sarbanes-Oxley, after controlling for other influencing factors. I also show that small firms and growth firms experienced a relatively greater reduction in the cost of debt with the increase in monitoring, consistent with greater levels of information asymmetry or uncertainty associated with these firms and thus with Sarbanes-Oxley having a greater impact on them. Overall, the findings in this study suggest that increased monitoring induced by Sarbanes-Oxley had a significant impact on contracts in the private debt market.

THE LEHMAN BROTHER'S BANKRUPTCY:
A TEST OF MARKET EFFICIENCY

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ABSTRACT

This study tests the market efficiency theory by examining the effect of the Lehman Brothers bankruptcy on several brokerage firms, as well as the overall market. It would suggest that these brokerage firms would occur negative stock prices following the announcement of the Lehman Bankruptcy. For this study, I analyzed 15 firms' stock price's risk adjusted rate of return before and after September 15, 2008, some with larger assets in Lehman than others. Results show stock prices dropping approximately 24 days prior to the announcement and continuing to drop for several weeks. This supports the semi-strong market theory; which suggest that the market anticipated the collapse of Lehman.

INTRODUCTION

When Lehman Brothers collapsed, they had about $60 billion in toxic bad debts, and had assets of $639 billion against debts of $613 billion; making it the largest investment bank to collapse since the 1990's. With a bankruptcy of this capacity, you would expect the stock market to take some sort of hit. This study examines the market's reaction to this event by analyzing the risk adjusted return of selected brokerage firms' stock prices around the event date of September 15, 2008.

LITERATURE REVIEW

The concern for Lehman Brothers started as early as March, with the collapse of Bear Sterns. The recent collapse of large investment banks are the result of the sub prime mortgage crisis, which actually started about a year ago. That's when the first signs that the soaring U.S. housing market was weakening. Interest rates began to increase, the economy weakened, which turned indebted homeowners into financial turmoil sparking foreclosures and rapid drops in house prices.

Lehman Brothers were considered one of Wall Street's biggest dealers in fixed-interest trading and were heavily invested in securities linked to the sub-prime mortgage market. They lost $14 billion in the past 18 months after being forced to take huge write downs on the value of those investments; which ultimately lead them to file for bankruptcy.

When Lehman collapsed, it sent a rippling affect across the globe, exposing how interconnected international markets have become. One of the largest companies affected were AIG, who backed a majority of credit default swaps by Lehman Brothers. So, when Lehman collapsed, AIG and many other banks, firms and individuals felt the pain.

September 15, 2008 has been proclaimed Wall Street's worst day in seven years. The Dow Jones Industrial average lost more than 500 points, more than 4%, which is the steepest fall since the day after the September 11th attacks.

DATA AND METHODOLOGY

This study includes 15 investment firms, about 9 with a significant stake in Lehman, and 6 others. The purpose of this study was to see how fast and how much of an impact the bankruptcy of one of the largest investment firms affected the stock prices of those 15 firms. I analyzed the 15 firm's prices, and the corresponding Standard & Poor's 500 Index (S&P 500) from 180 days before the event date of September 15, 2008 and 30 days after.

To test the affect of the bankruptcy on the 15 firms stock prices, and to test the semi-strong market efficiency theory; I used the following hypothesis.

$H1_0$: *The risk adjusted return of the stock price of the sample of investment firms is not significantly affected by this type of information on the event date.*
$H1_1$: *The risk adjusted return of the stock price of the sample of investment firms is significantly negatively affected by this type of information on the event date.*
$H2_0$: *The risk adjusted return of the stock price of the sample of the investment firms is not significantly affected by this type of information around the event date as defined by the event period.*
$H2_1$: *The risk adjusted return of the stock price of the sample of investment firms is significantly negatively affected around the event date as defined by the event period*

This study uses the standard risk adjusted event study methodology to test the stock market's response to the Lehman Brothers Bankruptcy on September 15, 2008. Using Yahoo Finance, I found the historical stock prices for the 15 firms and the S&P 500 index during the event study period. The event study period involved 180 days prior to the event and 30 days after, using day 0 as the event date. Using those prices, I calculated the holding period returns for the companies (R) and the corresponding S&P 500 index ($R_{m)\,for}$ each day using the formula:

Current daily stock return= (current day close price – previous day close price)
                                          previous day close price
Current daily index return= (S&P current close- S&P previous close)
                                          S&P previous close

A regression analysis was then performed using the actual daily return of each company (dependent variable) and the corresponding S&P500 index daily return (independent variable) over the pre-event period day -180 to -31 period prior to the event period of day –30 to day +30) to obtain the alpha (the intercept) and the beta (standardized coefficient). Table 1 shows alphas and betas for each firm.

	Table 1 Alpha's and Beta's of Sample Firms	
Firm	Alpha	Beta
FSLBX	-14.585314	.052077
FSVBX	-4.318129	.007655
SHRAX	-23.70695	.097596
YCVTX	-4.098515	.013841
EKNGX	1.190605	.002005
IMEIX	-4.68900	.037221
SLCVX	-6.69768	.015906
QVGIX	2.196207	.009090
PSEFX	-4.72506	.010639
VFINX	169.7731	-.039547
BX	-5.853405	.0174029
C	-9.375442	.0232386
JPM	27.97969	.0098513
BRO	17.96228	.0010140
GS	-60.47504	.0176874

In order to get the normal expected returns, the risk-adjusted method was used. The expected return for each stock, for each day of the event period from -30 to +30, was calculated as:

$E(R) = \text{alpha} + \text{Beta} \times (R_m)$, where R_m is the return on the market (S&P 500 index).

Then, the Excess return (ER) was calculated as the Actual Return (R) minus the Expected Return E(R). Average Excess Returns (AER) were calculated (for each day from -30 to +30) by averaging the excess returns for all the firms for given day: AER = Sum of Excess Return for given day / n, where n = number of firms in sample (15). Also, daily cumulative average excess returns or Cars was calculated by adding the AERs for each day from -30 to +30. The graph of CAER was plotted for the event period day -30 to day +30.

## QUANTITATIVE TESTS AND RESULTS

Did the market react to the Lehman Brother Bankruptcy? Was the information surrounding the event significant? If the information surrounding the event suggests new, significant information

then we would expect the average excess daily returns as shown in Exhibit 1 to be significantly different from 0 and differ from the cumulative average excess returns. If a significant risk adjusted difference is observed, then this information did significantly impact the firm's stock price, as hypothesized. To statistically test for a difference in the risk adjusted daily average excess returns and the cumulative average excess daily returns (day -30 to +30), a paired t-test was used. The result of these tests supports the alternative hypotheses $H1_1$ and $H2_1$ and concludes that the risk adjusted return of the stock price of the sample firms is indeed significantly negatively affected around and on the event date.

How efficient was the market to this information? Does it support the weak, semi-strong or strong form of market efficiency theory? To test for this, I used the CAER (cumulative average excess return) to see if it was significantly different from zero and analyzed the graph between time and CAER. As shown in exhibit 2, there is evidence that the adjusted rate of return on stock prices began to decline approximately 24 days before the event date. This confirms the semi-strong market efficiency theory, and proves the market anticipated the bankruptcy with the negative decline in stock prices.

EXHIBIT 1: Time vs. Average Expected Return
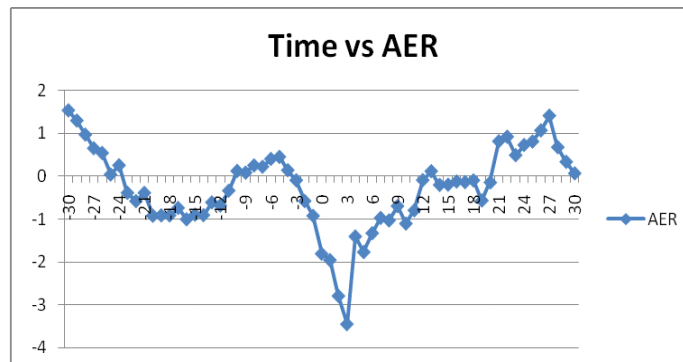
EXHIBIT 2: Time vs. Cumulative Average Excess Returns
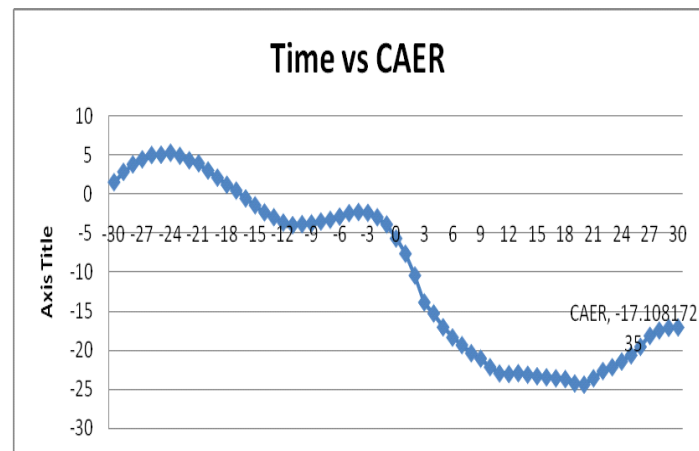
CONCLUSIONS

This study examined the effect of the Lehman Brothers bankruptcy on stock prices' risk adjusted rate of return for 15 selected brokerage firms, with 9 having larger assets in Lehman. Statistical tests proved that the bankruptcy had indeed a negative impact on the risk adjusted rate of return for the 15 firms stock prices. Results show stock returns beginning to drop about 24 days or so prior to the event, which could also be exaggerated due to the economic crisis around that time. However, the stock prices did significantly negatively fall around the event date, which supports the semi-strong market efficiency theory. Months after the event, there has continued to be a ripple effect in the market. Besides Lehman Brothers, other investment firms have been affected; among several others, Merrill Lynch was taken over by Bank of America and AIG had to be bailed out by the fed. The impact of the credit crisis is still being felt months later.

REFERENCES

Dolan, Karen. "Lehman, AIG, Merrill: Which Funds Are Most Affected?" Morningstar, inc. 15. September 2008. 17 October 2008. http://news.morningstar.com/articlenet/article.aspx?id=253125#hide

Fama, E. F. (1970). "Efficient Capital Markets: A Review of Theory and Empirical Work." *Journal of Finance*, Volume 25 (May), 383-417. http://stuwww.uvt.nl/fat/files/library/Fama,%20Eugene%20F.%20-%20Efficient%20Capital%20Markets,%20A%20Review%20of%20Theory%20and%20Empirical%20Work%20(1970).pdf

Graeme Wearden, David Teather, and Jill Treanor. "Banking crisis: Lehman Brothers files for bankruptcy protection." Guardian.co.uk. 15 September 2008. 5 December 2008. http://www.guardian.co.uk/business/2008/sep/15/lehmanbrothers.creditcrunch

Henderson, Marshall D. and Bacon, Frank. "Stock Market Efficiency and the 9/11 Terrorist Attack."

http://www.finance.yahoo.com

http://www.investopedia.com

Madura, Jeff. <u>Financial Markets and Institutions</u>.8th Edition. 2008

Maich, Steve. "Edge of Disaster: Fall of Lehman Brothers and Merrill Lynch". <u>Macleans</u>. 2008. 5 December 2008.
    http://vnweb.hwwilsonweb.com.proxy.longwood.edu/hww/results/getResults.jhtml?_DARGS=/hww/results
    /results_common.jhtml.20#record_2

Ross, Westerfield, and Jaffe. <u>Corporate Finance</u>. 8th Edition. 2008

THE ETHICAL IMPLICATIONS OF FAIR VALUE ACCOUNTING PURSUANT TO THE DECEMBER 28, 2008 SEC STUDY ON MARK-TO-MARKET ACCOUNTING

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ABSTRACT

Fair value accounting has received a significant amount of blame as the cause of the current financial crisis. Fair value accounting does not cause illiquidity or volatility in financial markets. Banks, rather than accounting, caused the existing crisis, ultimately through bad lending decisions and inadequate risk management. Accounting rules are designed to reveal the full extent of losses and future risks. This transparency would enable banks, regulators, and government to identify specific sources of the crisis and take steps toward recovery and future prevention. Shooting the accounting messenger is not a solution to the problem. Perhaps confusion exists regarding the conflict between transparency and financial stability. Transparency is an objective of accounting standards. Long term stability is best achieved by restoring investor confidence in financial markets and assets. Transparent accounting standards and sound auditing provide support for that confidence. Evidence from the recently released SEC study on mark-to-market accounting supports fair value as the most relevant measurement attribute for financial instruments. Suspension of fair value in favor of alternative cost-based measures would mask losses in value, mislead investors, and diminish investor confidence. From an ethical perspective, accounting has a responsibility to see that financial statements are fairly presented---reflect economic reality. Accountants and auditors are ethical detectives holding businesses to ethical standards of honesty, completeness, neutrality, and representational faithfulness. Accountants and auditors are bound by their professional code of conduct to protect the public interest. So grounded, accounting is the provider of one of the essential checks and balances on commerce.

THE 2008 BEIJING SUMMER OLYMPICS EFFECT ON IT'S SPONSOR COMPANIES' STOCK PRICES

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ABSTRACT

Sponsorship of an event involves the constant commitment of sponsor corporations who may feel the need to evaluate the returns on their investment. To evaluate these investments, an event study has been completed to analyze the effects of these commitments on the sponsors stocks. This actual event study tests these effects on sponsors of the 2008 Beijing Summer Olympics which took place this past summer. The results indicate a favorable impact leading up to event with little movement of returns days thereafter the announcement date, thus supporting the semi-strong form of market efficiency.