Sarbanes-Oxley and the Need for Audit Committee Independence: Contrary Evidence in the Textile Industry

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We investigate whether the appearance of audit committee independence, e.g., outside membership as defined by the Sarbanes-Oxley Act of 2002 (SOA), is necessarily related to effective independence, e.g., the audit committee's support of an auditor's going-concern opinion (Carcello and Neal 2003; 2000). The SOA makes the agency theory assumption, generally supported by current research, that seemingly non-independent audit committee members reduce the reliability of the financial reporting. Yet, prior to the SOA, other rulings permitted non-independent audit committee members to serve when it was "in the best interests of the firm," and even the Carcello and Neal (2000) findings point to a possible industry or company-size effect in measuring audit committee effectiveness. It seems that manager-owner committee members of smaller companies may also do the right thing. Therefore, we reconsider this independence question for the textile industry, one severely stressed and possibly affected by firm size. We observe seventy-four companies during the years 2000 and 2001 when the SOA was not in effect to determine whether their non-dependent-appearing audit committees also would effectively act independent, without the constraint of the SOA. We do find at least two SOA non-independent characteristics of audit committees, what would be two apparent SOA violations in 2011, contrarily associated with two actions of effective independence. We do not find any one of the ten recommended SOA requirements correlated with these actions of effective independence. These findings suggest that measures of effective independence may not necessarily be related to appearance, and may instead depend on company or industry size, adding to the growing body of research that argues for restricting government financial regulation (Gao et al., 2009; Hayes, 2009; Hart, 2009; Dodd–Frank Wall Street Reform and Consumer Protection Act, 2010; Orol, 2011).

If a corporate audit committee of the board of directors, the one that chooses the company's auditors, appears non-independent, e.g. has manager-owners as committee members, will this necessarily negatively affect the company's long-term interests? By 2002, the United States Congress. Shaken by the accounting fraud by the Enron, WorldCom, Adelphia, Tyco, and their complicit board and audit committee members, created provisions of the Sarbanes-Oxley Act (SOA) requiring audit committees to be independent of management. By 2009 many regulations of the SOA were reduced, but companies still tried to avoid the SOA regulations by remaining "small," by maintaining the SOA $75million market cap (Gao et al., 2009). Orol (2011) reports that companies still try to stay within the size limit of the SOA, but now to avoid the financial regulations of the Dodd-Frank Act (2010).

The SOA idea of committee independence had been evolving since the establishment of the 1934 Securities and Exchange Act (Klein, 2003). In July 1, 1978, the New York Stock Exchange (NYSE) became the first exchange required listed domestic corporations to have an audit committee "comprised solely of directors independent from management" (Klein, 2003, 345). In response to SOA, the NYSE added two additional rules: audit committee members must (1) not have a material relationship with the listed company (NYSE, 2002a and b) and (2) disclose membership on more than three audit committees of public companies (NYSE, 2003a).

Yet, DeZoort et al., (2002, 66) asks whether new requirements for audit committees "result in largely cosmetic changes or whether they appear to be associated with increased audit committee effectiveness," and others questioned whether these were related to actions that "would follow in the best interests of the corporation (Klein, 2002, citing NYSE Rule 303.01[B][3][b] and NASDAQ Rule 4310[c][26][B][ii]). Recently, lawmakers and the SEC have granted an exemption to smaller firms for one of the critical

components of SOA, audits of internal controls (Orol, 2011; Wild and Anderson, 2010), while still relying upon other provisions, such as audit committee independence, to encourage appropriate behavior and maintain investor confidence (Hart 2009). Gao et al., (2009) find that corporate governance in the exempt firms appears to exceed that of nonexempt firms, which supports the proposition that, in certain cases, management-owners may in fact do the right thing when government regulations are not in place.

To date, the research on the SOA's appearance-of-independence guide seems to correlate with stronger financial controls. Committees following the SOA are less associated (1) with fraudulent activities (Abbott et al., 2004; Abbott et al., 2000; Beasley et al., 2000) and (2) with financial restatements (Abbott et al., 2004), but more associated with stressed corporations who receive going-concern opinions (Carcello and Neal, 2000 and 2003), a measure of committee effectiveness. Chien et al., (2010) find independence related to reduced frequency of control problems and reduced financial stress for the largest government funded public hospitals. Yet et al., (2006) find hospital audit committee independence may not limit control issues for those hospitals without government funding. Therefore, some of these results may be funding- or industry-related, as suggested by Carcello and Neal (2000, 460). Carcello and Neal (2000) and Beasley et al., (2000) consider only a few industries.

This paper re-examines this question: in what way does appearance-of-independence characteristic relate to effective independence? We define effective independence in two ways: (1) does audit committee support the auditor's going-concern opinion, as asked by Carcello and Neal, (2000; 2003) and Abbott et al. (2003) and (2) does audit committee support filing for bankruptcy protection (Morgenson, 2006). [The latter is more indicative of the broader, corporate board effectiveness (McKeown et al., 1991; Mutchler et al.,1997)]. We examine seventy-four stressed textile-related companies from 2000-2001 that were under the BRC audit committee rules prior to the passage of SOA.

We find these companies increased their level of SOA appearance characteristics from 2000 to 2001, but these increases do not correlate with corresponding measures of effective independence. Instead, violations of what would have been SOA rules seem more agreeable to the effective measures of independence. These results add some evidence, if only partial, to whether the appearance of SOA characteristics implies effective independence and whether such can be measured by the issuance of a modified audit opinion for a stressed company (Carcello and Neal, 2000, 2003; Audit Committee Institute, 2004). This research may explain why Geiger and Rama (2003) and Abbott et al., (2003) do not find strong support for the appearance characteristics. Finally, these results also confirm the suspicion that the effectiveness of appearance characteristics is industry-dependent (Carcello and Neal, 2000, 460).

The remainder of this paper is organized as follows. Section II states the research hypothesis and reviews the generally accepted audit committee characteristics of independence. Section III describes the application of these characteristics to the particularly financially stressed textile industry. Section IV describes the research design and Section V its results. Finally, in Section VI, the conclusions are drawn.

AUDIT COMMITTEE INDEPENDENCE VARIABLES: MEASURES OF APPEARANCE AND OF EFFECTIVENESS

Hypothesis

Readers of the SOA would hypothesize that appearance characteristics should predict accepted measures of effective independence for audit committees, consistent with previous research:

H: Effective measures of audit committee independence increase with appearance measures.

We begin with accepted definitions. To be considered "appearing" independent prior to SOA, an audit committee member should not: 1) be a current employee or have been one within the previous three years, 2) be an officer of another company where one of this company's management serves on the committee member's home company compensation committee (interlocking directorships), 3) have a business relationship, such as the company's banker, accountant, or consultant, directly receiving non-director fees, and 4) be an immediate relative of an executive officer of the company or an affiliate.

The SOA expands these requirements (see Table 1). First, SOA, requires that all audit committee members appear to be independent (by financial and other relationships), and eliminates case-by-case exemptions except in rare circumstances. Second, the waiting period for former employees or interlocking directorships has expanded to five years. Third, new requirements include disclosure for audit committee members serving on more than three audit committees of public companies or having a material relationship with a listed company. Also, the compensation committee is required to be independent.

Table 1: Blue Ribbon, Sarbanes-Oxley, and Inferred Rules

Requirement	Blue Ribbon Committee NYSE (1999) and SEC	Sarbanes-Oxley AICPA (2002) NYSE (2003a) ; SEC (2003)	Inferred Rues
Member cannot be:			
*Employee or relative w/in past 5 years	(BRC) Yes (SEC) 3 yr.++	Yes, 5 yr. Compensation > $100,000	Yes, expanded
*Non-directorship fees	(BRC)Yes+/ (SEC) No (disclose)	Yes (no exceptions)	~
*Partner, S/H or Exe. Officer of business making or receiving significant payments from the audit committee company w/in past 5 years.	(BRC) Yes/ (SEC) Yes, current yr.++	Yes, current yr., material**	~
*Is or immediate family is an internal or external auditor within recent 5 years	Not addressed	Yes	Yes, expanded
*Interlocking directorships	Yes	Yes, 5 yr.	~
*Simultaneously serves on more than 3 audit committees of public companies	Not addressed	Yes^^	~
*Has a material relationship with the listed company	Not addressed	Yes^^	Yes, expanded
*On more than 3 other boards of public companies	Not addressed	Not addressed	Yes
*On the Company's compensation committee	Not addressed	Not addressed	Yes
*On more than 3 compensation committees of public companies	Not addressed	Not addressed	Yes
Minimum of 3 members, all financially literate	Yes	Yes	~
Compensation committee composed entirely of independent directors.	Not addressed	Yes	Yes, expanded above
+ exemptions on case-by-case basis ++ only if Board determines that relationship does not interfere w/ director's exercise of independent judgment (should be in exceptional and unusual circumstances). **both indirect and direct; only current period ^ general case-by-case exemptions are now not appropriate nor consistent with policies of the Sarbanes-Oxley Act. ^^Board must determine and disclose determinations. ~Component of dependent variable.			

TEN PREDICTOR VARIABLES OF SOA

First Six Variables

Therefore, from Table 1, we can summarize these first five violations of SOA characteristics as predictors for the firm that would fail effective independence:

AC Members = 1 if number of audit committee members is less than 3 (SOA not satisfied), else 0.

Interlock = 1 if company member has an interlocking directorship (SOA not satisfied), else 0.

Other AC = 1 if any audit committee member is on 4 or more audit committees of public companies (SOA not satisfied), else 0.

AffilPay = 1 if an audit committee member receives non-director fee compensation (SOA not satisfied), else 0.

AffilProf = 1 if an audit committee member is employed by professional advisors receiving payment from the company (SOA not satisfied), else 0.

"AC Members" captures the BRC requirement that listed companies maintain audit committees with at least three independent directors. The BRC recommended this minimum number in recognition that the size of the committee is a balancing act: it should be small enough to allow all members to participate actively, yet large enough to represent a balance of views (Turner 1999, 40). The BRC also noted that independence is often impaired when there are interlocking directorships (Interlock) where an audit committee member is an officer of another company whose compensation committee includes executives from the audit committee company (NYSE, 1999). Vicknair et al., (1993) found that the highest potential violation for 100 NYSE firms was interlocking directorships.

"Other AC" measures the member's service to other audit committees. The possibility of overextended directors can reduce independence (DiCarlo, 2002). With too many directorships, an audit committee member may devote less time to their duties and become too reliant on corporate management (Raghunandan et al., 2001; Gulati and Westphal, 1999). Prior to SOA, the number of public directorships for each board member was disclosed in annual proxy statements. In 2003, NYSE required an additional disclosure of any audit committee member serving on more than three audit committees of public companies (NYSE (Amendment) 2003).

Affiliated audit committee members, those receiving consulting fees (AffilPay) or having a business relationship with the company (AffilProf), can result in conflicts of interest (Felo, 2001). SOA provides that in order to maintain independence, an audit committee member may not receive, "other than for service on the board, any consulting, advisory, or other compensatory fee from the issuer" (AICPA 2002, Section 301). Also, payments for, "services to law firms, accounting firms, consulting firms, investment banks or financial advisory firms in which audit committee members are partners, members, executive officers or hold similar position" are indirect fees that should disqualify the audit committee member (SEC-Final Rule, 2003, II (A) 2).

We define one more variable: SOA VAR = 1, if there is at least one violation in a Sarbanes-Oxley Act appearance characteristic, and SOA VAR = 0 if not.

Next Four Predictor Variables

In addition to these six SOA variables, the effect of four other variables on audit committee independence can be inferred from Table 1:

OtherDir = 1 if any audit committee member is on 4 or more boards of public companies, else 0.

OtherCC = 1 if any audit committee member is on 4 or more compensation committees of public companies, else 0.

CompCom = 1 if any audit committee member is also on the company compensation committee, else 0.

AffilOther = 1 if any audit committee member has an affiliated relationship not identified by SOA, else 0.

"Other AC," "OtherDir," and "OtherCC," consider the over extension of directors, which can reduce independence (DiCarlo, 2002) and increase reliance on corporate management (Raghunandan et al., 2001; Gulati and Westphal, 1999). Dual membership on the audit committee and the compensation committee (CompCom) presents conflicts in evaluating the company's financial statements and management performance (Klein 2003; Vafeas, 2001). Although recent post-SOA corporate governance rules (SEC 2003b) address this variable by requiring a company's compensation committee composition to include only independent directors, they do not require separate independent committees as recommended by Klein (2003). The last inferred variable, AffilOther, encompasses additional affiliated relationships that are not covered by current SEC and NYSE rules, e.g., retired auditing partner-in-charge of current auditor or retired CEO of current servicing bank whose retirement occurred over three years before becoming a

member of the audit committee. These ten predictor variables define independence by appearance in much more detail than previous research (e.g. Abbott et al., 2003).

Two Other Characteristics That May Reduce the Effective Independence

To the above ten, we add two measures of audit committee independence from prior research: (1) the committee's percentage of board stock ownership and stock options (AC Stock% of Board) from Carcello and Neal (2003) and Klein (2002) and (2) the company size defined by total assets (Total Assets, from Abbott et al., 2003; Carcello and Neal, 2000; Geiger and Rama, 2003; Palmrose, 1997). Large stock ownership may reduce the incentive to file for bankruptcy. Also, smaller companies are more likely to be financially stressed and have less leverage when filing for bankruptcy. So we define:

AC Stock% of Board = Audit Committee directors' stock ownership to total directors and executive management.

Total Assets = natural log of total assets (in thousands).

The adjusted Altman's measure, Z-Score (Abbot et al., 2004), suggests a level of financial stress based on the company's ability to meet cash demands, which could lead to filing for bankruptcy under Chapter 11 (Chapter 11 Only) or whether a going-concern opinion, GCO (Carcello and Neal, 2000), is appropriate. So we define: Z-Score = 1 if the Altman's Z-Score is less than 2.6 (technically bankrupt), else 0.

TWO DEPENDENT VARIABLES

First Dependent Variable

We can also define two measures of effective independence. The first is the going-concern audit opinion (GCO) given by the auditor (Carcello and Neal, 2000 and 2003; Abbott et al., 2003). For financially stressed companies this opinion must be supported and then facilitated by the audit committee. Although other measures of auditor (and hence audit committee) effectiveness have been suggested such as the quality of earnings or discretionary accruals, the use of the GCO is most widely known (e.g., Carcello and Neal, 2000 and 2003; Abbott et al., 2004).] So we can define: GCO = 1 if the company has a going-concern opinion for the year under review, else 0.

Going-Concern Evaluation and Disclosure in Stressed Industries

Currently, if there is substantial doubt that a company will continue as a going-concern for a reasonable period of time, AICPA Statements on Auditing Standards 59 (SAS 59) requires that the auditor must disclose this concern in the audit report (Robertson and Louwers, 2002). SAS 59 does not require auditors to perform more procedures than they normally perform or expect the auditors to predict future events. Also, it does not provide any new auditing procedures to discern going-concern problems. Although not required, many auditors use business failure prediction models, such as Edward Altman's discriminant Z-Score bankruptcy predictor (Altman, 1968), to evaluate going-concern issues (Robertson and Louwers, 2002; Abbott, 1994).

Another issue is whether or not the opinion actually anticipates or unnecessarily exacerbates the filing. Palmrose (1997) found that of the 655 public companies declaring bankruptcy between 1972 and 1992, less than twenty percent involved auditor litigation. Geiger and Raghunandan, (2002) found that the lower threat of litigation in the past decade was associated with the issuance of fewer going-concern opinions to stressed companies.

Therefore, it is surprisingly likely that a company could be given a going-concern opinion after filing for bankruptcy rather than before. As explained by Mutchler et al., (1997), this could occur since some clients have contrary and mitigating information correctly not taken into account for the going-concern

opinion. One study finds only one-fourth of the companies receiving going-concern disclosures failed within a year and on average survived for approximately four years (Louwers et al., 1999). These trends support the issuance of going-concern opinions in distressed industries by independent auditors supported by effectively independent audit committees (Carcello and Neal, 2000; 2003).

Another measure of effective independence

A second measure of effective independence for the board of directors, if not audit committees, could be the actual filing of bankruptcy (Chapter 11 Only). Non-independent boards in fact would seek self interest and not file when a slow and prolonged recovery is the only option, because filing would imply that their stock is worthless immediately or in the least, that their stock is subordinated to the debt holders. Since filing for bankruptcy would cause an immediate decline in board wealth, self interest seeking non-independent boards would not be expected to file. This would buy time to permit short-term stock price manipulation for more opportunist stock dumping (Chenchuramaiah and Ramesh, 1995; Fama and Jensen, 1983).

Self-interest seeking non-independent directors for financially stressed companies have other incentives to leave the company when it has not yet declared bankruptcy. To obtain a position as a director of another company, "One of the occurrences that will cause a director to be designate a 'problem' is to be associated with…a bankruptcy," declares Paul Hodgson, senior research associate, Corporate Library, a research firm (Morgenson, 2006). Therefore, we define the second measure of effective audit committee independence as the filing for bankruptcy, given as: Chapter 11 only = 1 if company has filed for bankruptcy under Chapter 11, else 0.

Summary of Variables

Statistically, for H to hold, the dependent variables GCO and Chapter 11 Only (at level = 1) are expected to be associated with the ten predictor variables (each at level = 0), likely (but not necessarily) associated with the Z score, and to be associated with lower values of ACStock% Board and higher values of Total Assets. In this case effective independence would be associated with appearance of independence and prior research.

Carcello and Neal (2000), in finding the appearance of audit committee independence related to the effective characteristics of audit committee independence, consider heavy manufacturing and technology-related industries (SIC codes 35, 37, and 87), which are more likely to receive a going-concern opinion. As suggested by a footnote in Carcello and Neal (2000, 460), their results could be industry dependent. This is likely because certain financially stressed industries would most likely have small companies (identified by Total Assets) with audit committee members (often original owners) possessing high the stock ownership (ACStock%Board). The textile industry serves as one example.

APPLICATION TO A PARTICULARLY STRESSED INDUSTRY

Stressed U. S. Textile Industry

The textile industry experienced record shipments, strong profits and many product innovations during the majority of the 1990s. Yet, today the "U. S. textile industry is suffering from its worst economic crisis since the Great Depression" (American Textile Manufacturers Institute, 2002). After the 1997 Asian financial crisis, low-priced textile and apparel products resulted from devalued Asian currencies, lower labor costs and various country subsidy programs. Asian textile imports to the U. S. increased by 80% after 1996 causing major declines in U. S. textile company sales (American Textile Manufacturers Institute, 2001).

When SOA was implemented, the U. S. textile industry suffered "from its worst economic crisis since the Great Depression" (American Textile Manufacturers Institute, 2002). Increasing losses forced many textile companies to reduce in size, eliminate jobs and facilities and, for some, to file for bankruptcy protection. The change in the industry is evident in the calculation of the industry's relative earnings

growth as compared to stock price appreciation. The textile industry's relative stock price strength, as compared to 90 other industries, was close to 100% of the broad index in 1998 versus slightly below 10% of the broad index in early 2002 (Sirois, 2002) with more stock in the hands of fewer owners. Since the financial markets reflect the distressed condition in textile publicly traded stocks, it should follow that concerns of a company's future existence are addressed in the company's financial reports.

RESEARCH DESIGN

Sample Selection

We investigate the relationship of the research variables, the listed SOA, the extended SOA, the stress and the prior research variables (i. e., the ten predictor variables, Z score, ACStock% Board, and Total Assets), to the two effective measures of audit committee independence (GCO and Chapter 11 Only) for all textile companies from 1999 to 2001 in SEC Schedule 14A (Proxy Statement) filings. First, copies of the auditor's report and financial information used to calculate the Altman Z-Score were obtained from the 2000 and 2001 company annual reports. Initially, we included all the publicly-traded textile companies under the Standard Institute Classification (SIC) code 2211, which represents the cotton, woven fabric business. In addition, the top five publicly-traded companies of other SIC codes summarized in Textile Manufacturing: Industry Breakdown 1997-2001 by Harris InfoSource International, Inc. (Harris InfoSource International, 2002) were selected. Also, a list of 263 textile and apparel companies was included from Mergent Online (Mergent Online, 2003).

Table 2: Sample Selection Criteria

Initial Sample of SIC Codes 22xx and 23xx	275
Less: Repeated companies in SIC Codes	26
Less: Proxy statements and/or Form 10-K not available	12
Less: Companies with GCOs before 1999	17
Less: companies excluded from the Harris InfoSource	
(Because of low sale activity in the 22xx and 23xx code)	146
Total sample	74

Next, we deleted companies with missing proxy or financial statement data. Table 2 shows that this resulted in a final sample of seventy-four companies with fifty-four having two years of observations and twenty with only one year of observations for a grand possible total of 128. Companies with only one year of proxy information resulted from bankruptcy, privatization, or initial year of operation. For the seventy-four, there are thirty-one bankruptcies filed but only thirty companies received going-concern opinions.

The Proxy Statement discloses each director by name, his or her age, principal occupation and business experience, other directorships, length of service on the Board and committee assignments, equity ownership in the company, and the amount of director fees and non-director fees compensation to each director. This schedule also provides information about the total number of board and committee meetings held during the fiscal year.

Methodology

Using the data obtained on the seventeen variables identified in Section II we create two sets of analyses, one for the measure of independence by association with going-concern audit opinions and one by association with bankruptcy filings. Each set presents a correlation matrix of related variables and a corresponding logistic regression analysis for those variables identified as related.

RESULTS

Interrelationships of Appearance Characteristics

Table 3 below provides the Pearson correlation matrix, and hence interrelationships, of the first nine variables, the first five SOA and the next four non-SOA characteristics to the two independent variables,

GCO and Chapter 11 Only. There are statistical relationships (with two-tailed p-value less than 0.05) between only two SOA variables, Interlock and AffilProf. Interlock and two other SOA variables are related to non-SOA variables.

The first correlation between Interlock and AffilProf (r = + 0.181, p-value = 0.041) suggests some companies have two forms of non-independence under SOA. Interlock means that audit committee membership for Board A is compromised when a member of management for company A serves as a compensation committee member for Board B, the home company of the audit committee member. The correlation between Interlock and AffilProf suggests when there is this interlocking there are also members of that audit committee for A which also serve in other capacities for A (AffilProf). The second correlation (Interlock with the non-SOA characteristic, OtherCC, r = + 0.373, p-value = 0.00) suggests that given interlocking occurs an audit committee member also serves on four or more compensation committees of public companies. The third correlation (r = -0.198, p-value = 0.025) of the committee's membership (SOA , AC Members) with the position of having other directorships (non-SOA OtherDir) shows that those committees with memberships not violating the SOA and having enough members also are likely to be serving on other boards. The fourth correlation (between the SOA-Other AC, and non-SOA OtherCC, r = + 0.328, p-value = 0.00) shows that serving on four or more compensation committees (OtherCC) is related to serving on four or more audit committees (Other AC). This characteristic, other AC, is also found correlated as expected (p-value = 0.00), in those companies with members serving on four or more boards (OtherDir). [The relationship of OtherDir and OtherCC may be just due to the compensation committee membership.]

Table 3: The Correlation of Characteristics of Non Independence

		AC Members -SOA	Interlock -SOA	Other AC-SOA	AffilPay- SOA	AffilProf- SOA	OtherDir	Other CC	CompCom	AffilOther	GCO	Chapter 11 only	AC Stock% of Board	Total Assets-natural log
AC Members-SOA	Pearson Correlation	1	-.039	-.136	.069	-.171	-.198*	-.098	.034	-.096	.102	-.154	.003	-.288**
	Sig. (2-tailed)		.659	.126	.320	.054	.025	.270	.703	.279	.255	.083	.975	.001
Interlock-SOA	Pearson Correlation	-.009	1	.025	-.122	.181*	.052	.373**	-.037	-.041	.063	.208*	-.006	.136
	Sig. (2-tailed)	.659		.782	.171	.041	.558	.000	.681	.658	.481	.024	.947	.128
Other AC-SOA	Pearson Correlation	-.136	.025	1	-.136	.005	.332**	.328**	-.156	-.073	-.059	-.045	-.157	.350**
	Sig. (2-tailed)	.126	.782		.126	.956	.000	.000	.079	.416	.660	.618	.078	.000
AffilPay-SOA	Pearson Correlation	.069	-.122	-.136	1	.020	-.156	-.098	.090	-.096	.302*	.043	.260**	-.272**
	Sig. (2-tailed)	.320	.171	.126		.821	.079	.270	.312	.279	.023	.630	.083	.002
AffilProf-SOA	Pearson Correlation	-.171	.181*	.005	.020	1	.047	-.050	-.054	-.149	.093	.081	.091	.008
	Sig. (2-tailed)	.054	.041	.956	.821		.597	.578	.543	.092	.297	.364	.507	.936
OtherDir	Pearson Correlation	-.198*	.052	.332**	-.156	.047	1	.240**	.006	-.036	-.072	.022	.039	.490**
	Sig. (2-tailed)	.025	.558	.000	.079	.597		.006	.948	.683	.421	.806	.666	.000
Other CC	Pearson Correlation	-.098	.373**	.328**	-.098	-.050	.240**	1	.005	.022	.051	.133	-.106	.235**
	Sig. (2-tailed)	.270	.000	.000	.270	.578	.006		.973	.808	.570	.137	.237	.008
CompCom	Pearson Correlation	.034	-.037	-.156	.090	-.054	.006	.005	1	-.029	-.052	-.043	.076	-.082
	Sig. (2-tailed)	.703	.681	.079	.312	.543	.948	.973		.743	.563	.630	.387	.361
AffilOther	Pearson Correlation	-.096	-.041	-.073	-.096	-.149	-.006	.022	-.029	1	-.021	-.052	-.122	-.005
	Sig. (2-tailed)	.279	.658	.416	.279	.092	.683	.808	.743		.817	.721	.175	.956
GCO	Pearson Correlation	.102	.063	-.059	.302*	.093	-.072	.051	-.052	-.021	1	.504**	.142	-.114
	Sig. (2-tailed)	.255	.481	.660	.023	.297	.421	.570	.563	.817		.000	.130	.201
Chapter 11 only	Pearson Correlation	-.154	.208*	-.045	.043	.081	.022	.133	-.043	-.052	.504**	1	.124	.119
	Sig. (2-tailed)	.083	.024	.618	.630	.364	.806	.137	.630	.721	.000		.165	.182
AC Stock% of Board	Pearson Correlation	.003	-.006	-.157	.260**	.091	.039	-.106	.076	-.122	.142	.124	1	-.260**
	Sig. (2-tailed)	.975	.947	.078	.003	.507	.666	.237	.387	.175	.130	.165		.008
Total Assets-natural log	Pearson Correlation	-.288**	.136	.350**	-.272**	.008	.490**	.235**	-.082	-.005	-.114	.119	-.260**	1
	Sig. (2-tailed)	.001	.128	.000	.002	.936	.000	.008	.361	.956	.201	.182	.008	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.00 level (2-tailed).

Appearance versus Effective Measures of Independence

Table 3 also presents the results of correlating these first nine (SOA, non-SOA) appearance-of-independence characteristics with the other five financial variables of Section II used in previous research to demonstrate independence in fact as shown by the frequency of the auditor's going-concern opinion (GCO).

For the variable GCO, the first correlated variable is AffilPay (p-value = 0.023). This suggests that if a member receives affiliated payments (AffilPay = 1), the company is likely to receive a going-concern

opinion (GCO = 1). This is evidence of a dependent audit committee associated with evidence of independence, and this is contrary to Carcello and Neal (2000) and expectations. The characteristics of dependence (e.g., AffilPay = 1) should be negatively not, as it is, positively related (Pearson r = + 0.202) to the measure of effective independence (GCO). For GCO, the next correlated variable is filing for bankruptcy (Chapter 11 Only, p-value = 0.00). The variable found predictive of the GCO in prior research, Total Assets, is not related (two-tail p-value = 0.201), but the sign of the Pearson correlation coefficient (r = -.114) is negative, in the correct direction, consistent with prior research and if held to a one-tail p-value standard, it would be close to being significant (with one-tailed p-value = 0.10).

Correlated in the Direction Opposite to Expectations for the Going-Concern Opinion

The measure of audit committee independence, GCO, is not related to the percent of stock ownership by the AC committee, AC Stock% of Board, (with two-tailed p-value, 0.11, one-tail, 0.06), but considering only the one-tailed p-value it could be. Since AC Stock % of Board is also related to AffilPay (p-value = 0.003), which is related to the GCO, this suggests that those with larger shares of stock, i.e., those most likely to lose under bankruptcy or a given going-concern opinion, are also those who have affiliated payments (in stock) and may be from smaller companies (since this is negatively related to Total Assets, r = -0.26, p-value = 0.003). Surprisingly, Table 3 shows only two of the five SOA "appearance-of-independence" characteristics (the AC membership size (AC#) and belonging to other audit committees, Other AC) as having the correct corresponding sign of the correlation coefficients (r = + 0.102, r = -0.039) as would be anticipated from their definitions with GCO. In this regard, the appearance characteristics under the Sarbanes-Oxley Act fail again and provide contrary support as in Gao, et al., (2009).

Table 4: Statistical Tests-Chi Square or Phi (Normal z) Test
Characteristics versus Measures of Effective Independence

Effective	Variable			Effective	Variable		
Independence	Affiliated Pay	No Affil. Pay	Total	Independence	Interlocking	No Interlock	Total
GCO	9	21	30	Chapter 11 filed	5	26	31
No GCO	12	85	97	No Chap 11 filed	4	92	96
Total	21	106	127	Total	9	118	127
	Phi coef	z test	p- value		Phi coef	z test	p-value
	0.20156	2.27149	0.024		0.20025	2.25670	0.024
Effective	Variable			Effective	Variable		
Independence	AC # < 3	AC # ≥ 3	Total	Independence	AC # < 3	AC # ≥ 3	Total
GCO	7	23	30	Chapter 11 filed	2	29	31
No GCO	14	83	97	No Chap 11 filed	19	77	96
Total	21	106	127	Total	21	106	127
	Phi coef	z test	p- value		Phi coef	z test	p-value
	0.10176	1.14681	0.250		-0.15425	-1.73825	0.082
Effective	Combined Variable			Effective	Combined Variable		
Independence	VAR=1	VAR=0	Total	Independence	VAR=1	VAR=0	Total
GCO	19	11	30	Chapter 11 filed	20	11	31
No GCO	55	42	97	No Chap 11 filed	54	42	96
Total	74	53	127	Total	74	53	127
	Phi coef	z test	p-value		Phi coef	z test	p-value
	0.05713	0.64381	0.520		0.07201	0.81146	0.420

Because of these relationships and those from prior research, we consider in Table 5 the correlation of effective independence (GCO) with the four variables: AffilPay, AC Stock% of Board, the Z-Score for determining Chapter 11 Only, and ASSETS (from Table 3, company size defined by the natural log of total assets). Logit models are used for prediction purposes, and since we have already established AFFILPAY as significant, its predictive purpose remains. In the logit model for predicting GCO, AffilPay becomes less predictive (two-tailed p-value = 0.174) in the presence of stock ownership and the size of the company, but AffilPay still has the correct sign and is still the most predictive variable, even better

than the ZSCORE (0.997) and company size (ASSETS, has a p-value of 0.363 and a negative sign for its coefficient indicating smaller companies). The variable, AC Stock% of Board, while not significant (0.318) in predicting GCO in this logit model, was shown in Table 3 correlated with AffilPay, and obviously is multicolinear. Those with AffilPay =1 also have a larger percentage of the stock. In Table 5, this model of four variables does predict ten of the thirty GCO companies, only one more than the nine that can be found just with AffilPay =1.

Table 5: Logistic Regression Results for Going-Concern Opinions

Classification Table[a]

			Predicted		
			GCO		Percentage
	Observed		0	1	Correct
Step 1	GCO	0	89	8	91.8
		1	20	10	33.3
	Overall Percentage				78.0

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	AFFILPAY	.804	.591	1.851	1	.174	2.235
	ZSCORE	20.659	5768.654	.000	1	.997	9.4E+08
	ASSETS	-.065	.108	.363	1	.547	.937
	ACSTOCK	1.020	1.021	.997	1	.318	2.773
	Constant	-20.699	5768.654	.000	1	.997	.000

a. Variable(s) entered on step 1: AFFILPAY, ZSCORE, ASSETS, ACSTOCK.

Legend:

Number of observations	127
Chi-Square for model	37.551
p-value	00.0

Therefore, adding these three other variables (AC Stock% of Board, the Z-Score, and Assets) to AffilPay does not greatly improve the prediction. This one characteristic of appearance of non independence, AffilPay =1, predicts effective independence. Members who are affiliated and have larger stock ownership tend to support the going-concern opinion.

Correlated in the Direction Opposite to Expectations for Filing for Bankruptcy

We find similar results in predicting bankruptcy. First, Table 3 presents only two variables related to the filing of bankruptcy (Chapter 11 only): (1) Interlock (with p-value = 0.024), whether an audit committee member is on interlocking boards, an SOA violation and (2) GCO (with p-value = 0.00). Another SOA independence variable, the size of the audit committee required to be three or more (AC#), has a contrary correlation with bankruptcy (r = -0.154, p-value=0.083) and is almost significant.

In Table 4 we find these two SOA characteristics again. First, for the AC#, as with the negative Pearson correlation coefficient in Table 3, the Phi coefficient (-0.15) for the size of the audit committee (AC#) is negative, and this is consistent with the appearance of non-independence. Its two-tailed p-value (0.082 as opposed to 0.083, the approximation) is not significant but close, and would be significant as a one-tailed test. As in Table 3, the SOA characteristic Interlock is statistically significant, this time with exactly the same p-value (0.024). Of the nine committees that had this Interlock violation, five (more than half) were associated with those that filed for bankruptcy, contrary to the expectation that none would be so associated.

In Table 4 for bankruptcies (Chapter 11 filed), the p-value (0.42) is not significant for the variable, having at least one violation, SOA VAR. With this low p-value there is not enough evidence as to whether the SOA Variable can predict bankruptcy. Still, contrary to expectations, this sample found that more non-independent boards (20) than independent boards (11) filed for bankruptcy.

Next, when the same variables of Table 5 are considered in Table 6 for predicting bankruptcy (with AffilPay substituted with Interlock), Interlock becomes less predictive (p-value = 0.263). Because of this increased p-value we see that members who are on interlocking boards filing for bankruptcy are in those in the most distressed (low ZSCORE, p-value = 0.002), perhaps larger (not smaller) companies (ASSETS, p-value = 0.095, with a positive sign for the coefficient indicating the larger companies), and with higher stock ownership relative to Board, ACSTOCK. Again the coefficient of ACSTOCK has the correct positive sign and this time is less significant (p-value = 0.129, one-tail p-value = 0.07). Notice that now, as before when predicting GCO companies, we are able to predict one more bankruptcy: instead of the five bankruptcies with Interlock =1, we now can predict six bankruptcies using the model of all four variables. Also, it appears that for this small study the larger companies with board members owning perhaps the larger amount of stock (if only marginally statistically significant) are effective. Still according to Table 2, the smaller companies have audit committees with the larger percentage of stock ownership (with correlation coefficient, -0.026 and p-value, 0.003).

Table 6: Logistic Regression Results for Bankruptcy Filings

Classification Table[a]

| | | | Predicted | | |
| | | | Chapter 11 only | | Percentage |
Observed			0	1	Correct
Step 1	Chapter 11 only	0	91	5	94.8
		1	25	6	19.4
	Overall Percentage				76.4

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	INTERLOC	.885	.791	1.252	1	.263	2.423
	ZSCORE	3.283	1.043	9.901	1	.002	26.657
	ASSETS	.183	.109	2.788	1	.095	1.201
	ACSTOCK	1.614	1.064	2.299	1	.129	5.022
	Constant	-6.382	1.777	12.904	1	.000	.002

a. Variable(s) entered on step 1: INTERLOC, ZSCORE, ASSETS, ACSTOCK.

Legend:

Number of observations	127
Chi-Square for model	32.141
p-value	00.0

CONCLUSIONS

Summary

We reject the research hypothesis. We find (what would eventually become) required Sarbanes-Oxley appearance characteristics of independence not to be meaningful predictors of effective independence for this one industry. Instead, we find evidence contrary to expectations. We find one measure of effective independence, the issuance of a going-concern audit opinion, related to the SOA appearance measure of non-independence, in nineteen of thirty cases, when we would anticipate none. We find another measure of effective board independence, the declaration of bankruptcy, also related to what would be SOA non independence in twenty out of thirty-one bankruptcies, also when we would expect none. More importantly, we find two appearance measures of SOA non independence, whether an audit committee member receives affiliated payments, and whether a member is on interlocking boards, to be associated with filing for bankruptcy, a predictor of effective independence. These results suggest either a need for other appearance measures of effective independence or that theses measure of independence may be industry dependent, as Carecllo and Neal (2002) suggest. These results also support Geiger and Rama (2003) who find little evidence of a connection between effect and appearance.

We find other interesting results that are statistically significant or nearly so. For example, in Table 3 we see the percentage of ownership of stock by the audit committee (AC stock% of board), although not

strongly related to the effective measures of independence (see GCO, going-concern opinions, with the one tail p-value of 0.055), it is more strongly related to the significant variable, affiliated payments (AffilPay-SOA, p-value, 0.003), which is a stronger predictor of this effective measure, GCO (with a p-value of 0.023). This larger stock ownership variable is associated with the smaller companies (see Table 3, Total Assets with a negative correlation, -- 0.272, p-value 0.002). Therefore it appears that smaller, stressed companies having audit committees with larger stock ownership, a seemingly dependent measure, may in fact do the right thing in permitting going-concern opinions, just as would independent and not affiliated audit committees for larger companies. Similarly, boards with possibly larger stock ownership by the audit committee from larger companies may do the right thing and file for bankruptcy. These suggestions, consistent with the agency work of Fama and Jensen (1983), argue that more closer-held companies would have non appearing independent owner-managers-directors who act in their companies' best interest, as would directors (on audit committees) with a large percentage of ownership (Shleifer and Vishny, 1997).

The interrelationships of non-SOA appearance characteristics also seem to support these results as found in company board members serving other company boards, compensation committees, and other audit committees. Changes to these relationships involving audit committees and corporate boards since the passage of the Sarbanes-Oxley Act suggest that members are accepting fewer positions, and therefore the interlocking and other membership relationships are now fewer (Holstein, 2004).

Limitations

This is a relatively small sample study of seventy-four companies, with only thirty going-concern opinions (twenty-six that are not repeated) and thirty-one bankruptcies (nineteen that are not repeated), limited by design to one industry during two years before the SOA rules were enacted, and conducted over two years as found in Carcello and Neal (2000). Despite these limitations, Tables 3, 4, and 6 still demonstrate statistically significant findings.

Although limited in size to seventy-four companies, this study does not support an association of SOA appearance-of-independence characteristics with audit committee effectiveness for this specialized industry. Rather, they are supportive of contrary expectations. Explanations for this result are suggested by company size and percentage of committee stock ownership but this study is too small to show strong statistical evidence for these variables. Larger studies of stressed but industry-limited companies with the SOA characteristics may be possible since the Act has been in effect since 2002, but may difficult, now that some of the SOA rules recently changed even though these changes do not affect audit committees. Further research could also continue with other measures of effectiveness such as the quality of earnings or a company's discretionary accruals in determining whether the appearance requirements for audit committees are effective (DeZoort et al., 2000).

These limited findings contribute to the growing body of research that argues for restricting government financial regulation by company size and industry (Gao et al., 2009; Hayes, 2009; Hart, 2009; Dodd–Frank Wall Street Reform and Consumer Protection Act, 2010; Orol. 2011).

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