

Insider Trading and Audit Opinion

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Abstract:

This study aims to investigate the impact the abnormal insider trading had on the likelihood of firms receiving going-concern opinions in Egypt. The study further analyzes the impact of the clients' economic significance on this relationship. Based on a sample of financially distressed firms from 2013 to 2017, the results show that net abnormal insider sales has no impact on the likelihood of receiving going-concern report, even after controlling the presence of the clients' economic significance.

Keywords: Insider Trading; Litigation Risk; Opinion Shopping; Going-Concern Opinion.

1. Introduction:

This study investigates whether managers' litigation concerns about insider selling affect the auditor's decision to issue an opinion modified for going-concern uncertainty. Prior studies provide evidence that managers face the risk of trade-related litigation around news events (Seyhun 1992; Givoly and Palmon 1985). To reduce their risk exposure, managers can abstain from trading before notable events. But insiders can also coordinate

timely trades and the release of news during the post-trading period to achieve the same goal (Chen, Martin, and Wang, 2013). In other words, by altering the post-trade information flow, insiders can attempt to avoid signals that regulators or investors use to detect insider trading.

Prior studies provide evidence of negative market reaction to first-time going-concern reports (Firth, 1978; Chow and Rice, 1982; Jones, 1996; Carlson, 1998; Menon and Williams, 2010). Fleak and Wilson (1994) argued that auditors' going-concern opinions can affect stock prices for at least two reasons. First, a going-concern qualification provides a warning about the auditor's assessment of a company's probable viability. Second, a going-concern opinion can have direct negative consequences for a firm's future cash flow, resulting in technical default on existing debts or a defective SEC registration statement.

The literature have also supported that managers can influence auditors' opinions and engage in opinion shopping (Carcello and Neal 2000; Lennox 2000). Given that auditors tend to make Type I errors—studies show that a low percentage of firms receiving going-concern reports declare bankruptcy in the year following the audit opinions (e.g., Myers et al. 2011)—opinion shopping seems particularly plausible when the nature of the opinion is ambiguous. If managers have incentives to avoid insider-selling related litigation, then it's expected that managers

will exert a greater influence on auditors to avoid receiving a going-concern report. Therefore, some studies predict and find evidence of an inverse relation between the likelihood of receiving a first-time going-concern opinion and insider selling (Chen, Martin, and Wang, 2013; Donghua, Wah and Yujie, 2017).

However, *Dhaliwal et al. (2014)* examined whether insider trading has an impact on the likelihood of firms receiving going-concern opinions, and failed to find any relation between net abnormal insider sales and the issuance of a going concern opinion. Therefore, the evidence regarding the impact the abnormal insider selling has on the likelihood of firms receiving going-concern opinions are mixed and there exists neither theoretical nor empirical consensus on whether insider selling is an obstacle for going-concern opinion, which indicates that the relation between insider trading and going-concern opinion is still an empirical issue. Besides the impacts of the capital market's nature on the relationship between insider trading and going-concern opinion specifically in emerging markets still require further research.

This study attempts to contribute not only to the current debate regarding the relationship between abnormal insider trading and going-concern opinions, but also to the broader literature attempting to understand the main determinants of going-concern opinions. Besides, The Egyptian context presents

an interesting setting to investigate the influence of insider trading on the likelihood of firms receiving going-concern opinions. Article 20 and Article 64 of the Capital Markets Law No. 95 of 1992 prohibit insider trading. However, the Egyptian Stock exchange is still emerging, lacking effective enforcement tools to support the implementation and adoption of insider trading regulations (Omran, 2007; Ansary,2012). These settings differ dramatically form developed markets, such as the United States and China which have been the focus of a wide range of studies.

The remainder of this paper is organized as follows: Section 2 outlines prior literature and hypotheses tested in this paper. Section 3 outlines the research method including sample selection procedures, data sources, variables measurement, and empirical models employed. Section 4 presents data analysis, statistical techniques applied, and the main findings. Section 5 concludes by discussing the implications of the research findings, highlighting potential limitations and considering future areas for research.

2. Literature Review and Hypotheses Development:

This section of the research reviews prior literature that is specific to my research. Specifically, it discusses theory relating to insider trading and going-concern opinion. To date, very few

studies have examined this topic in general and in the context of emerging markets in particular (Chen, Martin, and Wang 2013; Dhaliwal et al. 2014; Donghua, Wah and Yujie 2017). Prior literature discussed in detail below provides a theoretical basis to investigate whether insider trading is related to auditors' decisions to issue going-concern opinions.

Chen, Martin, and Wang (2013) suggest that a going concern opinion elicits a negative stock market reaction and insider sales followed by negative news are likely to attract regulators' scrutiny and investor class-action lawsuits. In light of these regulatory and litigation concerns, they argued that insiders of distressed firms will pressure auditors to issue clean opinions in periods in which they undertake abnormal insider sales. Using a sample of 12,329 firm-year observations, Chen, Martin, and Wang (2013) empirically evaluated this prediction and found a statistically significant negative relation between abnormal insider sales and the issuance of going-concern opinions. Their results also revealed that the negative relation between insider selling and the probability of receiving a going-concern opinion is stronger for firms that are more economically important to their auditors but weaker for firms whose auditors have greater concerns about litigation exposure and reputation loss and for firms with more independent audit committees (Chen, Martin, and Wang, 2013).

In conjunction with the publication of Chen, Martin, and Wang (2013) in *The Accounting Review*, the American Accounting Association (AAA) issued a press release which noted that the study “strongly suggests that auditors' reluctance to issue a going concern opinion is too often driven by pressures from company higher-ups who have recently unloaded stocks of their distressed firms” (AAA press release 13 March 2013). The media that picked up on Chen, Martin, and Wang’s (2013) findings noted that given the influence of insiders on the issuance of a going concern opinion, “insider trading may be a better sign a company is failing than the word of its accountants” (Dhaliwal et al., 2014).

Donghua, Wah and Yujie (2017) based on listed firms in China's stock market from 2007 to 2013, also found that a higher level of insider selling is associated with a lower likelihood of receiving going-concern opinion, which is in line with Chen, Martin, and Wang (2013) finding. They also indicated that the negative relation between insider trading and the probability of receiving a going-concern opinion is stronger for firms that are more economically important to their auditors.

In contrary to the above arguments, *Dhaliwal et al. (2014)* re-visited the relationship between insider trading and the issuance of a going concern opinion. They hypothesized a plausible counter-argument that insiders will anticipate and time

their stock sales in the periods prior to the issuance of a going concern opinion. Their evidence failed to find any relation between net abnormal insider sales and the issuance of a going concern opinion. However, they found evidence that insiders time their sales in anticipation of the issuance of a going concern opinion. Specifically, they found insider sales rise at least two years prior to the issuance of a going concern opinion and decline steeply in the year of the going concern opinion. These findings suggest that, to the extent that insider trading related litigation concerns matter, they influence insiders to time their trades to avoid legal jeopardy. They don't find any support for the contention that insiders pressure auditors to forgo issuing a going concern opinion.

In summary, the relationship between insider trading and going-concern opinion is a very complex phenomenon and preliminary investigations have suggested that there are many potential explanations of the relationship between insider trading and going-concern opinion (Dhaliwal et al., 2014). These suggest the need for competing theories. The current investigation aims to fill this gap by examining the association between insider trading and going-concern opinion in an emerging capital market like Egyptian Stock exchange. The Egyptian case is interesting because the country has adopted very similar regulations to those in western countries, and yet, the country is an emerging market in all respects. In terms of financial system

development, strength of financial institutions, investor protection and the market for corporate control, the country lags quite a long way behind developed countries (Omran, 2007; Ansary, 2012). However, with a growing stock market, the country has seen fit to implement an insider trading directive to restrict and quickly disclose insider trading activity. This line of argument leads to the first hypothesis, formally stated as follows:

H₁: Insider selling activity has an impact on the likelihood of receiving a going concern opinion.

Later, In consistency with prior researches (e.g. Chen et al., 2013; Donghua et al., 2017) the researcher attempts to examine the impact of economic significance of clients on the relationship between insider trading and going-concern opinions in the Egyptian context. Accordingly, the next testable hypothesis is:

H₂: The economic significance of clients has no direct impact on the relation between insider selling and the probability of receiving a going concern opinion.

3. Research Method:

3.1. Sample Selection:

The sample is comprised of financially distressed companies and that is mainly due to the premise that the decision to issue GCO is most salient among these firms. The researcher merged the dataset to Mubasher to obtain financial data for each company

listed in the Egyptian Stock Exchanges within the period of 2013-2017, and only retain firm-years that reported a loss or negative cash flows. Firm-years following first-time going concern opinions are excluded because our focus is on auditors' decisions to issue first-time going concern opinions. After deleting observations with missing information regarding my independent variables or control variables, the final sample consists of 53 firm-years observations, 18 of which with GCOs while 35 with clean opinions.

3.2. Data Sources:

Data for insider trading has been collected manually from Mubasher database that reports details of each listed company insider transactions including:

- Title of the insider.
- The specific transaction and reported dates.
- The amount of shares traded.
- The market values of these shares.

While the main sources of accounting information were companies' published annual reports for the years 2013 to 2017. These annual reports are either obtained directly from the companies' websites or accessed using Mubasher database. Volatility, cumulative stock return and market value equity data have been collected from the annual reports issued by the

Egyptian Stock Exchange. Finally, financial data used in measuring auditor economic dependence were also collected manually from Mubasher database.

3.3. Variables Measurement:

3.3.1. Measuring Abnormal Insider Selling (CHNSV):

Consistent with Chen, Martin, and Wang (2013), the abnormal portion of insider sales (CHNSV) is measured by the difference between the net selling volume (NSV) of the current year and the average NSV during the prior two years. Then, the researcher gets sum the dollar value of all sales (Sales) and purchases (Purchases) of all top-level managers for each firm-year. The researcher defines NetSales as the difference between aggregated firm-year sales and purchases (Sales – Purchases). abnormal insider net sales (CHNSV) for year t is measured as the difference between the natural log of $1 + \text{NetSales}$ in year t and the natural log of $1 +$ the average NetSales for years $t-1$ and $t-2$, or $\text{Ln}(1+\text{NetSales}_t) - \text{Ln}(1 + \sum_{x=1}^2 \frac{\text{Net sales } t-x}{2})$.

3.3.2. Measuring Economic Significance of Clients (DEPENDENCE):

Following Dhaliwal et al. (2014), the researcher proxies auditor economic dependence (DEPENDENCE) as the ratio of a specific client's asset size to the total asset size for all the clients of an

incumbent auditor's local office. If the proportion is greater than 10%, it is 1, otherwise it is 0.

3.4. Model Specifications for Hypothesis Testing:

First, Test of hypothesis (H1): the impact of the insider trading on going concern opinion: The researcher tests the effect of insider trading on the likelihood of a going concern opinion, with Chen, Martin, and Wang (2013) logistic model, as shown in Equation (1):

$$\begin{aligned}
 GCO_t = & \beta_0 + \beta_1 CHNSV_t + \beta_2 ZScore_t + \beta_3 Loss_t + \beta_4 Size_t + \beta_5 Age_t \\
 & + \beta_6 Return_t + \beta_7 Volatility_t + \beta_8 Lev_t + \beta_9 CLev_t + \beta_{10} OCF_t \\
 & + \beta_{11} AnnLag_t + \beta_{12} Investment_t + \beta_{13} NewFinance_t \\
 & + \beta_{14} BigN_t + \sum Industries + \sum Years + \varepsilon_t \dots \dots \dots Eq (1)
 \end{aligned}$$

Where:

- GCO= an indicator variable equal to one if the company received a going concern opinion this year and an unqualified opinion in the prior year; zero otherwise.
- CHNSV= the change in net insider selling volume (CHNSV).
- LOSS= an indicator variable coded 1 if a firm reports a negative net income for the current year, and 0 otherwise.

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- ZSCORE= Altman's Z-score (Altman 1968) for the current year.
 - ANNLAG= number of days between the fiscal year-end and earnings announcement date for the current year.
 - SIZE= natural logarithm of total assets at the end of the current year.
 - AGE=natural logarithm of firm age, which is proxied by the number of years of listing in Egyptian stock market from the start of listing to the current year.
 - RETURN=firm's cumulative stock return over the current year.
 - VOLATILITY= standard deviation of monthly returns over the current year.
 - LEV= ratio of total liabilities to total assets at the end of the current year.
 - CLEV= change in LEV from the previous year to the current year.
 - OCF= operating cash flow divided by total assets for the current year.
 - INVESTMENTS= short- and long-term investment securities (including cash and cash equivalents), scaled by total assets.
 - NEWFINANCE= an indicator variable equal to 1 if a client has a new issuance of equity or debt in the subsequent fiscal year, and 0 otherwise.

- **BIGN**: an indicator variable equal to 1 if the auditor is a member of the Big 4, and 0 otherwise.

Second, test of hypothesis (H2): the moderating effect of clients' economic significance on the relationship between insider trading and going-concern opinion:

On the basis of Equation(1), the researcher adds the firm's economic dependence variable to study its impact on the relationship between insider trading and going-concern opinion, as shown in Equation (2):

$$\begin{aligned}
 GCO_t = & \beta_0 + \beta_1 CHNSV_t * \mathbf{DEPENDENCE}_t + \beta_2 ZScore_t + \beta_3 Loss_t \\
 & + \beta_4 Size_t + \beta_5 Age_t + \beta_6 Return_t + \beta_7 Volatility_t \\
 & + \beta_8 Lev_t + \beta_9 CLev_t + \beta_{10} OCF_t + \beta_{11} AnnLag_t \\
 & + \beta_{12} Investment_t + \beta_{13} NewFinance_t + \beta_{14} BigN_t \\
 & + \sum Industries + \sum Years + \varepsilon_t \dots \dots \dots \text{Eq (2)}
 \end{aligned}$$

Where:

DEPENDENCE_t: Ratio of a specific client's asset size to the total asset size for all the clients of an incumbent auditor's local office. . If the proportion is greater than 10%, it is 1, otherwise it is 0.

All other variables are previously defined.

3.5. Data Analysis and Results:

3.5.1. Descriptive Statistics:

Table (1) presents descriptive statistics for all continuous research variables. As shown in table (1), the normality distribution of research variables in terms of CHNSV, ZSCORE, SIZE, AGE, RETURN, VOLOTALITY, LEV, CLEV, OCF, ANNLAG, INVESTMENTS by using the Jarque-Bera test are normally distributed at a significant level greater than (0.05). However, CHNSV_DEP is not normally distributed, since the significant of Jarque-Bera statistic is less than (0.05).

Table 3.2: Descriptive Statistics

	CHNSV	ZSCORE	SIZE	AGE	RETURN	VOLITALI	LEV	CLEV	OCF	ANNLAG	INVESTME	CHNSV_DEP
Mean	0.667303	1.904576	19.70354	13.90566	0.185356	2.249340	0.456145	0.042005	-0.037524	69.33019	0.631933	-0.350998
Median	0.625989	1.853691	19.66956	14.00000	0.151500	4.350000	0.462587	0.039961	-0.010896	70.00000	0.698058	0.000000
Maximum	2.208245	2.996792	24.09918	34.00000	0.450000	90.98000	1.000000	0.104120	0.101551	105.0000	1.031843	2.089903
Minimum	-2.789145	1.104154	13.72865	1.000000	0.000000	-70.30000	0.000518	0.000000	-0.182911	29.00000	0.000000	-2.789145
Std. Dev.	1.122153	0.429478	2.436664	8.048564	0.151235	32.26512	0.224071	0.022565	0.064098	19.03513	0.265643	0.760886
Skewness	0.576229	0.429384	-0.223312	0.360397	0.315727	0.090526	0.002659	0.414181	-0.442475	-0.233123	-0.702895	-0.507297
Kurtosis	3.505643	2.716504	2.739846	2.685985	1.666052	3.053052	2.494656	3.000852	2.741819	2.356759	2.414314	5.238431
Jarque-Bera	3.497629	1.772013	0.589962	1.365080	4.719324	0.078604	0.564010	1.515321	1.876631	1.393778	5.121732	13.33828
Probability	0.173980	0.412299	0.744546	0.505332	0.094452	0.961460	0.754270	0.468762	0.391286	0.498133	0.077238	0.001269
N	53	53	53	53	53	53	53	53	53	53	53	53

As shown in table (1), the sample has a Mean value of 0.67 for the change in net insider selling (CHNSV), indicating that insiders trade opportunistically on their informational advantage prior to earnings announcements.

3.5.2. Logistic Regression model:

Table (2): Logistic regression model for testing H₁

No	Independent Variables	Estimated coefficient	Wald test		Chi-square test		R ²	Prob.
			Value	Sig.	Value	Sig.		
1	CHNSV	2.991	3.164	.507	44.935	***0.001	77.2%	.452
2	ZSCORE	-2.249	.933	.319				0.095
3	LOSS	2.810	1.997	.158				0.943
4	SIZE	3.712	5.042	.025*				0.976
5	AGE	.651	3.814	.051*				0.657
6	RETURN	-46.925	3.668	.055*				0.000
7	VOLITALITY	.146	3.942	.047*				0.464
8	LEV	.884	.027	.869				0.292
9	CLEV	20.979	.437	.509				0.000
10	OCF	-83.960	3.896	.048*				1.000
11	ANNLG	.328	4.266	.039*				0.419
12	INVESTMENTS	-7.597	3.028	.082*				0.999
13	NEWFINANCE	-9.860	5.000	.025*				1.000
14	BIGN	6.935	3.246	.072*				0.001
15	S1	-2.866	.624	.429				0.054
16	S2	-8.589	3.025	.082*				0.000
17	S3	2.609	.383	.536				0.931
18	S4	-12.400	2.666	.103				0.000
19	S5	-12.729	3.670	.055*				0.000
20	Constant	-39.334	4.185	.041*				

CHI²Hosmer and Lemeshow Test =2.600 (SIG>0.05) correct classification ratio= 86.5

*Parameter is significant at the (0.10) level

***Parameter is significant at the (.001) level

As shown in table (2), the coefficient of change in net insider selling (CHNSV) is insignificant (2.991) indicating that insider

selling has no effect on the likelihood of firms receiving auditor going-concern opinions and thus H_1 is *rejected*. The coefficients on the control variables are generally in the predicted directions. Consistent with Mutchler et al. (1997), big four auditors are more likely to issue going-concern opinions. On one hand, auditors are more likely to issue going-concern opinions for firms with longer announcement lags, and higher return volatility. On the other hand, firms are less likely to receive going-concern opinions when they have new financing activities, higher past stock returns, higher operating cash flows, and larger amounts of cash and investment securities.

Table (3): logistic regression model for testing H_2

No	Independent Variables	Estimated coefficient	Wald test		Chi-square test		R ²	Prob.
			Value	Sig.	Value	Sig.		
1	CHNSV_DEPEN	-.453	.081	.775	39.870	0.003**	71.4%	0.389
2	ZSCORE	-1.533	.506	.477				0.178
3	LOSS	2.444	1.515	.218				0.920
4	SIZE	2.418	5.232	.022*				0.918
5	AGE	.289	3.768	.052*				0.572
6	RETURN	-26.272	3.024	.082*				0.000
7	VOLITALITY	.068	3.361	.067*				0.483
8	LEV	2.971	.308	.579				0.951
9	CLEV	18.548	.446	.504				0.000
10	OCF	-35.955	3.530	.060*				1.000
11	ANNLAGE	.169	3.896	.048*				0.458
12	INVESTMENTS	-6.719	2.633	.105				0.999
13	NEWFINANCE	-6.963	4.372	.037*				0.999
14	BIGN	5.286	2.741	.098*				0.005
15	S1	-2.557	.607	.436				0.072
16	S2	-4.155	1.907	.167				0.015
17	S3	3.765	1.375	.241				0.977

18	S4	-4.459	1.639	.200				0.011
19	S5	-6.368	2.673	.102				0.002
20	Constant	-33.972	2.987	.084*				
CHI ² Hosmer and Lemeshow Test =2.432 (SIG>0.05) correct classification ratio = 82.7								

*Parameter is significant at the (0.10) level

** Parameter is significant at the (.01) level

As shown in table (3), the coefficient for the interaction term CHNSV_DEPEN is negative but statistically insignificant, suggesting that the clients’ economic significance per se does not affect the likelihood of auditors issuing going-concern opinions. Thus, H_2 is *accepted*.

Summary and Conclusion:

Conclusions:

This study has investigated whether insider trading affects external auditors’ decisions to issue first-time going-concern opinions in Egypt. Further, this study has investigated the moderating effect of clients’ economic significance on the relationship between insider trading and going-concern opinions. This study employs the model of Chen, Martin, and Wang (2013) and concentrates on financially distressed firms over the period 2013-2017.

Empirical results show that first, the abnormal return of insider trading has no significant impact on the issuance of a going concern opinion, and thereby H_1 is *rejected*. This finding is *inconsistent* with existing literature (Chen, Martin, and Wang, 2013; Dhaliwal et al., 2014; Donghua, Wah and Yujie, 2017)

which provide evidence of a higher level of insider selling in association with a lower likelihood of receiving a first-time going-concern report.

One possible explanation for the no impact finding is that managers don't have incentives to avoid insider-selling related litigation due to *the quality of insider trading enforcement* in the Egyptian Stock Exchange. A large body of work has documented that while the laws in the book in many emerging economics are comparable to those in many developed economics; the law on the ground is considerably weaker and is plagued by the lower quality of implementation, detection and deterrence (Berglof and Claessens, 2006; Coffee, 2007; Klapper and Love, 2004). Insiders, in turn, are not afraid of getting sued while they are trading on their shares and don't have escape regulators' scrutiny by avoiding going concern opinions.

A second possibility for this no impact finding may be the auditors' concerns about their reputation. As around 51% of the sample studied were audited by the former big "four". Francis and Yu (2009) show that the office size of Big 4 auditors is positively associated with audit quality. This the case of insiders do have litigation concerns, however, they fail to pressure auditor to not have a going concern opinion.

Further empirical analysis reveals that the coefficient for the interaction term CHNSV_DEPEN is statistically insignificant,

suggesting that the economic dependence of clients does *not* have a moderating effect on the relationship between the abnormal return of insider trading and likelihood of a going-concern opinion. Thus, H₂ is *accepted*. This finding is unlike earlier findings of Chen, Martin, and Wang (2013) and Donghua, Wah and Yujie (2017) who supported that the stronger the auditor's economic dependence, the more significant the negative correlation between the insider's selling transaction and the likelihood of a GCO. This finding, however, is consistent with my first finding supporting that top officers don't have severe litigations concerns while trading on their shares and thereby they don't have to pressure auditors. Therefore, clients' economic significance don't play any significant role in this relationship.

Taken together, results from the two hypotheses don't support the prior findings of insider selling as a deterrence for a going concern opinion. As, the relation between insider trading and going concern opinions is controlled by the nature of regulatory enforcement environment. This study, thereby, contributes to the literature by addressing the relationship between insider trading and GCO in an emerging market, like Egypt.

Directions for future research:

1. Future research should investigate the role and effectiveness of both public enforcement through legal insitutions as well as private enforcement, via. institutional

activism and investor awareness, in mitigating insider trading practices in Egypt.

2. Future research could investigate insider trading surrounding a first-time going concern audit opinion
3. Further research could be carried out in other countries and pinpoint how the differences in the economic environment, as well as differences in cultural, political and legal institutions, have a profound impact on the relationship between insider trading and GCOs.

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