Which Corporate Governance Attributes Do Matter?

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This study investigates which corporate governance attributes have a significant effect on the market's reaction to SEO announcements and is the first to analyze the effect of legal and joint expertise in this context. The results show that among other corporate governance characteristics, the percentage of directors on the audit committee, board size, number of board meetings, audit committee size, average board age, and average director tenure seem to be significantly related to market reaction. In the case of director expertise, the market reacts more positively to SEO announcements by firms with legal experts or joint experts on their boards.

Keywords: Corporate governance, SEO announcements, Board of directors, Director Expertise, Market reaction

INTRODUCTION

The field of corporate governance has been a hot topic of interest among researchers. Its relationship to market reaction to equity issues, board decisions, and performance are among the most commonly investigated areas (Huang and Tompkins, 2010). In their quest for finding the optimal combination of governance attributes, researchers have analyzed many variables. This study uses cross-sectional regression analysis to investigate which attributes have a significant impact on the market's reaction to the seasoned equity announcements (SEOs).

Announcements of equity issues by firms are followed by negative returns (Ferreira and Laux, 2014; Chaudhuri and Seo, 2010; and Demiralp et al., 2011) mainly due to the information asymmetry problem between managers and shareholders. Good corporate governance practices mitigate this information asymmetry problem. Hence, firms with better corporate governance practices are rewarded with better market reaction. (Hartzell et al., 2008, and Becker-Blease and Irani, 2008).

In our analyses, we use the most commonly used variables from literature together with our new variables on director expertise. Our results show that among other corporate governance characteristics, the percentage of directors on the audit committee, board size, number of board meetings, audit committee size, average board age, and average director tenure seem to be significantly related to market

reaction. Additionally, in the case of director expertise, investors react more positively to SEO announcements by firms that have legal experts or joint experts on their boards. Namely, legal and joint expertise can mitigate the negative impact of adverse selection and agency problems by decreasing the perceived information asymmetry. Our results imply that legal or joint experts can reduce a firm's cost of raising equity capital.

In the next step, we differentiate between internal and external expertise. Sarbanes-Oxley Act of 2002 requires audit committees to be composed of outsider directors with financial expertise. Furthermore, Mobbs (2011) suggests that shareholder benefits of internal financial expertise are not clear. By differentiating between internal and external expertise, we are able to investigate the impact of external expertise separately.

This paper contributes to the literature by showing that poor governance in the form of lack of directors on board who have required skills and background to effectively monitor management, can in part, explain the negative market reaction to SEO announcements. This study is the first to analyze the effect of legal and joint expertise on market reaction to SEO announcements.

LITERATURE REVIEW

Firms' decisions to issue equity are known to be followed by negative market reactions in the form of negative abnormal returns (Chaudhuri and Seo, 2010; Demiralp et al., 2011; and Ferreira and Laux, 2014). Information asymmetry introduced by Akerlof (1970) is one of the main causes of this negative reaction. Managers typically know more about a firm's true state of earnings than does the market. The adverse selection hypothesis predicts that managers have a tendency to issue equity when it is overpriced (Myers and Majluf, 1984). Hence, the market perceives the decision to issue equity as an opportunistic behavior and reacts negatively to equity issue announcements.

Another reason why the market reacts negatively to equity issues is the agency problem between managers and shareholders (Jensen and Meckling, 1976; Fama, 1980; Fama and Jensen, 1983; and Easterbrook, 1984). Per the agency contract, managers are supposed to act in the best interest of shareholders. However, managers' interests are not always aligned with the shareholders' interests. When this is the case, they may choose to act in their own interests. One of these cases is the equity issuances. Jung et al. (1996) argue that proceeds raised by the equity issue are open to misuse by the firm's managers. Thus, investors react negatively to equity issue decisions.

Research suggests that good corporate governance mechanisms can reduce problems related to information asymmetry and agency relationship. Some of the most commonly researched corporate governance attributes in literature are discussed below.

Board Size

There are conflicting ideas on the optimal size of a board to monitor managers effectively. Yermack (1996) and Eisenberg et al. (1998) find smaller boards to be associated with better firm performance. On the other hand, Dalton et al. (1999) find that firm performance increases with board size. Overall, studies in favor of smaller boards have found them to be related to better market reaction to SEO issues and less communication problems (Huang and Tompkins, 2010), increased risk-taking behavior by directors (Eisenberg et al.,1998), and decreased likelihood of financial fraud (Beasley, 1996). However, Klein (2002a) finds that audit committee independence increase with board size. Furthermore, Xie et al. (2003) argue that larger boards may be more likely to have independent directors with corporate or financial expertise, and in turn, they might be better at preventing earnings management. Coles et al. (2008), Linck et al. (2008), and Boone et al. (2007), suggest that when it comes to board size, one size does not fit all. They argue that optimal board size is unique for each firm, depending on its needs. Boone et al. (2007) explain that there is a trade-off between the costs and benefits of increasing board size. Hence, a firm must decide how much monitoring it needs and how costly it is to monitor its management before increasing the number of directors. Due to the conflicting evidence in literature, we do not have a prediction for the sign of the relationship between board size and market reaction.

Number of Board Meetings

Board meetings are used as a proxy to measure board activity. More active boards are able to monitor managers more effectively. Brick and Chidambaran (2010) find board activity to have a positive effect on firm value. Xie et al. (2003) find that more active boards are associated with lower level earnings management. Thus, we expect a positive relationship between the number of board meetings and firm performance.

Audit Committee Size

Large audit committees composed of independent directors with financial expertise are perceived as efficient monitoring mechanisms. Vafeas and Waegelain (2007) find evidence supporting this notion. Their results show that audit committee size and independence are related to effective monitoring of management. Audit committee size has also been found to be positively related to market reactions to SEO announcements (Becker-Blease and Irani, 2008). Hence, we expect to see a positive relationship between audit committee size and market reaction to SEOs.

Number of Audit Committee Meetings

Typically, meeting frequency is associated with the effectiveness of boards and board committees, and in turn, with better corporate governance. Xie et al. (2003) use audit committee meeting frequency as a proxy for audit committee activeness. They find active audit committees to be associated with a reduced level of discretionary current accruals. Anderson et al. (2004) find that number of audit committee meetings is negatively related with corporate-debt yield spreads. Given the empirical results in literature, we expect the number of audit committee meetings to be positively associated with market reaction to SEOs.

Director Independence

NASDAQ requires directors not to have any relationship with the company that would impair their independence (Rule 4200(a)(15)). [1] Both NYSE and NASDAQ require corporate boards to be dominated by independent directors. The effectiveness of independent directors in monitoring managers has been examined by many researchers in literature (Becker-Blease and Irani, 2008; Ferreira and Laux, 2014; Chaudhuri and Seo, 2010; and Huang and Tompkins, 2010). When it comes to corporate boards, it is believed that independent directors serve as better monitoring mechanisms than insider directors (Fama and Jensen, 1983). This is due to two reasons, (1) independent directors do not have ties that would otherwise compel them to make decisions in favor of the top management, and (2) independent directors care about their reputation as this reputation is what makes them competent in the labor market (Fama, 1980). Independent directors have been related with higher abnormal returns following equity issues (Huang and Tompkins, 2010, Ferreira and Laux, 2014), higher target shareholder gains from tender offers (Cotter et al., 1997), increased firm performance (Schellenger et al., 1989, Daily and Dalton, 1992, Barnhart et al., 1994), lower abnormal accruals (Klein, 2002b), more accurate disclosure and better compliance with law, and in turn lower likelihood of financial fraud (Beasley, 1996, and Gordon, 2007). On the other hand, other researchers posit that although independent by definition, these directors may not always be beneficial (Hermalin and Weisbach, 1998; Vafeas, 2000; and Cohen et al., 2012). Cohen et al. (2012) explain that firms appoint independent directors who are overly sympathetic to management. Thus, following their appointments to the board, firms continue to perform poorly and increase earnings management. Due to the conflicting evidence in literature, we do not have a prediction for the sign of the relationship between board size and market reaction.

CEO and Average Board Age

Anderson et al. (2004) use the mean age of directors on the board to proxy for business experience. On one hand, older directors and CEOs tend to have more business experience, which may benefit the firm. On the other hand, older directors and CEOs might have different incentives. Yim (2013) asserts that career concerns may make younger CEOs reluctant to jeopardize future earnings, and therefore avoid

risky activities. The study finds a negative relationship between CEO age and firm acquisition propensity. Furthermore, it may also be harder to fire older CEOs as CEO age is also correlated with tenure. In the case of the directors, older directors have an established reputation in the labor market. However, younger directors may still be trying to build their reputation. Thus, their monitoring actions might vary considerably. Thus, we do not have a prediction for the signs of average board age and CEO age.

Director Tenure

Usually, director tenure is negatively related to board independence. Vafeas (2003) investigates the relationship between the length of board tenure and outside director independence. The results show that directors with longer tenure usually become too friendly with management to effectively monitor them. Showing that these directors compromise shareholder interests by inflating CEO salaries, he asserts that the presence of directors with twenty or more years of service on the board is a sign of CEO entrenchment.

Given these results in literature, we expect to find a negative impact for tenure and market reaction to SEO announcements.

CEO-Chair Duality

CEO and Chair duality is the situation that occurs when one person is both the CEO and the Chair of a firm. Rechner and Dalton (1991) investigate the financial implications of CEO and Chair duality in firms. Their results show that firms opting against duality outperform those opting for duality. Furthermore, Carter et al. (2003) find that firm value declines when CEOs are also chairs. A more recent study, Huang and Tompkins (2010) analyze the market reaction to SEOs. They find that the market punishes firms with duality. Ceteris paribus, three-day CARs for these firms, are on average 2.42 percent lower than firms opting against duality. Hence, we expect to find a negative relationship between CEO and Chair duality and market reaction to SEOs.

Director Expertise

Director expertise is another issue that has gained increasing attention after the financial scandals. Sarbanes-Oxley Act of 2002 (SOX) requires firms to have audit committees composed of independent directors and to disclose whether there is at least one financial expert on the committee. In support of the legislation, Farber (2005) finds that the existence of financial experts is related negatively with the likelihood of financial fraud. Financial experts are also associated with better financial reporting (Kalbers and Fogarty, 1993), and voluntary corporate disclosures (Gul and Leung, 2004). However, there is also evidence against the benefits of financial experts on boards. Mobbs (2011) asserts that internal financial expertise may not be beneficial. Similarly, Guner et al. (2008) find that financial experts may not always benefit shareholders.

Other than financial expertise, directors may have legal expertise, or they may have both types of expertise. The number of studies focusing on these types of expertise is very limited. Krishnan et al. (2011) find that controlling for accounting expertise, legal experts on audit committees are associated with better financial reporting. In the case of directors with both forms of expertise, the study finds the positive impact to be higher than the existence of a single form of expertise. Given the results in literature, we do not have a prediction for the sign of the relationship between financial expertise and market reaction. On the other hand, we expect to observe a positive relationship between market reaction and legal and joint expertise.

DATA AND VARIABLES

Data

Our initial sample includes all primary equity offerings made in the U.S. market and are listed in the Securities Data Corporation (SDC) database between 1997 and 2009. For an observation to be included in our sample, the firm has to be included in the CRSP database during the announcement year and in

Compustat and RiskMetrics databases in the year prior to the announcement year. Then, we exclude (1) block, rights, shelf, or unit offerings; (2) issuers not listed on the NYSE, Nasdaq, or Amex (Ferreira and Laux, 2014); (3) issues with offer prices below $1; (4) financial firms (SIC codes 6000-6999) and utilities (SIC codes 4910-4940) (Ferreira and Laux, 2014, Kim and Purnanandam, 2014); and (5) firms with missing data. The final sample consists of 109 seasoned equity offerings. Most of our corporate governance data is obtained from RiskMetrics, and the remaining governance data is hand collected using proxy statements available online on the SEC's EDGAR Database. We obtain offer characteristics from the SDC database, and firm characteristics are obtained from CRSP and Compustat databases.

Variables

The variables we use in this study can be grouped under three categories: (1) offer characteristics, (2) firm characteristics, and (3) board characteristics.

Offer Characteristics

1. Cumulative Abnormal Returns (CARs): Data required to calculate cumulative abnormal returns (CARs) is obtained from the CRSP database. We calculate 3-day CARs using the market model and use the mean value as the dependent variable in our regression analyses. In the robustness tests, we also use 2-day and 5-day CARs.
2. SEO Proceeds (Net): Data required to calculate the SEO net proceeds is obtained from Securities Data Corporation (SDC) database. Following Ferreira and Laux (2014), this variable is defined as the difference between SEO gross proceeds and gross spread
3. SEO Relative Size: Data required to calculate the SEO net proceeds is obtained from Securities Data Corporation (SDC) and Compustat databases. This variable is defined as the ratio of SEO net proceeds to market capitalization. The calculation of market capitalization is explained in detail under firm characteristics.

Firm Characteristics

1. Market Capitalization: Data for the calculation of market capitalization is obtained from the Compustat database. Following Reinganum (1983), this variable is calculated by multiplying stock price and the number of common shares outstanding. For the stock price, we use the fiscal year-end stock price.
2. Total Assets: To control for firm size, we gather information regarding the book value of total assets for each observation from the Compustat database.
3. Sales: Information regarding net sales for each observation is obtained from the Compustat database.

Board Characteristics

1. Board Size: Information regarding the number of directors on the board is obtained from the RiskMetrics database. Board size is the number of directors on the board. We take the natural logarithm of this variable.
2. Number of Board Meetings: The frequency of board meetings is hand-collected from proxy statements available online on SEC's EDGAR database. For every firm-year observation, this number corresponds to the meeting frequency in the year prior to the SEO announcement. Following Vafeas (1999) and Xie et al. (2003) we exclude board actions resulting from written consent and count only the number of board meetings in person.
3. Audit Committee Size: Information regarding the number of directors on the audit committee is obtained from the RiskMetrics database. Audit committee size is the number of directors on the committee. We take the natural logarithm of this variable in our main regression analyses.
4. Audit Committee Size to Board Size: This variable is calculated by scaling the audit committee size by board size, to see the impact of the percentage of directors serving on the audit committee.

5. Number of Audit Committee Meetings: The frequency of audit committee meetings is hand-collected from proxy statements available online on SEC's EDGAR database. For every firm-year observation, this number corresponds to the meeting frequency in the year prior to the SEO announcement.
6. Director Independence: Information regarding the independence of directors on the board is obtained from the RiskMetrics database. For each firm-year observation, this variable corresponds to the number of independent directors on the board scaled by the number of directors on the board.
7. CEO Age and Average Board Age: Age data for the board is obtained from the RiskMetrics database. CEO age is the age given in the database. The average board age is the average age of all board members.
8. Average Director Tenure: Information regarding the election year for directors is hand-collected from proxy statements available online on SEC's EDGAR database. For each firm-year observation, tenure is the difference between election year and the year prior to the SEO announcement. The average director tenure is the average tenure of all directors on the board.
9. CEO-Chair Duality: Employment data for CEO and Chair positions is obtained from the RiskMetrics database. Following Xie et al. (2003), CEO-Chair duality is defined as a binary dummy variable that takes the value 1 when both positions are occupied by the same person, and 0 otherwise.
10. Director Expertise: We hand-collect background information for directors from proxy statements available online on SEC's EDGAR database. Then, we identify directors with financial, legal, and joint expertise.

Our financial expertise definition is based upon the categories used by Guner et al. (2008). Accordingly, to be considered a financial expert, a director is required to have working experience in at least one of the following positions:

(1) Commercial bank executive
(2) Investment bank executive
(3) Executive of a non-bank financial institution
(4) Finance executive (CFO, CPA, Accountant, Treasurer, Vice President of Finance)
(5) Finance professor (including Finance, Economics, Accounting, and Business)

For legal expertise definition, we follow Krishnan et al. (2011). Accordingly, to be considered a financial expert, a director is required to possess the following attributes:

(1) Law school degree, such as JD, L.L.M., or L.L.D.
(2) Working experience as a lawyer at a law firm or as a legal counsel

Directors who possess at least one attribute from each expertise classification are classified as joint experts.

After identifying the expert directors, we create our expertise variables. For each firm-year observation, we count the number of financial, legal, and joint expert directors on the board for that year. Then we scale each variable by the number of directors on the board and find the percentage of each expertise type on the board. We also differentiate between internal and external expertise. In a similar manner, we scale each external expertise figure by the number of directors on the board to find the percentage of each expertise type on the board.

11. SOX Dummy: We use a dummy variable to identify the pre-SOX and post-SOX periods. The SOX dummy takes the value 0 for the period between 1997 and 2002, and it takes the value 1 for the period between 2003 and 2009.

Table 1 presents descriptive statistics. Panel A shows the results for offer characteristics. The average value of 3-day CAR is -3.38%, while the average values of 2-day and 5-day CARs are -3.27% and -4.13%, respectively. Panel B shows the results for firm characteristics. For an average firm in our sample market capitalization is $2,838,100,000, total assets is $3,948,700,000, and sales is $3,377,200,000. Panel C shows the results for board characteristics. The average board size for our sample is around 8. The largest board is composed of 15 members, and the smallest board is composed of 4 members. The highest

numbers of expert directors on a board with financial expertise is 8, legal expertise is 3, and joint expertise is 1. In the case of external expertise, highest numbers of external expert directors on a board with financial expertise is 7, legal expertise is 2, and joint expertise is 1.

TABLE 1
DESCRIPTIVE STATISTICS

This table presents descriptive statistics. Panel A shows the results for offer characteristics. Panel B shows the results for firm characteristics. Panel C shows the results for board characteristics.

Panel A. Offer Characteristics					
Variable	**Mean**	**Median**	**Std. Dev.**	**Min**	**Max**
CAR 2-day	-0.0327	-0.0300	0.0475	-0.2550	0.0964
CAR 3-day	-0.0338	-0.0293	0.0578	-0.2840	0.0966
CAR 5-day	-0.0413	-0.0282	0.0800	-0.5210	0.1350
SEO Proceeds (Net)	242.5942	118.6088	428.2207	17.3888	2,696.3650
SEO Relative Size	0.1899	0.1498	0.1477	0.0139	0.7889
Panel B. Firm Characteristics					
Variable	**Mean**	**Median**	**Std. Dev.**	**Min**	**Max**
Market Capitalization (millions)	2,838.1000	788.9300	7,468.6000	75.0370	64,259.0000
Total Assets (millions)	3,948.7000	777.8900	16,422.0000	75.5180	165,282.0000
Sales (millions)	3,377.2000	667.7200	12,570.0000	0.5330	118,298.0000
Panel C. Board Characteristics					
Variable	**Mean**	**Median**	**Std. Dev.**	**Min**	**Max**
Board Size	8.5413	9.0000	2.3980	4.0000	15.0000
Board Meetings	6.7431	6.0000	2.8816	1.0000	18.0000
Audit Committee Size	3.2569	3.0000	1.0488	1.0000	8.0000
Audit Committee Meetings	3.7339	3.0000	2.4670	1.0000	11.0000
Independent Directors	4.6330	4.0000	2.3557	0.0000	11.0000
CEO Age	53.1280	53.0000	8.6539	35.0000	77.0000
Average Board Age	57.1210	57.8570	4.9056	46.4000	68.5000
Average Director Tenure	8.4880	8.4444	3.9991	2.4000	19.2220
CEO-Chairman Duality	0.6330	1.0000	0.4842	0.0000	1.0000
Financial Experts	2.7064	2.0000	1.7230	0.0000	8.0000
Legal Experts	0.4679	0.0000	0.7014	0.0000	3.0000
Joint Experts	0.0183	0.0000	0.1348	0.0000	1.0000
External Financial Experts	1.5872	1.0000	1.3554	0.0000	7.0000
External Legal Experts	0.2018	0.0000	0.4256	0.0000	2.0000
External Joint Experts	0.0092	0.0000	0.0958	0.0000	1.0000

RESEARCH METHODS

To analyze the relationship between the SEO announcement returns and corporate governance characteristics in a regression framework, we regress cumulative abnormal returns on the rest of the corporate governance variables. We also control for offer characteristics and firm characteristics. We estimate various specifications based on the model below:

$$CAR = f(SEO\ net\ proceeds, SEO\ relative\ size, Market\ capitalization, Total\ assets, Sales, Audit\ committee\ size\ to\ board\ size, \ln(Board\ size), Board\ meetings, \ln(Audit\ committee\ size), Audit\ committee\ meetings, \%Independent\ Directors, CEO\ age, Average\ board\ age, Average\ Director\ Tenure, CEO - Chair\ duality\ dummy \%Financial\ Experts, \%Legal\ Experts, \%Joint\ Experts, SOX\ dummy) \quad (1)$$

We use the ordinary least squares (OLS) regression method and use robust standard errors corrected for clustering at the industry level in order to allow for heteroskedasticity and industry fixed effects (Ferreira and Laux, 2014).

Table 2 presents the results for our regression analyses. The dependent variable is 3-day CARs calculated using the market model. Model 1 includes all of our variables. Model 2 specifically tests the impact of financial expertise on CARs. Model 3 is focused on testing the impact of legal expertise on CARs. Model 4 tests the impact of joint expertise on CARs. Looking at the results, financial expertise does not seem to have a significant impact on CARs. This result is in line with Guner et al. (2008), and Mobbs (2011). In the next step, we will differentiate and test the impact of external expertise separately. In the case of legal expertise, having legal experts on the board seems to have a positive significant effect on the market reaction to SEOs. Similar to the results for financial expertise, joint expertise does not seem to have a significant impact on CARs.

Among other corporate governance characteristics, audit committee size to board size, ln(board size), number of board meetings, ln(audit committee size), average board age and average director tenure seem to be significantly related to CARs and the results hold for all models.

The number of board meetings, ln(audit committee size), have signs different than our expectations meaning that they have a negative impact on CARs. In the case of the number of board meetings, our results suggest that there is a negative relationship between the number of board meetings and CARs. Similarly, Vafeas (1999) finds an inverse relationship between firm value and board meeting frequency. He explains that monitoring in the form of frequent board meetings is a costly activity, and there are other monitoring mechanisms used by the firms. However, following periods of poor performance firms will increase board activity despite the cost. In other words, he explains that corporate boards become more active in the presence of problems.

In the case of ln(audit committee size), we find a negative relationship between this variable and CARs. Xie et al. (2003) find an insignificant relationship between discretionary current accruals and audit committee size. Taken together, these results could imply that it is not the size of the audit committee but the ratio of audit committee size to board size that matters. In our case, we use this variable in the regression, and it is positively related to CARs.

TABLE 2
DIRECTORS WITH EXPERTISE

This table presents the results for the regression analyses. We use ordinary least squares regression method, and robust standard errors corrected for clustering at industry level in order to allow for heteroskedasticity and industry fixed effects. ***, **, * denote significance at 1%, 5%, and 10% level respectively.

	Exp. Sign	Model 1		Model 2		Model 3		Model 4	
Parameter		**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**
Intercept		-0.1855	-1.39	-0.1863	-1.33	-0.1895	-1.36	-0.1908	-1.25
SEO proceeds (Net)		0.0000	-0.69	0.0000	-0.84	0.0000	-0.73	0.0000	-0.86
SEO relative size		0.0346	0.86	0.0339	0.91	0.0317	0.84	0.0311	0.8
Market capitalization (millions)		0.0000	-0.51	0.0000	-0.6	0.0000	-0.59	0.0000	-0.65
Total assets (millions)		0.0000	2.59**	0.0000	2.71**	0.0000	2.79***	0.0000	2.83***
Sales (millions)		0.0000	-7.45***	0.0000	-6.85***	0.0000	-8.08***	0.0000	-7.6***
Audit committee size to board size	+	0.2821	2.29**	0.2797	2.08**	0.2895	2.27**	0.2868	2.04*
Ln(board size)	?	0.1627	2.95***	0.1550	2.54**	0.1657	2.94***	0.1582	2.53**
Number of board meetings	+	-0.0057	-2.19**	-0.0055	-1.98*	-0.0057	-2.25**	-0.0055	-1.99*
Ln(audit committee size)	+	-0.1053	-2.24**	-0.1019	-2.01*	-0.1066	-2.21**	-0.1034	-1.95*
Number of audit committee meetings	+	0.0000	0	0.0016	0.76	0.0001	0.07	0.0016	0.75
Percentage of independent directors	?	0.0125	0.42	-0.0003	-0.01	0.0094	0.35	-0.0025	-0.1
Ceo age	?	0.0004	0.72	0.0005	0.93	0.0005	0.86	0.0006	1.06
Average board age	?	-0.0028	-2.27**	-0.0025	-1.79*	-0.0029	-2.45**	-0.0025	-1.82*
Average director tenure	-	-0.0018	-1.89*	-0.0015	-1.15	-0.0019	-1.98*	-0.0015	-1.21
CEO-Chairman duality	-	-0.0092	-0.81	-0.0088	-0.71	-0.0090	-0.78	-0.0087	-0.68
Percentage of financial experts	?	0.0126	0.66	0.0107	0.61				
Percentage of legal experts	+	0.1646	3.58***			0.1563	3.96***		
Percentage of joint experts	+	-0.1395	-1.09					0.1248	1.37
SOX dummy		-0.0211	-1.23	-0.0332	-1.94*	-0.0227	-1.31	-0.0341	-1.99*
R-square		0.3940		0.3430		0.3918			

In the next step, we differentiate between internal and external expertise and look at the impact of external expertise on 3-day CARs. Table 3 presents the results for regression analyses using external expert directors. The results are consistent with the results in Table 2, except for the fact that the average director tenure is not significant in this case. In the case of external expertise, external legal experts seem to mitigate the negative market reaction to SEOs.

TABLE 3
EXTERNAL EXPERTISE

This table presents the results for the regression analyses concerning external expertise. We use ordinary least squares (OLS) regression method, and robust standard errors corrected for clustering at industry level in order to allow for heteroskedasticity and industry fixed effects. ***, **, * denote significance at 1%, 5%, and 10% level respectively.

	Exp. Sign	Model 1		Model 2		Model 3		Model 4	
Parameter		**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**
Intercept		-0.1751	-1.35	-0.2036	-1.64	-0.1625	-1.13	-0.1877	-1.27
SEO proceeds (Net)		0.0000	-0.81	0.0000	-0.79	0.0000	-0.89	0.0000	-0.86
SEO relative size		0.0373	0.99	0.0384	1.07	0.0295	0.79	0.0311	0.77
Market capitalization (millions)		0.0000	-0.46	0.0000	-0.62	0.0000	-0.51	0.0000	-0.65
Total assets (millions)		0.0000	2.35**	0.0000	2.62**	0.0000	2.61**	0.0000	2.81***
Sales (millions)		0.0000	-6.58***	0.0000	-6.45***	0.0000	-8.31***	0.0000	-7.49***
Audit committee size to board size	+	0.2632	2.25**	0.2924	2.41**	0.2607	2.05**	0.2878	2.04*
Ln(board size)	?	0.1514	2.88***	0.1615	3.00***	0.1494	2.58**	0.1586	2.52**
Number of board meetings	+	-0.0058	-2.02*	-0.0057	-2.07**	-0.0057	-1.99*	-0.0056	-2.01*
Ln(audit committee size)	+	-0.0989	-2.23**	-0.1081	-2.26**	-0.0958	-2.03*	-0.1041	-1.97*
Number of audit committee meetings	+	0.0008	0.39	0.0014	0.71	0.0009	0.46	0.0016	0.74
Percentage of independent directors	?	-0.0232	-0.84	-0.0166	-0.61	-0.0115	-0.42	-0.0031	-0.12
Ceo age	?	0.0005	0.96	0.0006	1.17	0.0004	0.85	0.0005	1.03
Average board age	?	-0.0025	-2.11**	-0.0024	-1.85*	-0.0026	-2.21**	-0.0026	-1.91*
Average director tenure	-	-0.0014	-1.32	-0.0015	-1.27	-0.0014	-1.23	-0.0015	-1.15
CEO-Chairman duality	-	-0.0073	-0.75	-0.0111	-0.98	-0.0048	-0.44	-0.0084	-0.66
Percentage of external financial experts	?	0.0453	1.11	0.0492	1.36				
Percentage of external legal experts	+	0.2438	2.88***			0.2476	2.85***		
Percentage of external joint experts	+	-0.1995	-0.83					0.1668	0.78
SOX dummy		-0.0274	-1.61	-0.0356	-2.04*	-0.0264	-1.61	-0.0343	-1.99*
R-square		0.3891		0.3517		0.3821		0.3431	

ROBUSTNESS TESTS

To test the sensitivity of our results, we repeat our tests for CARs calculated for different event windows. These include 2-day and 5-day CARs. Table 4 presents robustness test results for our main regression analyses. In panel A, the dependent variable is 2-day CARs calculated using the market model, and in panel B, the dependent variable is 5-day CARs calculated using the market model. In both panels, Model 1 includes all of our variables. Model 2 specifically tests the impact of financial expertise on CARs. Model 3 is focused on testing the impact of legal expertise on CARs. Model 4 tests the impact of joint expertise on CARs.

TABLE 4
ROBUSTNESS: DIRECTORS WITH EXPERTISE

This table presents the results for the robustness analyses. ***, **, * denote significance at 1%, 5%, and 10% level respectively.

Panel A. CAR 2-day

	Exp. Sign	Model 1		Model 2		Model 3		Model 4	
Parameter		**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**
Intercept		-0.2061	-2.21**	-0.1904	-2.04*	-0.1919	-2.39**	-0.2093	-2.37**
SEO proceeds (Net)		0.0000	-1.52	0.0000	-1.61	0.0000	-1.54	0.0000	-1.55
SEO relative size		0.0090	0.29	0.0141	0.48	0.0133	0.46	0.0081	0.27
Market capitalization (millions)		0.0000	-0.08	0.0000	-0.05	0.0000	-0.03	0.0000	-0.12
Total assets (millions)		0.0000	2.48**	0.0000	2.41**	0.0000	2.50**	0.0000	2.57**
Sales (millions)		0.0000	-7.29***	0.0000	-6.83***	0.0000	-8.13***	0.0000	-8.16***
Audit committee size to board size	+	0.2486	3.02***	0.2372	2.91***	0.2404	3.01***	0.2493	2.93***
Ln(board size)	?	0.1337	4.31***	0.1277	4.05***	0.1312	4.15***	0.1321	4.09***
Number of board meetings	+	-0.0051	-2.63**	-0.0051	-2.6**	-0.0051	-2.68**	-0.0050	-2.59**
Ln(audit committee size)	+	-0.1066	-2.88***	-0.1027	-2.77***	-0.1044	-2.94***	-0.1062	-2.8***
Number of audit committee meetings	+	-0.0006	-0.35	-0.0002	-0.11	-0.0007	-0.35	-0.0003	-0.14
Percentage of independent directors	?	0.0127	0.71	0.0119	0.70	0.0152	0.92	0.0093	0.55
Ceo age	?	0.0005	1.02	0.0004	0.92	0.0004	0.99	0.0005	1.10
Average board age	?	-0.0011	-0.92	-0.0012	-0.95	-0.0013	-1.22	-0.0010	-0.89
Average director tenure	-	-0.0019	-1.89*	-0.0018	-1.69	-0.0019	-1.93*	-0.0018	-1.77*
CEO-Chairman duality	-	0.0030	0.32	0.0033	0.36	0.0032	0.35	0.0030	0.32
Percentage of financial experts	?	-0.0006	-0.03	0.0031	0.14				
Percentage of legal experts	+	0.0424	0.95			0.0525	1.20		
Percentage of joint experts	+	0.1640	1.59					0.2249	2.93***
SOX dummy		-0.0120	-0.78	-0.0139	-0.91	-0.0104	-0.66	-0.0152	-1.01
R-square		0.3315		0.3202		0.3284		0.3265	

Panel B. CAR 5-day									
	Exp. Sign	Model 1		Model 2		Model 3		Model 4	
Parameter		Estimate	t Value	Estimate	t Value	Estimate	t Value	Estimate	t Value
Intercept		-0.3042	-2.65**	-0.2965	-2.47**	-0.2831	-2.07**	-0.2966	-2.37**
SEO proceeds (Net)		0.0000	-0.11	0.0000	-0.21	0.0000	-0.21	0.0000	-0.28
SEO relative size		0.0132	0.28	0.0155	0.34	0.0155	0.34	0.0115	0.25
Market capitalization (millions)		0.0000	-0.73	0.0000	-0.72	0.0000	-0.81	0.0000	-0.89
Total assets (millions)		0.0000	2.31**	0.0000	2.25**	0.0000	2.56**	0.0000	2.63**
Sales (millions)		0.0000	-5.83***	0.0000	-6.39***	0.0000	-4.96***	0.0000	-5.43***
Audit committee size to board size	+	0.2845	3.18***	0.2776	3.02***	0.2845	2.7**	0.2902	3.16***
Ln(board size)	?	0.1631	3.54***	0.1566	3.5***	0.1649	3.16***	0.1628	3.6***
Number of board meetings	+	-0.0046	-1.55	-0.0045	-1.45	-0.0047	-1.6	-0.0045	-1.46
Ln(audit committee size)	+	-0.1201	-2.89***	-0.1167	-2.86***	-0.1185	-2.84***	-0.1187	-2.92***
Number of audit committee meetings	+	0.0041	0.89	0.0050	1.27	0.0044	0.93	0.0052	1.28
Percentage of independent directors	?	-0.0085	-0.25	-0.0146	-0.44	-0.0106	-0.34	-0.0194	-0.63
Ceo age	?	0.0005	0.62	0.0005	0.62	0.0005	0.73	0.0006	0.81
Average board age	?	-0.0013	-0.98	-0.0012	-0.81	-0.0017	-1.25	-0.0014	-0.89
Average director tenure	-	-0.0003	-0.11	0.0000	-0.01	-0.0004	-0.19	-0.0002	-0.1
CEO-Chairman duality	-	0.0215	1.37	0.0218	1.39	0.0225	1.4	0.0225	1.4
Percentage of financial experts	?	0.0287	0.92	0.0297	1				
Percentage of legal experts	+	0.0939	0.86			0.0959	0.94		
Percentage of joint experts	+	0.0224	0.07					0.2134	0.84
SOX dummy		-0.0411	-0.91	-0.0474	-1.23	-0.0414	-0.91	-0.0492	-1.25
R-square		0.2153		0.2057		0.2118		0.2041	

Table 5 presents robustness test results for our regression analyses focusing on external expertise. Similar to table 4, in panel A, the dependent variable is 2-day CARs calculated using the market model, and in panel B, the dependent variable is 5-day CARs calculated using the market model. Looking at the results without focusing on external expertise, only the relationship between joint expertise and 2-day CARs seems to be significantly positive. However, when we differentiate external expertise, the results in Table 5 suggest that external legal expertise seems to be positively related to 2-day CARs, and in the case of 5-day CARs, external joint expertise seems to have a significantly positive impact.

TABLE 5
ROBUSTNESS: EXTERNAL EXPERTISE

This table presents the results for the robustness analyses. ***, **, * denote significance at 1%, 5%, and 10% level respectively.

Panel A. CAR 2-day

	Exp. Sign	Model 1		Model 2		Model 3		Model 4	
Parameter		**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**	**Estimate**	**t Value**
Intercept		-0.1854	-2.23**	-0.1925	-2.14**	-0.1794	-2.38**	-0.1997	-2.28**
SEO proceeds (Net)		0.0000	-1.59	0.0000	-1.56	0.0000	-1.62	0.0000	-1.57
SEO relative size		0.0088	0.3	0.0149	0.53	0.0115	0.4	0.0097	0.31
Market capitalization (millions)		0.0000	-0.01	0.0000	-0.06	0.0000	0.03	0.0000	-0.11
Total assets (millions)		0.0000	2.4**	0.0000	2.47**	0.0000	2.37**	0.0000	2.55**
Sales (millions)		0.0000	-7.07***	0.0000	-6.69***	0.0000	-8.5***	0.0000	-7.94***
Audit committee size to board size	+	0.2326	2.93***	0.2393	2.87***	0.2268	3.01***	0.2473	2.9***
Ln(board size)	?	0.1265	4***	0.1289	3.88***	0.1245	4.11***	0.1315	4***
Number of board meetings	+	-0.0051	-2.61**	-0.0051	-2.6**	-0.0051	-2.63**	-0.0051	-2.63**
Ln(audit committee size)	+	-0.1015	-2.98***	-0.1037	-2.75**	-0.0996	-3.09***	-0.1061	-2.8***
Number of audit committee meetings	+	-0.0006	-0.32	-0.0002	-0.11	-0.0006	-0.31	-0.0002	-0.14
Percentage of independent directors	?	0.0055	0.28	0.0091	0.48	0.0061	0.36	0.0091	0.53
Ceo age	?	0.0004	0.92	0.0005	0.99	0.0004	0.92	0.0005	1.01
Average board age	?	-0.0011	-1.05	-0.0012	-1.05	-0.0012	-1.14	-0.0011	-1
Average director tenure	-	-0.0017	-1.68	-0.0018	-1.72*	-0.0017	-1.72*	-0.0018	-1.67
CEO-Chairman duality	-	0.0055	0.67	0.0030	0.34	0.0054	0.63	0.0035	0.38
Percentage of external financial experts	?	-0.0020	-0.09	0.0082	0.36				
Percentage of external legal experts	+	0.1282	2.1**			0.1331	2.28**		
Percentage of external joint experts	+	0.1286	0.87					0.2201	1.36
SOX dummy		-0.0109	-0.72	-0.0143	-0.92	-0.0101	-0.7	-0.0151	-0.98
R-square		0.338		0.3205		0.3372		0.3227	

Panel B. CAR 5-day									
	Exp. Sign	Model 1		Model 2		Model 3		Model 4	
Parameter		Estimate	t Value	Estimate	t Value	Estimate	t Value	Estimate	t Value
Intercept		-0.3355	-3.15***	-0.3166	-2.95***	-0.2749	-2.14**	-0.3159	-2.47**
SEO proceeds (Net)		0.0000	-0.11	0.0000	-0.17	0.0000	-0.32	0.0000	-0.19
SEO relative size		0.0114	0.26	0.0236	0.54	0.0168	0.37	0.0014	0.03
Market capitalization (millions)		0.0000	-0.96	0.0000	-0.8	0.0000	-0.81	0.0000	-1.03
Total assets (millions)		0.0000	2.59**	0.0000	2.4**	0.0000	2.56**	0.0000	2.82***
Sales (millions)		0.0000	-5.18***	0.0000	-6.67***	0.0000	-4.39***	0.0000	-5.19***
Audit committee size to board size	+	0.3192	3.51***	0.2987	3.54***	0.2766	2.71**	0.3136	3.19***
Ln(board size)	?	0.1750	4.35***	0.1681	4.33***	0.1581	3.26***	0.1714	3.62***
Number of board meetings	+	-0.0049	-1.56	-0.0049	-1.53	-0.0046	-1.48	-0.0047	-1.54
Ln(audit committee size)	+	-0.1323	-2.67**	-0.1261	-2.84***	-0.1146	-2.66**	-0.1274	-2.86***
Number of audit committee meetings	+	0.0049	1.14	0.0050	1.27	0.0052	1.17	0.0050	1.25
Percentage of independent directors	?	-0.0421	-1.39	-0.0421	-1.43	-0.0183	-0.52	-0.0259	-0.88
Ceo age	?	0.0008	1.01	0.0008	1.04	0.0006	0.73	0.0006	0.83
Average board age	?	-0.0011	-0.76	-0.0013	-0.87	-0.0015	-1.04	-0.0013	-0.83
Average director tenure	-	0.0000	-0.02	-0.0001	-0.07	-0.0002	-0.08	0.0000	-0.01
CEO-Chairman duality	-	0.0197	1.44	0.0186	1.32	0.0232	1.59	0.0232	1.44
Percentage of external financial experts	?	0.0619	1.06	0.0799	1.47				
Percentage of external legal experts	+	-0.0114	-0.05			0.0276	0.14		
Percentage of external joint experts	+	0.5279	1.49					0.7619	2.11**
SOX dummy		-0.0538	-1.17	-0.0515	-1.28	-0.0472	-1.07	-0.0520	-1.3
R-square		0.2196		0.2153		0.2023		0.2128	

CONCLUSION

Our results show that among other corporate governance characteristics, the percentage of directors on the audit committee, board size, number of board meetings, audit committee size, average board age, and average director tenure seem to be significantly related to market reaction. In the case of director expertise, the market reacts more positively to SEO announcements by firms with legal experts or joint experts on their boards. In other words, legal and joint expertise can mitigate the negative impact of adverse selection and agency problems by decreasing the perceived information asymmetry. These results imply that legal or joint experts can reduce a firm's cost of raising equity capital.

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ENDNOTE

1. Source: http://www.sec.gov/rules/other/nasdaqllcf1a4_5/nasdaqllcamendrules4000.pdf

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