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THE TRIAD THAT BINDS: FINANCIAL ANALYSTS AND BOARD INTERLOCKS

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THE TRIAD THAT BINDS:
HOW COMMON FINANCIAL ANALYST COVERAGE REVEALS DIFFERENT MOTIVATIONS OF CORPORATE LEADERS TO MAINTAIN BOARD INTERLOCKS

A substantial body of research has examined board of director interlocks, where a top executive affiliated with one organization sits on the board of directors of another organization as an outside director (Mizruchi, 1996). As a unique formal mechanism linking individual top managers of large corporations, board interlock has been suggested as a particularly fruitful research arena to examine the social embeddedness perspective that economic action is influenced by social structure (Davis & Greve, 1997; Galaskiewicz & Wasserman, 1989; Palmer et al., 1986). Despite this research attention, prior research on board interlock has focused on the relational embeddedness of interlocks at the dyad level, paying less attention to structural embeddedness, i.e., how the board interlock itself is linked with other external ties of the focal firm CEO and the outside directors. For instance, although corporate leaders' interaction with financial analysts and the influence of financial analysts on corporate strategies have been widely documented in the literature (Rao & Sivakumar, 1999; Useem, 1999; Zuckerman, 2000), fewer studies have attempted to investigate i) structural embeddedness of board interlocks in the financial analysts' firm coverage ties (e.g. how the individual executive-analyst ties overlap between the focal CEO and the interlocked directors) and ii) whether and how such structural embeddedness influences the maintenance of these two important networks.

In this study, I examine how the maintenance of board interlock ties can be influenced by the positivity or negativity of financial analysts' stock recommendations regarding a focal firm CEO and the outside directors representing the interlocked company. Drawing on the theories of triangular ties in structural sociology and social psychology (Coleman, 1988; Heider, 1958; Simmel, 1950), I conceptualize the relationship between financial analysts, a focal firm CEO, and the outside director as a triad. Two distinct types of triads emerge. In an *open triad*, the focal firm CEO and the outside director (hereafter 'the interlock dyad') are followed by different, non-overlapping sets of financial analysts. In a *closed triad*, the interlock dyad is followed by the same, overlapping sets of financial analysts. One of the most important insights suggested in this literature is that the structural transformation from the open to the closed triad (i.e. the presence of a common third-party other) can alter individual preferences for dyadic affiliation from finding *better* tie partners to finding *similar* partners through enhanced social comparison (Festinger, 1954), and cognitive dissonance (Heider, 1958). Indeed, the theoretical argument advanced in this study and the supportive empirical findings suggest that when the interlock dyad is embedded in an open triad, negative analyst stock recommendations regarding either the focal firm CEO or the outside director lead to a higher likelihood of interlock breakage. In a closed triad, however, it is the dissimilarity of analyst stock recommendations of the interlock dyad that predicts a higher likelihood of interlock breakage. Negative stock recommendations regarding the focal firm CEO in a closed triad are found to decrease the likelihood of interlock breakage when the outside director of the interlocked company also receives similarly negative recommendations. Furthermore, this structural effect of common financial analyst coverage on interlock maintenance is also verified by strong empirical support for two moderating effects –i) structural dependence of the interlock dyad on financial analyst firm coverage and ii) demographic similarity of the interlock dyad. Overall, these findings provide insights into how the different types of structural closure of financial analyst coverage of the interlock dyad can affect the maintenance of their board interlock ties by influencing different dyadic affiliation motives of corporate leaders. In the following sections, I provide a brief background on the study before summarizing the theoretical framework and hypotheses.

FINANCIAL ANALYST STOCK RECOMMENDATIONS AND BOARD INTERLOCKS

Financial analysts guide investor behavior by interpreting information and providing summary statements about corporate finance, strategic decisions, and industry trends of the firms they follow (Hayward & Boeker, 1998; Rao et al., 2001; Zuckerman, 2000). Summary statements highlighting future prospects of the covered firm include recommendations about whether to buy, hold, or sell the firm's stock. Apart from the impact on a firm's market valuation and its capacity to raise capital, changes in analyst stock coverages and recommendations are shown to ultimately influence a firm's corporate strategy as well as career prospects of the firm's top executives (Puffer & Weintrop, 1991; Zuckerman, 2000). For instance, Puffer et al. (1991) show that, after accounting for other conventional measures of firm performance, a CEO has a greater likelihood of dismissal when reported earnings fall short of analysts' earnings forecasts. Given this wide-ranging impact of financial analysts, it is not surprising that the relationships between analysts and corporate leaders are characterized not only by objective evaluation of firm value but more importantly by sociopolitical influence. Indeed, CEOs have been shown to i) engage in negative social reciprocity toward analysts who issue negative stock recommendations for their firms (Westphal & Clement, 2008), ii) respond to analyst questions during corporate conference calls in a discriminatory manner to prefer analysts offering more positive stock ratings of their firms (Mayew, 2008), and even iii) invite as outside directors former analysts who had previously given positive evaluations of their companies (Cohen et al., 2008). These incidents reveal how much attention corporate leaders pay to the analysts who follow their firms and the significance of analyst stock recommendations in executive-analyst relationships. Building on this stream of research, I examine how the ties between analysts and executives can function as third-party indirect ties for a focal firm CEO and the outside director representing an interlocked company. I also consider how tie content (i.e., the positivity or negativity of stock recommendations issued by the analyst) can influence different motivations of a focal firm CEO and the outside director to maintain their board interlock ties, depending on different triad closure structures between the interlock dyad and the financial analysts' firm coverage ties.

THEORY AND HYPOTHESES

Open triad and the instrumental motivation to avoid interlock partners with negative stock recommendations

In an open triad where a focal firm CEO and the outside director representing the interlocked company are followed by different, non-overlapping sets of financial analysts, the interlock dyad members will interpret the overall positivity or negativity of each other's stock recommendation as their interlock partner's quality signal received from the investor community. The open vs. closed triad is better conceptualized in terms of the concept 'structural equivalence' (Lorrain & White, 1971). Two social actors are structurally equivalent when they interact with the same set of alters. Research has shown that structurally equivalent actors function as social referents, providing a basis for social comparison, mutual monitoring, and competition (Burt, 1987). Thus, when a focal firm CEO and the interlocked director are followed by the same set of financial analysts, i.e. in a closed triad, the two executives become structurally equivalent and serve as obvious social comparison peers to each other in understanding the relative positivity of their own stock recommendations. In an open triad, however, the motivation to understand the interlock partner as basis of social comparison for the focal actor might be less salient.

Thus, the decision to maintain an interlock dyad in an open triad is more likely to be influenced by the dynamics of the instrumental social affiliation to prefer a better performing alter over worse performing counterparts in terms of stock recommendations as quality signal. While prior studies on board interlocks provide less definitive insights into the relationship between firm performance and board interlocks (Davis, 1993; 2004), multiple studies on board composition have suggested that corporate executives seek interlock partners that provide positive signals to the investor community (Higgins & Gulati, 2003; Stuart et al., 1999) and avoid partners that provide negative signals (Kang, 2008). This is the classical social influence tactic of basking in the reflected glory of accomplished others and distancing oneself from less attractive counterparts. In effect, individuals use social affiliation as an instrument to take advantage of the evaluative generalization occurring in the minds of a third party evaluator (Cialdini et al., 1999; Podolny, 2005). Therefore, when the interlocked company receives negative stock recommendations, the outside director representing the interlocked company may be less likely to be retained on the focal company board. Similarly, when the focal company receives negative stock recommendations, the focal company CEO will be less likely to be retained on the interlocked company's board. This line of reasoning leads to the following hypothesis.

H1: Negative financial analyst stock recommendations regarding either the focal company or the interlocked company are more likely to lead to the breakage of board interlock ties than when both the companies receive positive recommendations.

Closure of the triad and intensification of the cognitive motivation to maintain interlock partners with similar stock recommendations

This section builds on the distinction between open and closed triads to consider how closure between the interlock dyad and financial analysts fundamentally shifts the dyadic affiliation motive from an instrumental motive to a cognitive one, which in turn alters the executives' decision to maintain different types of board interlock partners. Theories of social comparison and triangular balance suggest that a focal CEO or the interlocked director will maintain interlock partners with similar stock recommendations and avoid tie partners with dissimilar stock recommendations.

Closure of a triad The formation and maintenance of dyadic ties embedded in a triangular relationship has been extensively studied in social psychology, structural sociology, and management (Heider, 1958; for a review Kilduff & Krackhardt, 2008; Simmel, 1950). Emphasizing the significance of the transition from dyadic to triadic social structure, Simmel (1950:136) wrote that the transition can be characterized by "intensification of (dyadic) relations by a third element, or by a social framework that transcends both members of the dyad". In the present study, a closed triad emerges when a focal firm CEO and the outside director representing the interlocked company are followed by a common set of financial analysts. One of the most important features of such a structural transformation from an open to closed triad is that the emergence of a third-party other can alter individual preferences for dyadic affiliation through enhanced social comparison between dyad members (Burt, 2009). Thus, a focal firm CEO or outside director with better analyst stock recommendations in a closed triad will serve as source of relative deprivation for the 'outperformed' executive (Festinger, 1954; Stouffer et al., 1949), rather than source of positive status spillover. Thus, upon receiving negative stock recommendations, the CEO may prefer outside directors with similarly negative stock recommendations to their counterparts with positive stock recommendations who will make the focal CEO look worse by comparison. Indeed, several studies in top management team literature suggest that social comparisons can prevail among corporate executives especially when performance evaluation is highlighted (O'Reilly et al., 1988; Porac et al., 1999). Moreover, the focal firm CEO and the outside director of the interlocked company would function as direct anchoring points for each other in the common financial analysts' firm evaluation process (Kahneman et al., 1982). When such social comparison by a common third-party evaluator is salient, people anticipate the pain of falling behind their social comparison referent and try to avoid such a comparison situation. This demonstrates that in closed triads, the relative similarity or dissimilarity of stock recommendations forms the basis of social comparison influencing the interlock partner's decision to maintain the tie.

Balance of the triad Theories of interpersonal affiliations in social psychology also explore the "structural-dynamic character of human cognition" in social life (Simon & Holyoak, 2002), highlighting relational components such as liking between dyad members (sentiment) influenced by a third-party. The main proposition of the early balance theorists is that individual efforts to maintain cognitive consistency in social affiliations lead to change in belief, attitude, and behavior (Heider, 1946; Newcomb, 1953). For instance, if a focal person P likes some object O (positive relationship), P also likes the alter X (positive sentiment), and P perceives X's dislike of the object O (negative relationship), the triangular relationship P-O-X is 'unbalanced', which creates cognitive dissonance (members feel 'uncomfortable') because the focal person P's cognitive consistency towards the alter X and the object O is violated. Balance theory further predicts that "if no balanced state exists, then forces towards this state will arise (Heider, 1946:107-109). As a result, P may feel obliged to dislike O or try to influence O to like X. Eventually, the dyadic relationship between P and O could become more fragile. The transitivity of relationship content in a triangular relationship is also illustrated by the famous Arab proverb, "the enemy of my enemy is my friend or the enemy of my friend is my enemy". Indeed, the proverb indicates that the presence of two negative relationships toward the common third-party other enhances the strength of a dyad embedded in a triad. Conversely, conflicting relationships (e.g. combination of positive and negative relationships) toward the common third-party other will tend to divide the embedded dyad.

From this balance theoretic perspective, dissimilar stock recommendations regarding one of the focal and the interlocked companies from the same financial analyst may indicate either i) the absence of positive stock recommendations to one of the dyad members (cognitive unit as a third-party object) or ii) the negativity of the interpersonal relationship between the analyst and the interlock dyad member who received negative recommendation (cognitive unit as a third-party person). In either case, balance theory predicts that imbalance in stock recommendations between the focal CEO and the outside director can trigger cognitive dissonance in their relations, which in turn makes the board interlock less likely to persist. For instance, contrasting stock recommendations from the common financial analyst may yield less positive affect and relational tension between the focal CEO and the outside director and make it more difficult to establish a cooperative relationship in the boardroom. On the other hand, similar stock recommendations may enhance interpersonal affect and induce attitudinal congruence towards the common financial analyst. Indeed, the case of 'negative balance' where both the focal CEO and the interlocked director receive similarly negative stock recommendations, may enhance interpersonal affect between the executives and even induce them to establish a 'common front' against the financial analyst who holds a negative opinion of their firm performance and strategic capabilities. Thus, the theories of social comparison and triangular balance suggest that, in a closed triad where the common financial analyst follows both a focal firm CEO and the interlocked director, it is not the positivity but the similarity of stock recommendations of the interlock partners that maintains the board interlock ties. Therefore,

H2: The coverage of the focal and the interlocked companies by the same financial analyst a) increases the likelihood of board interlock breakage when both the companies receive unbalanced (dissimilar) stock recommendations, and b) decrease the likelihood of board interlock breakage when both the companies receive balanced (similar) stock recommendations.

<u>Structural and social psychological moderators of the triad closure effect on interlock tie maintenance</u>

The effect of the triad closure can be also moderated by the strength and content of the other ties of the triad. For instance, although different stock recommendations regarding a focal CEO and the interlock director cause cognitive dissonance in the interlock dyad, the CEO and the director may pay less attention to the analyst stock ratings because the analyst has insufficient influence on them. Similarly, the dyadic tie content and strength between the focal firm CEO and the outside director representing the interlocked company may mitigate or exacerbate the impact of cognitive dissonance on board interlock maintenance under the triad closure. The following section examines i) structural dependence of the interlock dyad on financial analyst coverage and ii) demographic similarity between the focal CEO and the interlock director as two such potential moderators.

Structural dependence of the interlock dyad on financial analyst coverage Building on Heider's triangular balance, Newcomb (1959) suggested that the greater the strength of the relationship among elements of a triad, the greater the triad's imbalance-induced tension. In other words, the relevance of the third-party X on the P-O dyad is contingent on the intensity of P or O's attitude toward X. For instance, when the stock recommendation from the analyst is not highly valued by the focal interlock member, its influence on cognitive dissonance and the dyadic tie maintenance is limited. The dependence and power relationship among network partners have been explored by social exchange theorists (Cook & Emerson, 1978; Emerson, 1962), who conceptualized social relations as ties of mutual dependence among the interaction parties. One major prediction of this literature is that the mutual dependence is determined by the availability of alternative sources of the alter in achieving a focal actor's goal (Emerson,1962). In the present analysis of the triad, the dependence of a focal firm CEO and the director on the common financial analysts and their stock recommendations will be determined by the number of other financial analysts following the focal and the interlocked companies. Indeed, when the common financial analyst is one of the few analysts following the focal and the interlocked companies, the stock coverage and recommendations from the common financial analyst cannot be ignored. Structural dependence of the interlock dyad on the financial analyst coverage in turn will amplify the structural effect of the triad on the interlock tie maintenance. Conversely, when the common financial analyst is one of the many analysts following the focal and the interlocked companies, the dependence of the focal CEO and the interlock director on the common analyst's coverage is relatively low, thus mitigating the triad closure effect for dissimilar stock recommendations. Therefore

H3: Structural dependence of the focal and the interlocked companies on the common financial analysts increases the influence of triadic closure on the likelihood of tie breakage.

Demographic similarity of the interlock dyad Another tie characteristics which can moderate the triad closure effect on interlock maintenance is the demographic similarity between the focal CEO and the interlock director. Demographic similarity in the top management team literature has been operationalized along different social-categories (e.g. age, race, and gender) or professional backgrounds (e.g. education, functional background and industry tenure). Studies highlighted that demographic similarity among board members tends to increase interpersonal trust and open communications and contribute to better group decision making (Smith et al., 1994; Williams & O'Reilly, 1998). Studies in social psychology and sociology also suggested the similarity-attraction process as almost an automatic cognitive process triggering interpersonal attraction and liking (Berscheid & Walster, 1969; Byrne, 1971), which in turn leads to more homophilious social affiliation (Ibarra, 1996; McPherson et al., 2001; Newcomb, 1961). In the current study, interpersonal attraction and trust based on the demographic similarity of the interlock dyad may mitigate the cognitive dissonance caused by dissimilar stock recommendations from the common analyst and decrease the structural effect of triad closure on interlock maintenance. In other words, demographically similar CEOs and directors are less likely to decide to break the interlock tie as a reaction to the dissimilar stock recommendations from the same analyst than their demographically dissimilar counterparts. Moreover, social psychology studies on self-protective biases in social categorization consistently indicate that in-group vs. out-group bias in social categorization becomes more pronounced especially when the focal actor experiences a threat (Miller et al., 2010). Dissimilar stock recommendations from the common financial analyst may be perceived as a kind of performance threat by the 'outperformed' executive of the interlock dyad, who would prefer to interact with demographically similar interlock partner over the demographically dissimilar counterpart. This then leads to the final hypothesis.

H4: Demographic similarity between a focal firm CEO and the interlocked director decreases the likelihood of interlock breakage under unbalanced stock recommendations from the same financial analyst recommendations.

SUMMARY OF METHOD AND RESULTS

I used a longitudinal panel research design to examine the maintenance of board interlock as a function of negativity or imbalance of financial analyst stock recommendations for the focal and the interlocked company. The sample was derived from the S&P 500 companies representing large industrial and service corporations listed on U.S. stock exchanges. 471 companies were retained for the sample periods of 2001 and 2008. Board interlocks are constructed based on the director list obtained from the BoardEx database. I followed all the financial analysts and their stock recommendations for the focal and the interlocked companies from the start of the board interlocks until the ties were broken. Analysts' firm coverage and stock recommendation data were obtained from IBES. This yielded 17,745 observations of focal-interlocked company dyads and 1,819 final triads over the sample period. Board interlock breakage was coded as a dichotomous variable when the interlocked director was not reelected at annual shareholder's meeting. Following prior research on the positivity or negativity of analyst appraisals, I categorized "strong buy" and "buy" as positive categories and all the other ratings including "hold" negative. Negativity or imbalance of recommendations is coded as a dichotomous variable indicating the respective category of stock recommendations calculated as the median value of all the stock recommendations during the most prior year (twelve preceding months) to the annual shareholder meeting date (Westphal & Graebner, 2010). Structural dependence on analyst coverage was coded as the inverse of the total number of analyst following the focal and the interlocked companies. Demographic similarity was measured in terms of the director age, gender, elite education, and functional background (Hambrick et al., 1996; Westphal & Milton, 2000). Conventional accounting and market measures of firm performance, individual director variables, firm characteristics, and alternative interpersonal/interorganizational ties were controlled. Random-effects logistic panel regression model was used with clustered standard errors around the focal CEO-interlocked director dyads to address the lack of independence among the dyads. All independent and control variables were lagged by one year. I followed the usual cautionary measures in analyzing the marginal and interaction effect of logistic regression models (Hoetker, 2007).

The results strongly supported the theoretical perspectives of the study. Consistent with H1, the negativity of financial analyst stock recommendations regarding the focal and/or the interlocked company is positively associated with the likelihood of board interlock breakage in an open triad (a 121% increase in the likelihood of board interlock breakage when other variables are fixed at their mean). Consistent with H2, an imbalance of stock recommendations is positively associated with the likelihood of interlock tie breakage when the triad is closed (a 210% increase in the likelihood of board interlock breakage when other variables are fixed at their mean). Such interaction effect with the triad closure is not found for the negativity of stock recommendations. Moreover, the likelihood of interlock breakage is found to decrease by as much as 52% when both the focal and the interlocked companies receive negative stock recommendations by the same financial analyst. Furthermore, the median-split subsample analysis with Heckman selection procedure also provided strong support for H3. The effect of triad closure on tie breakage becomes non-significant for the subsample of low analyst coverage dependence. The subsample analysis also confirmed the moderating effect of demographic similarity between the focal CEO and the interlocked director (H4). Consistent with the study's theoretical perspectives, more surface-level similarity such as age and gender was found to negatively moderate the structural effect of dissimilar stock recommendations under the triad closure.

The present study contributes to the study of board interlocks and the larger literature of interorganizational networks by considering the financial analysts' firm coverage ties as a neighbor network of the board interlocks. Although there exist studies on the role of third-party alter's indirect ties on the formation and maintenance of dyadic ties, these studies focused on the role of indirect ties as information conduits (Burt & Knez, 1995; Gulati & Westphal, 1999), paying less attention to how the combination of triangular structure and the indirect tie content (e.g. positivity or balance) can influence different motivations of tie maintenance for the dyad members. By conceptualizing the relationship between financial analysts, a focal firm CEO, and the outside director as a triad and considering the indirect tie content of the triad, this study reveals that a structural shift from open to closed triad can alter dyad members' tie maintenance motivations from instrumental to cognitive motives, which in turn results in interlock tie breakages that cannot be foreseen with the assumption of instrumental motivations only. This study also has implications for the vibrant literature in strategy and organizational studies on the influence of external firm constituents such as financial analysts on corporate governance. Future studies can extend this study's conceptualization of triadic structure between board interlock and external ties of the board interlock members to different sets of external constituents such as journalists or institutional investors. ■

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