ABSTRACT

Title of Document: FINANCIAL REPORTING: A LOOK AT
                                      DIFFERENT SETTINGS

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The first of two essays examines whether financial reporting is influenced when a

firm shares a director with a "central" firm. Central firms are those which are well-

connected within the network of firms formed by shared board of directors. Centrality

is a driver of influence and since social networks are a channel to spread information,

central firms could transmit reporting practices. However, because financial reporting

style is presumably firm specific, the central firm's reporting may not be effective for

a focal firm. I examine the effect of central firm conservatism and discretionary

accruals on the same focal firm attributes. The results show that focal firm

conservatism is influenced by that of the central firm after the two firms become

interlocked and that influence is concentrated in the first year. However, a firm

adopted central firm discretionary accruals over a longer time horizon. The finding

was robust to a variety of alternate explanations. Overall, the findings shed light on

how financial reporting spreads through a network and adds to our understanding of how influence occurs between two interlocked firms.

The second essay examines municipal reporting manipulation. Municipalities use fund accounting to separately track each activity in self-balancing set of accounts. I focus on the general fund, the largest fund, which uses governmental accounting, and the enterprise fund, which accounts for business-like operations and uses corporate-like accounting. Municipalities have a different organizational objective than corporations and could desire to report a small increase in the general fund bottom line to avoid taxpayer's backlash or they could wish to build up their fund balance to for future use. The enterprise fund incentives are also unclear. I find that operating transfers between funds (discretionary accruals) are used in the general (enterprise), but not the enterprise (general), fund to systematically manipulate its bottom line downward. Accordingly, each fund is manipulated downwards using a method that is in line with its accounting system. Further analysis shows that the general fund results are more pronounced in municipalities with heavy citizen involvement. The findings also highlight that institutional factors do not impact both funds in the same manner.

FINANCIAL REPORTING: A LOOK AT DIFFERENT SETTINGS

By

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Dedication

To my wife Grace, whose support and encouragement were a constant pillar of strength during the dissertation process. To my parents, whose unfailing love helped me through the ups and downs of the program. And to my father, who I wish could have been here for this moment, but I know is looking down with joy.

"The end of a thing is better than its beginning; The patient in spirit is better than the proud in spirit." – Ecclesiastes 7:8

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Essay 1: Central Influences: The Effect of Being Interlocked to a Central Firm

Chapter 1: Introduction

Directors often serve on multiple boards and two firms with the same director are linked by what is commonly known as a board interlock. Through these interlocks, a corporate director network forms and naturally some firms will become more central in the network due to greater connectedness. Because central firms are more connected, they are often more influential and prestigious within the network (Davis, 1991). Given that central firms can be influential, this study examines whether the financial reporting- specifically conservatism and discretionary accruals- of a firm linked to a central firm, the focal firm, is influenced by the reporting style of the central firm.

Prior literature has documented the effect board interlocks have on firm decisions. One group of papers has focused on adoption decisions. For example, firms are more likely to adopt a poison pill or expense stock options if they are interlocked with a firm that previously began that practice (Davis, 1991 and Reppenhagen, 2010). Another set of papers focus on more common, on-going practices. They find, among other things, that firms that interlocked firms have similar political contributions (Mizruchi, 1992), compensation packages (Wong and Gygax, 2007) and effective tax rates (Brown and Drake, 2011).

However, prior literature has rarely differentiated between the two interlocked firms. Since board interlocks form the overall corporate network, firm centrality is an important dimension to explore between two the interlocked firms. To emphasize this

difference, central firms in my sample had 17.1 interlocks compared to 4.8 interlocks of non-central firms. Central firms also utilize their additional information to discover and adopt innovations faster (Bell, 2005). Central firms also enjoy lower cost of debt (Chuluumn et al, 2011) and superior performance (Larcker et al, 2011).

This tremendous informational advantage elevates the prestige and influence of the central firm (Lieberman and Asaba, 2006). Prior literature has documented that network centrality is a main driver of influence in terms of behavior and performance (Huanchild and Beckman, 1998) which is why institutional theory suggests that the practices of central firms are well positioned to be copied by other firms (DiMaggio and Powel, 1983) to gain legitimacy. Additionally, since managers are constantly in pursuit of more information to improve decision making (Rogers, 2003) and central firms represent a wealth of quality information regarding policies and practices, information coming from central firms could be especially valuable.

Still, there are at least two prominent reasons why focal firm financial reporting might not be influenced by the central firm. First, accounting is an on-going process and its financial reporting tends to be steady over time (Givoly et al, 2007). So while a firm might seek counsel from its interlocked partners on infrequent decisions, it presumably has set practices for financial reporting that it has been following for years. Therefore, a firm might be less inclined to imitate that of the central firm even after being exposed to its reporting. Second, unlike the "on-going" actions that are affected by board interlocks, financial reporting is unique to firm characteristics. An accounting system maps a firm's economic events into financial statements (DeFranco et al, 2011). Since central firms are economically different than other

firms (Larcker et al 2011), a focal firm may not emulate the central firm reporting

practices because those practices that help a central firm report its superior

performance might not be suitable to help a focal firm report its performance.

I examine the effect of a central tie on financial reporting with respects to

conservatism and discretionary accruals. Conservatism deals with the timeliness of

reporting news and is seen as one of the "most influential principles" in accounting

(Watts, 2003a) and discretionary accruals have been widely used in the literature to

capture reporting quality (Dechow et al, 2010). I use three measures of conservatism:

the C-Score which is firm-specific measure based on the Basu (1997) model, non

operating accruals and Book to market. I capture discretionary accruals with the Jones

Model and a variation of it.

Drawing on social network theory, I estimate four measures of firm centrality for

each year based on director connections. I aggregate all the measures and identify

central firms as those in the top quintile of each year. Then, I code all the firms linked

to a central firm each year. Through a difference in difference approach, I compare

the financial reporting of the focal firm in the period before and after they become

tied to the central firm. I also conduct a similar test after the tie is broken to see if the

influence persists. I also address endogeniety concerns usings a Heckman self

selection model. This design, coupled with the endogeniety remedy, allows me to

track the effect of central firms overtime and track the direction of causation within

interlocks, something prior literature has not previously explored.

I find that a focal firm conservatism is influenced by central firm conservatism after

the two firms are tied. This result was true for the entire time the two firms were

linked but the effect was concentrated in the first year of the tie. There was no effect affect on conservatism after the link was broken, suggesting the focal firm retained the central firm influence. I also find that focal firms do not to be influenced by central firm discretionary accruals when comparing focal firm reporting before and after the tie. However, I find some evidence suggesting that focal firms slowly adopt central firm discretionary accrual practices over a longer period of time.

Additional analysis reveals that the reporting difference in conservatism between the focal and central firm declines after the tie. Also, firms with lower pre-tie conservatism or reporting quality than their central firm counterparts improve on each dimension after the tie. This indicates that the focal firm converges to the reporting of the central firm and supports the notion that central firms can spread their accounting practices through their network.

The dichotomous set of results maybe rooted in the incentives to report conservatism and discretionary accruals. Discretionary accruals are "systematically tied to firm characteristics" and prior research suggests that "managerial intent affects the incidence and magnitude" of them (Dechow and Dichev, 2002 p.3). Because discretionary accruals are more firm-specific, it appears focal firms are more cautious to adopt these practices. Conservatism, on the other hand, arises from contractual arrangements, litigation concerns, taxes and regulation (Watts, 2003a) and is embedded in demands that are fairly common to all firms. Accordingly, this could explain why focal firms adopted central firm conservatism at a quicker pace.

I also consider the alternate explanation that the central firm is only indirectly affecting focal firm reporting through other mechanisms. However, I find that my

results are robust to this alternate explanation. I also address the possibility that my results are due to the natural flow of information in an interlock and not due to firm's centrality and the potential for reverse causation. My results were robust to the size of the central firm, whether the focal and central firm shared an industry or auditor, and the position of the linking director at each firm among other things. Interestingly, I find some evidence that focal firms with independent boards were less likely to be influenced by central firm reporting.

My paper contributes to the literature in several ways. First, I document that financial reporting is influenced by another firm, namely a central one. While there is a literature on the benefits of being a central firm and another about board interlocks, my paper merges the two streams. Secondly, the study also highlights how financial reporting practices can spread through a network setting. In this case, a central firm was spreading good reporting practices to its interlocks. Prior research has documented the effect of "contagion" in negative settings but this evidence suggests that good contagion is also possible. The findings add to our knowledge of factors that affect financial reporting.

Third, I add to our understandings of networks. Specifically, whereas prior literature has used a longer horizon to determine the effect of networks, I show that central firm influence is concentrated in the first year. This furthers our understanding of how quickly networks can influence firm decisions and the persistence of such influence. Also, I provide evidence on causality within board interlocks. Prior studies have only shown a correlation between interlocked firms regarding certain practices. But because of my research design and by correcting for endogeniety, I track how one

firm's practices influenced the other firm's practices. This adds to our knowledge of how why interlocked firms may behave similarly.

Fourth, I add to the literature about the differing incentives for conservatism and discretionary accruals. Although the evidence shows that both reporting features were influenced, they were affected in different times. Whereas conservatism was adopted immediately after the tie, the discretionary accruals influence happened over a longer horizon. This indicates that focal firms were more judicious about adopting practices that tend to be more firm-specific.

Fifth, I add to the literature about conservatism. Prior studies have concluded that conservative reporting is "stable over time" (Louis et al, 2011). My findings suggest that firm conservatism can change in a short period. Lastly, I add to literature on board independence. I show that focal firms board independence were less likely to be influenced by central firm reporting. This adds to previous findings that board independence is an important feature in forming financial statements.

The remainder of the paper unfolds as follows: Chapter 2 presents the motivation, Chapter 3 describes the design, Chapter 4 discusses the results, and Chapter 5 concludes.

Chapter 2: Motivation

2.1 Interlock Literature

Board interlocks are formed when two firms share a director. Prior research has examined the effect of such interlocks. One group of papers examines the effect of interlocks on a binary decision. These studies have found that a focal firm is more likely to adopt poison pills, multidivional form, investor relations department, switch stock exchanges, expense stock options and adopt life insurance tax shelters if it is interlocked with a firm that previously adopted the practice (Davis, 1991, Palmer et al, 1993, Rao and Sivakumar, 1999, Rao et al, 2000, Reppenhagen, 2010 and Brown, 2011). In addition, a focal firm increases its acquisition activity, engages in option backdating, has a restatement, is targeted for a private equity transaction and recognizes an impairment if it is interlocked with a firm that engaged or experienced the same event (Haunschild et al 1993, Chiu et al, 2013, Bizjak et al, 2009, Stuart and Yim, 2010 and Shepherdson, 2011**).**

Another stream of papers has studied the impact of interlocks on more common, on-going actions. Davison, Stening and Wai (1984) document a correlation between two firms interlocking and sharing an auditor. Interlocking firms also exhibit similarity in political contributions, (Mizruchi, 1992) and compensation packages (Wong and Gygax, 2007). In addition, firms with interlocking boards tend to have similar effective tax rates, implying that both firms engage in similar tax practices (Brown and Drake, 2011). Interlocking firms also have parallel types of investments and research and development levels (Fracassi, 2012).

Interestingly, the literature does not differentiate between the two interlocked firms nor does it distinguish among the type of firms a focal firm is tied to. The interlock research dealing with the so-called binary outcomes only note a difference in the timing of action. However, understanding the differences between the focal firm and the firm it is linked to serves to provide a better picture of the interaction within the interlock.

2.2 Central Firms

An important dimension to explore within board interlocks is firm centrality. Within the corporate director network, some firms will emerge to better connected than others. The more connected a firm, the more central it is in the corporate network (Davis, 1991). Because they are well connected, central firms have access to more information and can better verify the information it receives (Bell, 2005). As a result, central firms become aware of innovations earlier and adopt them faster (Bell, 2005). Consequently, central firms are more likely to conduct acquisitions (Haunschild and Beckman, 1998) and form alliance partnerships (Gulati, 1999). They also have more profitable mergers (Harris and Shimizu, 2004). Central firms also have lower cost of debt because their informational advantage reduces information asymmetry (Chuluumn et al, 2011). Central firms translate their informational advantage into superior future performance (Larcker et al 2012). Central firms also reward their executives with higher compensation for their well connectedness and additional information sources (Brian et al 2001 and Barnea and Guedj, 2009). Moreover, a central firm is more likely to adopt poison pills, presumably to protect its informational advantage from outside sources (Davis, 1991).

Bouwman (2011) finds that interlocking have similar governance structures, mainly because firms appoint directors from similar firms. However, that is unlikely to be the case in this setting since central firms differ from focal firms along dimensions of centrality and economic fundamentals. Firm centrality is therefore an important dimension of a firm and can help explain its behavior. Network centrality has been shown to be a driver of influence in terms of behavior and performance (Leavitt, 1951 and Huanchild and Beckman, 1998). Meanwhile, central firms are viewed as being the "corporate elite" (Davis, 1991 p.592) and thus their policies are well-positioned to be copied by other firms. Accordingly, institutional theory suggests that a firm will imitate a prestigious firm to gain legitimacy (DiMagio and Powell, 1983).

In addition, social network theory asserts that "economic agents are affected by their social networks" (Granottover, 1985). Rogers (2003) asserts that information can spread through a social network, provided it comes from a "high opinion leader." Since central firms are densely connected, they retain a great deal of quality information regarding practices and policies. In addition, because managers attempt to gather more information for better decision-making (Rogers, 2003), information coming from a central firm would be valuable. Accordingly, given that practices that start at the center of a network spread faster (Davis and Greve, 1997), central firms, with their wealth of information, could have a role in spreading financial reporting styles.

Since central firms tend to be more prestigious (Lieberman and Asaba, 2006) and have greater information, it is an empirical question whether a focal firm's actions will be more influenced when tied to a central firm.

2.3 Financial Reporting

However, there are reasons to believe a central firm would not impact focal firm reporting. First, financial reporting is conducted on a continuous basis. That is, a firm has its accounting system and reporting policies set prior to being linked to a central firm. Therefore, while prior literature documents that the focal firm is likely to seek counsel from its interlocked firms about adoption decisions that the interlocked firm previously deliberated, the focal firm might not need the same counsel regarding its routine reporting practices. Financial reporting tends to be stable over time (Givoly et al, 2007). Therefore, access to practices at a central firm may not influence the focal firm.

In addition, accounting is different than other "on-going" firm policies which have been found to be similar in interlocking firms. Although prior research indicates that interlocked firms have similar capital investment, research and development, tax practices and compensation, these practices are continually revised with new information (Bertrand and Mullainathan, 2001, Dennison, 2009, and Armstrong et al., 2012). However, as stated above, accounting practices tend to be stable and additional information may not be helpful.

Second, unlike the "on-going" actions that are affected by board interlocks, financial reporting is unique to firm characteristics. An accounting system maps a firm's economic events into financial statements (DeFranco et al, 2011). Economic performance is underpinning the output of the accounting system, the financial statements. As Jensen (1983) explains, "accounting practices are affected by an organization's structure" (p. 323). This is borne out empirically: central firms have

superior financial performance and are economically different than other firms (Larcker et al 2012). Therefore, a focal firm may not emulate the central firm reporting practices because those practices that help a central firm report its superior performance might not be suitable to help a focal firm report its performance. The discussions above leads to the first hypothesis:

H1: A focal firm's financial reporting will move closer to that of the central firm after the link.

Prior literature has examined the effect of interlocks after the link is established. However, few have studied the effect after the interlock ends. Therefore, if focal firms are mirroring the reporting style of central firms, then a natural question to ask is whether those changes persist over time. Stated differently, does the effect of the central firm endure after the link ends or does the focal firm revert back to its old style? This leads to the following:

H2: A focal firm's financial reporting will divert away from that of the central firm after the link ends.

Chapter 3: Design

3.1 Social Network Measures

I measure centrality using four commonly used measures of social networks: degree,

closeness, betweenness and eigenvector centrality. Degree is the sum of direct links a

firm has to other firms. For example, if firm A is linked to 4 other firms via its

directors, it would have a degree of four. In more formal terms, degree is defined as:

$Degree_i = \Sigma_j\, x_{ij}\, /(n-1)$ where x_{ij} is the number of links for firm i. Closeness,

which accounts for direct and indirect links a firm may have, measures how quickly

one firm can reach other firms. It is defined as the inverse of the average distance

between one firm and another and is defined as: $Closenss_i = \frac{n-1}{\Sigma_{j \neq i} C(i,j)}$ where C(i,j) is

the shortest path between firm i and firm j. Accordingly, a firm with a higher

closeness score can reach other firms quicker.

Eigenvector centrality, sometimes referred to as connectivity, captures the quality of a

firm's links. Intuitively, being linked to other well connected firms enhances the

centrality of the focal firm and therefore attempts to quantify influence in a network.

Eigenvector centrality requires creating an n x n adjacency matrix A where A_{ij}=1 if

firm i and firm j are linked and 0 otherwise. Then, eigenvector centrality is calculated

as: $\frac{1}{\lambda_{max}}$(A*Eigenvector) where eigenvector is the largest eigenvalue, λ, of A.

Essentially, eigenvector centrality is a recursive measure of degree where centrality is

the sum of links to other firms scaled by their respective centrality.

Betweenness, which measures how often a firm is the intermediary between two other

firms, captures the ability of a firm to be an information broker. Stated differently, a

firm is more central if it lies on the path of the shortest distance between two other

firms. Betweeness is calculated as: $Betweenness_i = \frac{\sum_{j \neq i, i \notin \{k,j\}} \frac{P_i(kj)}{P(kj)}}{(n-1)(n-2)/2}$ where $P_i(kj)$ are

the number of shortest paths between firm k and firm j that firm i lies on and P(kj) are

the total shortest paths between firm k and firm j. All the centrality measures are

normalized by the size of the network, which mitigates the concern that larger firms

tend to be more central.

3.2 Sample Selection

I gather information on firm directors from RiskMetrics for the period 1996-2006. I

map the corporate network of directors for each year separately. Two firms are

considered tied if they share a director in a given year. Using those board ties, I

calculate the four centrality measures for each firm each year (Borgatti, Everett and

Freeman, 2002). Then for each year, I sort each centrality measure by quintile and

add up the four quintile rankings to form a Centrality Score for each firm. A firm in

the top quintile of the Centrality Score is identified as a central firm for a particular

year. Subsequently, I identify a "central tie" as occurring when a firm is tied to a

central firm in year through a shared director.

I create a variable that identifies the testing window around the first and last central

tie for each firm. I code *D_intoTie* to equal 1 during the years of the central tie a firm

has during the sample period and equal to 0 for an equal number of years before the

tie is entered. *D_OutofTie* is coded 0 for the years during the tie and 1 for an equal

number of years before the tie is exited. For example, firm A enters a central tie to

firm B in year t and the link lasts for 3 years till t +2. So, *D_intoTie* would be coded 0

in time t-3, t-2 and t-1 and be coded 1 t, t+1 and t+2. Meanwhile *D_OutofTie* would

be coded 1for t, t+1 and t+2 and 0 for t+3, t+4 and t+5. This methodology allows for within firm comparison and allows me to use the focal firm as its own control.

As explained in Table 1, my initial sample of 9,207 firm-years is based on firms with financial information in COMPUSTAT. After eliminating firms that have no central tie, multiple central ties per year or central firms tied to other tied central firms, I am left with 1,462 firm-years, which form the basis for the two subsamples. The "in-tie" sample tests H1 and the "out-tie" sample tests H2. I eliminate all firms that have multiple central ties during the testing window or other central ties in the period when $D\_intoTie$ ($D\_OutofTie$) = 0 (1). Essentially, each focal firm in the sample could only have one central tie for the sample period. These procedure ensures that the cleanest setting to test the effect of a central firm on a focal firm.

These procedures result in 993 firm-years for the "in-tie" tests and 883 firm-years for the "out-tie" tests. Stated differently, I identify 339 (322) instances where a firm enters (exits) a central tie. Those central ties come 450 focal firms being linked to 232 unique central firms. When I restrict my sample to observations of firms with a central tie and central firms, the sample is 2,605 firm-years.

Table 2 illustrates presents the normalized means of the social network measures. The mean value of *degree* is .006, the mean of *closeness* is .363, the mean of *eigenvector centrality* is 2.574 and the mean of *betweenness* is .252. I conducted a t-test to compare each of the centrality measures of central and focal firms, finding that central firm have significantly larger values in each case (p-value =0.000). For emphasis, a focal firm is tied to, or has an un-normalized degree, of 4.8 other firms while central firms are tied to an average of 17.1 firms. These tests not only stress the

superior connectivity of central firms, but also provide evidence that the central firms identified by my methodology are indeed more central than other firms.

3.3 Research Design

I examine the effect of a central tie on financial reporting. Specifically, I inspect the effect central firm reporting of conservatism and discretionary accruals has on focal firm reporting of those two items. Conservatism deals with the timeliness of reporting news and is seen as one of the "most influential principles" in accounting (Watts, 2003a) and discretionary accruals have been widely used in the literature to capture reporting quality (Dechow et al, 2010).

It is important to note that these two aspects of reporting are not similar. Earnings management, which discretionary accruals usually are trying to capture, occurs mainly due to market expectations and contractual incentives (Healy and Wahlen, 1999). Discretionary accruals are "systematically tied to firm characteristics" and prior research suggests that "managerial intent affects the incidence and magnitude" of them (Dechow and Dichev, 2002 p.3). Conservatism on the other hand arises from contractual arrangements, litigation concerns, taxes and regulation (Watts, 2003a). Conservatism acts as a governance mechanism to protect the shareholder investments. Indeed, prior research has documented that conservative reporting protects shareholders (Louie et al, 2011 and Lafond and Watts, 2008). Whereas the use of discretionary accruals seems to depend on firm specific qualities, conservatism is rooted in demands that are fairly common to all firms.

I measure conservatism using three different measures. First, I employ the C-score developed in Khan and Watts (2009). This firm specific conservative measure is

based on the Basu (1997) model of asymmetric timeliness. The Basu (1997) model is calculated as:

$$X_i = \beta_1 + \beta_2 D_i + \beta_3 R_i + \beta_4 D_i R_i + \varepsilon$$

where X is net income before extraordinary items, R is returns, D is a dummy variable equal to 1 when R<0 and 0 otherwise. The good news timeliness measure is β_3 and β_4 is the asymmetric timeliness of bad news over good. The C-score is an estimate of β_4, where each coefficient is specified with firm specific characteristics each year:

$$C - Score = \beta_4 = \lambda_1 + \lambda_2\, Size_i + \lambda_3\, M/B_i + \lambda_4\, Lev_i$$

The estimator λ_i is constant across firms but varies across time since it is estimated in annual cross sections. The C-score also varies across firm due to the firm characteristics (*Size, M/B and Leverage*). *Size* is measured as the log of market value, *M/B* is the market to book ratio and *Leverage* is short term plus long term debt scaled by market value. The equation for the C-score is substituted into the Basu model and that expanded model is run in annual cross sections. I then calculate the C-score from that expanded model.

The second firm specific measure of conservatism I use is non-operating accruals, *ConAcc*. Givoly and Hayn (2000) find that the pattern of non-operating accruals is consistent with the rise of conservative reporting over time. Non-operating accruals include such items as restructuring charges, loss on bad debt, gain or loss on asset sale, asset impairments, capitalization of expense and the deferral of revenue. *ConAcc* is total accruals less operating accruals scaled by lagged assets by -1, thereby making larger values more conservative. Total accruals are calculated as income before

extraordinary items less cash flow from operations. Depreciation and operating accruals are subtracted from total accruals where operating accruals are the non-cash change in current assets less the change in current liabilities excluding short term debt.

Book to Market (*ConBTM*) is the last conservatism measure. It is defined as the ratio of book to market multiplied by -1 so larger values are more conservative. More conservative firms should have a lower book values compared to market value because they consistently defer gains but recognize losses (Ahmed and Duellman, 2007).

I measure discretionary accruals by employing the Jones Model where accruals are modeled as:

$$TA_{i,t} = \beta_0 + \beta_1(\Delta\ Revenue_{i,t}) + \beta_2(PPE_{i,t}) + \varepsilon$$

TA is total accruals measured as income before extraordinary items minus cash flow from operations, change in revenue is revenue in year t less revenue in year t -1 and *PPE* is property, plant and equipment. All variables are scaled by lag assets. Discretionary accruals are calculated as the residual obtained from running the above regression on annual industry cross sections. I take the absolute value of the discretionary accruals, *absJM*.

I also use the variation of the Jones Model suggested by Kothari et al (2004). This model includes for return on assets (*ROA*) to control for the relationship between accruals and firm performance. Discretionary accruals are derived in the same fashion and absolute values are taken, *absJM_ROA*.

$$TA_{i,t} = \beta_0 + \beta_1(\Delta\ Revenue_{i,t}) + \beta_2(PPE_{i,t}) + \beta_3(ROA_{i,t}) + \varepsilon$$

I test the effect of a central tie on focal firm reporting by employing a difference in difference model. I test the effect of the tie on reporting in the first year of the tie, the "in-tie," compared to the previous year and then again with the last year of the tie, the "out-tie," compared to the following year. This two step approach allows me to capture the effect of the central tie over the course of time.

I test the impact of the central tie on accounting by comparing the time before (after) the tie to the time during the tie using the following regression:

$$AcctMeasure_{i,t} = \beta_0 + \beta_1 AcctMeas\_CF_{i,t} + \beta_2 D + \beta_3 D*AcctMeas\_CF_{i,t} + \beta_4 Size_{i,t-1} + \beta_5 SizeCF_{i,t-1} + \beta_6 M/B_{i,t-1} + \beta_7 Leverage_{i,t-1} + \beta_8 Volatility_{i,t-1} + \beta_9 SalesGrowth_{i,t-1} + \beta_{10} CFO_{i,t} + \beta_{11} Age_{i,t} + \beta_{12} Litigation_{i,t} + \beta_{13} BigN_{i,t} + \beta_{14} SimilarSize_{i,t} \beta_{15} SameInd_{i,t} + \beta_{16} GeogProximity_{i,t} + \beta_{17} SameAuditor_{i,t} + \beta_{18} BoardIndep_{i,t} + \beta_{19} TieLength_{i,t} + \beta_{20} BoardSize_{i,t} + \beta_{21} Funding_{i,t} + \beta_{22} TangibleAssets_{i,t} + \beta_{23} Degree_{i,t} + \varepsilon$$

AcctMeasure is the accounting variable in question and AccMeasureCF is the accounting measure of the central firm that the focal firm is tied to. D is a dummy variable capturing the central tie. For the "in tie" tests, $D\_intoTie$ equals 1 during the years of the central tie and 0 for an equal number of years before the tie is entered. $D\_OutofTie$ is coded 0 for the years during the tie and 1 for an equal number of years before the tie is exited. The β_3 coefficient, the interaction term between $D\_intoTie$ ($D\_OutofTie$) and the central firm accounting, indicates the impact of the central firm's accounting practices on the focal firm's accounting during (after) the tie. Therefore, for "in tie tests" ("out tests"), a positive (negative) coefficient on β_3 will indicate that relative to the years when the focal firm was not (was) tied to the central firm, the focal firm's reporting was impacted by the reporting of the central firm that of the central firm during (after) the tie. Accordingly, β_3 is hypothesized to be positive (negative) for H1 (H2).

I control for central firm size (*SizeCF*) to address the concern that larger firms tend to have greater centrality. I include the lag *SizeCF* since there could be correlation between the current year size of the central firm and either conservatism or discretionary accruals. I control for *Size*, *M/B* and *Leverage* because all three are associated with conservatism and discretionary accruals. In a short window, conservatism is dependent on prior year *M/B (*Roychowdhury & Watts, 2007*)* so I use lagged M/B as well as lagged *Size and Leverage* because Khan and Watts (2009) suggest controlling for the inputs to the C-score. I also control for other firm characteristics that could affect conservatism or discretionary accruals (*CFO, volatility, age, Sales Growth*). I control for high *Sales Growth* can also raise market expectations which could affect *ConBTM* (Ahmed and Duellman, 2007). I also include a dummy variable *Big N auditor* and a dummy if the firm is in a litigious industry. When *ConBTM* is the dependent variable, I also include the current and six lagged period returns following Beaver and Ryan (2000). I control *Board Independence* and *Board Size* as each could affect reporting. I also include *Funding*, measured as retained earnings scaled by lag assets, *Tangible Assets* and *Degree. Funding* measures the capacity of internmal financing, which in turn affects likelihood of seeking external financing (Byrd and Miruchi, 2005) and could affect reporting. Firms with lower levels of *Tangible Assets* have increased information asymmetry problems which also could affect reporting. *Degree* controls for other non-central interlocks the firm may have and also controls for the focal firm's own centrality. I additionally control for other types of links between the focal and the central firm which could serve as alternate communication channels. *Same Industry and Same*

Auditor are dummy variables coded 1 if the focal and central firm share an industry or auditor, respectively. *Geog. Proximity* is the log of distance in miles between focal and central firm while *Tie Length* is included to control for the possibility that influence could grow over time. Industry fixed effects are included in each regression and standard errors are clustered by firm and year.

3.4 Descriptive Statistics

Table 2 Panel A provides descriptive statistics. Central firms are larger in *Size* and have higher *M/B*. The differences are statistically significant at the 1% level. Central firms also have better performance that focal firms (CFO: .093 vs .086, t-stat = -2.05). The flip side is also true. Focal firms have more volatile returns (.010 vs .090, t-stat = 9.22). These findings are consistent with Larcker et al, (2012) which documented that central firms are larger, have higher market values and better performance. This reinforces notion that central firms are able to use their informational advantage gain better performance. It also illustrates that central firms differ from focal firms not only in their network position, but also along performance and size.

The *C-Score*, which measures the propensity to report bad news, had a mean of 0.065 while the *ConAcc* had a mean of 0.57 and *ConBTM* had a mean of -0.475. Focal firms had higher values of C-Score (0.101 vs.0.011, t-stat = 11.12) but there was no statistical difference for *ConAcc* between the two sets of firms. Interestingly, focal firms had a lower *ConBTM* (-0.514 vs. -0.414, t-stat =7.08). *ConBTM,* which is the book to market ratio multiplied by -1, indicates larger values to be more conservative. *ConBTM* also measures conservatism since firm inception (Ahmed and Duellman, 2007) and since central firms are significantly older than focal firms, this difference

result reflect the fact that central firms have had a longer time period to recognize increase their book value. This underscores the need to control for the lagged returns of prior six years in the *ConBTM* models.

The absolute value of discretionary accruals (*absJM*) is 0.029 with focal firms having a mean of 0.025 and central firms having an average of 0.020. The means for *absJM_ROA* is similar and the difference between focal and central firms is significant at the 1% level for both measures. These results are generally consistent with prior literature which finds that larger firms and better performing firms have lower levels of discretionary accruals and are less conservative (LaFond and Watts, 2008 Kahn and Watts, 2009 and Hribar and Nichols, 2007). It also supports the notion that central firms have superior underlying fundamentals, which is translated differently through the accounting system in terms of discretionary accruals and conservatism.

Panel B of Table 2 shows the accounting measures of the focal firms by each year of the tie. For the C-Score, there is a pattern of increase in most years after the tie and there is a significant difference between the C-Score before the tie and during the tie (t-stat = 3.05). ConAcc and ConBTM reveal that they steadily became more conservative over time, but at a statistically insignificant pace. Both discretionary accruals models show that firms seemed to maintain their levels of discretionary accruals for the first two years after the tie, and then decreased them. Though these figures were not statistically significant, they provide insight how and when the central firm influenced the focal firm over time.

Table 3 displays the correlations among variables. Panel A shows that there is high correlation among the social network variables. Panel B generally confirms the descriptive statistics that Central Firms are larger, more profitable and have lower discretionary accruals and less conservatism. Although there is a positive correlation between Central Firm and *ConBTM* (.151), that could be explained by the positive correlation between *Age* and *ConBTM* (.289), suggesting older firms have higher book to market values.

Chapter 4: Result

4.1 Main Analysis

Table 4 presents the results for the main regression model. Each dependent variable is presented in two columns: first regressed on the dummy variable measuring the testing window, the central firm accounting variable in question, and the interaction term, then with the controls. The models include industry fixed effects and standard errors are clustered by firm and year.

In Table 4A, columns 1-6 show that the interaction term between *D_intoTie* and the central firm conservatism is positive and significant in each specification. The only exception is column 1 where C-Score is regressed without controls and even then the t-statistic (1.62) is margninally insignificant. For some perspective, a 1% increase in the central firm's ratio of non-operating accruals to lagged assets after the tie increases the focal firm's non-operating accruals by 31% of lagged assets, which is economically non-trivial. Interestingly, central firm size generally had no impact on focal firm conservatism, indicating again that it was not the size of the central firm that influenced the focal firm. Columns 7-10 show the analysis for *absJM* and *absJM_ROA*. The interaction for each variable with *D_IntoTie* is statistically insignificant.

To summarize, Table 4 Panel A provides evidence that the focal firm conservatism is affected central firm conservatism after the two firms are linked. This result is consistent across three measures of conservatism. However, focal firms are not influenced by central firm discretionary accrual practices. This perhaps highlights the differences between conservative and earnings management. Given that prior

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literature finds the use of discretionary accruals to be firm-specific, the fact that central firm accrual practices bear no impact on the focal firm is consistent with prior findings.

Conservatism, on the other hand, is rooted in demands that are applicable to a wider range of firms and therefore is susceptible for transmission through a network. Whereas prior literature held that conservatism to be stable over time (Louis et al 2011, these results demonstrate that a firm's conservatism style can change in short period. My finding that central firms affect focal firm conservatism but not discretionary accruals is consistent with prior research that has found that particular attributes have a dichotomous affect on the two reporting features (Francis et al, 2004, LaFond and Roychowdhury, 2008 and Warfield et al, 1995).

Next, in Table 4B, I explore the effect of central firm reporting on focal firms after their tie. I compare the years of the tie with an equal number of years after the tie. Interestingly, none of the interactions between *D_OutTie* and central firm accounting measures loaded significantly. This suggests that after the central tie is broken, the focal firm is no longer influenced by the central firm. In fact, the lack of significance indicates that there is no difference in the tie and post-tie period influence of the central firm on focal firm reporting. Stated differently, it appears that any focal firm retains any influence it gleaned from the central firm after the tie.

To examine further, I rerun the analysis in Table 5 except I redefine *D_IntoTie* to equal 0 the year before the tie begins and 1 the first year of the tie. This specification allows me to examine when the central firm influence occurs.

Table 5A presents the results. In columns 1-3, the interaction between *D_IntoTie* and central firm conservative measures is positive and significant at least at the 10% level. The interaction with the discretionary accruals measures was insignificant as in Table 4. While the results are consistent with that in Table 4, this analysis indicates that most of the central firm influence occurs in the first year. This finding also adds to interlock research which had only previously measured the effect of networks over a longer time horizon.

Panel A shows that central firm conservatism affects focal firm conservatism in the first year of the tie compared to the last year before the tie. But while this finding gives importance to the first year of the tie, it is plausible that all subsequent years also have equal influence. I address this in Panel B of Table 5 where I compare the first year of the tie to the remaining years of the tie.

I rerun the analysis in Table 4 Panel A but I code a dummy variable, *D_FirstYr*, 1 if it is the first year of the tie and 0 for all other years of the tie. I exclude all ties that only last for one year. In Table 5B, the results of this regression show that the interaction terms of interest, between *D_FirstYr* and central firm conservatism measures, are all statistically insignificant. This shows that central firm conservatism in subsequent years of the tie is not as influential as it is in year one of the tie. In other words, in the first year of the tie, the focal firm reacts to the reporting style of the central firm and retains that style so in subsequent years it does need to react to the same information. This is analogous to the stock market initially reacting to a firm disclosure, incorporating the news into the stock price for future periods.

Interestingly, columns 4-5 of Table 5B show the interactions between *D_FirstYr* and

central firm discretionary accruals are significantly positive, indicating that

subsequent years of the tie have an incremental influence on focal firm discretionary

accruals compared to the first year. This provides some evidence that focal firms are

indeed influenced by central firm discretionary accruals. However, perhaps because

of the firm specific nature of discretionary accruals, it takes the focal firm longer time

to adopt such practices.

Taken together, the results indicate that focal firm reporting of conservatism is

affected by central firm conservatism and that effect is concentrated in the first year

of the tie. Also, it appears that there is no difference between the first year of the tie

and the remaining years of the tie with respect to central firm influence, which

suggests that after the focal firm is exposed to central firm conservatism, it stays at

that level. Focal firms appear to be influenced by central firm discretionary accruals

but only over a longer period of time.

4.2 Additional Analysis
4.2.1 Endogeniety

A key point to address in the empirical design is the potential for endogeniety. It is

possible that focal firms may self-select to be tied to a central firm if ex-ante they

know the benefits a central firm could provide. To address endoegeniety concerns, I

employ the Heckman model. For focal firms, I estimate two decisions: the probability

of entering in a tie with a central firm (*D_intoTie*) and the probability of exiting such

a tie (*D_OutofTie*). I include all control variables from the main regression model in

the probit model. But since this procedures requires instruments be included in the

first stage not included in the second stage, I also include the central firm's average of the prior three-years for *ROA* and *Centrality Score.*

Table 6A presents the probit regressions. Columns 1 shows that the probability of entering a tie (*D_intoTie*) is positively impacted by central firm centrality (β= .164, t-stat = 5.82) and *Geog.Proximity* (β= .034, t-stat = 1.65) but negatively affected by the focal firm's *Degree* (β= .061, t-stat = 3.63), suggesting focal firms that are more connected are less likely to interlock with other central firms. Interestingly, the size and past performance of the central firm did not impact the probability of entering a tie. Overall, this indicates that focal firms interlock with central firms primarily due to their centrality and not because of their size or performance. Column 2 shows the results for the probability of exiting a central tie. Firm Size, Age and Degree were all significantly associated with exiting a tie while BigNAuditor and Tangible Assets were negatively related. From the coefficients in Table 6A, I computed *Inverse Mills Ratio*. Table 6B presents the analysis of Table 4 including the Inverse Mills Ratio. The inferences remain unchanged.

Another source of endogeniety could be reverse causation. While the results of Tables 4 and 5 reveal an association between reporting after the focal and central firms become tied, it is conceivable that positive coefficient is due to reverse causation. Although prior papers have documented that interlocked firms generally behave similarly, reverse causation would be less likely in this case because central firms have many sources of information and it is doubtful that any one source has incremental effect on the firm's behavior. In fact, Haunchild and Beckman (1998)

showed that a central firm is less likely to be influenced by its interlocks' prior

acquisitions when it is deliberating its own acquisition decision.

Nevertheless, I re-run the analysis of Table 4A but I hold the central firm values

across the entire tie equal to the first year values. The results in Table 6C are

generally consistent with Table 4. The interaction terms on *C-Score and ConBTM* are

positive and significant. The interaction for *ConAcc* was statistically insignificant.

This analysis should alleviate the reverse causation concern because it shows that

even when the central firm values are held constant, the central firm conservatism is

still influencing focal firm conservatism after the two firms become tied.

4.2.2 Convergence of Reporting

Though evidence indicates that the central firm is influencing focal firm reporting, it

would still be instructive to know whether the focal firm is proactively changing its

reporting and converging to the central firm. I examine this process by regressing the

change of focal firm reporting between year t and t-1 over the prior year difference

between the focal and central firm, *D_intoTie* and an interaction between the prior

year difference and the period dummy. A statistically significant interaction would

mean that the focal firm is changing its reporting in response to the difference

between it and the central firm. Table 7A shows that the interaction on all three

conservatism measures is negative and significant at the 5% level, except for *ConAcc*.

Stated differently, after the tie, if the focal firm is more (less) conservative than the

central firm in the prior year, it will decrease (increase) its conservatism in the current

year to move closer the central firm.

In Table 7B, I run a similar analysis as 7A but the dependent variable is the current

year reporting difference between the focal and central firm. The idea here is to

examine whether reporting differences between the two firms change over time.

Again, the interactions for the conservatism models are negative and significant,

except for *C-Score*. Combining the observations from panels A and B, the results

indicate that after the tie, as the prior year conservatism difference between the focal

and central firm increases, the focal firm reacts by decreasing its change in

conservatism and thus minimizing the current year difference. This provides more

evidence that the focal firm is converging to the reporting of the central firm.

While this interpretation would be in line with the main hypothesis, the original

reporting differences could affect the type of change the focal firm makes. Thus I

attempt to determine how pre-tie reporting differences affect the post-tie relationship

between the two firms. I re-run the main analysis of Table 4A but add, *Focal Lower*

Quality, which takes a value of 1 if the focal firm average reporting in the pre-tie

period is less conservative given the particular measure and 0 otherwise. A similar

measure is constructed for the discretionary accruals. I interact *Focal Lower Quality*

with *D_intoTie* to see how firms with initially poorer reporting reacted after the tie.

The results are presented in Table 7C. The coefficient on *Focal Lower Quality* was

negative and significant at the 1% level for all three conservative measures.   The

interaction between *Focal Lower Quality* and *D_intoTie* is positive and significant for

all three conservative measures (β= 0.103, t-stat = 1.91 β= 0.093, t-stat = 3.71 and β=

0.105, t-stat = 2.53). Similar results were obtained for the discretionary accruals

models. *Focal Lower Quality* was significantly positive for both models while the

interaction with *D_intoTie* was negative and significant at the 1%. This suggests that

a focal firm with initially worse (better) reporting quality than the central firm

improves its reporting on both dimensions after the tie to the central firm.

Prior inter-firm studies have documented "contagion," which is the idea that a

practice spreads among firms. Usually, it refers to negative situations such as earnings

management (Chiu et al, 2009) but this evidence indicates that it can also apply to

accounting. It also points to the possibility of good contagion: the central firms are

spreading their relatively better reporting to their interlocks.

4.2.3 Cross-Sectional Analysis

Thus far, the analysis supports the hypothesis that the central firm influences focal

firm reporting. But further analysis is needed to determine factors that could

potentially affect this relationship. To do this, I rerun the analysis of Table 4A but I

include a three way interaction term consisting of *D_intoTie*, central firm reporting

measure and the cross sectional variable. I also include the relevant two way

interactions needed when a three interaction is performed. The coefficient on the

three way interaction should shed light on any incremental affect these conditions

have on the relationship between central and focal firm reporting.

 I broadly examine three categories of cross sectional variables: Director Features,

Firm Features and Linking Features. The Director Features include whether the

linking director is on the audit committee of the focal firm, central firm or both firms

or whether the director is the CEO of the focal or central firm. Prior literature has

documented the importance of the audit committee and CEO in the formation of

financial reports, so I examine the position of the linking director at each firm to see

if the position of the director affects the relationship between the two firms. The Firm Features consist of firm *Size* and *Board Independence* since at the firm level, these two factors have been shown to affect accounting information. The Linking Features include whether the two firms share a similar industry, similar auditor and variable measuring their Geographical Proximity. These variables are meant to determine if the observed affect is greater for firms with other communication channels. It also contains a variable, *Similar Size*, which is coded 1 if the two firms are in the same size decile in a given year. This variable aims to capture if the focal firm is more influenced by the reporting of a firm that shares its economic fundamentals. The last variable in this category is central firm size. This variable tests whether focal firms are being influenced by central firm size as opposed to the firm's centrality. If centrality is just a proxy for firm size, then the affect of being tied to larger central firms should be greater.

Table 8 presents the cross sectional results. The position of the linking director at either firm did not have an incremental affect on the influence of central firms on focal firms[1]. Next, the size of the focal firm did not affect the tendency of the focal firm to be influenced. However, the three way interaction including board independence had a negative and significant reaction for the *C-Score* and *ConBTM* models (β= -.377, t-stat = -2.70 β= -.310, t-stat = -2.98) but it yielded an insignificant coefficient for *ConAcc.* This provides some evidence that focal firms with independent boards were less likely to allow the focal firm to be influenced by central

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[1] I conducted this test by limiting it to observations in which the linking director was on the focal firm AC committee, central firm AC committee, on both committees, was the focal firm CEO or central firm CEO, respectively. There were too few observations but the general implications are similar to the tests described above.

firm reporting. This suggests that independent directors collectively guard the firm from external forces.

In addition, there was no incremental effect for focal and central firm sharing auditors, industries, or having close geographical proximity. Also, the three way interaction with *Similar Size* and central firm size each yielded an insignificant coefficient. These two findings together indicate that focal firms are being influenced by the central firm not because the central firm is similar in size or because it is large in size but the influence is a product of the central firm's network connectivity.

4.2.4 Alternate Explanations

To this point, the analysis has shown that the central firm influences focal firm conservatism. While the hypothesized mechanism is through board interlocks spreading the reporting, it could be that the central firm indirectly influences the focal firm. For example, the focal firm could move to have a similar level of board independence as the central firm, and since board independence is positively associated with conservatism, the increased board independence would affect conservatism. In such a scenario, the central firm is affecting focal firm conservatism, but only indirectly by influencing focal firm board independence.

If the central firm was influencing other focal firm practices, I would expect to see those practices impacted by central firm practices. To test this possibility, I use a similar design to that in Table 4A but I focus on key demands for conservatism. The dependent variable is the focal firm attribute regressed on the central firm attribute, *D_intoTie* and the interaction of the two as well as controls. If the interaction is positive, it would indicate that the focal firm attribute is influenced more by the

central firm attribute after the two firms become tied. I examine *Percent Outsiders* because independent boards affect conservatism. I look at *Leverage* since creditors often demand more conservative reporting. I also inspect *Internal Funding* since a firm's ability to generate funds will impact its financing need. *Tangible Assets* and *Volatility* are also included because they proxy for information asymmetry and firm uncertainty, two factors which also impact conservatism. It is important to note that I remove a particular variable from the set of controls when it is serving as the dependent variable.

Table 9A reports the findings. The β_3 coefficient on the interaction between *D_intoTie* and the central firm attribute is insignificant in all cases. This analysis suggests that the demands of conservatism of the focal firm are not being influenced by the same attributes at the central firm after the tie commences.

While these attributes are not changing in response to the same central firm attributes, it is possible that they behave differently after the tie. For example, the focal firm may not change the composition of its board after its tie to the central firm, but the board itself may be influenced by the shared director and thus function differently, which in turn could lead to more conservatism. Similarly, the focal firm may not change its leverage because of central firm leverage but the central firm may nonetheless be affecting the focal firm's leverage levels after the tie through other channels. To control for this possibility, I rerun the regressions of Table 4A, but I also include additional interactions between *D_intoTie* and the change in variables that capture demand for conservatism. These interactions are meant to control for indirect ways the central firm might influence focal firm reporting. I inlude each conservatism

attribute in the regression as a change variable, which in addition to controlling for the interaction, also controls for the possibility that natural changes in the focal firm's demand for conservatism affected reporting.

Table 9B presents the results. The β_3 coefficient on the interaction of $D\_intoTie$ and central firm conservatism is positive and significant for all three conservatism measures. However, none of the interactions between $D\_intoTie$ and the changes in demands for conservatism are statistically significant. The results illustrate again that not only does focal firm reporting change in response to central firm conservatism but also that the central firm does not appear to indirectly influencing focal firm conservatism through other mechanisms. Therefore, it is apparent that the mechanism the central firm is influencing focal firm reporting is via its own conservative reporting. Overall table 9 shows that central firm reporting is influencing focal firm reporting and that this influence is robust to other potential indirect mechanisms of influence between the two firms and changes in the focal firm environment.

Another concern with the results is that the relationship picked up in Table 4A may merely reflect the flow of information in an interlock and not influence of the central firm to the focal firm. If this were the case, the same findings should be found if I tracked a firm's response to the reporting of any of its interlocks. To address this concern, I conduct a parallel analysis to that in Table 4A by tracking the interlocks of 500 firms for which director and financial data are available. I track only one interlock per year for each firm. For those firms, I track only one interlock per year. If a firm has multiple interlocks per year, I randomly choose one of its interlocking firms. Following similar procedures as when defining the sample window for the

central ties above, I keep firms who are only interlocked with to one firm over time and where there is sufficient time in the sample before the tie where they were not interlocked with any firm. Therefore, the interlock that is assigned to each focal firm is a random interlock. Table 10 reproduces the regressions of Table 4A with this new sample. The results show that the β_3 coefficient on the interaction between $D\_intoTie$ and the random firm accounting measure is insignificant for all models. This evidence supports the notion that the results in Table 5A are due the firm centrality and are not merely due to interlocking firms exchanging information.

4.2.5 Difference in Difference Analysis

The main tests in this study relied on a within firm analysis, where the pre-tie condition of a firm serves as its own control. Subsequent analysis confirmed the results. Still in this section, I estimate a difference in difference model. I match each focal firm with a non-focal firm based on firm size. A non-focal firm is one that is not tied to a central firm. I assign each matched, non-focal firm the central firm of its matched focal firm counterpart. I then ran the main model but added a dummy for *Focal Firm* and a three way interaction between *D_intoTie*, *Focal Firm* and the central firm reporting. The three way interaction would indicate the incremental effect the central firm had on the focal firm after the tie relative to the non-focal firms. This analysis serves to bolster the idea that the central firm is exerting influence over the focal firm.

The results in Table 11 conform to those in Table 4A. The three way interactions for the conservatism variable are all positive significant at conventional levels, except for *ConBTM* (β= .108, t-stat =1

4.3 Sensitivity Analysis

In order to ensure that I properly control for other factors of the central firm that could affect focal firm reporting, I rerun Table 4A but additional controls for central firm characteristics. In unreported results, the results are consistent with those reported in Table 4A. I also control for central firm size by adding an interaction term into the analysis between *D_intoTie* and central firm size. This interaction is insignificant more all specifications, suggesting that central firm size is not influencing the focal firm, rather it is the conservative reporting of the central firm that is causing the influence.

Chapter 5: Conclusion

Prior literature has examined the effect of board interlocks on firm behavior. These papers have not investigated differences among the type of firm to which a focal firm can be tied. Firm centrality is a key dimension to explore because central firms have an informational advantage and therefore can spread information and practices much quicker through a network because of their position. At the same time, financial reporting is meant to be firm specific and might not be prone to being spread in a network.

I find that a focal firm conservatism is influenced by the conservatism of the central firm to which it is tied. This finding, while relevant for the entire time such a tie is in place, is driven by the first year of the tie. Focal firms adopted central firm discretionary accruals but only over a longer horizon. These findings are robust to host of cross sectional variables and other potential channels that could link the two firms. The results also indicate that the focal firm is converging to the central firm reporting and that influence is effected by pre-tie differences between the firms. I also provide evidence that board independence was associated with a lower likelihood of adopting central firm practices.

My study draws a distinction between two interlocked firms based on network centrality and is consistent with the notion that central firms affect focal firm financial reporting. This adds to our understanding of how and why two interlocked firms behave similarly while illustrating the speed at which network influences can occur. Additionally, my findings add to the literature about forces that shape financial

reports and further provide evidence about the different incentives for conservatism

and discretionary accruals.

Appendix A   **Variable Definitions**

Centrality

Central Firm
A firm is a Central Firm in a given year if it ranks in the highest quartile of the Total Centrality Score.

The Total Centrality Score is the summation of the ranked scores of 5 commonly accepted centrality measures.

Total Centrality Score is the sum of the quintile rankings for each of the four centrality measures

Focal firm   A firm is a focal firm if it is the center unit of analysis (ie: tied to a Central firm)

Financial Variables

CScore	The C-Score of a firm as calculated by Kahn Watts 2007 identifies a firm's propensity to convey bad news sooner
ConBTM	Book to Market ratio multiplied by negative 1
ConAcc	Non Operating accruals scaled by lag assets and are calculated as total accruals less operating accruals. Operating accruals are the non-cash change in current assets less the change in current liabilities excluding short term debt.
absJM	Absolute value of discretionary accruals as estimated by the Jones Model.
absJM_ROA	Absolute value of discretionary accruals as estimated by the Jones Model after controling for return on assets.
Size	Log of market value
M/B	The ratio of market value to book value
Leverage	Te ratio of long term and short term debt to market value
Volatility	The standard deviation of monthly returns of the previous 5 years
Age	the log of the firm's age
CFO	cash flow from operations scaled by lag assets
Sales Growth	The percentage change of sales over prior year
BigNAuditor	Coded 1 if the firm uses a Big N Auditor and 0 otherwise
BoardIndep	Coded 1 if over over 50% of directors are independent
Percent Outside	The numbre of independent board members scaled by total board size
Board Size	The number of members a firm has on its board of directors
Internal Funding	Retained Earnings scaled by lag assets
Tangible Assets	Property, Plant and Equipment scaled by lag assets

Linking Variables

D_IntoTie	Coded 1 for all the years a focal firm is tied to a central firm and 0 for an equal number of years prior
D_OutofTie	Coded 1 for all the years a focal firm is tied to a central firm and 0 for an equal number of years prior
D_IntoTie1yr	Coded 1 the first year a focal firm is tied to central firm and 0 in prior year
D_first year	Coded 1 for the first year a focal firm is tied to a central firm and 0 for the other years of the tie
SameIndustry	Equals 1 if the focal and central firm from first ties share the same 2 digit SIC code
SameAuditor	Equals 1 if the focal and central firm from first tieshare the same auditor
GeoProx	log of distance in miles between the headquarters of the focal and central firm
Similar Size	Equals 1 if focal and central firm are in same size decile for a particular year and 0 otherwise

Centrality Measures

Degree	The sum of direct links a firm has to other firms
Closeness	Measures how quickly one firm can reach other firms. It is defined as the inverse of the average distance between one firm and another.
Betweeness	Measures how often a firm is the intermediary between two other firms and captures the ability of a firm to be an information broker
Eigenvector	Eigenvector centrality, sometimes referred to as connectivity, captures the quality of a firm's links. Being linked to other well connected firms enhances the centrality of the focal firm.

Table 1: Sample Selection

Firm-Years available in RiskMetrics for 1996-2006	17,409
Less: Firms missing financial information	(8,202)
	9,207
Less: Firms not interlocked with Central Firm	(6,858)
	2,349
Less: Central Firms interlocked with other Central Firms	(734)
	1,615
Less: Firms interlocked with multiple Central Firms per year	(153)
	1,462

	The In-Tie Sample	The Out-Tie Sample
Less: Firms interlocked with multiple central firms during the testing window	(469)	(579)
	993	883

Focal Firms in the "In-Tie"	993
Focal Firms in the "Out-Tie"	883
Less Focal firm years in the "In-Tie" and "Out-Tie" Sample	(634)
Central Firm interlocked with focal firms	1,363
Total Number of firms in sample	2,605

This table reviews the sample selection procedures.

Table 2: Descriptive Statistics
Panel A: Univariate Statistics

Variable	All Sample	N	Focal Firms	Central Firms	Diff	t-stat
Networking Measures						
Degree	0.006	2605	0.003	0.012	-0.009	-66.70***
Betweeness	0.252	2605	0.110	0.585	-0.475	-47.40***
Eigenvector	2.574	2605	0.856	6.614	-5.758	-41.22***
Closeness	0.363	2605	0.359	0.372	-0.013	-4.63***
Financial Variables						
Cscore	0.065	2593	0.101	0.011	0.090	11.122***
ConAcc	0.057	2060	0.056	0.058	-0.002	-0.446
ConBTM	-0.475	2591	-0.514	-0.414	-0.100	7.770***
absJM	0.029	2366	0.025	0.020	0.005	4.498***
absJM_ROA	0.024	2366	0.030	0.025	0.005	2.658***
Size	8.103	2600	7.403	9.156	-1.753	-32.019***
M/B	2.957	2591	2.796	3.435	-0.639	-5.192***
Leverage	0.648	2593	0.637	0.664	-0.027	-0.697
Volatility	0.098	2521	0.105	0.088	0.017	9.964***
Age	3.187	2529	2.996	3.467	-0.471	-15.167***
CFO	0.088	2419	0.086	0.093	-0.007	-2.394***
Sales Growth	0.109	2605	0.114	0.103	0.011	1.139
Tangible	0.339	2549	0.347	0.327	0.020	1.736*
Internal Funding	0.219	2595	0.215	0.225	-0.010	-0.760
Board Independence	0.842	2605	0.796	0.911	-0.115	-8.118***

Linking Variables	Mean
Similar Size	0.082
Geographical Proximity	5.285
Same Industry	0.055
Same Auditor	0.192
Tie Length_In	1.670
Tie Length_Out	1.780

Panel B: Reporting Changes -FocalFirm

| | Before Tie | After Tie | | | | | During Tie | Diff | T-stat |
		Year 1	Year 2	Year 3	Year 4	Year 5& beyond			
Cscore	0.077	0.102	0.123	0.189	0.129	0.151	0.116	0.039	3.054***
ConAcc	0.054	0.058	0.067	0.064	0.078	0.038	0.060	0.006	1.020
ConBTM	(0.504)	(0.490)	(0.567)	(0.563)	(0.559)	(0.609)	(0.519)	(0.015)	-0.678
absJM	0.032	0.036	0.033	0.036	0.018	0.020	0.034	0.002	1.098
absJM_ROA	0.025	0.027	0.027	0.030	0.011	0.012	0.026	0.001	0.726

Panel A of this table provides summary statistics. Panel B presents univariate statistics for accounting measures before a focal firm is tied to a central firm. Then, it presents the mean of those measures for each year the focal firm is tied to the central firm, the mean of those measures for all the years a focal firm is tied to the central firm and the difference of before and after the tie. All variables are defined in Appendix A.

Table 3: Correlations

Panel A: Social Network Measures Correlation

	Deg.	Bet.	Eigen	Close
Degree	1.000			
Between	0.742	1.000		
Eigenvector	0.739	0.613	1.000	
Close	0.392	0.246	0.176	1.000

Panel B: Financial Variables Correlation

	absJM	absJM_ROA	Cscore	Con BTM	Con Acc	Size	M/B	Lev.	Vol.	Age	Sales Growth	CFO	Int. Fund	Tang Asset	Cent. Firm
absJM	1														
absJM_ROA	0.688	1.000													
Cscore	0.043	0.059	1.000												
ConBTM	0.030	0.013	(0.250)	1.000											
ConAcc	(0.085)	(0.089)	(0.004)	(0.087)	1.000										
Size	(0.126)	(0.152)	(0.375)	0.412	(0.060)	1.000									
M/B	0.069	0.053	(0.206)	0.487	(0.106)	0.301	1.000								
Leverage	0.001	0.023	0.265	(0.295)	(0.079)	(0.132)	(0.215)	1.000							
Volatility	0.167	0.206	0.143	0.005	(0.061)	(0.296)	0.030	(0.059)	1.000						
Age	(0.098)	(0.132)	(0.056)	0.023	(0.026)	0.307	0.023	(0.004)	(0.340)	1.000					
Sales Growth	0.060	0.063	(0.082)	0.154	(0.111)	0.117	0.114	(0.057)	0.074	(0.104)	1.000				
CFO	0.047	0.023	(0.163)	0.254	(0.138)	0.173	0.269	(0.283)	(0.093)	0.043	0.013	1.000			
Internal Funding	(0.027)	(0.053)	(0.128)	(0.004)	0.082	0.131	0.088	(0.308)	(0.284)	0.156	(0.048)	0.453	1.000		
Tangible	(0.023)	(0.032)	(0.021)	(0.063)	0.009	(0.029)	(0.065)	0.017	(0.131)	0.095	0.139	0.220	0.044	1.000	

| CentralFirm | (0.092) | (0.087) | (0.214) | 0.151 | (0.010) | 0.532 | 0.102 | 0.014 | (0.195) | 0.289 | (0.022) | 0.049 | 0.015 | (0.034) | 1 |

Panel A presents pair wise correlations between the social networking variables while Panel B shows the pair wise correlations between the financial variables. All Variables are defined in Appendix A.

Table 4: In and Out Tie Regressions

Panel A: "In-Tie" Regression

VARIABLES	Cscore	Cscore	ConAcc	ConAcc	ConBTM	ConBTM	absJM	absJM	absJM_ ROA	absJM_ ROA
AcctMeasCF	0.0357	0.00307	-0.181***	-0.233***	0.0545	0.0165	0.00414	0.0430	0.0659	0.101
	(0.315)	(0.0271)	(-2.918)	(-3.241)	(1.000)	(0.336)	(0.0406)	(0.469)	(0.788)	(1.198)
D_intoTie	0.0403***	0.00300	0.00964	0.0183	0.0598*	0.0120	0.00110	0.000221	0.00227	0.00253
	(4.185)	(0.329)	(0.786)	(1.089)	(1.962)	(0.404)	(0.243)	(0.0397)	(0.839)	(0.534)
AcctMeasCF*D_intoTie	0.156	0.149**	0.286***	0.314***	0.133**	0.128**	0.116	0.116	0.0188	-0.00166
	(1.622)	(2.179)	(3.037)	(3.049)	(2.038)	(2.022)	(0.953)	(1.120)	(0.250)	(-0.0199)
Size		-0.0307*		-0.00243		0.0952***		-0.00328		-0.00347**
		(-1.718)		(-0.321)		(4.186)		(-1.325)		(-2.426)
Size_CF		0.00135		-0.00964		-0.0275***		-0.00156		0.00147***
		(0.145)		(-1.589)		(-2.735)		(-1.013)		(5.058)
M/B		0.00391		-0.00221		0.0205***		-0.000626		0.000279
		(0.449)		(-0.677)		(2.728)		(-0.522)		(0.267)
Leverage		0.0790*		0.0126		-0.0710*		-0.00108		-0.00153
		(1.737)		(0.653)		(-1.956)		(-0.309)		(-0.444)
Volatility		0.901***		0.114		0.0398		0.00921		0.0543
		(3.053)		(0.478)		(0.0725)		(0.168)		(1.295)
SalesGrowth		-0.0507		-0.0696***		0.0367		0.00655		-0.000276
		(-1.586)		(-2.868)		(0.851)		(0.654)		(-0.0396)
CFO		-0.140		-0.339***		0.506***		0.0854*		0.0784**
		(-0.579)		(-3.759)		(2.870)		(1.954)		(2.095)
Age		0.00404		0.000917		0.0432		-0.00452		-0.00289
		(0.333)		(0.0767)		(1.433)		(-1.313)		(-0.954)
Litigation		-0.221		0.0498		-0.191		0.0849***		0.0283**
		(-.740)		(0.857)		(-1.476)		(4.568)		(1.990)
BigNauditor		-0.0143		-0.00935		0.0108		-2.76e-05		-0.00203

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		(-0.167)		(-0.0836)		(0.142)		(-0.00356)		(-0.273)
SimilarSize		0.00196		0.0134		-0.0186		-0.00355		0.000852
		(0.244)		(1.228)		(-0.504)		(-1.112)		(0.203)
SameIndustry		-0.00773		-0.0171		0.103*		0.00241		0.00132
		(-0.440)		(-1.198)		(1.917)		(0.287)		(0.144)
GeogProximity		-0.00242		-0.00659*		0.00575		0.000497		-0.00140
		(-0.410)		(-1.711)		(0.796)		(0.402)		(-1.611)
SameAuditor		0.000339		0.0254*		-0.0726*		0.00203		0.00150
		(0.0166)		(1.673)		(-1.803)		(0.342)		(0.341)
BoardIndep		-0.00141		-0.00549		-0.0256		-0.0109**		-0.000505
		(-0.0906)		(-0.448)		(-0.682)		(-2.401)		(-0.147)
TieLength_IN		0.0191***		-0.00625		0.0176		0.00124		6.15e-05
		(3.515)		(-0.987)		(1.296)		(0.726)		(0.0396)
BoardSize		-0.00375		0.00124		-0.0126**		0.000870		0.00127**
		(-1.424)		(0.359)		(-2.079)		(0.523)		(2.022)
Internal Funding		0.0124		0.0566		-0.187***		-0.0116		-0.00321
		(0.248)		(1.440)		(-2.648)		(-0.902)		(-0.670)
TangibleAssets		-0.0171		0.0313		-0.149*		0.0193		0.00246
		(-0.295)		(0.402)		(-1.794)		(1.626)		(0.249)
Degree		0.000689		0.00233		-0.00101		0.000298		0.000500
		(0.303)		(0.881)		(-0.261)		(0.464)		(0.806)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prior Returns Included						Yes	Yes			
Constant	0.0781***	0.188	-0.0649***	0.0730	-0.163***	-0.484**	0.00243	0.0130	-0.00234	-0.0186
	(4.810)	(0.812)	(-7.575)	(0.414)	(-2.956)	(-1.982)	(0.936)	(0.408)	(-1.036)	(-0.923)
Observations	960	850	571	541	919	817	748	709	748	709
R-squared	0.356	0.415	0.245	0.340	0.614	0.751	0.363	0.403	0.378	0.412

Panel B: Out Tie Regressions

VARIABLES	Cscore	Cscore	ConAcc	ConAcc	ConBTM	ConBTM	absJM	absJM	absJM_ROA	absJM_ROA
AccMeasCF	0.182***	0.152***	0.133*	0.0694	0.162**	0.0836	0.134***	0.137***	-0.0232	-0.0116
	(3.581)	(2.676)	(1.961)	(0.726)	(2.177)	(1.403)	(3.336)	(3.038)	(-0.220)	(-0.109)
D_OutTie	-0.0100	-0.00190	-0.0132	-0.00468	-0.0358	-0.000712	0.00473	0.00520	0.00190	-0.000670
	(-0.578)	(-0.122)	(-1.230)	(-0.370)	(-0.631)	(-0.0238)	(0.905)	(1.076)	(-0.519)	(-0.151)
AccMeasCF*D_OutTie	-0.0522	0.00602	-0.101	0.0208	-0.126	-0.0416	-0.117	-0.0547	0.121	0.129
	(-0.817)	(0.0861)	(-0.809)	(0.198)	(-1.113)	(-0.650)	(-1.277)	(-0.605)	(1.480)	(1.326)
Size		-0.0404***		0.00884		0.0681***		-0.00580**		-0.00276
		(-2.728)		(0.967)		(4.142)		(-2.109)		(-1.260)
Size_CF		0.00389		-0.0108***		-0.0299**		-0.00174		-0.000997
		(0.666)		(-2.627)		(-2.268)		(-1.508)		(-0.590)
M/B		0.000907		-0.00773**		0.0250***		0.000233		4.13e-05
		(0.148)		(-2.217)		(4.116)		(0.143)		(0.0451)
Leverage		0.0737		0.00865		-0.0838***		0.00130		0.00152
		(1.288)		(0.776)		(-3.434)		(0.465)		(0.655)
Volatility		-0.211		0.0647		-0.844*		-0.00667		0.0260
		(-0.808)		(0.387)		(-1.883)		(-0.135)		(0.664)
SalesGrowth		-0.0421*		-0.0601*		0.0236		0.00194		-0.00375
		(-1.937)		(-1.859)		(0.606)		(0.205)		(-0.383)
CFO		-0.0262		-0.132		0.609***		0.0152		0.0779*
		(-0.193)		(-1.086)		(3.128)		(0.349)		(1.882)
Age		-0.00770		-0.00302		0.0820*		-0.00326		-0.00268
		(-0.673)		(-0.232)		(1.965)		(-1.270)		(-0.992)
Litigation		-0.0569		-0.137***		-0.487**		0.0189		0.0112
		(-0.277)		(-3.291)		(-2.319)		(1.179)		(0.703)
BigNauditor		0.0571*		0.109***		0.0315		0.00254		0.00750

		(1.654)		(3.145)		(0.553)		(0.274)		(0.676)
SimilarSize		0.0158		-0.00529		0.00760		-0.000825		0.00393
		(1.168)		(-0.372)		(0.250)		(-0.132)		(0.751)
SameIndustry		0.0761***		-0.0140		0.0172		-0.0112		0.00362
		(5.317)		(-0.778)		(0.283)		(-1.100)		(0.482)
GeoProximity		-0.00151		-0.00309		-0.000850		-0.00148		-0.00121*
		(-0.777)		(-0.647)		(-0.117)		(-1.203)		(-1.694)
SameAuditpr		0.00506		0.000736		-0.0993***		-0.00477		-0.00104
		(0.159)		(0.0726)		(-2.725)		(-1.239)		(-0.367)
BoardIndep		0.0179		0.0171		-0.0293		0.00239		0.00635
		(0.682)		(0.796)		(-1.184)		(0.381)		(1.199)
TieLength_Out		0.0104*		-0.00572*		-0.00934		-5.33e-05		-0.00243**
		(1.889)		(-1.799)		(-0.934)		(-0.0992)		(-2.168)
BoardSize		-0.00314		0.000742		-0.0226***		0.00111		0.00111
		(-0.831)		(0.207)		(-4.093)		(1.161)		(1.507)
Funding		-0.0283		0.0528*		-0.367***		-0.0121		0.00757
		(-0.609)		(1.759)		(-3.856)		(-1.453)		(0.950)
TangibleAssets		-0.0498		-0.143**		-0.137*		0.00587		-0.00635
		(-1.218)		(-2.262)		(-1.782)		(0.469)		(-0.450)
Degree		-0.00403		-0.00114		-0.00149		0.000510		0.000417
		(-1.476)		(-0.701)		(-0.404)		(0.717)		(0.450)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prior Returns Included						Yes	Yes			
Constant	0.156	0.394**	0.0301***	0.0861	-0.138	-0.443*	0.0134	0.0718***	0.00779	0.0234
	(0.936)	(2.334)	(4.857)	(0.481)	(-0.873)	(-1.657)	(1.609)	(4.199)	(0.928)	(0.787)
Observations	799	704	459	426	796	664	611	573	611	573
R-squared	0.355	0.490	0.329	0.467	0.588	0.801	0.434	0.526	0.466	0.504

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Panel A presents the "in tie" analysis. The focal firm accouting measure is regressed on central firm accounting measure, a dummy variable (D_intoTie) set to 1 during the tie and 0 for an equal number the tie and an interaction between central firm accounting and the dummy variable. Panel B presents the "out tie" analysis. All variables are the same except the dummy (D_OutofTie) is 1 the years of the tie and 0 for years before and equal number of years afte the tie. All control variables are defined in Appendix A. Standard errors are clustered by firm and year. Industry fixed effects are included.

*,**,*** indicate significance at the 10%,5% and 1% level, respectively.

Table 5: First Year Analysis
Panel A: Impact of First Year

VARIABLES	Cscore	ConAcc	ConBTM	absJM	absJM_ROA
AcctMeasCF	0.0461	-0.194**	0.0266	0.117	0.117
	(0.412)	(-2.374)	(0.642)	(1.387)	(1.637)
D_intoTie	0.0141	0.0133	0.0269	0.00384	0.00364
	(0.967)	(0.809)	(1.181)	(0.591)	(0.785)
AcctMeasCF*D_intoTie	0.194*	0.296**	0.0881*	0.0135	-0.102
	(1.759)	(2.097)	(1.741)	(0.0784)	(-1.189)
Size	-0.0215	-0.000763	0.0811***	-0.00542**	-0.00470***
	(-1.165)	(-0.0613)	(3.488)	(-2.323)	(-3.562)
Size_CF	0.00960	-0.0112*	-0.0266***	-0.00114	0.00125
	(0.917)	(-1.652)	(-2.969)	(-0.437)	(0.951)
M/B	-0.00296	-0.00252	0.0194***	-0.000208	0.000573
	(-0.428)	(-0.541)	(2.973)	(-0.181)	(0.538)
Leverage	0.0731**	0.0193	-0.0965**	0.000267	0.000201
	(2.001)	(0.633)	(-2.556)	(0.0667)	(0.0600)
Volatility	1.295***	0.289	0.478	-0.00627	0.0475
	(4.240)	(0.810)	(0.549)	(-0.0709)	(0.908)
SalesGrowth	-0.0529	-0.0766**	0.0635*	0.00513	0.00290
	(-0.990)	(-2.075)	(1.729)	(0.403)	(0.314)
CFO	-0.420*	-0.336***	0.769***	0.0913**	0.0872***
	(-1.781)	(-2.663)	(2.850)	(2.502)	(2.738)
Age	-0.00902	-0.00432	0.0420	-0.00370	-0.00139
	(-0.559)	(-0.359)	(1.203)	(-0.848)	(-0.424)
Litigation	0.114	0.141	-0.249**	0.0876***	0.0353*
	(1.300)	(-1.069)	(-2.105)	(3.413)	(1.790)
BigNauditor	0.00800	-0.174**	0.0663	-0.000585	0.00269
	(0.0761)	(-2.404)	(0.652)	(-0.0691)	(0.441)
SimilarSize	0.00282	0.00745	-0.00711	-0.00493	-0.000906
	(0.0919)	(0.363)	(-0.194)	(-0.559)	(-0.141)
SameIndustry	0.0420**	-0.000479	0.0656	-0.00870	-0.00242
	(2.084)	(-0.0173)	(1.361)	(-0.684)	(-0.203)
GeogProximity	-0.00272	-0.00373	0.00170	0.00171	-0.000379
	(-0.302)	(-0.625)	(0.184)	(0.952)	(-0.323)
SameAuditor	0.0123	0.0195	-0.0555*	0.00504	0.00139
	(0.448)	(1.054)	(-1.813)	(0.740)	(0.309)
BoardIndep	-0.00773	-0.0159	-0.00230	-0.0177***	-0.00481
	(-0.543)	(-0.976)	(-0.0503)	(-3.653)	(-0.730)

BoardSize	-0.00233	0.00266	-0.00762	0.00101	0.00208***
	(-0.665)	(0.690)	(-0.948)	(0.570)	(6.120)
Funding	0.0795*	0.0449	-0.157**	-0.0157**	-0.00769
	(1.945)	(0.779)	(-2.364)	(-2.316)	(-1.218)
TangibleAssets	-0.00491	0.0970	-0.153*	0.0241	0.00533
	(-0.0723)	(1.026)	(-1.898)	(1.471)	(0.398)
Degree	0.00153	0.00272	-0.000968	-0.000247	4.99e-05
	(0.479)	(0.955)	(-0.215)	(-0.310)	(0.0700)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns Included			Yes		
Constant	0.119	0.135	-0.603*	0.0139	-0.0353
	(0.672)	(0.670)	(-1.726)	(0.269)	(-0.910)
Observations	570	368	547	481	481
R-squared	0.528	0.387	0.789	0.483	0.493

Panel B: Impact of Other Years of Tie

VARIABLES	Cscore	ConAcc	ConBTM	absJM	absJM_ROA
AcctMeasCF	-0.0209	-0.345**	-0.0192	-0.185	-0.159
	(-0.0936)	(-2.098)	(-0.215)	(-0.630)	(-0.589)
D_intoTie First YR	0.0456*	-0.00598	0.0305	-0.00858	-0.0115*
	(1.654)	(-0.388)	(0.635)	(-0.937)	(-1.796)
AcctMeasCF*D_intoTie	0.0857	0.328*	0.0924	0.460*	0.456*
	(0.391)	(1.675)	(0.850)	(1.871)	(1.657)
Size	-0.0193	-0.0206	0.122**	-0.00281	-0.00695
	(-0.774)	(-0.839)	(2.536)	(-0.181)	(-0.524)
Size_CF	-0.0196	0.000319	-0.0326	-0.00106	0.00297
	(-0.918)	(0.0485)	(-1.486)	(-0.284)	(0.833)
M/B	0.0210	-0.00672	0.0454**	3.52e-05	0.00275
	(1.523)	(-0.915)	(2.417)	(0.00992)	(1.075)
Leverage	0.0337	-0.0616***	0.00731	0.00834	-0.000681
	(0.544)	(-3.113)	(0.182)	(1.170)	(-0.126)
Volatility	0.329	0.326*	-0.333	0.149	0.0994
	(0.367)	(1.719)	(-0.339)	(0.887)	(0.568)
SalesGrowth	-0.0533	-0.107**	-0.0878	0.00595	-0.00719
	(-1.008)	(-2.482)	(-1.048)	(0.464)	(-0.512)
CFO	0.468	-0.0257	0.0154	0.134	0.120
	(1.120)	(-0.177)	(0.105)	(1.129)	(1.069)
Age	0.0315	0.0147	0.101	-0.00738	-0.00804
	(0.577)	(0.504)	(1.360)	(-0.435)	(-0.460)
Litigation	0.196	0.134*	0.689**	0.0227	0.0330
	(0.590)	(1.956)	(2.010)	(0.289)	(0.360)

BigNauditor	-0.0777	0.426***	-0.0183	0.0275	-0.00426
	(-0.381)	(6.927)	(-0.128)	(1.371)	(-0.190)
SimilarSize	0.122	-0.0262	-0.0448	0.00386	0.00540
	(1.344)	(-0.731)	(-0.773)	(0.303)	(0.329)
SameIndustry	-0.00242	0.0798	0.167	0.0456*	0.0333
	(1.009)	(1.005)	(1.416)	(1.752)	(1.415)
GeogProximity	0.00629	0.0117	-0.00293	-0.00434	-0.00450**
	(1.573)	(1.531)	(-0.174)	(-1.621)	(-2.168)
SameAuditor	-0.0635	-0.0858	-0.155	-0.0122	-0.0171
	(-1.193)	(-1.146)	(-1.432)	(-0.280)	(-0.448)
BoardIndep	-0.0625**	0.0322	-0.0560	0.00847	0.00827
	(-2.069)	(0.930)	(-0.905)	(0.642)	(0.794)
BoardSize	-0.00160	0.0104	-0.0349***	-0.00398	-0.000736
	(-0.136)	(1.551)	(-3.007)	(-1.468)	(-0.370)
Internal Funding	-0.175	0.0524	-0.153	-0.00845	0.00433
	(-1.448)	(0.728)	(-1.439)	(-0.247)	(0.140)
TangibleAssets	-0.0294	-0.217***	-0.215	0.0445	0.0120
	(-0.214)	(-3.933)	(-1.426)	(0.761)	(0.224)
Degree	-0.0116	-0.00862	0.0208*	0.00583*	0.00498*
	(-1.112)	(-1.207)	(1.797)	(1.859)	(1.771)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns Included			Yes		
Constant	0.267**	-0.302**	-0.628	-0.00280	-0.00589
	(2.005)	(-2.212)	(-1.499)	(-0.0366)	(-0.0711)
Observations	268	162	264	223	223
R-squared	0.454	0.694	0.858	0.468	0.527

In Panel A, the focal firm accouting measure is regressed on central firm accounting measure, a dummy variable and an interaction of the two. The dummy variable is set to 1 the first year of the tie and 0 the year before the tie.

In Panel B, the model is similar except that the dummy is 1 the first year of the tie and 0 the remaining years of the tie.

All control variables are defined in Appendix A. Standard errors are clustered by firm and year.
Industry fixed effects are included. *,**,*** indicate significance at the 10%,5% and 1% level, respectively.

Table 6: Endogeniety Analysis

Panel A: First Stage Heckman Analysis

VARIABLES	D_intoTie	D_OutofTie
SimilarSize	0.00114	0.00202
	(0.00585)	(0.0150)
SameIndustry	0.0278	-0.0778
	(0.194)	(-0.631)
GeogProximity	0.0345*	0.0140
	(1.647)	(0.743)
CentralityScoreAvg_CF	0.164***	0.0155
	(5.821)	(0.500)
ROAAvg_CF	-1.017	-0.129
	(-1.115)	(-0.163)
Size	0.0107	0.101**
	(0.311)	(2.480)
Size_CF	-0.0286	0.0191
	(-0.806)	(0.607)
M/B	-0.0149	-0.0323
	(-1.075)	(-1.611)
Leverage	-0.000509	0.0888
	(-0.00613)	(1.436)
Volatility	-1.387	1.617
	(-1.209)	(1.390)
SalesGrowth	0.00118	0.379
	(0.00550)	(1.595)
CFO	-0.773	0.993
	(-1.029)	(1.282)
Age	0.0752	0.183***
	(1.273)	(3.247)
Litigation	0.0103	-0.0649
	(0.0956)	(-0.513)
BigNauditor	0.385*	-0.747*
	(1.713)	(-1.912)
SameAuditor	-0.0728	-0.0785
	(-0.863)	(-0.852)
BoardIndep	0.150	0.144
	(1.226)	(0.990)
BoardSize	0.00271	-0.0398
	(0.110)	(-1.471)
Internal Funding	-0.182	-0.238
	(-1.246)	(-1.547)

TangibleAssets	-0.157	-0.556***
	(-0.977)	(-2.927)
Degree	-0.0616***	0.0347**
	(-3.632)	(2.228)
Constant	-2.535***	-1.109
	(-3.900)	(-1.524)
Observations	676	604

Panel B: "In-Tie" Regression controlling for Inverse Mills Ratio

VARIABLES	Cscore	ConAcc	ConBTM	absJM	absJM_ ROA
AcctMeasCF	-0.0284	-0.206	-0.0634	0.0227	0.216***
	(-0.242)	(-1.589)	(-1.029)	(0.196)	(4.151)
D_intoTie	-0.00496	0.0181	0.0361	-0.00274	0.00365
	(-0.386)	(0.815)	(1.100)	(-0.377)	(0.629)
AcctMeasCF*D_intoTie	0.159***	0.312**	0.173**	0.222**	-0.0552
	(2.919)	(2.037)	(2.362)	(2.167)	(-0.636)
Inverse Mills Ratio	0.0141	-0.0385	-0.0910	-0.0102	-0.00786
	(0.262)	(-1.378)	(-1.055)	(-1.038)	(-0.794)
Controls Included	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns Included			Yes		
Constant	0.274	-0.0553	-0.333	0.0649*	-0.00531
	(0.932)	(-0.357)	(-1.351)	(1.664)	(-0.280)
Observations	673	428	653	569	569
R-squared	0.427	0.369	0.798	0.439	0.453

Panel C: Holding First Year of Central Firm Constant

VARIABLES	Cscore	ConAcc	ConBTM	absJM	absJM_ ROA
AcctMeasCF	0.0298	0.226***	-0.0249	0.0207	-0.0470
	(0.516)	(2.661)	(-0.356)	(0.245)	(-0.462)
D_intoTie	0.00136	-0.00476	-0.0129	-0.00157	-0.000254
	(0.133)	(-0.314)	(-0.600)	(-0.234)	(-0.0441)
AcctMeasCF*D_intoTie	0.211***	-0.0705	0.0654**	0.158	0.0983
	(2.632)	(-0.600)	(2.001)	(1.084)	(1.019)
Controls Included	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns			Yes		
Constant	0.204	0.0480	-0.476*	0.0122	-0.0135
	(0.976)	(0.270)	(-1.901)	(0.344)	(-0.627)
Observations	848	542	818	704	704
R-squared	0.421	0.340	0.745	0.406	0.409

Panel A presents the Heckman first stage model. The first column presents the probability of entering a tie with a central firm while the second column estimates the probability of exiting such a tie. ROAAvg_CF is the average ROA for the central firm for years t-2, t-1 and t. CentralityScoreAvg_CF is the average Centrality Score for years t-2, t-1 and t. Z-statistics are presentd in parenthesis. Panel B reruns analysis of Table 5A but includes the Inverse Mills Ratio for each model.

Panel C reruns analysis of Table 5A but holds the values of the central firm constant to that of the first year of the tie.
All other variables are defined in Appendix A. *,**,*** indicate significance at the 10%, 5% and 1% level, respectively. Standard errors are clustered by firm.

Table 7: Convergence Analysis
Panel A: Reporting Response to Differences

VARIABLES	Cscore Change	ConAcc Change	ConBTM Change	absJM Change	absJM_ROA Change
D_intoTie	0.0119	-0.00164	-0.0421*	0.0190***	0.0230***
	(0.622)	(-0.103)	(-1.937)	(3.823)	(5.470)
PY_Reporting_Diff	-0.409***	-0.449***	-0.0584*	-0.640***	-0.622***
	(-4.393)	(-3.560)	(-1.716)	(-4.997)	(-4.890)
PY_RptDiff*D_intoTie	-0.247**	-0.226	-0.111**	0.0286	0.114
	(-2.340)	(-1.194)	(-1.979)	(0.124)	(0.715)
Controls Included	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns Included			Yes		
Constant	-0.0411	-0.194	1.459***	-0.0219	-0.0705**
	(-0.105)	(-1.124)	(5.735)	(-0.611)	(-2.015)
Observations	812	538	819	691	691
R-squared	0.310	0.465	0.467	0.525	0.589

Panel B: Reporting Differencs Over Time

VARIABLES	Diff_Cscore	Diff_Con NOAcc	Diff_Con BTM	Diff_JM	Diff_JMROA
D_intoTie	0.0217	0.0223	-0.0321	0.000758	0.00289
	(0.697)	(1.545)	(-1.205)	(0.125)	(0.746)
PY_Reporting_Diff	0.213	0.0219	0.698***	0.0535*	0.0315
	(1.229)	(0.187)	(11.21)	(1.828)	(1.584)
PY_RptDiff* D_intoTie	-0.350	-0.241***	-0.134**	-0.199	-0.0494
	(-1.455)	(-2.959)	(-2.075)	(-1.332)	(-0.525)
Controls Included	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Constant	0.407***	0.0825	0.106	-0.0222	-0.0188
	(4.279)	(1.251)	(1.238)	(-0.778)	(-1.091)
Observations	907	567	953	726	726
R-squared	0.327	0.231	0.679	0.327	0.314

Panel C: Pre-Tie Difference Analysis

VARIABLES	Cscore	ConAcc	ConBTM	absJM	absJM_ROA
AcctMeasCF	-0.0222***	-0.0558**	-0.115**	0.0167***	0.0168***
	(-2.755)	(-2.583)	(-2.414)	(2.989)	(3.081)
D_intoTie	0.0807	-0.00829	0.163***	0.185**	0.251***
	(0.650)	(-0.0794)	(2.827)	(2.323)	(3.453)
AcctMeasCF*D_intoTie	0.0591	0.106	0.00292	-0.0300	-0.137
	(0.712)	(0.781)	(0.0364)	(-0.321)	(-1.620)
FocalLowerRpt	-0.0704***	-0.0926***	-0.186***	0.0248***	0.0255***
	(-4.380)	(-4.295)	(-4.521)	(4.097)	(5.457)
FocalLowerRpt*D_intoTie	0.102*	0.0929***	0.105**	-0.0238***	-0.0193***
	(1.919)	(3.717)	(2.526)	(-3.535)	(-3.393)
Controls Included	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns			Yes		
Constant	0.214	0.0893	-0.242	0.0227	-0.00663
	(0.946)	(0.741)	(-0.831)	(0.810)	(-0.310)
Observations	850	541	817	709	709
R-squared	0.424	0.399	0.768	0.427	0.449

Panel A regresses the change of focal firm reporting for each reporting variable on D_intoTie, which is coded 1 for years of the tie and 0 an equal number of years before the tie, PY_Rpt_Diff, which is the prior year reporting difference between the focal and central firm and an interaction between the two variables.

Panel B regresses the current year reporting difference of the focal and central firm on the prior year difference between the two firms, D_intoTie and an interaction between those two variables.

Panel C regresses current year focal firm accounting measures on D_intoTie, Focal Lower and in interaction between these two variables. Focal Lower is coded 1 if the focal firm had lower conservatism (higher discretionary accruals)than the central firm in the pre-tie period and 0 otherwise. Central firm reporting values are also included in the regression as well as an interaction between central firm reporting values and D_intoTie.

All control variables are defined in Appendix A. Standard errors are clustered by firm and year. Industry fixed effects are included.

*,**,*** indicate significance at the 10%,5% and 1% level, respectively.

Table 8: Cross Sectional Analysis

VARIABLES	Cscore	ConAcc	ConBTM
Director Features			
AC-Focal Firm	0.231	0.0931	0.182
	(0.874)	(0.380)	(1.647)
N	664	422	644
R-Squared	0.433	0.380	0.805
CEO-Focal Firm	-0.114	-0.357	-0.00887
	(-0.490)	(-1.256)	(-0.064)
N	666	422	646
R-Squared	0.431	0.382	0.799
AC-Central Firm	-0.263	-0.152	-0.154
	(-1.177)	(-0.384)	(-1.251)
N	667	426	648
R-Squared	0.436	0.370	0.808
CEO-Central Firm	0.137	-0.0714	0.000326
	(0.785)	(-0.374)	0.003
N	667	426	648
R-Squared	0.431	0.370	0.803
AC-Both	0.0624	0.173	-0.0607
	(0.453)	(0.657)	(-0.368)
N	673	428	653
R-Squared	0.430	0.372	0.801
Firm Features			
Firm Size	-0.0737	-0.105	-0.0363
	(-1.031)	(-1.010)	(-0.633)
N	673	428	653
R-Squared	0.445	0.374	0.814
Board Independence	-0.377***	0.0527	-0.319***
	(-2.703)	(0.203)	(-2.975)
N	673	428	653
R-Squared	0.432	0.369	0.805
Linking Features			
Central Firm Size	-0.048	0.0982	0.0244
	(-1.580)	(0.771)	(0.608)
N	673	428	653
R-Squared	0.296	0.379	0.799
Similar Size	0.448	-0.0854	0.0677
	(1.428)	(-0.210)	(0.288)
N	673	428	653
R-Squared	0.433	0.371	0.765
Same Industry	0.312	1.064**	-0.262
	(0.530)	(2.128)	(-1.078)
N	673	428	653
R-Squared	0.444	0.405	0.799

Same Auditor	(1.643)	-1.873	-0.124
	-0.006	-0.520	(-0.880)
N	673	428.000	653.000
R-Squared	0.436	0.371	0.799
Geographical Proximity	0.0484	-0.0413	-0.0101
	(1.317)	(-0.377)	(-0.227)
N	673	428	653
R-Squared	0.442	0.374	0.763

This table reruns the analsis of Table 5 but adds to it a three way interaction between D_intoTie, Central Firm accounting measure and a cross sectional variable. Each regression also includes the requisite interactions needed when performing a three-way interaction. Each row of the table presents the three way interaction of the regression. In Column 1, the dependent variable is Cscore, in column 2 it is ConAcc and in column 3 it is ConBTM. The main effects, control variables and fixed effects are calculated but omitted for brevity.

All control variables are defined in Appendix A. Standard errors are clustered by firm and year. Industry fixed effects are included.

*,**,*** indicate significance at the 10%,5% and 1% level, respectively.

Table 9: Alternate Channels of Influence

Panel A: Indirect Effect

VARIABLES	% Outsiders	Leverage	Internal Funding	TangibleAssets	Volatility
Central Firm Attribute	0.0664	0.0152	0.152**	0.0547	0.386***
	(1.617)	(0.426)	(2.372)	(0.871)	(3.428)
D_intoTie	0.0260	0.145**	0.000536	-0.0252**	-0.00289
	(0.675)	(2.056)	(0.0196)	(-2.286)	(-0.398)
D_intoTie*CF Attribute	-0.0102	-0.0101	-0.0514	0.0176	-0.0125
	(-0.220)	(-0.411)	(-1.041)	(0.409)	(-0.191)
Size	0.0110*	0.0280	0.0679*	-0.0291**	-0.00426*
	(1.722)	(0.590)	(1.805)	(-1.978)	(-1.772)
Size_CF	0.00585	-0.0455*	-0.00469	0.00875	0.00470**
	(1.129)	(-1.688)	(-0.336)	(1.132)	(2.322)
M/B	-0.00236	-0.00127	-0.00874	-0.00640	0.00187*
	(-0.907)	(-0.0445)	(-1.088)	(-1.510)	(1.752)
SalesGrowth	-0.00843	-0.238**	-0.0139	0.0922**	0.0105*
	(-0.636)	(-2.453)	(-0.322)	(2.455)	(1.842)
CFO	-0.0265	-0.739	1.208***	0.0838	0.0141
	(-0.398)	(-1.226)	(7.127)	(0.823)	(0.673)
Age	0.00800	0.0397	0.0231	0.0253	-0.00859**
	(0.713)	(1.128)	(0.831)	(1.311)	(-2.084)
Litigation	0.118**	-1.418***	0.141	-0.499***	0.0373***
	(2.169)	(-6.678)	(1.627)	(-6.887)	(3.204)
BigNauditor	0.00738	-0.0911	-0.0412	0.0195	-0.00856
	(0.609)	(0.512)	(-0.516)	(0.774)	(-1.384)
SimilarSize	-0.00184	-0.192**	-0.0454	0.00820	-0.00298
	(-0.122)	(-2.562)	(-1.015)	(0.481)	(-0.554)
SameIndustry	0.00499	0.212	0.0861	-0.0508	-0.00412
	(0.187)	(1.604)	(0.925)	(-1.004)	(-0.515)
GeogProximity	0.00697	0.0610**	0.0193**	-0.00230	-0.000535
	(1.484)	(2.373)	(2.138)	(-0.262)	(-0.483)
SameAuditor	0.0198	0.0185	0.00630	-0.00174	0.00288
	(0.974)	(0.189)	(0.130)	(-0.0725)	(0.457)
BoardIndep	0.287***	0.0538	0.00258	-0.0189	0.00254
	(15.38)	(0.809)	(0.0556)	(-0.739)	(0.494)
TieLength_IN	-0.00414	-0.0779**	0.0147	0.00631	0.00191
	(-0.660)	(-2.190)	(1.523)	(1.067)	(1.541)
BoardSize	-0.00692**	7.73e-05	-0.0149	0.00830	-0.00141
	(-2.333)	(0.00398)	(-1.644)	(1.555)	(-1.032)
Degree	0.00367	0.000600	-0.0188***	0.00552**	-0.000226

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	(1.458)	(0.0533)	(-3.011)	(1.996)	(-0.385)
Inverse Mills Ratio	-0.000919	-0.115	0.183**	0.0121	-0.00418
	(-0.0399)	(-0.701)	(2.266)	(0.243)	(-0.382)
Leverage	0.000849		-0.101***	-0.0467	-0.000155
	(0.0787)		(-3.807)	(-1.516)	(-0.0213)
Internal Funding	-0.00905	-0.244		0.0712***	-0.0483***
	(-0.325)	(-1.584)		(2.861)	(-4.874)
TangibleAssets	0.000308	-0.604*	0.204***		0.00412
	(0.00656)	(-1.912)	(2.770)		(0.281)
Volatility	0.202	-0.233	-3.291***	-0.00921	
	(1.600)	(-0.200)	(-5.156)	(-0.0282)	
Constant	0.221	1.835***	-0.100	0.778***	0.119***
	(1.622)	(3.661)	(-0.363)	(4.245)	(3.545)
Observations	676	673	671	665	667
R-squared	0.811	0.736	0.780	0.880	0.821

Panel B: Controlling For Indirect Effect

VARIABLES	Cscore	ConAcc	ConBTM	absJM	absJM ROA
AcctMeasCF	0.0205	-0.171	0.0295	0.0628	0.138
	(0.149)	(-1.563)	(0.494)	(0.938)	(1.279)
D_intoTie	-0.00375	0.0165	0.0332	0.00179	0.00510
	(-0.224)	(0.915)	(1.300)	(0.325)	(0.963)
AcctMeasCF*D_intoTie	0.146**	0.195*	0.156**	0.0961	-0.0346
	(2.091)	(1.656)	(2.204)	(1.235)	(-0.312)
InfoAsym*D_intoTie	0.0439	-0.0444	0.104	0.0140	0.00727
	(0.279)	(-0.318)	(0.642)	(0.522)	(0.364)
FinNeeds*D_intoTie	-0.345	0.122	0.107	0.0139	0.00814
	(-1.421)	(0.548)	(0.667)	(0.271)	(0.282)
Leverage*D_intoTie	0.0196	0.0309	0.0766	0.00248	-0.00711
	(0.319)	(0.798)	(1.427)	(0.417)	(-1.291)
Uncertainty*D_intoTie	-1.511	0.176	0.320	0.127	0.399
	(-1.187)	(0.225)	(0.432)	(0.338)	(1.567)
Outisiders*D_intoTie	0.178	-0.0253	-0.394**	-0.0115	-0.0527
	(0.783)	(-0.234)	(-2.084)	(-0.279)	(-1.359)
Size	-0.0401**	-0.00331	0.0812***	-0.00200	-0.00321*
	(-1.978)	(-0.405)	(4.012)	(-0.588)	(-1.900)
Size_CF	0.000445	-0.00500	-0.0351***	-0.00148	0.00112
	(0.0399)	(-0.678)	(-3.306)	(-0.902)	(1.574)

M/B	0.00495	-2.75e-05	0.0220***	-0.000534	0.000474
	(0.545)	(-0.0107)	(2.812)	(-0.406)	(0.358)
Leverage Change	0.0888**	-0.00693	-0.0601*	-0.00441	-0.00155
	(2.131)	(-0.314)	(-1.754)	(-1.544)	(-0.453)
Volatility Change	0.767	0.167	1.240	0.0781	-0.281
	(1.080)	(0.316)	(1.381)	(0.233)	(-1.473)
SalesGrowth	-0.0336	-0.0853**	-9.69e-05	0.00528	0.00163
	(-0.957)	(-2.441)	(-0.00228)	(0.746)	(0.198)
CFO	-0.216	-0.396***	0.224	0.0721**	0.0730**
	(-0.841)	(-2.805)	(1.183)	(2.557)	(2.037)
Age	0.00448	0.00766	0.0380	-0.00770**	-0.00506
	(0.253)	(0.665)	(1.134)	(-2.195)	(-1.534)
Litigation	0.114	0.00547	-0.677***	0.0709***	0.0320**
	(0.999)	(0.143)	(-8.648)	(7.482)	(2.272)
BigNauditor	-0.0295	0.0844	0.0393	-0.00151	-0.00251
	(-0.236)	(1.444)	(0.434)	(-0.161)	(-0.263)
SimilarSize	-7.94e-05	0.0115	-0.00210	-0.00415	0.00186
	(-0.00505)	(0.818)	(-0.0608)	(-1.436)	(0.427)
SameIndustry	-0.00275	-0.0197	0.0790	-0.00164	0.00221
	(-0.0933)	(-1.334)	(1.348)	(-0.205)	(0.202)
GeogProximity	-0.00425	-0.00845***	0.00486	0.000184	-0.00127
	(-0.596)	(-2.686)	(0.809)	(0.137)	(-1.312)
SameAuditor	-0.00162	0.0230*	-0.0526	0.00723	0.00257
	(-0.0714)	(1.652)	(-1.158)	(1.004)	(0.494)
% Outsider Change	-0.152*	-0.0474	0.205	-0.0147	0.0322
	(-1.693)	(-0.627)	(1.633)	(-0.643)	(1.001)
TieLength_IN	0.0231***	-0.00428	0.0169	0.000270	-0.000418
	(3.231)	(-0.641)	(1.386)	(0.177)	(-0.244)
BoardSize	-0.00529	0.00422	-0.0141***	0.000917	0.000960
	(-1.224)	(1.112)	(-2.608)	(0.511)	(1.534)
Internal Funding Change	0.238	0.159	-0.310***	-0.0332	-0.0139
	(1.486)	(0.967)	(-2.739)	(-1.101)	(-0.665)
TangibleAssets change	-0.156	0.00350	-0.0385	0.0302	0.0142
	(-1.319)	(0.0285)	(-0.303)	(1.320)	(1.061)
Degree	0.00111	0.00256	-8.81e-05	0.000136	0.000724
	(0.392)	(1.231)	(-0.0202)	(0.175)	(0.966)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns Included			Yes		
Constant	0.399	-0.0646	-0.412*	0.0297	-0.00543
	(1.566)	(-0.491)	(-1.842)	(1.186)	(-0.247)

Observations	748	477	729	623	623
R-squared	0.431	0.384	0.762	0.418	0.422

Panel A examines whether other focal firm practices were influenced by the central firm. Each column represents a different dependent variable: Percent Outsider, Leverage, Internal Funding, Tangible Assets and Volatility. The dependent variable is regressed on the central firm measure of the same practice, a dummy variable set to 1 in the years the focal and central firm are tied and 0 an equal number of years before the tie, and an interaction between the two. Control variables are defined in Appendix A.

Panel B augments the analysis in Table 5A by including several interactions between D_intoTie and changes to demands for conservatism. Information Asymmetry is captured by change in Tangible Assets (PPE/Lag Assets) , Finance Needs is captured by change Retained Earnings scaled by Lag Assets, Leverage is measured as the change in short and long term debt scaled by size, Uncertainty is captured by the change in volatility is measured as the standard deviation of monthly returns over the past 5 years while Outsiders is the change in the percentage independent directors on the board. All control variables are measured at time t, except for Volatility, Leverage, Internal Funding, Tangible Assets and Percent Outsiders, which are measured as the change from t-1 to t. All control variables are defined in Appendix A. Standard errors are clustered by firm and year. Industry fixed effects are included.   *,**,*** indicate significance at the 10%,5% and 1% level, respectively.

Table 10: Random Interlocks

VARIABLES	Cscore	ConNOAcc	ConBTM	absJM	absJM_ROA
AcctMeas_RT	0.313***	-0.0495	0.0540	-0.0287	0.0618
	(3.369)	(-0.501)	(0.892)	(-1.150)	(0.965)
D_intoTie_RandomTie	-0.0134	0.00242	-0.0117	-0.000460	-0.00431
	(-0.463)	(0.159)	(-0.341)	(-0.0421)	(-0.379)
AcctMeas_RT*D_intoTie	-0.0751	0.0517	-0.0864	0.0438	-0.0381
	(-1.013)	(0.544)	(-1.392)	(1.480)	(-0.501)
Size	-0.0280*	0.00886	0.0432**	-0.00561	-0.00520
	(-1.670)	(1.423)	(2.458)	(-1.385)	(-1.019)
Size_randomtie	0.0200	0.0101***	-0.0123	0.000843	0.00143
	(0.987)	(2.712)	(-0.912)	(0.359)	(0.659)
M/B	-0.00414	0.00154	0.0380***	-0.00140	-0.000799
	(-0.830)	(0.797)	(3.176)	(-1.037)	(-0.528)
Leverage	0.0195	-0.00692	-0.180***	0.0135	0.00485
	(0.543)	(-0.403)	(-4.206)	(1.377)	(0.455)
Volatility	0.969**	0.181	-2.325***	-0.312	-0.0726
	(2.108)	(0.622)	(-3.905)	(-1.202)	(-0.243)
SalesGrowth	0.0248	-0.0371	0.0249	0.00488	-0.0213
	(0.470)	(-0.968)	(0.501)	(0.446)	(-1.124)
CFO	-0.107	-0.355***	0.569**	0.0630	0.133
	(-0.491)	(-3.855)	(2.525)	(0.747)	(1.364)
Age	-0.00284	-0.0307*	-0.0340	-0.000115	-0.00216
	(-1.567)	(-1.841)	(-1.252)	(-0.0157)	(-0.179)
Litigation	-0.126	-0.104	0.244	0.275***	0.229***
	(-1.383)	(-0.954)	(1.132)	(4.365)	(3.078)
BigNauditor	0.130***	0.104**	-0.0400	-0.00763	0.0104
	(6.056)	(2.215)	(-0.462)	(-0.190)	(0.216)
SameIndustry_randomtie	-0.0435	-0.0168	0.0198	0.00978	0.0157
	(-.489)	(-0.445)	(0.232)	(0.444)	(0.607)
SameAud_randomtie	0.0208***	-0.0112	-0.0322	-0.00445	0.00879
	(6.499)	(-0.766)	(-1.278)	(-0.335)	(0.552)
TieLength_randomtie	0.0154*	0.00201	-0.0146	0.00294	0.00377
	(1.712)	(0.412)	(-1.221)	(0.646)	(0.724)
GeogProximity_randomtie	7.79e-05	0.000688	-0.00243	0.000615	0.00292
	(0.971)	(0.123)	(-0.302)	(0.313)	(1.223)

BoardIndep	0.00553	-0.0310***	0.0730**	0.00389	0.0113
	(0.297)	(-3.678)	(2.340)	(0.282)	(1.063)
BoardSize	0.00169	0.00242	-0.000645	-0.00315**	-0.00207*
	(0.421)	(0.456)	(-0.102)	(-2.122)	(-1.775)
Internal Funding	-0.00778	0.0772	-0.493***	-0.0210	-0.0498***
	(-0.173)	(1.248)	(-4.809)	(-1.077)	(-2.628)
TangibleAssets	-0.0943	-0.0358	-0.129	0.0620**	0.0441
	(-1.570)	(-0.654)	(-1.205)	(2.195)	(1.266)
SimilarSize_randomtie	-0.0363	0.0137	-0.0323***	0.00322	-0.00540
	(-1.090)	(1.412)	(-2.878)	(0.414)	(-0.922)
Degree	-0.000653	-0.000965	-0.00123	0.000203	-0.000268
	(-0.345)	(-0.449)	(-0.321)	(0.174)	(-0.149)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns Included			Yes		
Constant	-0.0347	-0.142	-0.194	0.0685	-0.0152
	(-0.368)	(-0.834)	(-1.334)	(1.126)	(-0.232)
Observations	651	448	634	565	565
R-squared	0.420	0.493	0.725	0.530	0.372

This table reruns the analysis of Table 5 with a different sample. A random sample of firms is selected to track their interlocks. For each focal firm, a interlocking firm with is considered its "random tie" if it's the only interock of the focal firm during the testing window. The testing window, identified by D_intoTie, is 1 for years during the tie and 0 and equal number of years before the tie. The focal firm accounting measure is regressed on the random tie accounting measure, D_intoTie and the interaction. All control variables are defined in Appendix A. Standard errors are clustered by firm and year. Industry fixed effects are included. *,**,*** indicate significance at the 10%,5% and 1% level, respectively.

Table 11: Difference in Difference Analysis

VARIABLES	Cscore	ConNOAcc	ConBTM	absJM	absJM_ROA
D_intoTie	0.0152	-0.00932	0.0283	0.00725	-0.00747
	(0.967)	(-0.894)	(0.808)	(1.157)	(-0.658)
FocalFirm	-0.00179	-0.0193	-0.0137	-0.0326***	-0.0498***
	(-0.122)	(-1.442)	(-0.354)	(-5.298)	(-4.824)
AcctMeasCF	0.0898	0.0277	0.116*	0.0816	-0.0741
	(1.438)	(0.369)	(1.713)	(0.300)	(-0.461)
AcctMeasCF*D_intoTie*FocalFirm	0.245*	0.406***	0.108	0.314	(0.847)
	(1.686)	(2.981)	(1.094)	(1.162)	-0.172
D_intoTie*AcctMeasCF	-0.109	-0.0888	0.0257	-0.228	0.112
	(-1.317)	(-0.818)	(0.351)	(-0.893)	(0.461)
FocalFirm*AcctMeasCF	-0.0567	-0.261**	-0.0744	-0.116	0.200
	(-0.408)	(-2.321)	(-0.954)	(-0.374)	(-0.618)
D_intoTie*FocalFirm	0.0132	0.0215	0.0108	-0.00551	0.0119
	(0.694)	(1.125)	(0.217)	(-0.673)	(0.844)
Controls Included	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Prior Returns			Yes		
Constant	-0.135	-0.00637	-0.142	0.636***	0.269***
	(-0.570)	(-0.133)	(-0.748)	(10.87)	(5.219)
Observations	1,682	1,105	1,602	1,437	1,437
R-squared	0.346	0.288	0.632	0.440	0.410

This table presents a difference in difference model. Each focal firm is matched with a non-focal firm based on size. Each non-focal firm is linked to the central firm connected to its matched focal firm. The non-focal firms serve as the control group in the regression. D_intoTie is coded 1 each year a focal firm is tied to a central firm and 0 an equal number of years prior. Non-focal firms follow the same coding as their matched focal firms for D_intoTie. Focal firms is coded 1 if the firm is linked to a central firm and 0 if it is a non-focal firm. All control variables are defined in Appendix A. Standard errors are clustered by firm and year. Industry fixed effects are included. *,**,*** indicate significance levelat the 10%,5% and 1%, respectively

Essay 2: Municipal Accounting Quality

Chapter 6: Introduction

This paper studies different manners of municipal reporting manipulation and institutional factors that affect tendency to manipulate. Municipalities use fund accounting which tracks each activity separately in self-balancing set of accounts. I focus on manipulation in the general fund, the largest fund, which uses governmental accounting, and the enterprise fund, which accounts for business-like operations and uses commercial-like accounting (Ruppel, 2010). I first investigate whether manipulation occurs and if so, how it occurs in each fund. Then I examine the institutional factors that affect the tendency to manipulate, thereby underscoring those circumstances.

While the study is in the spirit of the corporate earnings management literature, institutional and accounting differences make ex-ante predictions unclear. In municipalities, elected officials, acting as agents of the citizen, use public funds obtained from the citizenry to provide public services (GASB, 2006). A second difference between the corporate and municipal setting is the accounting standards, which stresses accountability. Corporate accounting addresses accountability to shareholders by producing statements that emphasize financial performance. Municipalities, however, are accountable to the citizens, the main resources providers, to show how public funds were expended to provide services. (Granof and Khumawalaf, 2011).

To that end, in addition to fund accounting, the general fund uses the current resource method,[2] which matches the inflows and outflows of government in a given period. The striking difference is that only items affecting current year resources are reported, thus long term assets and liabilities are absent from the balance sheet. Accordingly, the statement of operations reports on net changes in working capital ("bottom line") (Zimmerman, 1977).

The general fund would have an incentive to report a small increase in its bottom line to avoid taxpayers demanding more services and/or reduction of taxes (Anthony, 1985). At the same time, municipal officials could desire build up their fund balance to withstand economic shocks in the future (GFOA, 1990). Therefore, ex-ante, the direction of general fund manipulation is not clear.

The incentives to manipulate enterprise fund earnings are less clear. While enterprise earnings could be managed downwards to keep in line with the overall objective of the municipality, they could also be managed upwards since enterprise funds are operated similar to commercial entities (Ruppel, 2010). However, if municipal officials concentrate their efforts on the general fund since it receives the most attention from users (Raman, 1981), then they may not exert effort to manipulate earnings in the enterprise funds.

Municipalities have different institutions and accounting from corporations and prior literature has documented that institutions impact corporate outcomes (La Porta et al, 2000 and La Porta et al 2002). As a result, ex-ante, there is reason to believe that if

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[2] Appendix A has a more complete set of differences between governmental and corporate accounting.

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municipal manipulation occurs, it occurs for different reasons. Furthermore, this setting allows me to investigate how two dissimilar entities within the same organization respond to reporting pressures and how those differences manifest themselves with respect to accounting manipulation. Additionally, my study will answer an unexplored part of the literature: the accounting quality of municipalities. With municipalities comprising 10.5% of the U.S. economy in 2001 (Census of Government, 2001), my study seeks to better understand financial reporting for a significant part of the economy.

Using a sample of 103 municipalities from 2001- 2003, I examine manipulation using techniques of each brands of accounting. First, I inspect if interfund transfers are used to bias the bottom line in either fund. Operating transfers are shifts of money between funds that can occur to subsidize the receiving fund, to account for long term interfund loans, and other reimbursements. Although transfers have a legitimate purpose, there remains discretion in their use. For example, if the general fund were to transfer more money than needed to the debt service fund, it could create a "rainy day" fund to draw from in future years when the general fund needs it while still showing the desired general fund balance in the current year. I control for legitimate economic reasons for the transfers by including financial condition of other funds in the municipality and prior year general fund transfers in the analysis.

I find that net transfers (transfers in less transfers out) are used in the general fund to systematically manipulate its bottom line downward but had no such usage in the enterprise fund. I then find that there is a negative relationship between operating income before discretionary accruals and discretionary accruals in the enterprise fund

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but a similar analysis into general fund accruals yielded no results. The results

suggest that each fund manipulates downward using its own brand of accounting.

Next, I look at institutional factors that could exacerbate or mitigate manipulation in

each fund. Prior literature has documented that particular institutional factors affect

corporate earnings management (Luez et al, 2003). In municipalities, citizens have an

incentive to monitor their elected official to ensure that the public treasury is used

shrewdly (Downs, 1957). I include a series of variables that measure citizen

influence. I also argue that municipal councils, which are the legislative bodies for

municipalities, can influence accounting practices similar to how strong corporate

boards have been linked to favorable outcomes (Laux and Laux, 2008).

Municipalities also face various external pressures that could impact the tendency to

manipulate. Creditors react to municipal financial information (Wallace, 1981) and

municipal bond ratings are based on their ability to sustain operations via their fund

balance (S&P, 1999). I use binary variable if the municipality issued a bond in the

prior year. Since municipalities are also subject to additional reporting requirements

as a condition of the continuation of state and federal grants (Chan, 1981), I use

intergovernmental revenue as to proxy this incentive. In addition, labor unions use

financial information during negotiations (Anthony, 1985) and therefore use pension

costs, after controlling for municipality size, to measure relative union strength.

In the general fund, I find that the interaction between pre-transfer income and

"citizen" variables were generally negative while the interaction with "council"

variables was mostly positive. This suggests that higher citizen involvement is

associated with a general fund transferring more money out as pre-transfer income

rises. Higher pension costs and intergovernmental revenue were also associated with downward manipulation while the affect of a bond issuance was not significant. However, a similar analysis in the enterprise fund using discretionary accruals yielded no results.

Additional analysis revealed that general funds over their budgeted pre-transfer income were more likely to transfer more money out of the fund. As a sensitivity check, I model Net Transfers to calculate discretionary net transfers and find that the results are robust to the use of this variable as well. In addition, I find that each fund uses its preferred manipulation method to offset increases in the other method.

This paper makes five contributions. First, to my knowledge, this paper is the first to document accounting manipulation in U.S municipalities. This finding compliments the finding that non-profit hospitals use accruals to manage earnings towards zero (Leone and Van Horne, 2005) and corporate literature that has largely documented that firms manage earnings up (Healy, 1985, Burgstahler and Eames 1998, and DeFond and Jimbalvo, 1994). My results underscore the important link between institutional incentives and the direction of accounting manipulation. Second, I show that although there is evidence that both general and enterprise funds manipulated their reporting downwards, each fund used a method consistent with its brand of accounting. Whereas corporate literature has used firm-wide measures of earnings management (Jones, 1991), this unique setting allows me to show that municipal officials are sophisticated enough to achieve the same objective using parallel accounting systems.

Third, I shed light on how institutional forces affect municipal reporting. Namely, citizen influence, union and granting agency pressure lead to downward manipulation. Also, councils that are more active and removed from oversight manipulate upwards to project financial viability. This finding should have implications for policy setters in determining effective municipal institutional features. The paper also underscores the importance of the budget and its influence in shaping financial reports. However, those institutional forces played virtually no role in enterprise fund manipulation. Again, the corporate setting assumes the entire firm faces similar external pressures but these results indicate that even within the same organization, divisions are not uniformly affected by outside factors.

Fourth, my paper also provides evidence about the interactive effect between methods of manipulation. This finding adds to the corporate literature that suggests the use of multiple earnings management method by showing its application in a novel setting. Finally, my paper also raises the possibility that Big 4 auditors audit municipalities differently than corporations. I find that they either had no effect of were associated with higher levels of discretionary accruals, which suggests that Big 4 firms may not view these matters as substantially as they do in the corporate setting.

The remainder of the paper unfolds as follows: Chapter 7 presents the motivation, Chapter 8 lays out the hypothesis development, Chapter 9 discusses the design and analysis, and Chapter 10 concludes.

Chapter 7: Motivation

7.1 Municipal Significance

Municipalities comprise a significant portion of the U.S. economy. In 2001, the first

year of my sample, local governments collected revenue of $1.06 trillion including

$354 billion in taxes (Census of Government, 2001). They also had total expenditures

including capital outlays of $1.07 trillion, which accounts for 10.6% of US GDP of

$10.1 trillion in 2001. In 2001 local governments had a total debt of $977 billion

while the federal debt level stood at 5.8 trillion. Local governments maintained their

standing during the decade. In 2008, the most recent year of data availability shows

that local governments $1.59 trillion which accounted for 10.8% of US GDP and

amassed debt totaling $1.54 trillion.

7.2 Institutional Features

The municipal principal-agent relationship is a departure from the model assumed in

the corporate setting. Shareholders, who voluntarily purchase shares, are the

corporate owners and they hire a manager to operate the business to create a return on

their initial investment (Jensen & Meckling, 1976). Therefore corporate accounting

emphasizes financial performance as a measure of "how management has discharged

its stewardship responsibility to owners for the use of enterprise resources entrusted

to it" (FASB Concept Statement 4).

In municipalities, on the other hand, elected officials are the agents of its citizens and

are charged with providing public services in accordance with public policy goals

(Zimmerman, 1977 and GASB, 2006). Elected officials have the power to collect

taxes from the citizenry to finance services. Since the taxpayers,[3] the principals, are

involuntary resource providers (GASB, 2006), they have an incentive to monitor the

elected officials, the agents, to ensure that the public funds are shrewdly expended

(Downs, 1957, Zimmerman, 1977).

Accounting standards are a second difference between the municipal and corporate

setting. Municipal accounting stresses accountability with regards to public funds as a

main objective (GASB Concept Statement 1). To that end, inter-period equity is a

fundamental principle in governmental accounting. Inter-period equity holds that each

year's resources should be adequate to pay for the services provided that year,

"thereby avoiding shifting a burden to future taxpayers for services previously

provided" (GASB, 2006).

In line with this principle, governments use the current resource method which only

focuses on current resources as opposed to economic resource method used in

commercial enterprises. The striking difference is that only items affecting current

year resources are reported, thus long term assets and liabilities are absent from the

balance sheet. Such items are recorded in full in the year they occur. For example, if a

city purchases a new fleet of automobiles with cash, it would simply record as an

expenditure for the autos and the corresponding reduction in cash. Likewise, a sale of

an asset would be recorded as an inflow on the statement of operations (akin to the

income statement), not just the gain portion. The current resource method tries to

match the amounts spent by government in with the amounts received by government

in a given period. Accordingly, the statement of operations reports on net changes in

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[3] Although there is a theoretical distinction between taxpayers and citizens, they are used interchangeably in this paper.

working capital (Zimmerman, 1977).

Another unique feature of governmental accounting is its use fund accounting. A fund is a self balancing set of accounts and is a separate reporting entity. Governments will set up funds based on legal and contractual guidelines or management judgment. Funds are used so governments are more fully accountable for public resources obtained for specific reasons.

By far, the largest fund on a government's ledger is the general fund, which is the catch-all account that records any transaction not classified into the other funds. It is also the most significant fund the government has and receives the most scrutiny when analyzing the overall financial situation of a government (Ruppel, 2010 and Raman 81).

Another fund of interest is the enterprise fund which accounts for business like operations such as utilities and sanitation that the municipality may provide. Governmental Accounting Standards Board (GASB) statement 34 suggests that enterprise funds can be established when a government charges fees for an activity but mandates a fund be set up when the activity is financed by revenue bonds or the fees charged are intended to recover cost. These funds are financed and operated as commercial enterprises (Ruppel, 2010) and therefore there is no concern about preserving inter-period equity. Accordingly, they use commercial accounting standards including full accrual and the economic resource method and therefore report on periodic income[4].

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[4] This is also referred to as change in Net Assets. Enterprise funds interact with other funds via operating transfers

7.3 Literature Review

Municipal accounting literature has documented the effect of accounting to creditors. Wallace (1981) finds that accounting and auditing variables are associated with bond ratings and interest cost. Wilson and Howard (1984) find that weak financial performance leads to higher interest costs while Gore (2004) finds that financial disclosure and bond insurance serve as substitutes.

Another set of papers has focused on factors influencing disclosure. Evans and Patton (1983) documented that municipal population, debt and presence of a municipal manager were all associated a municipality being awarded the GFOA certificate for quality disclosures. Copley (1991) also found that municipalities with Big 8 audit firms tended to disclose more.

More recent papers have explored irregularities. Gore (2009) finds that cities with more volatile revenue or less revenue sources accumulate higher levels of cash. Baber et al (2011) finds that municipalities with restatements subsequently experience higher interest costs but that restatements are less likely in the presence of a Big 4 auditor and voter intervention. Two empirical papers, Stalebrink (2007) and Pilcher and Van der Zan (2010) are of a similar spirit to this one. Stalebrink (2007) examines Swedish cities and finds that those cities use discretionary accruals to lower profit and Pilcher and Van der Zan (2010) find that cities in Australia and New Zealand use depreciation expense to adjust their reported profit.

These studies provide intuition for my study but all three countries sampled in these studies have different government accounting rules than the U.S. In those countries, governments use the same accounting standards as private businesses and therefore

variables like depreciation and accruals can be isolated. Because of the different

standards, these papers only look at the overall profit of the city. However, because of

the fund accounting in the U.S, I can separately examine the general fund, which uses

the current resource method, with the enterprise fund, which uses economic resource

method.

Municipalities offer a unique setting to examine the link between organizational

incentives and accounting methods. Corporate literature has widely assumed that the

entire organization has the same reporting pressure (Healy and Wahlen, 1999).

Consequently, earnings management studies have been focused on firm-wide

measures intended at capturing firm wide earnings management (Jones, 1991). The

municipal setting allows me to test differing incentives within an organization to see

if each fund is subject to the same reporting pressures. By examining distinct units

within the overall entity, I can test whether incentives differ between subunits and if

so, whether the differing accounting rules play a part in the manipulation.

7.4 General Fund Incentives

In the municipal setting, managers have many funds to contend with but the general

fund is the largest fund and receives the most attention when assessing the financial

condition of a city (Ruppel, 2010). As mentioned, the statement of operations of the

general fund reports on the change in working capital and is intended to reflect the

degree to which the fund was able to pay for its services with current inflows. This

figure which represents "bottom line" for the general fund is how users determine the

performance of a municipality (Raman, 1981). Consequently, a decrease in the

working capital would reflect poorly on municipal officials because it would indicate

that the municipality had to finance current activity with prior year funds, thereby breaching inter period equity. For example, the State of Maryland Legislative Auditor reported on the financial condition of cities in the state and labeled cities with a negative bottom line as having a "negative trend." (State of Maryland, 2010). Conversely, showing a large increase in the bottom line can also be a poor signal. Although a large increase in the working capital may seem commendable, the implication is that the municipality collected more taxes than needed. Such a situation may prompt taxpayers to call for a limit of their taxes and/or require more services be provided (Lipnick et al, 1999). A large increase in the bottom line can also embolden labor to make higher demands and could jeopardize some of the grants a municipality receives from state and federal agencies (Anthony, 1985). Accordingly, the ideal target for the General Fund's change in working capital would be a small positive increase (Raman, 1981).

Nonetheless, showing a larger increase in working capital could have its operational benefits. The Governmental Finance Officers Association (GFOA) recommends that municipalities build up their fund balance to withstand economic shocks in the future (GFOA, 1990). This practice would allow continuity of municipal services and for a consistent tax rate even in downturn years (Marlowe, 2005). Credit rating agencies evaluate municipalities based on their ability to sustain operations via their fund balance (S&P, 1999).

Although there might be conflicting arguments about which direction to manipulate the general fund bottom line, extant literature has documented that the officials making those decisions have their own personal incentives. Public choice literature

makes it clear that public officials are motivated by their own self interest (Chan and Rubin, 1987). Politicians seek reelection and thus are often fixated on the short term (Giroux, 1989), mainly for reelection purposes and are willing to compromise or add services to gain a constituency for reelection (Svara, 1999). City managers, who act as the chief operating officer of the municipality and handle the bureaucracy, are motivated by income for performance and reputational concerns. (Giroux, 1989). Given the demands and important uses of financial information, it would appear that municipal officials have a basis to manipulate their financial reporting to favorably influence the opinion of the end user. However, the direction of such manipulation remains an empirical question thus leading to my first hypothesis stated in the null form:

H1: The net change in working capital in the general fund is not systematically manipulated in either direction.

7.5 Enterprise Fund Incentives

GASB 34 declares that enterprise funds need to be established when a governmental activity charges fees to recover costs, which implies that according standard setters, the objective of the enterprise fund is to record zero profit. The zero profit constraint of enterprise funds would not only parallel the objective of the rest of the municipality but also it would make them resemble a non-profit organization. In fact, prior research has found that nonprofit hospitals manage their earnings downwards to reach that threshold (Leone and Van Horn, 2005).

Enterprise funds often operate with little or no competition and therefore can wield monopoly-like power if it chooses (Granof and Khumawalaf, 2011). In addition,

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profits from enterprise funds can be used to finance services provided by the rest of the municipality (DiLorenzo, 1982). Taken together, enterprise funds could be trying to maximize profits.

However, whether the target is zero or maximum profits, the question of manipulation would only be relevant if the fund was deemed important. Although enterprise funds may share the zero profit motives with non-profit organizations, those organizations manage earnings for the whole entity because the entire entity faces the same external pressures. Municipalities, however, have multiple funds but the general fund receives the bulk of attention when analyzing the finances of the municipality (Raman, 1981). Therefore, reporting pressures for the government as a whole fall onto the general fund. But it is unclear if those pressures transfer to the enterprise fund.

On one hand, municipal officials may concentrate their efforts on the general fund since it receives the most attention from users. If this is the case, then those officials would not exert effort to manipulate earnings in the enterprise funds. Conversely, if municipal officials believe the enterprise fund represents meaningful and significant information to users, then they may also wish to present more favorable accounting numbers in the enterprise fund. Therefore, it remains an open empirical question as to whether enterprise fund accounting is managed. This leads to my second hypothesis stated in the null form:

> **H2: The change in net assets in the enterprise fund is not systematically manipulated in either direction.**

7.6 Cross Sectional Hypotheses

The first two hypotheses focused on whether manipulation happens. Accounting

manipulation, though, can be affected by institutional factors. Luez (2003), for

example, notes that differences between countries in investor protection laws explain

earnings management. Firms in countries with stronger investor protection laws also

have higher valuation (LaPorta et al, 2002). As the municipal setting uses two

accounting systems, evidence about accounting quality between international

standards can inform this study. Firms in countries that adopt international standards

have higher accounting quality and information content (Barth et al 2008, and

Landsman et al 2011). Chin et al (2011) provide evidence that states manipulate their

accounting ahead of elections.

Likewise, the municipal setting has different institutional factors that vary in degree

that could alter the direction and manner of the accounting manipulation. While

citizens theoretically have the role to monitor municipal officials, they make lack

ability to do so because it would be too costly for each citizen (Zimmerman, 1977).

However, citizens use financial information for voting and relocation decisions

(Copley et al, 1997). Indeed, Ingram and Copeland (1981) find that financial ratios

have an incremental impact in the outcome of municipal elections suggesting that

voters are implicitly aware of financial information when making voting decisions.

Brender et al. (2003) supports this conclusion by finding that fiscal performance

influences the outcome of mayoral election results in Israel. In addition, municipal

accounting literature has consistently found that municipalities with larger

populations disclose more accounting information, further boosting the monitoring

narrative (Evans and Patton, 1983 and Giroux and Mclelland, 2003). Therefore, municipal officials understand that citizens are aware of the financial information and that they generally disprove of large increases in fund balance.

Manipulation could also be affected by a variety of other external factors. A stream of papers have documented that creditors reacts to municipal financial information. Bond rating changes have been associated with changes in its financial condition (Wallace, 1981, Copeland et al 1982 Ingram, 1983) while cost of debt has been shown to be lower for municipalities with higher levels of financial disclosure (Wilson and Howard 1984, Gore et al 2004 and Gore 2004). Since creditors are interested in a municipality's ability to repay its debt, bond rating agencies recommend a municipality's fund balance be large enough to cover 5-15% of operating expenditures (GFAO, 1990). Therefore, creditors could counteract the incentive to show a small bottom line and allow municipal officials to build up their fund balance.

Another external factor could be state and federal agencies. Most municipalities receive grants from these agencies and they are subject to additional reporting requirements to ensure grant money is expended properly and assess future eligibility (Chan, 1981, Broadus and Comtais, 1985). Securing such aide becomes easier with the report of a deficit (Zimmerman, 1977). In addition, labor unions base their demands on the financial condition of the municipality (Anthony, 1985). Zimmerman (1977) suggests that municipalities would have an easier time negotiating with unions if their financial statements look weaker. Indeed Gore (2012) supports this claim. She finds that municipalities with strong labor unions shift resources away from the

general fund. Therefore, a municipality with greater amounts of grant money or facing labor union demands could wish to manage downwards.

A municipality's council features can also affect its tendency to manipulate accounting reports. Municipal councils, which are the legislative bodies for municipalities, can influence accounting practices similar to how strong corporate boards have been shown to reduce earnings management (Laux and Laux, 2008). Similarly, municipal councils where the mayor sits on the board or can vote have higher cash reserves (Gore, 2009). Therefore, the council could impact the manipulation behavior. All of these factors together lead to the following:

H3: Institutional forces have will impact municipal accounting manipulation.

Chapter 8: Design and Data

8.1 Design

The focus of my study is to determine if municipal officials to manipulate the "bottom line" in the general and enterprise funds. I first examine the use of operating transfers. Although each fund is a separate self balancing set of accounts, the government can transfer monies between accounts. Operating transfers can occur to subsidize the receiving fund (Anthony, 1985), to account for long term interfund loans, and other reimbursements. For example, a debt service fund may be set up to account for debt repayments. But since this fund generates no revenue on its own, it is subsidized by the general fund via transfers.

Although transfers have a legitimate purpose, there remains a lot of discretion about how and when to use them. For example, if the general fund were to transfer more money than needed to the debt service fund, it could create a "rainy day" fund to draw from in future years when the general fund needs it while still showing the desired general fund balance. Anthony (1985) notes that cities can use transfers to "vary the treatment of the deficit or surplus" and explains that in 1980 New York City was able to reduce an initial surplus of $551 million to only a $23 million increase using various accounting tricks including transfers. New York provides an interesting case study because of its financial troubles in the late 1970s. In an SEC staff report, the SEC notes that the city transferred $35 million into the general fund to mask the underlying deficit (SEC, 1977). In addition, in 1985 and 1993, the GAO studied the effect of state balanced budget amendments on state budgeting practicing. They found that states used inter fund transfers as a "one time fix" to close a budget shortfall

(GAO, 1985 and1993). These analyses underscore the significance of the bottom line in government accounting and the discretion municipal managers have over operating transfers to reach a palatable bottom line. In order to control for natural economic reasons for transfers, I include variables to capture the financial health of other funds as well as prior year's net transfers to provide for an expectation of transfers. The net transfers model is presented below for both funds:

$NetTransfers_{i,t}= \beta_0 + \beta_1 PreTransferIncome_{i,t} + \beta_2 CityForm_{i,t} + \beta_3 AssetRato_{i,t}$

$+\beta_4 BegFundBalance(NetAssets)_{i,t} +\beta_5 OtherFinancingSources_{i,t} \beta_6 Population_{i,t}$

$\beta_7 LagNetTransfer_{i,t} \beta_8 PreTransferIncome\_OtherFunds_{i,t}$

$+\beta_9 BegFundBalance\_OtherFunds_{i,t} +\beta_{10} OtherFinancingSources\_OtherFundst_{i,t} + \varepsilon$

NetTransfers is the total of transfers into the each fund minus transfers out from that fund. *Pre-Transfer Income* is revenue less expenditures, which in the general fund is labeled *Surplus/Deficit* and is labeled *Income Before Transfers* in the enterprise fund. If municipal officials are using transfers to manipulate the general fund bottom line into showing a small increase in bottom line, then when the fund has large pre-transfer income, there should be more transfers out. Conversely, if there were a deficit in pre-transfer income, there would be more transfers in to increase the bottom line. Accordingly, β_1 is expected to have a negative coefficient. There should be no relationship between transfers and pre transfer income in the same way one would not expect a relationship between a corporation's income from continuing operation and its extraordinary item. A statistical relationship though would indicate that discretion is being exerted to force a relationship.

The remaining regressors serve as controls. *City Form* is coded 1 if the municipality has a mayor-council form and 0 if it has a manager-council form. The mayor-council form grants the mayor the authority of the chief executive. The mayor is in this form is to oversee the administration of the municipality as well as its functions. In the manager-council form structure, a city manager is appointed by the municipal council to be the chief executive and the mayor functions as the head of the city council and attends to mostly "ceremonial" duties (Wikstrom, 1979). In both instances, the council acts as the municipal legislature. Prior studies have found that manager-council cities have higher quality of disclosure and better financial condition (Evans and Patton, 1983, Giroux and McLelland, 2003 and Laswad et al, 2005). The intuition behind these finds are that since city managers are appointed by the council, they are less sensitive to political pressures and therefore are driven by to enhance their reputation.

Asset Ratio is the ratio of the total assets of the general fund to the combined total assets in all the governmental funds. This controls for the relative size of the general fund compared to the rest of the funds and the natural tendency of the largest funds to finance the smaller ones. I control for *Population* to mitigate the effect of municipality size and I control for *LaggedNetTransfers* to provide a reasonable baseline for the expected net transfers. *BegFundBalance* is the beginning balance of fund balance in the general fund and controls for the ability of municipal officials to draw down on previous year's performance to finance current year operations and thus avoid transfers. This is referred to as *Beginning Net Assets* in the enterprise fund. *OtherFinancingSources* controls for the amount of other financing sources the affect

the general fund bottom line. I include *Pre-Transfer Income, BegFundBalance* and *OtherFinancingSources* for governmental funds. For the general (enterprise) fund model, I include the same variables for enterprise (general) fund. The inclusion of the financial variables of the other funds controls for economic reasons for interfund transfers. All financial variables are scaled by Average Assets of each fund, respectively. State and year fixed effects are included in each model.

Next, I test whether discretionary accruals are used to manipulate. Accruals have been shown in corporate and non-profit settings to manage earnings therefore, examining their impact in the municipal setting is important, especially since enterprise funds use commercial-like accounting. I estimate the Jones Model for each yearly cross-section and calculate the discretionary portion of accruals from the following:

$$TA_{i,t} = \beta_0 + \beta_1(\Delta \, Revenue_{i,t}) + \beta_2(PPE_{i,t}) + \varepsilon$$

TA is total accruals and is calculated as enterprise fund bottom line (change in net assets) minus cash flow from operations. Total accruals are regressed on the change in revenue and property, plant and equipment of the fund.

After the discretionary accruals were calculated, I then sought to determine of discretionary accruals were systematically being used to manipulate the enterprise fund operating figures downward. To do this, I regressed Discretionary Accruals (*DiscAcc*) on *Pre-Transfers Income Before Discretionary Accruals (PTIDA)*, calculated for each enterprise fund as *Pre-Transfers Income* less Discretionary Accruals. If discretionary accruals were being used to manage enterprise earnings down, then there would be a negative relationship between PTIDA and *DiscAcc*. I regress *DiscAcc* on *PTIDA* as well as lagged *Pre-TransferIncome (PTI)* and lagged

DiscAcc because corporate literature has found discretionary accruals to be linked to prior performance and control for autocorrelation in *DiscAcc* (Leone and Van Horne, 2005). I also control for *City Form* and *population*. The model is presented below:

$$DiscAcc_{i,t} = \beta_0 + \beta_1(PTIDA_{i,t}) + \beta_2(PTI_{i,t-1}) + \beta_2(DiscAcc_{i,t-1}) + Controls + \varepsilon$$

I attempt to conduct a similar analysis for the general fund. However because the general fund does not carry long term assets and GASB does not require a statement of cash flows for the general, the Jones Model could not be computed. Nevertheless, I attempt to model accruals for the general fund by defining accruals as the change in working capital as Dechow and Dichev (2002). In this setting since only current items are reported, working capital amounts to total assets minus total liabilities. This formulation leads to accruals essentially capturing the fund balance of the general fund. Thus, the change in working capital would amount to the change in fund balance, the bottom line, for the general fund. I propose that the change in working capital is a function the change in total revenues and total other financing sources. Including total other financing sources controls for all other financing that could affect fund balance. The model is presented below:

$$ChangeWC_{i,t} = \beta_0 +$$

$$\beta_1(\Delta\ Revenue_{i,t}) + \beta_2(TotalOtherFinancingSources_{i,t}) + \varepsilon$$

The model is run for each annual cross section and the residual is calculated for each general fund. I calculate *DiscAcc_GF* as the residual from the regression above and then regress *DiscAcc_GF* on the *Pre-Transfers Income less DiscAcc_GF (PTIDA)*, prior year *Pre-Transfer Income (PTI)* and prior year *DiscAcc_GF. I also control for City Form* and *population.*.

$$DiscAcc\_GF_{i,t} = \beta_0 + \beta_1(PTIDA_{i,t}) + \beta_2(PTI_{i.t-1}) + +$$

$$\beta_3(DiscAcc\_GF_{i.t-1} + Controls + \varepsilon$$

8.2 Data

I compile my sample from the International City Manager Association (ICMA) 2001 Form of Government Survey. The ICMA survey is conducted every five years to describe the governmental structures of municipalities. I choose the 2001 period because variables needed for cross sectional analysis were only available in the 2001 survey. The survey includes 4,245 municipalities but in keeping with prior literature, I focus municipalities with populations over 25,000. This limits to my initial sample to 631. To those municipalities, I email a request for the municipalities financial reports for the years 2001-2003. I use reports from the year 2000 to obtain lagged variable information. I had 135 municipalities reply (21%) but 32 of those replies could not provide all the requested years. Therefore, my final sample included 103 municipalities. My sample includes municipalities from 24 states. California and Ohio combine for 56 municipalities.[5] I manually collected the requisite financial data from the financial reports.

Table 1 shows that the average municipality has a population of 91,368 in 2000 and that the mayor-council form was present 34% of municipalities. The general fund reported $35.8 million in assets. Also, the general fund assets accounted for 39% of all governmental fund assets, underscoring the significance of this fund. The univariate results show that general fund *Pre-Transfer Income* reported is $.10 but

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[5] To ensure that these two states are not driving my results, I include state fixed effects.

that the average *net transfer* is $(.09) resulting in a bottom line of $.005 This would seem to lend support for the notion that transfers are used to favorably manipulate the bottom line downward to only show a small increase.

The average size enterprise fund was $304 million but when comparing enterprise current assets to governmental assets, the Enterprise Ratio is 42%. This figure shows the magnitude of enterprise funds but since governmental funds (the denominator) do not include enterprise assets, a direct comparison of the Enterprise Ratio and General Fund Ratio would be inaccurate. The beginning value of net assets (akin to beginning retained earnings) is $.78. The Income before transfers is $.02 with net transfers totaling $.004 resulting in a bottom line increase of $.032.

Chapter 9: Results

9.1 Transfer Analysis

Table 2 presents the general fund net transfers model. Column 1 regresses *Net Transfers* on only the *Pre-Transfer Income* of the general fund. The analysis shows that *Pre-Transfer Income* has a negative and significant relationship with *Net Transfers* (β_1 = .88 and t-stat -8.23). In column 2, the control variables from the governmental fund are added to the regression. Again, *Pre-Transfer Income* has a negative coefficient and significant coefficient (β_1 = .92 and t=-13.89). These results imply that a one standard deviation increase in *Pre-Transfer Income* decreases the *Net Transfer* by $.94 per capita. *BegFundBalance, Other Financing Sources and Population* all had negative and significant coefficients at the 1% level suggesting that when the general fund has enough reserves or has other financing sources, it may transfer more money out to other funds. It also suggests that in larger municipalities, the general fund is tasked with subsidizing more of the other funds. *Lagged Net Transfers* was positive and significant at the 1% level. Non of the governmental fund variables loaded significantly. Because not all municipalities have enterprise funds, I conduct a separate regression by adding enterprise fund control variables in Column 3. The results are very similar to Column 2.

In Column 4, I examine the possibility that the increase in *Pre-Transfer* was reducing *Net Transfers* but *Net Transfers* were still positive. I run a logit model where the dependent variable is coded 1 if the general fund *Net Transfers* were negative (indicating more transfers out) with the same regressors. This model shows that *Pre-Transfer Income* has a positive coefficient (β_1 = 12.71 and z =.4.36). This finding

bolsters the findings in Panel A by suggesting that increasing our pre-transfer income is positively related to transferring more money out of the general fund.

In unreported results, I also examine the possibility that *Other Financing Sources* are being used to also manipulate the general fund bottom line. Accordingly, I rerun the analysis in Panel A only for observations that have no *Other Financing Sources*. Again, the coefficient for *Pre-Transfer Income* is negative and significant at the 1% level. This indicates that *Other Financing Sources* are not driving the results. The statistically significant relationship suggests that, even after controlling for economic reasons for transfers, interfund transfers are being used to manipulate the bottom line of the general fund.

Table 3 display the model net transfer model for the enterprise fund. Column 1, which regresses *Net Transfers* on *Pre-Transfer Income* has a negative but insignificant coefficient ($\beta_1 = .05$ and t=.27). When control variables were added in Column 2 and 3, the coefficients likewise remained insignificant.

Again, in Column 4 of Table 3 I conduct a logit to predict the probability of having a negative *Net Transfer* out of the enterprise fund but *Pre-Transfer Income* yielded an insignificant coefficient. I also reran the analysis in Panel A on the subsample with no *Other financing sources* and again the Income before transfers had an insignificant coefficient.

Taken together, the analysis suggests that net transfers are used to systematically decrease the bottom line in general fund but no such relation exists in enterprise fund between net transfers and the bottom line.

9.2 Discretionary Accruals Analysis

Table 4 presents the results of the enterprise discretionary accrual regressions.

Column 1, without controls, *PTIDA* has a negative and significant coefficient (β_1 = -.71 and t =4.69). In Column 3 with all the control variables, again, *PTIDA* shows a significantly negative coefficient (β_1 = -.69 and t=8.23). In fact, if *IBTBDA* were to increase by one standard deviation, *DiscAcc* would decrease by .88 per capita. This suggests that municipal officials are using discretionary accruals to manage their operating income downwards in the enterprise fund.

Table 5 shows that the corresponding general fund analysis. *PTIDA* has an insignificant coefficient when regressed alone and when the controls are added. This provides some evidence that discretionary accruals are not to systematically bias accounting numbers in the general fund. However, this result should be examined with caution as the model may be picking up the effects of changes in fund balance and not necessarily just discretionary accruals.

9.3 Cross Sectional Analysis

The results presented in Table 2 indicate that municipal officials are using their discretion with regards to transfers to manipulate the general fund bottom line. Now to examine the cross sectional hypotheses, I will look at a set of variables that may mitigate or exacerbate the tendency.

The first dimension I will examine deals with the citizens. The strongest monitoring tool they have is their voting power. To capture this, I measure *political competition*, defined as the proportion of city council members that ran and lost for re-election in the last council elections. Political competition, which measures the strength of

monitoring by the citizens has been shown as a factor that influences the quality of municipal disclosure (Baber, 1983) so it could be relevant in this context as well. Also, I examine how the mayor is elected because depending on who appoints the mayor could alter the incentives to manipulate. I code *Mayoral Election Method* 1 if the mayor is selected by direct vote and 0 if selected by the council and include *City Form*. Prior literature has found that municipalities led by a mayor as opposed to a manager have worse performance and disclosure (Giroux and Mclelland, 2003). The reasoning is that because are direct agents of the citizens, they are more sensitive to political incentives.

I also capture citizen monitoring pressures by examining if the municipality allows for citizen initiatives. These initiatives allow for "direct democracy" and give citizens more influence in government. *Citizen initiative* is coded 1 if it exists in a municipality. Likewise, I code *Recall* 1 if the municipality allows the citizens to remove an elected official from office. Municipalities with these provisions could empower citizens to be more attentive about monitoring their officials. I also examine the role of citizen boards, which are a collection of residents either appointed or elected to serve an advisory or policymaking role regarding specific issues. *Citizen boards* have a stated goal of involving the citizens in the policy making process. A ramification though could be that these boards, although mainly advisory, serve as a monitoring tool for public officials. The close involvement of citizens in government could act as a "perceived" monitoring mechanism. Citizen board is coded 1 if it exists in the municipality. I also include *Mayoral Term Length* and *Population* to capture municipal size.

I next measure creditor pressure with a binary variable, *Bond Issue,* which is set to 1 if the municipality issued a bond in the previous year. A similar variable is constructed for the enterprise fund bond issuances. Corporate literature has shown that creditors play an oversight role and enhance reporting quality and municipal research has documented that creditors react to municipal financial information. Creditors have oversight through bond covenants and therefore a bond issuance would capture the extent of creditor monitoring.

In order to capture the effect of state and federal aid on manipulation incentives, I measure *Intergovernmental revenue,* which is coded 1 if the general fund's state and federal grant revenue is in the top quintile in the prior year. Having a lot of intergovernmental revenue indicates heavier reliance on those agencies and thus, potentially, more incentive for manipulation.

Labor unions are another external force that could influence the tendency to manipulate accounting. Labor unions negotiate with municipal managers on a host of issues including wages and benefits, foremost among them is pension contributions. Pension contributions are a part of the contractual agreement between the unions and the municipality. Since pension contributions can vary with municipality size, I first regress pension costs on municipality population and calculate the residual. The residual represents pension costs above and beyond factors that are tied to municipality size and approximates the influence of the labor union. I code *Pension Cost* 1 if the municipality's pension cost residual is in the top quintile of all residuals in the prior year.

I also inspect characteristics of the council itself. Municipalities have a staggered council if council member terms are spread out. Corporate literature documents that firms with staggered boards are less likely to engage in earnings management because those managers become entrenched and have less incentives (Zhao and Chen, 2008). Yet another possibility is because of the staggered terms, there is greater continuity on the council which allows it to focus on the long term outlook of the municipality and not worry so much about imminent reelection concerns. Municipal evidence on staggered councils suggests that municipalities with staggered councils have higher agency problems which lead to higher city manager salaries (Gore, 2009). *Staggered board* is measured as a binary variable.

Council term limits are likewise another feature that could impact accounting manipulation. If the incentive of re-election is removed, presumably political officials will behave differently. In addition, I examine the effect of council size, frequency of council meetings the number of business executives on the council and the number of standing committees in the council. These features also draw on corporate findings that the size, activity and experience of a corporate board determine its effectiveness (Cheng 2008, DeFond et al, 2005 and .Core et al, 1999). I measure *Council Size* as the number of members on the council, *Frequency* as the number of times a council meets per year and *Bus Exec* is coded 1 if a business executive sits on the council. *Standing Committee* is coded 1 if the number of standing committees on the council is in the top quintile of all standing committees. Another feature I examine is whether the mayor sits on the council. I also inspect the effect of having a mayor on the council. *Mayor on council* is coded 1 if the mayor is on the council and 0 otherwise.

Table 6 presents descriptive statistics for these variables. *Political Competition* was

18% meaning that 82% of incumbents won re-election. In 30% of municipalities, the

voters directly selected the mayor while 81% of municipalities allow for a citizen

initiative. Fifty two percent of municipalities issued bonds in the prior year while

35% of enterprise funds did the same. *Intergovernmental revenues* were 1.6 times

general fund assets. In 17% of municipalities, council members had term limits and.

A staggered council exists in 75% of municipalities and the average council had 1.85

standing committees.

In Table 7, each column shows the results of the base model for the general fund with

the addition of the variable and interaction term. I run a separate regression for each

interacting variable to maximize the power of my tests. Many of the variables,

particularly the ones from the ICMA survey, are not complete for the entire dataset so

one regression with all the variables would severely limit the number of observations.

The interaction between *Pre-Transfer Income* (PTI) and Citizen Boards is negative

and significant at the 1% level. Similarly, the interaction with *Citizen Initiatives* ($\beta_1 =$

-.25 and t=-2.22), *City Form* ($\beta_1 = -.32$ and t=-3.97), *Mayoral Term Length* ($\beta_1 = -.11$

and t=-3.11), and *Method Mayor Election* ($\beta_1 = -.21$ and t=-2.75), each has a

significantly negative coefficient. In addition, the interaction with *Population* and

Recall are also a negative but insignificant coefficient. Taken together, this evidence

suggests that in the presence of these citizen oversight variables, as Pre-Transfer

Income increases, the general fund is more likely to transfer money out to show a

smaller increase in its bottom line. This indicates that citizens are directly involved to

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elect the mayor or in the functioning of government, officials feel the need to manipulate their bottom line downward.

The interaction between *Pre-Transfer Income* and *Bond Issue* is positive as expected but insignificant. At the same time, the interaction *with Intergovernmental revenue* and *Pension Costs* yielded negative coefficients significant at the 5% level. This suggests that municipalities with high a level of grant money or facing powerful unions transfer money out of the general fund to show smaller increases in the bottom line. This would be consistent with the notion that a smaller increase assists with the likelihood of grant continuation and minimizes labor demands.

The interaction with *Mayor on Council was* positive and significant (β_1 = .20 and t=2.52) as was the interaction with *Standing Committee* (β_1 = .36 and t=2.59), *Staggered Board* (β_1 = .23 and t=3.10), *Frequency* of council meetings (β_1 = .11 and t=4.25) and the interaction with *Business Executives* (β_1 = .72 and t=1.77). Taken together, this suggests that a more active council, one with business executives and with staggered terms tend to transfer more money into the general fund to cushion the bottom line. This could be that these council features force the elected officials to think about the long-term financial viability of the municipality and thus manage up increases the general fund balance. Interestingly though *Council Term Limits*, which would also measure the removal of reelection pressures, has a negative coefficient (β_1 = .25 and t=4.10). This could be that even if elected officials have are term limited, they still have to worry about forthcoming contests before their limit.

In Table 7, I rerun the interaction analysis of Table 3 with *Discretionary Accruals* of the enterprise fund. The interaction between *Pre-Transfer Income before*

Discretionary Accruals (PTIDA) and the "citizen" variables is insignificant.

Similarly, all of the council related interactions were also insignificant except for

Council Term limits was produced a negative coefficient significant at the 10% level.

Interestingly, the interaction with *Pension Costs* was positive and significant at the

1% level. Overall, there was no consistent pattern in the enterprise fund results as

there was in the general fund analysis in Table 6. This underscores that although the

two funds faced the same institutions, only the general fund responded to those

pressures.

9.4 Additional Analysis

Thus far, evidence has been shown that the general fund systematically uses operating

transfers to manipulate its bottom line down and this tendency is affected by certain

institutional factors while the enterprise fund uses discretionary accruals manipulate

its bottom line down. However, there could be other circumstances that contribute to

this behavior. While showing too large an increase in the bottom line may draw

unwanted attention from citizens and oversight agencies, showing a deficit can reflect

poorly on management (Rupel, 2010). Therefore, I measure *Deficit* equal to 1 if *Pre-

Transfer Income* is negative. If managers are less inclined to show a negative change

in fund balance, then they would transfer more money into a fund if it has negative

Pre-Transfer Income. Similarly, because the budget is a legal governing document,

there is a great emphasis in reaching budgeted figures (Rupel, 2010). I code *Positive

Variance* 1 if the actual *Pre-Transfer Income* is greater than its budgeted value. The

idea being that if *Positive Variance* is 1, then the managers could still transfer money

out of the general fund to reach the budgeted bottom line figure.

In addition, Big 4 auditors have been shown in corporate literature to restrain earnings

management and generally produce higher quality reports (DeAngelo, 1981 and

DeFond and Jimbalvo, 1998). Baber et al, 2011 finds that clients of Big 4 auditors are

less likely to restate their reports. I construct a binary variable, *Big 4*, if the

municipality is audited by a Big 4 auditor.

There have been many municipal papers exploring disclosure related questions.

Municipal literature has often proxied disclosure quality for accounting quality

(Evans and Patton, 1983). However, this claim has not been empirically verified. To

the extent that a relationship exists between accounting disclosure and quality,

accounting manipulation will change. In other words, if disclosure quality

approximated accounting quality, then there would be little or no manipulation in to

those cases. To examine this test, I proxy for disclosure using the GFOA certificate.

This certificate, awarded by the government financial officers association, recognizes

municipalities for the quality of their disclosures. The GFOA has a checklist of

disclosures and presentation styles it looks for and if a municipal report meets the

benchmark, it receives the award. This certificate has been regularly used to capture

municipal disclosure (Evans and Patton, 1983, Evans and Patton, 1987 and Giroux

and McLelland, 2003). In 77% of municipalities received the GFOA certificate. This

is consistent with Giroux and McLelland (2003) who reported the figure to be at 88%

percent in 1996.

Panel A of Table 8 reveals that the interaction of *Pre-Transfer Income* and *Deficit* is

positive as expected but insignificant. However, the interaction with *Positive*

Variance is negative and significant at the 10% level. This indicates that when the

general fund is outperforming its budget, more money is transferred out so it can reach its budgeted figures. The interaction with *Big* 4 was insignificant but the interaction with *GFOA* yielded positive coefficient significant at the 5% level. This suggests that general funds in municipalities with the GFOA certificate systematically have more net transfers for all levels of *Pre-Transfer Inco*me, perhaps to enhance the appearance of their financial condition. This would seem to indicate that there is divergence between disclosure quality and actual accounting quality.

In Table B, a similar analysis is done for the enterprise fund. Since most municipalities do not disclose the enterprise fund's budgeted information, I could not perform that test for enterprise funds. none of the interactions produced a significant coefficient. The interaction with *Deficit* produced a negative coefficient significant at the 5% level. This suggests that when an enterprise has negative *Pre-Transfer income*, it has negative discretionary accruals to lower its bottom line. This could be similar to firm taking a "big bath," whereby it takes additional charges in the current year if its target is unattainable. Also, interestingly, the interaction with Big 4 was positive and significant at the 1% level. This suggests that *Big 4* do not restrain discretionary accruals as they do in the corporate setting. But it could also offer a clue into how auditors prioritize items in both settings. Perhaps they do not view accruals as consequential in this setting so they do not exert as much effort curtailing them.

9.5 Sensitivity Analysis

The general fund analysis thus far has used net transfers as the dependent variable and controlled for the financial condition of other funds and of lagged net transfers. I

believe this sufficiently controls for economic reasons for transfers and for the expected transfers. However, in this section, I propose a model for net transfers and use the residual from that model, *Discretionary Net Transfers*, as the dependent variable for my analysis. The purpose is to directly isolate the portion of transfers unexplained by economic reasons to determine if it is being affected by *Pre-Transfer Income*.

I propose a model where Net Transfers in a given year are explained by the change in *Pre-Transfer Income, Beginning Fund Balance, Budgeted Net Transfers,* and *Pre-Transfer Income* and *Beginning Fund balance* in the governmental funds. I then use the same variables to model *Transfers In* and *Transfers Out*. I do the same procedure for enterprise net transfers except I use lagged net transfers instead of budgeted transfers because those figures are unavailable. I do not report the regression results but the R-squared of the net transfers general (enterprise) regression is 13.2% (5%). Table 9 Panel A reruns the general fund analysis of Table 2 except with *Discretionary Net Transfers* as the dependent variable. In Column 1, *Discretionary Net Transfers* is the dependent variable, *Pre-Transfer Income (PTI)* has a negative coefficient significant at the 1% level. In Column 2 when *Discretionary Transfers In* is the dependent variable, *PTI* is negative and significant at the 5% level. But when *Discretionary Transfers Out* is the dependent variable, *PTI* has a positive coefficient significant at the 1% level. Taken together, this corroborates the evidence in Table 2 and further illustrates that as *PTI* rises, municipal officials both decrease the amount of transfers into the general fund while increasing the amount of transfers out of it.

Panel B presents the same analysis for the enterprise fund. *PTI* is insignificant in all three specifications, which confirms the results of Table 3 that the enterprise fund does not use operating transfers to manipulate their reports. In Panel C, I attempt to determine if there is a interplay between how each fund uses its operating transfers and accruals to manage its financial information. For the general fund, I regress *Discretionary Net Transfers* on *PTI,* Discretionary accruals and an interaction between the two as well as the same controls from Table 2. The coefficient on the interaction is negative and significant at the 5% level, suggesting that for all levels of *Pre-Transfer Income*, as discretionary accruals increase, there are more negative discretionary net transfers.

I do a similar analysis for the enterprise fund but since enterprise funds use discretionary accruals to manipulate, I regress *Discretionary Accrual*s on *PTI*, *Discretionary Net Transfers*, an interaction between the two and the same controls as in Table 3. Again, the coefficient on the interaction is negative and significant at the 10% level. Taken together, this suggests that in both funds, there is a substitution effect between the two methods. In the general (enterprise) fund where its preferred method of manipulation is operating transfers (discretionary accruals), those operating transfers (discretionary accruals) were used to offset the increases in discretionary accruals (net transfers).

Thus far, I have provided evidence that the general but not enterprise fund uses operating transfers to manipulate their reports. However, there still could be the argument that either all funds that use the same accounting as the general fund behave similarly. This could either mean that governmental funds use operating transfers to

manipulate or that transfers are used to subsidize other funds. Although I control for the other fund's economic factors and do the discretionary net transfer analysis, if the latter was the case, then transfers would systematically be used to shift excess money to subsidize other funds as governmental fund Pre-Transfer Income increases. In order to test this explanation, I rerun the net transfer regressions of Table 2 using variables from the governmental funds. *PTI* loads insignificantly in all the models suggesting that operating transfers are uniquely used in the general fund to manipulate their financial reports.

Chapter 10: Conclusion

I used construct a sample of 309 municipal-year observations to examine whether accounting manipulations occurred in municipal settings. The municipality objective is to provide services to the public using public funds. As a result, one of the goals of government accounting is to display accountability for those public funds. This leads to the municipal target being a small increase in its bottom line. I find that the general fund's the bottom line is manipulated to show a small increase with the use of operating transfers. I also find that transfers were not used in the same manner for the enterprise funds, which operate similar to commercial entities. However, I do find that enterprise funds manipulate their bottom line with the use of discretionary accruals. I also attempt to model discretionary accruals for the general fund and show that their use does not systemically explain the general fund bottom line.

I extend my analysis to factors that may affect this manipulating activity for each fund. In the general fund, I find evidence that citizen oversight tends is associated with the downward manipulation of the bottom line whereas governance features of the municipal council were generally associated with upward manipulation. Strong unions, proxied by pension costs, and high levels of grant money were also associated with downward manipulation. These factors did not generally affect the enterprise fund.

The results have implications for municipal officials, the public at large, and other users of municipal accounting reports. While both the general and enterprise fund were shown to manipulate their reporting, each preferred a tool that was consistent with their brand of accounting. The general fund used operating transfers but the

enterprise fund, which has the option of using operating transfers as well, used discretionary accruals. Besides showing the sophistication of managers to simultaneously arrive at the same objective using different methods, it stresses the important of context in accounting manipulation studies. My findings suggest that understanding the institution, incentives and available accounting tools are important in such studies.

My findings also show that the general and enterprise fund were affected by external forces differently with regards to accounting manipulation. Generally, the enterprise fund was not influenced by the same factors as the general fund. This suggests that the environment an entity is in critically affects its manipulation behavior. Additionally, even in the same organization, divisions are not uniformly affected by outside factors. This could lead to similar analysis of subdivisions on the corporate side. Corporate literature has assumed that the earnings management target is the same for the entire company. But perhaps future research can investigate if differences in target exist among the divisions and if smaller divisions or subsidiaries are deemed important enough to manage their earnings.

For the general fund, I found that the voter oversight generally exacerbates the tendency to manipulate accounting numbers downward but governance features led to upwards manipulation. This could be that municipal officials attempt to make the municipality appear more viable when they have distance from the voters. In addition high levels of grant money and having strong unions led to downward manipulation. I also present evidence of the importance of reaching budgeted figures in the general

fund. These finding should be interested to public policy setters in determining the proper municipal oversight structures.

In addition, I found that disclosure was associated with increasing not decreasing the bottom line. The fact that municipalities with the better disclosure systematically manipulated their bottom line in any direction points to a divergence between disclosure quality and actual reporting quality. Therefore, an organization can have accounting quality in appearance but not in fact. I also find evidence that Big 4 auditors do not restrain discretionary accruals in the same fashion they do for corporations, suggesting they audit the two of institutions differently.

The results of my study provide understanding of the municipal reporting process. My results of my study are subject to the limitation of my sample. My sample is based on those municipalities that chose to reply to my email requesting financial data. To the extent that municipalities that selected to reply are systematically different from that that did not reply, my results may not be generalizable to all municipalities. My study also uses data from 2001 -2003. While, I believe my study underscores an important dimension of municipal reporting, such behavior could have been impacted by the run up to and the subsequent financial crisis. These questions are left for future research.

Appendix A

	Governmental Accounting	Corporate Accounting
Organizational Objective	To offer services to the public	To maximize profits
Accounting Objective	Safeguard public treasury, facilitate financial management and enforce public accountability	FASB Concept Statement No.1 states: "Financial reporting should provide information about how management of an enterprise has discharged its stewardship responsibility to owners for the use of enterprise resources entrusted to it." So in corporations, the focus is on reporting earnings.
Measurement Focus	Current Resource Method-record activity that affects current resources only	Economic Resources-record activity that affects economic position of the firm
Budget	Budgets are legally binding and used to ensure safeguarding of public treasury.	Budgeting is a planning document used by managers. It is not incorporated into the accounting system.
Reporting Entity	Report on funds. Each fund is a reporting entity. Funds are used to enhance accountability of public funds	Corporation reports all its activity in one set of accounts.
Basis of Accounting	Modified accrual accounting recognizes expenditures when incurred and revenues	Full accrual basis is used to determine net income for shareholders.

	when recognizable and available. The extra condition on revenues ensures that only revenues that can be used to pay off current liabilities are recorded.	Revenues are recognized when service rendered and expense recognized when incurred.
Matching	None--focus is not net income, but flow of resources	Focus is net income so matching revenues and expenses is crucial aspect of accounting system.

Appendix B

Revenues:	General
Municipal income taxes.	$ 108,554,027
Property and other taxes	9,195,204
State shared taxes.	16,045,927
Charges for services	19,682,367
Licenses and permits	2,014,392
Fines and forfeitures	1,420,200
Intergovernmental	1,453,282
Special assessments	327,656
Investment income	3,365,179
Increase in FMV of investments	-
Other	2,800,814
Total revenues	164,859,048

Expenditures:	
Current:	
Downtown	3,112,343
Youth, education and human services.	181,204
Community development and neighborhoods. .	11,032,510
Economic development	2,817,334
Leadership and quality of life	26,935,463
Corporate responsibility.	14,619,628
Public safety and justice	87,506,358
Other	670,941
Capital outlay.	1,047,525
Debt service:	
Principal retirement	40,379
Interest and fiscal charges	250
Total expenditures	147,963,935

Excess (deficiency) of revenues over (under) expenditures	16,895,113

Other financing sources (uses):	
Proceeds from sale of capital assets	-
Proceeds from sale of bonds	-
Proceeds from capital lease transactions. . . .	112,090
Transfers in	1,209,665
Transfers out	(12,522,056)
Total other financing sources (uses)	(11,200,301)

Net change in fund balances	5,694,812

Fund balances at beginning of year	34,393,301
Fund balances at end of year.	$ 40,088,113

Operating revenues:	Dayton International Airport
Charges for services	$ 38,112,286
Other.	4,127,135
Total operating revenues	42,239,421

Operating expenses:	
Personal services	10,688,618
Benefit payments	3,397,050
Contractual services.	5,685,328
Materials and supplies	1,575,281
Utilities	2,120,441
Cost of sales	-
Depreciation	7,136,273
Claims expense.	-
Other	1,864,299
Total operating expenses.	32,467,290

Operating income (loss)	9,772,131

Nonoperating revenues (expenses):	
Interest revenue	580,996
Loss from disposal of capital assets.	-
Interest expense and fiscal charges	(3,233,935)
Total nonoperating revenues (expenses)	(2,652,939)

Income (loss) before capital contributions and transfers	7,119,192

Capital contributions	14,487,159
Transfers in.	220,451
Transfers out	-

Changes in net assets	21,826,802

Net assets, January 1 (restated)	124,023,177

Net assets, December 31	$ 145,849,979

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Appendix C- Variable Definitions

Independent

NetTransfersGF	Operating Transfers In less Operating Transfers Out
NetTransfersENT	Operating Transfers In less Operating Transfers Out

Dependent

PreTransferIncome_GF	The Surplus/Deficit, equal to the sum of revenues, less expenditures scaled by average general fund assets
PreTransferIncome_Ent	Income Before Transfers, equal to the sum of revenues, less expenses scaled by average enterprise fund assets

Controls

CityForm	Coded 1 if the chief executive is the mayor 0 if it's the city manager
AssetRatio_GF	The ratio of general fund assets to all governmental fund assets
AssetRatio_Ent	The ration of enterprise current assets to all governmental fund assets
GF_Beginning Balance	Beginning balance of the General Fund's Fund Balance scaled by average general fund assets.
	This controls for the size of the General Fund as well as its need for funding from other funds
Ent_Beginning Net Assets	Beginning balance of the Enterprise Fund's Net Assets scaled by average enterprise fund assets.
	This controls for the size of the General Fund as well as its need for funding from other funds
OtherFinancingSources_GF	All other financing sources that flow into or out of the general fund scaled by average general fund assets
OtherFinancingSources_Ent	All other financing sources that flow into or out of the enterprise fund scaled by average general fund assets
logpop	The log of the municipality population in 2000

Instituional Forces: Citizen Involvement

PolComp	The log of the following: the percentage of city council officials who ran for re-election but lost
CouncilTermLimits	Coded 1 if the municipality has term limits and 0 otherwise
CitizenBoards	Coded 1 if the City has citizen boards and 0 otherwise
StaggeredCouncil	Coded 1 if the municipality council has staggered terms and 0 otherwise
Recall	Coded 1 if the municipality has a recall provision
Citizen Inititative	Coded 1 if municipality has a citizen intitatitive provision
Method of Election	Coded 1 if mayor is elected directly by the citizens and 0 otherwise
Mayor Term Length	The length of the mayoral term

Instituional Forces: External

Municipal Bond Issue	Coded 1 if Municipal issued a bond in the previous year
Enterprise Bond Issue	Coded 1 if Enterprise fund issued a bond in the previous year
Intergovernmental Revenue	Coded 1 if prior year Intergovt. revenue is in the top quintile of all intergovt. revenue and 0 otherwise
PensionCosts	Coded 1 if prior year Excess Pension Costs are in the top quintile of all Excess Pension Costs and 0 otherwise.
	Excess pension costs are the calculated as the error term from regressing pension costs on population.

Instituional Forces: Council Features

StaggeredCouncil	Coded 1 if the city council has staggered terms and 0 otherwise
Council Size	The number of councilpersons on a municipal council
FrequencyCouncilMeetings	The number of meetings a council holds per year

BusinessExecOnCouncil	Coded 1 if the city council has a business executive on it and 0 otherwise
CouncilTermLimits	Coded 1 if the City has term limits and 0 otherwise
Standing Committees	Coded 1 if number of standing committees is in the top quintile of and 0 otherwise

Other Variables

GFOA Certificate	Coded 1 if the city received the GFOA certificate for excellence in reporting and 0 otherwise
Big 4 Auditor	Coded 1 if the city has a big 4 auditor and 0 otherwise
Deficit	Coded 1 if the general or enterprise fund has negative pretransfer income and 0 otherwise
Actual/Budget Variance	Coded 1 if the General Fund's actual pretransfer income is higher than the budget and 0 otherwise

Table 1
Descriptive
Statistics

Name	Mean	P25	P50	P75	N
Population	91,368.70	31,872.00	46,832.00	68,652.00	309
CityForm	0.34	-	-	1.00	309
PreTransferIncome_GF	0.1049	(0.0200)	0.0858	0.2242	309
NetTransfers_GF	(0.0993)	(0.2333)	(0.0635)	0.0076	309
ChangeFundBal._GF	0.0053	(0.0762)	0.0111	0.0824	309
BegFundBal._GF	0.6060	0.4289	0.6300	0.7940	309
OtherFinSources_GF	(0.0003)	-	-	0.0051	309
AvgAssets_GF	35,800.00	8,735.14	15,600.00	29,800.00	309
AssetRatio_GF	0.3943	0.2573	0.3599	0.4872	309
PreTransferIncome_GovtFunds	(0.1643)	(0.3383)	(0.1391)	0.0000	309
OtherFinSources_GovtFunds	0.1893	0.0075	0.1415	0.3649	309
BegFundBalance_GovtFund	0.6240	0.3866	0.6465	0.8117	309
PreTransferIncome_Ent	0.0255	(0.0009)	0.0185	0.0359	284
NetTransfers_Ent	0.0043	(0.0045)	-	0.0073	284
ChangeNetAssets_Ent	0.0322	0.9589	0.9970	1.0405	284
BegNetAssets_Ent	0.7794	0.5554	0.7056	0.8761	284
OtherFinSources_Ent	0.0023	-	-	-	284
AssetRatio_Ent	0.4248	0.1547	0.3115	0.4881	284
AvgAssets_Ent	304,000.00	42,300.00	67,800.00	159,000.00	284

This table displays summary statistics for variables used in the analysis. All variables are defined in Appendix C. Population, AvgAssets_GF and AvgAssets_Ent are expressed in thousands

Table 2
General Fund Net Transfers Analysis

VARIABLES	Net Transfers	Net Transfers	Net Transfers	Negative Net Transfers
Pre-Transfer Income GF	-0.888***	-0.929***	-0.942***	12.71***
	(-8.323)	(-13.89)	(-13.63)	(4.365)
CityForm		-0.00244	-0.00525	-0.373
		(-0.0933)	(-0.172)	(-0.550)
GF Asset Ratio		0.184**	0.201**	-0.887
		(2.574)	(2.394)	(-0.595)
BegFundBalance_GF		-0.314***	-0.347***	0.988
		(-4.487)	(-5.203)	(0.521)
OtherFinancingSources_GF		-0.762***	-0.778***	9.268***
		(-4.297)	(-4.262)	(3.930)
Population		-0.0428***	-0.0413**	1.078
		(-3.086)	(-2.614)	(1.496)
Lag NetTransfers_GF		0.0579***	0.0542*	-3.097**
		(2.900)	(1.693)	(-2.113)
PreTransferIncome_GovtFunds		-0.00109	-0.00285	1.209
		(-0.0357)	(-0.0878)	(1.228)
OtherFinancingSources_GovtFunds		-0.0250	-0.0277	0.555
		(-0.951)	(-1.023)	(0.687)
BegFundBalance_GovtFunds		-0.00275	0.00128	1.270
		(-0.211)	(0.0835)	(1.398)
PreTransferIncome_Ent			0.0294	-2.270
			(0.248)	(-0.523)
BegNetAssets_Ent			0.0599	-0.548
			(1.149)	(-0.324)
OtherFinancingSources_Ent_AA			0.135	-1.774
			(1.298)	(-0.731)
State Fixed Effects Included	Yes	Yes	Yes	Yes
Year Fixed Effects Included	Yes	Yes	Yes	Yes
Constant	0.0950***	0.658***	0.634***	-13.05
	(3.617)	(4.172)	(3.472)	(-1.502)
Observations	309	309	284	309
R-squared	0.827	0.920	0.924	0.474

This table presents Net Transfer analysis in the general fund. The dependent variable is Net Transfers in the general fund. It is regressed on pre-transfer income, variables capturing the financial condition of governmental and enterprise funds as well as other control variables, respectively. Column 1 excludes all control variables, Column 2 shows the effect of only the general fund and governmental fund control variables and column 3 adds enterprise fund control variables. Column 4 is a logit model where the dependent variable is 1 if NetTransfers in the general fund are negative with the same regressors. State and Year fixed effects are included. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C

Table 3
Enterprise Fund Net Transfers Analysis

VARIABLES	Net Transfers	Net Transfers	Net Transfers	Negative Net Transfers
PreTransferIncome_Ent	0.0577	0.0306	0.0216	7.187
	(0.271)	(0.211)	(0.150)	(1.217)
CityForm		0.00661	0.00873	-0.0443
		(0.704)	(0.917)	(-0.0685)
Ent. Asset Ratio		-0.000354	-0.000214	-0.0508
		(-0.177)	(-0.111)	(-0.385)
BegNetAssets_Ent		-0.0345	-0.0390	-0.851
		(-1.108)	(-1.196)	(-0.846)
OtherFinancingSources_Ent_AA		-0.268	-0.276	13.75
		(-1.250)	(-1.293)	(1.415)
Population		0.00175	0.00385	0.206
		(0.502)	(1.134)	(0.680)
LagNetTransfersENT		0.0260*	0.0241	-0.203
		(1.681)	(1.561)	(-0.193)
PreTransferIncome_GovtFunds		0.00944	0.0105	-0.776
		(0.923)	(0.914)	(-0.920)
OtherFinancingSources_GovtFunds		0.00356	0.00401	0.0492
		(0.466)	(0.524)	(0.0737)
BegFundBalance_GovtFunds		0.00815	0.00812*	-0.936
		(1.657)	(1.793)	(-1.273)
Pre-Transfer Income GF			0.00267	-0.839
			(0.411)	(-1.233)
BegFundBalance_GF			0.0331**	-1.434
			(2.429)	(-1.326)
OtherFinancingSources_GF			-0.00824	-4.292**
			(-0.615)	(-2.415)
State Fixed Effects Included	Yes	Yes	Yes	Yes
Year Fixed Effects Included	Yes	Yes	Yes	Yes
Constant	0.0151***	0.0160	-0.0253	-18.92
	(3.598)	(0.360)	(-0.542)	
Observations	284	284	284	239
R-squared	0.252	0.386	0.399	0.205

This table presents Net Transfer analysis in the enterprise fund. The dependent variable is Net Transfers in the enterprise fund. It is regressed on pre-transfer income, variables capturing the financial condition of governmental and general funds as well as other control variables, respectively. Column 1 excludes all control variables, Column 2 shows the effect of only the enterprise fund and

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governmental fund control variables and column 3 adds general fund control variables. Column 4 is a logit model where the dependent variable is 1 if NetTransfers in the enterprise fund are negative with the same regressors. State and Year fixed effects are included. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C

Table 4
Enterprise Fund Discretionary Accrual Analysis

VARIABLES	Disc. Acc	Disc. Acc	Disc. Acc
Pre-Transfer Income Before Disc Acc	-0.715***	-0.860***	-0.691***
	(-4.679)	(-7.806)	(-8.213)
PY_PreTransferIncome_Ent		0.588***	0.247*
		(5.216)	(1.672)
PY_DiscAcc			0.0841
			(1.621)
CityForm		-0.00404	-0.0139**
		(-0.964)	(-2.069)
Population		0.00224	0.00581**
		(1.287)	(2.601)
State Fixed Effects Included	Yes	Yes	Yes
Year Fixed Effects Included	Yes	Yes	Yes
Constant	0.0386***	0.00130	-0.0101
	(3.692)	(0.0580)	(-0.427)
Observations	284	284	189
R-squared	0.671	0.799	0.789

This table presents discretionary accruals analysis in the enterprise fund. Discretionary accruals are calculated according to the Jones model. In column 1, discretionary accruals in the enterprise fund are regressed only on pre-transfer income before discretionary accruals. In column 2, Prior Year pre-transfer income, City Form and Population are added as controls, while in the column 3, prior year discretionary accruals is added to controls. State and Year fixed effects are included. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C

Table 5
General Fund Discretionary Accruals Analysis

VARIABLES	Disc. Acc	Disc. Acc	Disc. Acc
Pre-Transfer Income Before Disc Acc	-0.0509	-0.168	-0.177
	(-1.264)	(-1.403)	(-1.613)
PY_Pre-Transfer Income GF		0.155	0.178*
		(1.376)	(1.742)
PY_DiscAcc			-0.439***
			(-3.592)
CityForm		0.00688	0.00378
		(0.659)	(0.138)
Population		-0.00601	-0.0170
		(-0.846)	(-1.116)
State Fixed Effects Included	Yes	Yes	Yes
Year Fixed Effects Included	Yes	Yes	Yes
Constant	0.0579***	0.113	0.357**
	(3.980)	(1.478)	(2.183)
Observations	309	309	206
R-squared	0.052	0.126	0.318

This table presents discretionary accruals analysis in the general fund. Discretionary accruals are estimated as the residual from the regression of change in working capital on change in revenue and total other financing sources. In column 1, discretionary accruals in the general fund are regressed only on pre-transfer income before discretionary accruals. In column 2, Prior Year pre-transfer income, City Form and Population are added as controls, while in the column 3, prior year discretionary accruals is added to controls. State and Year fixed effects are included. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C

Table 6
Descriptive Statistics- Cross
Sectional Variables

Name	Mean	P25	P50	P75	N
PensionCosts	0.10	0.03	0.07	0.14	309
Municipal Bond Issue	0.52	-	1.00	1.00	294
Enterprise Bond Issue	0.35	-	-	1.00	272
Intergovernmental Revenue	1.66	0.90	1.42	2.17	309
PolComp	0.18	-	-	0.33	288
Mayor Term Length	0.17	-	-	-	309
CitizenBoards	0.93	1.00	1.00	1.00	309
Citizen Inititatives	0.82	1.00	1.00	1.00	
Recall	0.79	1.00	1.00	1.00	
Method Mayor Elected	0.30	-	-	1.00	306
CityMgrSalary	119,709.30	100,000.00	114,296.50	134,992.00	174
Mayor on Council	0.61	-	1.00	1.00	306
Standing Committees	1.85	-	2.00	3.00	297
Staggered Council	0.75	-	1.00	1.00	306
Business Executive	0.20	0.13	0.19	0.20	102
Frequency	3.79	4.00	4.00	4.00	300
Council Term Limits	0.17	-	-	-	309

This table displays summary statistics for variables used in the cross sectional analysis. All variables are defined in Appendix C. Pension Costs and CityMgrSalary are expressed in thousands.

Table 7

General Fund Cross Sectional Analysis

VARIABLES		Controls	State FE	Year FE	Obs.	R Squared
CitizenBoards	-0.400***	Yes	Yes	Yes	309	0.92
	(-3.643)					
CitizenInitiatives	-0.259**	Yes	Yes	Yes	294	0.898
	(-2.270)					
Recall	-0.175	Yes	Yes	Yes	270	0.866
	(-1.429)					
CityForm	-0.332***	Yes	Yes	Yes	309	0.931
	(-3.972)					
MayorTermLength	-0.110***	Yes	Yes	Yes	306	0.928
	(-3.112)					
MethodMayorElection	-0.219***	Yes	Yes	Yes	306	0.925
	(-2.759)					
Population	-0.0926	Yes	Yes	Yes	309	0.921
	(-1.411)					
PolComp	0.195	Yes	Yes	Yes	288	0.918
	(0.890)					
BondIndebtedness	0.021	Yes	Yes	Yes	294	0.920
	(0.400)					
InterGovtRev	-0.169*	Yes	Yes	Yes	309	0.924
	(-1.948)					
PensionCosts	-0.205**	Yes	Yes	Yes	309	0.921
	(-2.337)					
MayorOnCouncil	0.203**	Yes	Yes	Yes	306	0.924
	-2.52					
StandingCommittee	0.362***	Yes	Yes	Yes	309	0.923
	(-2.590)					
StaggeredCouncil	0.236***	Yes	Yes	Yes	306	0.92
	(3.145)					
CouncilSize	-0.0135	Yes	Yes	Yes	309	0.919
	(-0.904)					
Frequency	0.117***	Yes	Yes	Yes	300	0.929
	(4.251)					
BusinessExec	0.722*	Yes	Yes	Yes	103	0.933
	(1.771)					
CouncilTermLimits	-0.250***	Yes	Yes	Yes	309	0.929
	(-4.153)					

This table presents cross sectional analysis in for the general fund. It replicates the analysis of Table 2 but includes an interaction term. Each row presents the interaction of a different variable with the Pre-Transfer Income variable in the general fund. The dependent variable is net transfers. For each model, state and year fixed effects are included. Control, intercept and main effect variables are calculated but

omitted from the table. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C.

Table 8

Enterprise Fund Cross Sectional Analysis

VARIABLES		Controls	State FE	Year FE	Obs.	R Squared
CitizenBoards	0.180	Yes	Yes	Yes	284	0.806
	(0.680)					
CitizenInitiatives	0.0196	Yes	Yes	Yes	269	0.806
	(0.169)					
Recall	0.0351	Yes	Yes	Yes	281	0.8
	(0.284)					
CityForm	-0.284	Yes	Yes	Yes	284	0.81
	(-1.072)					
MayorTermLength	0.0792	Yes	Yes	Yes	281	0.812
	(1.263)					
MethodMayorElection	-0.255	Yes	Yes	Yes	281	0.809
	(-0.995)					
logpop	-0.132	Yes	Yes	Yes	284	0.811
	(-1.086)					
PolComp	-0.240	Yes	Yes	Yes	284	0.834
	(-1.34)					
BondIndebtedness	0.012	Yes	Yes	Yes	269	0.811
	(0.080)					
InterGovtRev	0.152	Yes	Yes	Yes	284	0.801
	(1.560)					
PensionCosts	0.248***	Yes	Yes	Yes	284	0.803
	(3.100)					
MayorOnCouncil	0.175	Yes	Yes	Yes	281	0.808
	(0.947)					
StandingCommittee	0.0202	Yes	Yes	Yes	188	0.866
	(0.146)					
StaggeredCouncil	0.263	Yes	Yes	Yes	281	0.808
	(0.770)					
CouncilSize	-0.0809	Yes	Yes	Yes	281	0.813
	(-1.319)					
Frequency	0.172	Yes	Yes	Yes	275	0.812
	(1.473)					
BusinessExec	-0.00677	Yes	Yes	Yes	90	0.833
	(-0.0246)					
CouncilTermLimits	-0.288*	Yes	Yes	Yes	284	0.817
	(-1.746)					

This table presents cross sectional analysis in for the enterprise fund. It replicates the analysis of Table 4 but includes an interaction term. Each presents the interaction of a different variable with the Pre-Transfer Income variable in the enterprise fund. The dependent variable is discretionary accruals. For

each model, state and year fixed effects are included. Control, intercept and main effect variables are calculated but omitted from the table. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C.

Table 9
Additional Analysis
Panel A: General Fund

VARIABLES	Controls Included	State Fixed Effects	Year Fixed Effects	N	R Squared
Deficit	0.107	Yes	Yes	309	0.923
	(1.110)				
Big 4 Auditor	0.126	Yes	Yes	309	0.920
	(1.271)				
GFAO	0.183**	Yes	Yes	309	0.924
	(2.273)				
Positive Variance	-0.142**	Yes	Yes	309	0.872
	(-2.043)				

Panel B: Enterprise Fund

VARIABLES	Controls Included	State Fixed Effects	Year Fixed Effects	N	R Squared
Deficit	-0.3157**	Yes	Yes	284	0.834
	(-2.080)				
Big 4 Auditor	0.516***	Yes	Yes	284	0.828
	(3.124)				
GFAO	-0.0745	Yes	Yes	284	0.805
	(-0.404)				

This table presents additional analysis for the general and enterprise fund. In Panel A, the analysis of Table 2 is followed but an interaction term is included. Each row presents the interaction of a different variable with the Pre-Transfer Income variable in the general fund. The dependent variable is net transfers. In Panel B, the analysis of Table 4 is followed but an interaction term is included. Each row presents the interaction of a different variable with the Pre-Transfer Income variable in the enterprise fund. The dependent variable is discretionary accruals. For each model, state and year fixed effects are included. Control, intercept and main effect variables are calculated but omitted from the table. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C.

Table 10
Discretionary Net Transfer Analysis
Panel A: General Fund

VARIABLES	DiscNetTransGF	DiscTransIn_GF	DiscTransOut_GF
Pre-Transfer Income GF	-0.856***	-0.266**	0.201***
	(-16.23)	(-2.316)	(4.301)
CityForm	0.0495*	0.114*	0.0182
	(1.754)	(1.830)	(0.629)
GF Asset Ratio	0.128**	-0.291**	-0.115**
	(2.132)	(-2.548)	(-2.122)
BegFundBalance_GF	-0.175***	0.0233	0.0610
	(-3.121)	(0.313)	(0.899)
OtherFinancingSources_GF	-0.826***	-0.304***	0.249***
	(-4.157)	(-2.656)	(4.070)
Population	-0.0479***	-0.00689	0.0475*
	(-3.683)	(-0.357)	(1.979)
LagNetTransfersGF	0.117***	0.152**	-0.00624
	(4.649)	(2.496)	(-0.158)
PreTransferIncome_GovtFunds	-0.372***	-0.118**	0.0446
	(-11.34)	(-2.407)	(0.868)
OtherFinancingSources_GovtFunds	-0.0129	-0.0105	-0.00642
	(-0.478)	(-0.403)	(-0.208)
BegFundBalance_GovtFunds	0.0113	0.0288	-0.00688
	(0.984)	(1.233)	(-0.457)
State Fixed Effects Included	Yes	Yes	Yes
Year Fixed Effects Included	Yes	Yes	Yes
Constant	0.557***	-0.0527	-0.567**
	(3.539)	(-0.253)	(-2.382)
Observations	309	309	309
R-squared	0.861	0.557	0.489

Panel B: Enterprise Fund

VARIABLES	DiscNetTrans_Ent	DiscTransIN_Ent	DiscTransOut_Ent
PreTransferIncome_Ent	-0.0615	-0.0877	0.0110
	(-0.557)	(-0.810)	(0.224)
CityForm	0.00167	0.00310	0.000720
	(0.230)	(0.402)	(0.392)
Ent. Asset Ratio	-0.00175	-0.000442	-0.000650
	(-1.142)	(-0.273)	(-1.319)
BegNetAssets_Ent	-0.00720	-0.0159	-0.00853**
	(-0.304)	(-0.693)	(-2.413)
OtherFinancingSources_Ent_AA	-0.145	-0.129	0.00646
	(-1.079)	(-1.069)	(0.270)
Population	0.00339	0.000558	-0.000907
	(1.079)	(0.210)	(-0.825)
LagNetTransfersENT_wins	0.00374	-0.0139	0.0293***
	(0.238)	(-1.060)	(5.390)
PreTransferIncome_GovtFunds	0.00427	-0.00566	-0.00633
	(0.397)	(-0.571)	(-1.285)
OtherFinancingSources_GovtFunds	0.00548	-0.00418	-0.000426
	(0.569)	(-0.497)	(-0.0872)
BegFundBalance_GovtFunds	0.00451	0.000965	-0.00170
	(1.228)	(0.305)	(-1.315)
State Fixed Effects Included	Yes	Yes	Yes
Year Fixed Effects Included	Yes	Yes	Yes
Constant	-0.0167	0.00701	0.00797
	(-0.462)	(0.211)	(0.779)
Observations	284	270	270
R-squared	0.142	0.128	0.466

Panel C: Substitution Analysis Both Funds

	Variable
General Fund	
Pre-Transfer Income *DiscAcc	-0.214**
	(-2.050)
DiscAcc_GF	-0.3264***
	(-4.340)
N	309
R Squared	0.954
Enterprise Fund	
PTIDA*DiscNetTrans	-1.207*
	(1.780)
DiscNetTrans_Ent	0.128
	(0.480)
Observations	284
R-squared	0.824

Panel A reruns the analysis in Table 2 except the dependent variable is Discretionary Net Transfers. Discretionary Net Transfers are calculated as the residual when Net Transfers are regressed on the change in Pre-Transfer Income, Beginning Fund Balance, Budgeted Net Transfers, and Pre-Transfer Income and Beginning fund balance in the governmental funds. In column 1, the dependent variable is discretionary net transfers, in column 2 its discretionary transfers in and in column 3 its discretionary transfers out. Panel B reruns the analysis in Table 4 except with Discretionary Net Transfers for the enterprise fund. Enterprise Discretionary Net Transfers are calculated as the residual when Net Transfers are regressed on the change in Pre-Transfer Income, Beginning Fund Balance, Prior Year Net Transfers, and Pre-Transfer Income and Beginning fund balance in the governmental funds. In column 1, the dependent variable is discretionary net transfers, in column 2 its discretionary transfers in and in column 3 its discretionary transfers out. In Panel C, the analysis examines a substitution effect between discretionary accruals and discretionary net transfers. First, for the general fund, the regression in Column 1 is rerun but with adding an interaction between Pre-Transfer income (PTI) and discretionary accruals. The dependent variable is discretionary net transfers. A similar regression is run for the enterprise fund. The dependent variable is discretionary accruals and the interaction term is between discretionary net transfers and Pre-Transfer Income before discretionary accruals (PTIDA). For each model, state and year fixed effects are included. Control, intercept and main effect variables are calculated but omitted from the table. Standard errors are clustered by municipality. *,**,*** represent significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C.

Table 11

Governmental Funds Net Transfer Analysis

VARIABLES	Net Transfers	Net Transfers	Net Transfers
PreTransferIncome_GovtFunds	-0.00795	0.250	0.160
	(-0.0694)	(1.417)	(1.165)
CityForm		0.0993	0.0490
		(0.965)	(0.524)
Govt Asset Ratio		-0.0914	-0.0325
		(-0.468)	(-0.164)
BegFundBalance_GovtFunds		0.0533	0.0545
		(0.704)	(0.696)
OtherFinancingSources_GovtFunds		0.262*	0.172*
		(1.779)	(1.670)
Population		0.0146	0.0301
		(0.416)	(0.866)
Lag NetTransfers_Govt		0.389***	0.482***
		(2.801)	(2.861)
SurpDef_AA_wins		-0.00539	-0.0204
		(-0.0540)	(-0.215)
BegFundBalance_GF		0.223	0.157
		(1.520)	(1.163)
OtherFinancingSources_GF		0.134	0.114
		(1.022)	(0.860)
PreTransferIncome_Ent			0.154
			(0.797)
BegNetAssets_Ent			-0.0792
			(-0.586)
OtherFinancingSources_Ent_AA			-0.406*
			(-1.787)
State Fixed Effects Included	Yes	Yes	Yes
Year Fixed Effects Included	Yes	Yes	Yes
Constant	0.814***	0.326	0.173
	(29.63)	(0.776)	(0.418)
Observations	309	309	284
R-squared	0.316	0.433	0.553

This table presents Net Transfer analysis in the governmental funds. The dependent variable is Net Transfers in the governmental fund. It is regressed on pre-transfer income, variables capturing the financial condition of general and enterprise funds as well as other control variables, respectively. Column 1 excludes all control variables, Column 2 shows the effect of only the governmental fund and general fund control variables and column 3 adds enterprise fund control variables. State and Year

fixed effects are included. Standard errors are clustered by municipality. *,**,*** represent
significance at the 1%,5% and 10% level respectively. All variables are as defined in Appendix C

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