# How Do Multiple Regulators Regulate? Evidence from Fairness Opinion Providers' Conflict of Interest Disclosures

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**Abstract:** The process of producing and disseminating financial reporting disclosures often involves multiple parties operating under the supervision of multiple regulators. We investigate an important example: conflict of interest (COI) disclosures for fairness opinion (FO) providers in mergers and acquisitions. The Securities and Exchange Commission (SEC) oversees the companies responsible for disseminating FOs and COIs in their SEC filings, whereas the Financial Industry Regulatory Authority (FINRA) regulates the FO providers who supply COI information to their client companies. We assess the effectiveness of each regulator's enforcement efforts and examine whether they act as substitutes or complements when jointly enforcing COI disclosures. We find each regulator is effective when acting as the sole regulator, but that when both have oversight the second regulator reduces the effectiveness of the first. Cross-sectional tests indicate that this substitution effect is reduced when it is more likely both regulators need to coordinate to achieve effective oversight.

**Keywords:** Conflict of Interest, Disclosure, Fairness Opinion, Mergers and Acquisitions, Enforcement, FINRA, SEC, Court system, multiple regulators.

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## 1. Introduction

Whether the interaction between different regulatory bodies in the enforcement process enhances or worsens regulatory oversight has long been a subject of debate (Marks and Hooghe, 2003; Inman and Rubinfeld, 1997). Previous banking studies (Agarwal et al., 2014; Nicoletti, 2018; Bischof et al., 2020; Kim and Kim, 2023) examine multiple regulators overseeing the same regulatee. The process of producing and disseminating financial reporting disclosures, however, often involves multiple parties who each are under the authority of a specialized regulator. For example, certain information in 10-K filings is provided by third parties who operate under a different regulator than the SEC. The audit report is provided by the auditor, who is regulated by the PCAOB. Looking ahead, the introduction of additional environmental, social, and governance (ESG) reporting requirements could increase the prevalence of third-party disclosures in 10-Ks, as the third parties involved in ESG disclosures may be regulated by the Environmental Protection Agency or other relevant regulators.

Having multiple regulatees gives rise to multiple information asymmetries (e.g., among regulated entities and between regulated entities and investors), suggesting multiple regulators could be helpful. For instance, if each regulator has primary responsibility for a different part of the disclosure process (such as one overseeing information quality and the other information dissemination) there is potential for a complementary regulatory relationship. If the regulators' responsibilities are overlapping, however, they could reduce the impact either would have had alone by failing to sufficiently coordinate.

Despite the importance of different regulatees coordinating with each other and their regulators on information production and dissemination, we are unaware of research examining multiple regulatees interacting with each other and multiple regulators. We advance such research by studying how two regulators interact and whether their interaction creates stronger or weaker disclosure enforcement.

COI disclosures by fairness opinion (FO) providers in M&A present an opportunity to examine regulators interactions over different regulatees regarding the same disclosure. The SEC has authority over the company, while FINRA has authority over investment banks acting as FO providers. FO writers have the most information about their own COIs with a client firm and they communicate this information with the firm's board of directors. Firm managers then disseminate COI information to the public under their firm's reporting requirements as an SEC registrant.

The setting is important, with U.S. investment bankers generating billions of dollars in fees from M&A transactions.[1] Targets and/or acquirers in an M&A often obtain an FO from a third-party investment bank, because FOs are an important part of a target board's M&A due diligence following the landmark Delaware case *Smith v. Van Gorkom* (Bebchuk and Kahan 1989, Bowers et al. 2004, Imperatore et al. 2021). FOs can provide incremental information, impose external constraints on equity values, and discipline transactions (e.g., DeAngelo 1990, Cain and Dennis 2013, Liu 2020). However, they can instead be biased and uninformative (e.g., Bebchuk and Kahan 1989), particularly when there are COIs between the FO client's management and the investment bank providing the FO. Much of the COI information is proprietary (e.g., FO providers' personal, financial, and business interests with the FO client),[2] suggesting the mandatory disclosure regulation may be necessary.

The SEC and FINRA each provide regulatory guidance on COI disclosure. The SEC does not require FO COI disclosures in all M&A transactions, but mandates disclosure for certain transactions like mergers and deals requiring shareholder votes (e.g., Badawi et al. 2021). The SEC comment letter process is the primary enforcement mechanism for disclosure violations in M&A filings. Research indicates this process improves disclosure compliance (e.g., Bens et al. 2016, Bozanic et al. 2017, Johnston and Petacchi 2017, Brown et al. 2018, Cunningham et al. 2017). However, due to the strict timeline of the SEC's review and the complexity of M&A filings (e.g., Johnson et al. 2020), SEC staff may lack the time and resources to thoroughly investigate undisclosed COIs or low quality disclosures, instead prioritizing other issues.

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[1] According to Tuch (2014), the amount in 2012 was $17 billion. MarketWatch reported that in the first three quarters of 2020, investment banks earned $64 billion from M&A and IPO transactions. Companies who hire FO providers pay the FO fee. The average cost per FO in the 2000s ranged from $500,000 to $750,000, with many deals using multiple FOs (Kisgen et al. 2009, Lui 2020). https://www.marketwatch.com/story/wall-street-banks-net-64-billion-in-fees-in-bumper-year-for-m-a-and-ipos-11601479432

[2] For example, the FO provider might not want to disclose that they have a 3% holding in the acquirer's stock and would financially benefit from a deal that is unfair to the target's shareholders.

In contrast, FINRA has required its members (i.e., investment banks) to disclose COIs to a client firm's board when writing FOs since late 2007. FINRA evaluates investment banks' internal control effectiveness in ensuring compliance with FINRA regulations. However, FINRA is a self-regulatory organization (SRO), and some theoretical literature questions whether SRO incentives result in under-enforcement (DeMarzo et al. 2005). Moreover, the primary mechanism for disclosing COI status to investors is through SEC filings. As FO providers do not directly disclose information to investors, it is possible for an FO provider to include a COI disclosure in their FO, only to have management remove or modify it when creating the related SEC filing.

It is ex ante unclear how regulators interact with each other when they oversee different regulatees for the same disclosure. Given that FO providers are the most informed about their COIs with M&A transaction parties, FINRA regulation likely increases an FO client firm manager's certainty about the status of the FO provider's COI and thus increases the manager's COI information precision. When FINRA's regulation improves an FO client firm manager's information precision about the FO provider's COI, the SEC can better enforce informative disclosures.

On the other hand, these two regulatory bodies have overlapping mandates over the same transaction and may fulfill each other's roles to some extent, leading to a substitution relationship. The SEC may experience a decrease in its marginal effectiveness when FINRA begins regulating the same area, as the SEC may delegate some regulatory responsibilities to FINRA. Furthermore, each regulatory body has its own focus, expertise, and authority over regulatees, so each may not be able to fulfill responsibilities shifted toward it to the same extent as the other regulator can.

Our empirical strategy is to examine how firms' COI disclosure compliance changes after different types of regulator oversight are introduced. We measure disclosure compliance using self-constructed indices of disclosure quality. To do so, we collect data on whether firms disclose COIs in their SEC filings and manually code information about their FO providers' COIs, including financial, business, and personal relationships and contingent fees. High-quality disclosures are unambiguous about whether a COI exists and give specific information about the nature of the COI and how it is mitigated.

The SEC's enforcement rule applies throughout our sample period and varies by M&A structure (i.e., merger vs. tender offer). FINRA enforcement switches from off to on (for all M&A transactions) in late 2007. Thus, depending on the type of M&A transaction and its year, we observe COI disclosures under the jurisdiction of zero, one or two regulators. Before 2007, mergers are subject to SEC enforcement for FO COI disclosures whereas tender offer transactions are exempt from any regulatory obligations pertaining to FO COI disclosures. In contrast, after 2007, all M&A transactions, including tender offers, are subject to FINRA enforcement and mergers are subject to both SEC and FINRA enforcement.

We first show the effectiveness of a single regulator in overseeing COI disclosures. We find an increase in both the frequency and quality of disclosures with a single regulator relative to no regulator, demonstrating the efficacy of a single regulator. Through further exploiting the cross-sectional and timing variation of when the SEC and FINRA have COI disclosure oversight, we then examine interactions between the two. We find a negative association between the presence of dual oversight and the quantity and quality of COI disclosure, suggesting a substitution relationship where each regulator reduces the marginal effectiveness of the other.

To further investigate regulators' interactions, we exploit variation in resource constraints among regulators and in the alignment of incentives between regulatees. We explore instances where the SEC faces resource constraints, which we proxy by the intensity of IPO and M&A filing reviews ("busy" filing review months), and heightened concerns about the registrant, which we proxy by prior comment letters or restatements. We observe a strengthened substitution relationship with FINRA when the SEC faces greater constraints in, or perceives a heightened need for, effective enforcement. Furthermore, we use variation in regulatees' incentive misalignment, which we proxy by contentiousness of the deal and the presence of a private bidder. When regulatees exhibit greater incentive misalignment, we find a weakened substitution relationship among FINRA and the SEC.

Our paper makes several contributions. First, we add to the literature on the regulatory design of financial reporting disclosures, especially when different regulatees need to coordinate information or when disclosures have negative implications. Given that the different parties need to coordinate information and that disclosures may have negative implications (Leuz et al. 2020), there is a natural concern about noncompliance or partial compliance. Oversight from more regulators may increase a regulation's strictness or could provide multiple dimensions of regulatory expertise (which is especially important when regulatees are diverse). Our findings show that when multiple regulatees provide inputs into a regulated disclosure, the effectiveness of regulators in overseeing the mandated disclosure varies with whether there is more than one regulator and, when there is, with the circumstances of both the regulators and the regulatees. Although a single regulator improves COI disclosure quality and quantity, the introduction of a second regulator is harmful to disclosure quality and quantity on average. However, the extent to which this substitution effect occurs depends on the constraints of the regulators and the incentive conflicts of the regulatees.

Second, we add to prior literature that examines three main factors affecting the interactions of enfocement agencies with each other (e.g., Agarwal et al. 2014, Nicoletti 2018, Charoenwong et al. 2019, Ciancio and García-Jimeno 2019, Bischof et al. 2020, Kim and Kim 2021). One such factor is the relative resources of the multiple regulators. We incorporate SEC resource constraints into our cross-sectional tests and find that the extent to which FINRA oversight substitutes for that of the SEC with regard to enforcement of COI disclosure quality is much greater during months when the SEC has above average busyness reviewing other SEC filings. The second factor examined in prior literature is the incentive compatibility of a regulator with the other regulator(s) as well as with the regulatee(s). We capture this dimension in our cross-sectional tests by capturing variation in the extent to which the SEC (given its ideology, objectives and strictness) is likely to be concerned about incentive conflicts between the registrant and the registrant's non-insider owners. We find some evidence consistent with FINRA's substitution for SEC oversight being lessened or eliminated when the SEC is likely to be more concerned about the registrant's conflicts of interest with its external shareholders.

The third factor examined in prior work is the differences in expertise or specialization of the multiple regulators. An important distinction between our setting and those of prior papers is that we examine multiple regulators overseeing multiple regulatees, whereas prior literature focuses on single regulatee setttings. That is, in our setting, regulators are specialized over different regulatees for the same financial reporting disclosure (i.e., the SEC oversees firms, and FINRA oversees fairness opinion providers), and these regulatees need to coordinate with each other to provide informative financial reporting disclosures.[3] We find that, on average, the differences in specialized knowledge of the SEC and FINRA are not so large as to lead to a complementary enforcement relationship when both oversee a given COI disclosure.

A final contribution of our paper is that we provide empirical evidence that furthers our understanding of the effectiveness of FINRA enforcement, and its interaction with the SEC in enforcing the same disclosure. Prior literature has primarily focused on the roles of the SEC and SROs in isolation, not on their comparative and incremental roles in disclosure enforcement. DeMarzo (2005) theoretically shows under-enforcement by SROs and that government agencies can mitigate SRO under-enforcement by enforcing at a later stage, which has been supported in some empirical research (e.g., Lennox and Pittman 2010). In our setting, the government agency (the SEC) is not enforcing at a significantly later stage, but is instead regulating a different party than the one the SRO (FINRA) oversees for the same disclosure. We find that FINRA's regulation of the FO provider that has the COI information does not generally complement the SEC's enforcement of COI disclosures in the firm's SEC filings. Thus, perhaps related to the multiple regulatee setting that we are the first to examine, we show that an SRO may substitute for the role of the government agency.

## 2. Institutional Setting and Hypothesis Development

### 2.1 Institutional Setting

#### 2.1.1 FO and COIs in FO

Obtaining an FO has, because of the influence of the state courts, become an important part of a target board's M&A due diligence (see Appendix E1 for an example of a merger timeline and the role of the target's FO provider). In 1985, the Delaware Supreme Court ruled in *Smith v. Van Gorkom* that the

[3] We use "interact" to suggest implicit interactions, while "coordinate" means explicit interactions.

board of Trans Union Corporation violated its duty of care when it failed to obtain an FO.[4] Several subsequent cases established the use of FOs for meeting the standard set by this case (Kisgen et al. 2009).[5] Although FOs can be written by consultants, CPAs, commercial banks, or appraisers, investment banks are the most common writers of FOs.

FO valuations rely predominantly on accounting data (See Appendix E2 for an example of a fairness opinion and note that the final two paragraphs from that example FO are the ones that provide the COI information). In the creation of FO valuations, there is a great deal of flexibility. Writers must perform an underlying valuation analysis, but there is no consensus as to which technique is the most appropriate.[6] A weighted combination of multiple techniques is common, but the choice and weight of each technique is subjective. The measurement of key variables in each technique is also inherently subjective.

In addition to the subjectivity of FOs, a number of COI categories for FO providers have been documented (Davidoff 2006). The most common conflict arises when the investment bank that gives one of the companies in the merger transaction financial advice is also hired to write the FO, as the fees for financial advice are likely contingent on the deal closing (and are often much larger than the fees for writing the FO, with the Appendix E2 example showing an FO fee of $1 million and a target firm transaction advisor fee of approximately $43 million that is contingent on consummation of the transaction). In some fee structures, the FO writer is paid only when they agree that the deal is fair (Davidoff 2006). Furthermore, FO providers may have previous/ongoing business or personal relationships with managers or boards. Sometimes the FO provider holds stock in the relevant companies and so might financially benefit from an

[4] The court did not rule that a target board needed to acquire a fairness opinion. Rather, it ruled that when evaluating a takeover proposal, boards are required to inform themselves about the corporation's sale value through a well-prepared financial analysis. Delaware statute title 8, section 141(e) states that directors are "fully protected in relying in good faith" on the opinion presented to the company "by any other person as to matters the member reasonably believes are within such other person's professional or expert competence." In *Van Gorkom*, directors claimed that they relied on the chief executive and financial officers, and the judge specified that the full protection offered to directors under section 141(e) applies only to outside fairness opinions.

[5] Section 1203 of the California Corporate Code requires a fairness opinion for tender offers made by certain insiders, which is (to our knowledge) the only time that fairness opinions are required under state law.

[6] The most common techniques include discounted cash flow, benchmark premiums, break-up value, liquidation analysis, and comparable companies (Davidoff 2006, Imperatore et al. 2021). Imperatore et al. (2021) provide empirical evidence that FO valuations based on peer comparables are partially driven by a strategic motivation to mitigate litigation risk.

unfair deal. Even when there is no financial conflict, there are often biases; if an advisor is significantly involved with the construction of the deal, they likely feel that the deal is fair.

The prevalence of these conflicts may explain the common bias found in FO valuation estimates (Cain and Denis 2013). Many scholars are cynical about the usefulness of FOs, viewing them as skewed and uninformative (e.g., Bebchuk and Kahan 1989). Kisgen et al. (2009) synthesize these critiques in the legal protection only hypothesis, which argues that FOs serve to provide only legal protection for managers and board members. However, the authors reject the legal protection only hypothesis in cases where the FO is written for the acquirer. Specifically, they find that the use of an FO and the independence of the opinion writer both affect the probability of deal completion and the deal premium. The results suggest there is a connection between the information in the FO COI disclosures and how an investor evaluates the deal.

#### 2.1.2 The SEC and COI disclosure in FO

Fairness opinions are typically disclosed by the obtaining firm, a process that is regulated by several different bodies. At the SEC, there is the comment letter review process. In 1979, the SEC's Rule 13e-3 required issuers in going-private transactions to make a statement to unaffiliated securities holders on whether the transaction is fair, to disclose any FOs prepared by third parties, and to communicate the COIs for any external party rendering an FO. In 1986, the SEC adopted similar rules for proxy documents and for the S-4 (Proxy Rules-Comprehensive Review Exchange Act Release No. 34-23789, which was issued on Nov. 10, 1986 and which created § 229.1015 (Item 1015), is available in Appendix D1). An S-4 needs to be filed for stock-based transactions, and proxy documents need to be filed whenever the shareholders have to vote to approve the merger, which includes all targets of mergers (but not tender offers) and acquirers who issue more than 20% of their stock in the deal. The SEC rules for FO COI disclosure are that the filer must "describe any material relationship [with the FO provider or any FO provider affiliate/ representative] that existed during the past two years or is mutually understood to be contemplated and any compensation received or to be received as a result of the relationship" (§ 229.1015(b)(4)).

The SEC also requires the filer to disclose if any compensation is contingent on the completion of the merger, and to "quantify, including cases in which the fee is zero, any compensation received or to be received" over the last two years, including but not limited to transaction-related compensation (Question and Answer 217.01 of the Division of Corporation Finance's Compliance and Disclosure Interpretations for Going Private Transactions, Exchange Act Rule 13e-3 and Schedule 13E-3, 2009; see Appendix D2 for the full guidance). FO compensation, transaction fees, and any other unrelated compensation are all expected to be listed separately in the disclosure. However, the SEC has traditionally taken a "hands-off" position when reviewing the proxy and S-4 filings for Item 1015(b) compliance (Davidoff, 2006). The SEC has also never required FOs or FO COI disclosures for cash offers in required Schedule TO (Tender Offer) and 14-D9 filings.

The SEC is required to review all M&A filings within 30 days.[7] These reviews have traditionally been done by the SEC's division of corporate finance or by the division of mergers and acquisitions. During these reviews, the SEC confirms that the filing follows SEC disclosure requirements (as mentioned above, not all M&A filings require an FO COI disclosure). If a firm fails to comply with any requirements, the SEC comment letter can encourage compliance, as an M&A transaction cannot be completed until the SEC review is complete.

### 2.1.3 FINRA and COI disclosure in FO

FINRA (which is also a federal-level organization) requires its members to disclose COIs when writing an FO. FINRA is a self-regulating association comprised of (and funded by) broker-dealers with experience operating under SEC oversight.[8] FINRA can be seen as a specialized regulator for capital market participants, able to impose rules that are better tailored to specific industry needs because of FINRA's

[7] Johnson et al. (2020) explain that the SEC reviews all S-4s related to M&A deals, but only selectively reviews proxy statements or other periodic reports related to M&A deals; the selection criteria are not publicly disclosed. Ege et al. (2020) claim that all M&A and IPO transactional filings are reviewed by the SEC. The 2016 report by the U.S. Government Accountability Office (GAO) on the SEC's internal supervisory controls (https://www.gao.gov/assets/690/680352.pdf) claims that all M&A transactional filings are reviewed. Liu et al. (2021) find that only 31% of the mergers in the ThomsonOne Banker SDCdatabase from 2005 to 2017 have comment letters; the lack of a comment letter, however, does not prove that the SEC failed to review a filing. Liu et al. (2021) also find that one of the most frequent topics in its sample for SEC comments is the FO and the valuation.

[8] FINRA was preceded by the NASD, which survived until 2007. In 2007, NASD merged with the enforcement arm of the New York Stock Exchange to form FINRA. FINRA is funded by broker-dealers, and has the power to discipline broker-dealers, financial advisors, investment bankers, and other members and associated persons. Sanctions can include fines, censures, suspensions, and being barred from practice.

close industry ties, expertise, and technical knowledge. Broker-dealers and investment bankers must register with FINRA as a member or as an associated person, and are thereby subject to FINRA's rules. Under FINRA, members providing fairness opinions are required to disclose any conflicts of interest to the client firm's board. This federal requirement was created in late 2007 with the passing of Rule 2290, which has since been renamed Rule 5150 (the entire rule is in Appendix D3).[9] FINRA enforces compliance with its own rules, with the Exchange Act, and with other related rules. FINRA uses two common disciplinary procedures to impose sanctions: a complaint alleging the violation of a rule, and the initiation of a matter (without an associated complaint). FINRA has the ability to fine, suspend, or expulse members from practicing in the profession.

FINRA has specified that FO writers need to disclose COI information as part of their fairness opinions. FO writers typically provide their FO to the firm's board of directors as an oral report or as a letter with an average of two to four pages. At that point, it is the board's responsibility to report the FO and COI disclosures to its shareholders. FO providers do not have an alternative reporting mechanism for investors to verify that a board of directors has not tampered with or abbreviated the FO. However, Rule 5150 creates a mechanism to extend culpability to the FO provider in situations where they are complicit in, or the source of, FO-related securities fraud. For example, assume that an acquirer hires an FO provider with a material COI but does not disclose that information to their investors in the S-4. If the acquiring management and board of directors are unaware of the COI because the FO provider never disclosed it, then Rule 5150 establishes that the FO provider bears some legal responsibility for the misinformation.

Rule 5150 was initially written by the NASD in 2004, but was not fully approved and enacted until 2007. The long delay appears to have been caused by the nature of the approval process. Rule changes for SROs must go through a comment period at their own organization and at the SEC. The NASD amended the rule three times because of comments and a fourth time when NASD became FINRA. This delay,

[9] See https://www.finra.org/rules-guidance/rulebooks/finra-rules/5150#the-rule

however, helps separate any endogenous events or changes in the profession that might have inspired the initial proposal in 2004 from its eventual implementation in 2007.

**2.2 Hypothesis Development and Literature Review**

We study how multiple regulators regulate COI disclosures, examine the effectiveness of each regulator's enforcement and study their potential interactions with each other (i.e., whether they substitute for, or complement, the other) when enforcing COI disclosures. Although both regulators are regulating the same disclosure, each has authority over a different regulatee: the SEC over the managers who create the filings and FINRA over the FO providers (see Figure 1). The regulatees need to coordinate with each other to generate informative COI disclosures. FO writers have the most information about their COIs and should communicate this information with their client's board of directors, with the easiest method of communication being as part of the formal FO report written up by the FO provider for consumption by the board and investors at large as part of the M&A disclosures. Managers, with the oversight of the board, disseminate both the FO and the FO provider's COI information to investors and the public through M&A disclosures filed with the SEC. Each regulator has its strengths and challenges in enforcing FO COI disclosures, and we are interested in how their interactions affect the enforcement.

The literature has generally found that the SEC comment letter process is effective at increasing disclosure quality (e.g., Bens et al. 2016, Bozanic et al. 2017, Johnston and Petacchi 2017, Brown et al. 2018, Cunningham et al. 2019). For example, Ege et al. (2020) view the SEC comment letter process as an enforcement mechanism that often serves as the first line of defense against potential disclosure violations. Given the literature's strong endorsement of the comment letter process and the fact that the SEC is required to review all M&A transactions, the SEC comment letter process likely provides the main enforcement of COI disclosures for FO providers (Ege et al. 2020, Johnson et al. 2020, and Liu et al. 2021). Although all M&A filings are reviewed to ensure compliance, only selected filings are under the requirement to disclose COIs for FO providers. Thus, we predict that when the SEC requires a registrant involved in an M&A

transcation to disclose the COI of its FO providers, the related filings are more likely to disclose the conflicts of interest.

On the other hand, some law literature (Davidoff 2006, Herlihy et al. 1992) claims the SEC has historically under-enforced COI disclosures. To our knowledge, these claims have not been empirically tested. Nonetheless, SEC employees might lack the time and resources to investigate the possibility of undisclosed COIs. A branch of literature has noted the presence of resource constraints (see, e.g., Ege et al. 2020, Gunny and Hermis 2020); these papers, however, focus on variation in the quality of individual comment letters instead of on a general failure to enforce regulation. Johnson et al. (2020) explain that the SEC is expected to finish their review in under 30 days. Given the length and complexity of M&A filings and the 30 day timeline, SEC staff likely must prioritize issues to focus on when reviewing a document.

FINRA's regulatory processes could increase COI disclosure quality for all firms with FOs. FINRA might have an advantage over the SEC in regulating COI disclosures for several reasons. First, the SEC might lack the industry knowledge to impose specific rules, especially for FO disclosures. In our setting, FO providers, typically investment banks, have the most information about their COIs with the M&A parties. Therefore, FINRA's regulation/enforcement can help increase the informativeness of the COI disclosures from FO providers. Second, FINRA regulation is not contingent on merger structure or filing type, but on the membership of the FO provider.

FINRA, though overseen by the SEC, is a self-regulatory organization (SRO). Theoretical research predicts SROs will under-regulate their members (DeMarzo et al. 2005, Fogarty 1996). DeMarzo et al. (2005) predict that the SEC increases the effectiveness of SRO enforcement actions, although their model assumes that the SRO is the first mover.[10] Tuch's (2014) empirical results, however, create doubt that

[10] Empirically, most of the research on the effectiveness of SRO enforcement, especially as compared to federal regulators, has looked at the American Institute of Certified Public Accountants (AICPA). Auditing procedure was set by the AICPA until Sarbanes Oxley created the Public Company Accounting Oversight Board (PCAOB). The creation of the PCAOB was a reaction to a series of accounting scandals that created doubt about the ability of the AICPA, as an SRO, to deter fraud. A number of papers compare the enforcement activities of the PCAOB to those of

FINRA is properly enforcing SEC regulation. Tuch (2014) examines all FINRA enforcement between January 2008 and June 2013 and finds no censure of investment bankers for any merger-related activities, including those related to COI disclosures. Another possible explanation for this result is perfect compliance with COI disclosure requirements. However, Tuch mentions the *re Del Monte Foods Co*. and *re El Paso Corp.* cases, which both happened during his sample period, suggesting that perfect compliance does not explain FINRA's lack of enforcement actions.

Another potential consideration is regulatory capture, in which regulators get captured by the regulatee and their objective is to please the regulatee (e.g., Stigler 1971, Posner 1974, Peltzman 1976, Becker 1983). While it is institutionally unlikely for the SEC, FINRA might be subject to this concern given that it is funded by broker-dealers. If FINRA were captured by its regulatees, we would expect laxer enforcement with fewer disclosures and lower-quality disclosures.[11]

Given the above conceptual arguments for and against each regulator's enforcement effectiveness on COI disclosures, we state the null hypothesis as follows:

*H1: We predict that each regulator (SEC and FINRA) has no association with the quantity and quality of FO COI disclosures.*

Assuming both regulators in our setting share the objective of obtaining clear and complete COI disclosures[12], the existence of potential multiple information asymmetries (such as between the firm and shareholders and between the firm and its FO provider) makes one regulator less likely to be sufficient. Each regulator has jurisdiction over a different party involved in the disclosure. The SEC's comment letter process enforces regulation on filers, which is firm management. FINRA has enforcement authority over

the AICPA, examining the changes in audit or financial reporting quality under the PCAOB (e.g., Anantharaman 2009, Lennox and Pittman 2010, DeFond 2010.).

[12] The SEC's desire for clear and complete COI disclosures would stem from their mandate to protect minority investors and efficiency of markets. The Division of Corporate Finance has this objective because it is what is required to be compliant with current securities regulation. FINRA's desire for clear and complete COI disclosures would stem from their desire to protect the perceived ethical standing of the investment banking profession, similar to how the bar association has an incentive to enforce lawyer's COI disclosures to clients to protect the profession.

FO providers, but not over management or the board of directors. Each regulator oversees a different regulatee in the same financial reporting disclosure, and regulatees must coordinate with each other to provide an informative financial reporting disclosure, which makes regulators' interactions and co-existence important. Conditional on regulators effectively enforcing the disclosure rules (tested in *H1*), we examine the dynamics and interactions among the two regulators (if any).

The presence of substitution or complementarities in enforcement has been the topic of a long-standing debate in the economics literature (Marks and Hooghe 2003, Inman and Rubinfeld 1997, Oates 1999). In the setting of financial misreporting, Schantl and Wagenhofer (2020) study the interaction of public and private enforcement and show that strengthening one institution can be detrimental to the incentives of the other institutions, which may weaken rather than reinforce the deterrence effect. These authors focus on settings with multiple regulators and one regulatee. In our setting, the dynamics of the regulated parties can also affect the regulators' interactions.

We test whether regulators in our setting have a complementary or substitutive relationship. The presence of FINRA in addition to the SEC raises the question of whether FINRA addresses loopholes in SEC disclosure regulation (i.e., as a complement to SEC regulation) or if FINRA substitutes for/replaces SEC enforcement. Although the SEC has the power to enforce FINRA's rules, the SEC regards FINRA as having "primary responsibility" for regulating broker-dealers' activity, because as an SRO FINRA is considered the first line of defense in regulating the conduct of market participants. Furthermore, the SEC is rarely involved in enforcing FINRA's "just and equitable" rule, even though the SEC does have jurisdiction (Tuch 2014).

There have been claims that each regulator struggles with enforcement issues (Tuch 2014, Davidoff 2006, Herlihy et al. 1992), sometimes in ways that make it unlikely the other regulator will become involved. For example, although FINRA can start a disciplinary process by publicly issuing a complaint for which the adjudicating determination is subject to SEC review (and any SEC order is subject to judicial review), this is not generally the approach FINRA pursues. Instead, it usually initiates a disciplinary matter without issuing a complaint, public notice occurs only on settlement, and settlement (if any) occurs without SEC review.

Nevetheless, the two imperfect regulators may work together often and constructively enough to enhance the strength of FO COI enforcement. FINRA regulation likely increases managers' certainty about the COI status of the FO provider given that, due to FINRA, the FO provider faces substantial fines and expulsion from the profession if they fail to share COI information with the firm. Complementarity between the two regulators arises because FINRA can be viewed as regulating disclosure quality, whereas the SEC regulates public firms and their dissemination of information. When FINRA's regulation improves managers' information precision about FO COI, the SEC can better enforce informative disclosure. Thus, two bodies' efforts can be complements.

Alternatively, the two regulators may substitute for each other. The introduction of FINRA as a COI regulator might increase the quality of disclosures significantly for tender offers (where there was no previous SEC oversight), but have less or even negative COI disclosure enforcement effect on deals that were already receiving SEC review. Given the general effectiveness of the SEC as a regulator, FINRA's contribution to disclosure quality for disclosures regularly reviewed by the SEC might be marginal if the SEC maintains the same focus on these disclosures after FINRA also becomes involved in their regulation. If the SEC reduces its oversight of these disclosures given FINRA's involvement, the overall regulatory effectivenesss may decrease.

In sum, concerns about each regulator's ability to properly enforce disclosures and the presence of loopholes within disclosure rules create space for multiple regulators and the need for additional enforcement. Thus, we might see disclosure levels and quality increase as an additional regulator is given oversight of a particular merger. We would expect this outcome if there were complementarities between the regulators. Conversely, we might see no increase or even a decrease in the levels and quality of disclosure if regulators substitute for each other. We generalize our second hypothesis:

*H2: We predict that FINRA and SEC will act as substitutes (complements) to each other, and expect to find no change or a decrease (increase) in disclosure quantity and quality when FINRA and the SEC jointly enforce disclosure relative to either regulator enforcing by itself.*

**Sample selection**

Table 1 outlines our merger transaction FO sample selection. We obtain from SDC Platinum all merger transactions involving publicly traded target U.S. firms announced between January 2000 and December 2015. For these 8,350 deals, we examine SEC filings to extract fairness opinions (FOs). We use textual analysis with a Python script to examine the following SEC filings for acquirer and target firms: S-4, S-4/A, DEFM14A, DEF14A, DEFR14A, and SC14D9 and arrive at a sample of 6,139 mergers that include FOs. As we describe in detail below, the highly technical nature of COI disclosure precludes automating its collection, and the manual collection process is time consuming. We thus limit our data collection of COI disclosures to a random sample of 900 deals equally distributed before and after 2007. We check if each of these 900 observations has the control variable information we require for our regression analyses and drop the 159 observations that do not. Finally, we check the remaining 741 observations to confirm that the FO provider is always an investment bank, so that the FO provider is subject to FINRA oversight after 2007 and the pre-2007 observations are comparable to the post-2007 observations.[13]

We obtain data on firm characteristics from COMPUSTAT, information on M&A deal transactions, including advisors, from SDC, and information on the number of SEC filings and SEC comment letters from WRDS Suite and Audit Analytics.

### 3.1 COI disclosure quantity and quality

To assess the COI disclosure in FOs, we use two measures: an indicator variable denoting the existence of a COI disclosure, and a measure of COI disclosure quality. *COI Disclosure Indicator* is set equal to one

[13] We have not completed the process of checking that each FO provider is an investment bank, but this in-process work has not yet found any non-investment bank FO providers within our 741 observation sample.

for FOs with a COI disclosure in at least one filing, and to zero otherwise. We preserve filing level FO and FO COI data, where filings are connected by a merger-specific identifier, filing type, company identifier, filing year, and an indicator variable that equals one when an acquirer files the document.

For the quality of COI disclosure, we collect information on the extent to which companies disclose information about COI in compliance with FINRA 5150 rule and *SEC Regulation M-A on Fairness Opinion Conflict of Interest Disclosures*. Both FINRA and the SEC mandate FO providers and companies to provide information on whether i) the FO provider will receive compensation or any other significant payment that is contingent upon the successful completion of the transaction; and ii) the company and FO provider had any material relationships that existed during the past two years. For each COI item mandated by FINRA and the SEC, we create weighted indices developed using a 0 to 3 scale and assign 0 points to firms that do not disclose information on COI; 1 to firms that provide a generic description of the COI; 2 to firms that provide a more detailed description of the COI; and 3 to firms that either explicitly report the absence of a COI or to firms that exhaustively describe the presence of the COI. After having assigned the 0 to 3 score to each firm's COI disclosure, we create three aggregate quality proxies: i) *COI score*, which is the principal component of the three FINRA COI disclosure items (contingent fees, additional fees, and material past ties) plus the two SEC COI items (contingent fees and material past ties); ii) *FINRA COI quality*, which represents the sum of the zero to three scores on the three FINRA COI related items divided by the maximum score of nine; and iii) *SEC COI quality* which represents the sum of the zero to three scores on the two SEC COI related items divided by the maximum score of six. Examples and instructions for coding the quality of COI disclosures can be found in Appendices A1 - A3.

It is nearly impossible to create a dictionary that would have sufficiently low error when identifying sentences related to FO COIs. This is due to the fact that 1) multiple parties are involved in developing the disclosure of a given COI, 2) COI word choice varies, and 3) there can be significant variation in FO information even within a single filing type, especially when there are multiple FO providers. Such features of COI disclosure imply that mechanized linguistic tools are not suitable and can lead to noisy results. We thus use manual coding by well-trained research assistants. We acknowledge that (although more accurate) manual coding is characterized by subjectivity, so we validate our coding scheme as follows. First, the coding scheme was created and cross-checked by three of the co-authors. After the creation of a first coding scheme, each of these three co-authors applied the coding scheme to 6 FOs. The results of the coding were discussed and disagreements were resolved before sharing the coding procedure and instructions with twelve research assistants. The twelve research assistants performed a pilot test on the same set of deals. Research assistants with a high percentage of disagreement relative to the co-author codings were not considered for the subsequent data collection that, hence, involved only eight research assistants.

## 3. Research design and main results

### 4.1. Research design

Our empirical strategy is to examine how firms' COI disclosure quantity and quality change after coming under different regulators. To examine the effect of SEC regulatory enforcement and its interaction with FINRA enforcement on COI disclosures, we estimate the following difference-in-differences specification:

$$y_{imt} = \alpha_{imt} + \beta_1 Merger_{im} \times FINRA_t + \beta_2 Merger_{im} + State_{im}\ x\ Year_t\ FE + Industry_{im}\ x\ Year_t\ FE + \gamma' X_{imt} + \varepsilon \quad (1)$$

where *i* indexes the firm, *m* indexes the type of M&A (e.g., cash offers, going private, tender offers that require shareholder votes), t indexes years, and y is the dependent variable (i.e., firms' COI disclosure frequency or quality). We include state times merger announcement-year fixed effects as well as FO client industry (SIC two-digit) times merger announcement-year fixed effects to account for local and industry shocks happening in a specific year. *Merger* is an indicator variable that equals one if the client firm is involved in a merger, and zero it is involved in a tender offer (which is not subject to the SEC regulation). *FINRA* is an indicator variable that equals one after the FINRA COI disclosure regulation goes into effect (i.e., post-2007). As we include state times year fixed effects, the main effect of *FINRA* is subsumed in the intercept.

We include a vector ($X$) of control variables shown in prior work to be associated with merger outcomes, which includes client firm and deal-level characteristics. Client-level controls include return on assets (*ROA*), book-to-market ratio (*BTM*), an indicator for whether the firm has an operating loss (*Loss*), leverage (*Lev*), and asset turnover (*Asset turnover)*. Merger-level controls include the natural log of the dollar amount of the deal (*Deal size*), the number of days from announcement to completion (*Deal length*) as in Wangerin (2019), and the percentage of cash used for payment (*Percent cash*). Standard errors are clustered at the client state of incorporation level to account for potential litigation risk.

Predictions about the coefficients based on our hypothesis are as follows. $\beta_1$measures the coefficient of interest, which is the interaction effect between the two regulators. $\beta_2$ measures the baseline effect for the SEC. For H1, we predict that $\beta_2 > 0$, which is consistent with the conjecture that the SEC is positively associated with the frequency and quality of FO COI disclosures.

To examine the standalone effect of FINRA regulatory enforcement on COI disclosure, we modify Eq. (1) by replacing state times year fixed effects with state times merger type fixed effects and also replacing industry times year fixed effects with industry times merger type fixed effects. In this way, the main effect of *Merger* is subsumed in the intercept and we can observe the distinct effect of the introduction of new FINRA regulation and its relation with pre-existing SEC regulation. Specifically:

$$y_{imt} = \alpha_{imt} + \beta_1 Merger_{im} \times FINRA_t + \beta_2 FINRA_t + State_{im}\ x\ Merger_{im}\ FE + Industry_{im}\ x\ Merger_{im}\ FE + \gamma' X_{imt} + \varepsilon \quad (2)$$

where *i* indexes the firm, *m* indexes the type of M&A (e.g., cash offers, going private, tender offers that require shareholder votes), t indexes years, and y is the dependent variable (i.e., firms' COI disclosure frequency or quality).

For H1, we predict that $\beta_2 > 0$, which is consistent with the conjecture that FINRA regulation is positively associated with the frequency and quality of FO COI disclosures. In both Eq. (1) and (2), for H2, finding that $\beta_1$>0 indicates a reinforcing effect (i.e., that the two bodies' efforts are complements), whereas finding $\beta_1$ <=0 indicates a replacement effect (i.e., that the two regulators' efforts are substitutes).

### 4.2. Main results: the effect of different regulators and their interrelation

Before turning to the results from estimation of Eq. (1) and Eq. (2), we briefly highlight the descriptive statistics presented in Table 2. The COI-related dependent variables are presented in Panel A. By construction, the three score measures all vary between zero and one. Looking at the *FINRA_COI_score* compared to the *SEC_COI_score* shows that their two distributions are similar, but with somewhat higher values for the latter. Both distributions have medians and means above 0.5, indicating that the typical sample firm's FO COI disclosures are of reasonable quality. The 0.991 mean for *COI Disclosure Indicator* shows that more than 99% of our observations include a COI disclosure for their fairness opinion.

We note that the very high proportion of observations that include a COI disclosure makes almost moot a potential concern related to the unobservability of whether nondisclosure observations indicate a true absence of any COI versus noncompliance with the disclosure mandate. Our maintained assumption is that the 0.9% of observations with no COI disclosure are noncompliant as there are disclosures that simply state there is no COI and such disclosures are viewed as good news. However, there is a materiality threshold for COI disclosure enforcement and some non-disclosures may thus be ones where there is no COI and the firm is viewed as complying with the mandated disclosure by not disclosing immaterial information. If some of the seven non-disclosing observations instead should be viewed as (implicitly) saying they have no COI, then we could be viewed as having a minor misclassification of which observations are non-compliant.

Beyond the issue above (that in the absence of disclosures, we cannot observe when firms are dishonest), we are also unable to observe when firms provide inaccurate disclosures. For the purpose of our analyses, we assume that COI disclosures are accurate. That is, we assume that firms choose to either not disclose or to provide low quality information rather than to provide a knowingly inaccurate disclosure. Consistent with our maintained assumption, court cases where the FO writer is proven as dishonest are rare.

After reviewing the SEC comment letters, we find that most of the ones about COI disclosures ask for disclosures to be provided or for more detailed information about the nature of a COI. It is rare to see the SEC taking enforcement action on firms' inaccurate COI disclosures.

Panels B and C of Table 2 provide details on the various items related to the FO and COI disclosures under the FINRA and SEC regulations. Focusing on the items used to construct the *FINRA_COI_score* and the *SEC_COI_score* shows that the item disclosure quality is quite similar under both regulators with regard to their requirements to disclose material past ties and contingent fees, with the SEC disclosures slightly better for material past ties. The relatively low scores under the FINRA rules for the additional fees COI component is the main reason that the overall COI score distribution is a bit lower for FINRA than for the SEC.

Finally, Panel D of Table 2 presents descriptive statistics for independent variables and control variables. These data indicate that 80 percent of our M&A transactions are mergers, target profits and book-to-market ratios tend to be low, the majority of acquisitions are for all cash, the majority of the FO firms do not have any SEC comment letters in the three years before the M&A deal, but the majority of the FO firms do have either a comment letter or a restatement in the three years preceding the deal.

Turning to the regression results, Table 3 Panel A presents the results from estimating Eq. (1). The table shows the change in COI disclosure quality and quantity in mergers' FOs following the introduction of FINRA COI regulation. In column (1) the positive coefficient for *Merger* (coef. = 0.075; t= 2.66) indicates that the quality of overall COI disclosure is higher when the deal is a merger rather than a tender offer during the pre-2008 period in which FINRA had no COI disclosure oversight. In other words, when the deal is exposed to SEC scrutiny, managers are more likely to provide high-quality COI disclosure. The magnitude of the coefficient indicates that the quality of COI disclosure in mergers is higher by an average of 0.075 compared to tender offers, which represents an increase of 12 percent relative to the sample mean. We find a negative coefficient for *Merger* x *FINRA* (coef. = -0.073; t= -1.92) suggesting that target firms exposed to SEC regulation decrease the quality of COI disclosure after FINRA regulation comes in (i.e., as in the case of target firms involved in mergers after 2007).

Empirical evidence is similar in column (2) where we consider the quality of COI disclosure requested by FINRA. The magnitude of the column (2) coefficient on the interaction term represents a 0.077 decrease in the *FINRA_COI_score*, indicating that target firms exposed to SEC regulation decrease the quality of their COI disclosures following the introduction of FINRA regulation by about as much as these target firms increase their COI disclosure quality due to being under SEC oversight (i.e., the column (2) coefficient on *Merger* of 0.084 is about the same as the -0.077 estimate on the interaction term). Moreover, the -0.077 coefficient represents a 14 percent decrease relative to the sample mean of 0.544 for *FINRA_COI_score*.

In column (3), where we assess the quality of COI disclosure mandated by SEC, the results are very similar to those from column (2). The magnitude of the coefficient on the interaction term represents a 0.082 decrease in the *SEC_COI_score*, indicating that target firms exposed to SEC regulation decrease the quality of their COI disclosures following the introduction of FINRA regulation by slightly more than these target firms increase their COI disclosure quality due to being under SEC oversight (i.e., the column (3) coefficient on *Merger* of 0.069 is smaller in absolute value than the -0.082 estimate on the interaction term). Moreover, the -0.082 coefficient represents a 13 percent decrease relative to the sample mean of 0.621 for *SEC_COI_score*.

In column (4), the dependent variable is an indicator for whether this is a COI disclosure. The inferences are similar here, where the dependent variable is the indicator for whether COI disclosure occurs, to those described above for the prior three columns where the dependent variables are measures of the quality of COI disclosures. The likelihood of making a COI disclosure is 4.7 percentage points higher with SEC oversight than without it in the pre-2008 period, as indicated by the positive and significant coefficient estimate on *Merger.* Once FINRA also regulates these disclosures after 2007, however, the probability of COI disclosure in mergers is reduced by 4.4 percentage points relative to the pre-2008 period.

Table 3 Panel B presents the results from estimating Eq. (2). The table shows the change in COI disclosure quality and quantity in FOs following the introduction of FINRA COI regulation. In column (1), we find a positive coefficient for *FINRA* (coef.= 0.360; t= 13.37) denoting an increase in the quality of COI disclosure after FINRA mandates COI disclosure to FO providers. This result suggests that regulatees react to FINRA's demand for COI disclosure. The negative coefficient for *FINRA x Merger* is in line with the empirical evidence reported in Panel A, remains significantly negative in the estimations in columns (2) through (4) of Panel B, and can be due to two distinct channels.

On one hand, when a new regulator is introduced (i.e., FINRA), the pre-existing regulator (i.e., the SEC) decreases its level of enforcement over its regulatee (i.e., managers of the firm including the FO and COI information in SEC filings) by partially delegating the task to the new regulator. As the new regulator disciplines a different regulatee (i.e., the FO provider), an overall reduction in the quality of COI disclosure can be observed. On the other hand, the entry of a new regulator can generate coordination frictions with the existing regulator as both oversee the same COI disclosure but different regulatees. In the next section, we perform cross-sectional tests to assess the mechanism underlying our findings.

**4.3. Cross-sectional tests**

In this section, we examine whether regulators' resource constraints or the need for joint oversight have an impact on the relation between COI disclosure in FOs and coordination frictions between the two regulators. With respect to the resource constraints of regulators, we focus on SEC busyness.

Prior studies (Ege et al., 2020; Gunny and Hermis, 2020) document that the review activity of the SEC is of lower quality when the SEC has to review an abnormally high number of transactional filings (e.g., initial public offerings or acquisitions). Building on these insights, we contend that, if the deal is announced in a month with an abnormally high number of transactional filings (i.e., a "busy period"), coordination between FINRA and SEC is more difficult as the SEC faces time and resource constraints. We classify a month as busy if the number of transactional filings (S-1, S-4, PREM14A, and SC 13E3 as taken from WRDS SEC Analytics) in the month is higher than the yearly average. Then, we re-estimate our main models separately in “busy” and “non-busy” months. Our expectation is that our findings are stronger (i.e., coordination frictions are more likely) in busy periods when the SEC lacks the time and resources to coordinate with FINRA. Empirical evidence is reported in Table 4 Panel A.

Column (1) displays the results for non-busy periods with *SEC_COI_score* as the dependent variable and shows that the coefficient on *FINRA x Merger* is negative, but not statistically significant. In Column (2) we observe that the coefficient on *FINRA x Merger* is negative and statistically significant in busy periods. A one-tailed t-test for the difference in coefficients confirms that the two coefficients are statistically different at better than the 1% level. Columns (3) and (4) show the results from the same exercise, but with *COI Disclosure Indicator* as the dependent variable. Here, the coefficient estimate on *FINRA x Merger* is significantly negative in both columns. Nevertheless the estimate is more negative in the busy period estimation and the difference in the coefficient estimates on the interaction term between columns (3) and (4) is, using a ont-tailed t-test, significant at the 10% level. Overall, the Table 4, Panel A results support our conjecture that coordination frictions between the two regulators are more likely when one of the two is busier.

Given the resource and time constraints they face, it is reasonable to expect that regulators prioritize transactions that threaten shareholders’ interests, such as transactions where either the target or the bidder exhibits high levels of agency conflicts or information frictions. In these cases, a joint effort of the two regulators to protect shareholders’ interests is more likely to trigger greater cooperation between the two regulators. To examine the role of the need for joint oversight, we explore three sources of cross-sectional variation: pre-merger target disclosure quality, private bidders, and contentious deals.

The SEC has stronger incentives to coordinate with FINRA if in the past there were concerns about the reliability of the target firm’s disclosures. In such cases, collaboration with FINRA is more likely to be desired by the SEC to help ensure that conflicts of interest are properly disclosed and shareholders’ interests are protected. We use the presence of SEC comment letters or restatements of financial statements in the three years before the merger announcement to proxy for low quality of pre-merger FO client firm disclosure quality. As SEC comment letters became available only after 2004, in this test we limit our sample to the period 2004-2015. We compare deals where FO client firms did not receive SEC comment letters or restatements in the three years before the deal announcement with others where the target received either an SEC comment letter or restated its financial statements. Results are reported in Table 4 Panel B.

Column (1) displays the results for the *SEC_COI_score* dependent variable for FO client firms that did not receive SEC comment letters or restate financial statements. It shows a significantly negative coefficient on *FINRA x Merger*. Column (2) also shows a significantly negative coefficient on *FINRA x Merger* for FO client firms that did receive SEC comment letters or restate their financial statements. The coefficient in Column (2) is not significantly different at conventional levels from that in Column (1), inconsistent with coordination frictions between the two regulators being less likely when prior concerns about the reliability of the FO client firm's disclosures require their joint effort.

The inference changes when examining the results from columns (3) and (4), where the dependent variable is the indicator for whether there was a COI disclosure. Both the sample of firms that did not receive SEC comment letters or restate financial statements (shown in column (3)) and the sample that did (shown in column (4)) have a significantly negative coefficient on *FINRA x Merger*. The -0.216 coefficient estimate in column (3) is, however, significantly more negative than the -0.083 estimate in column (4), with a on-tailed t-test indicating the difference is significant at better than the 0.01 level. Thus, for the binary outcome of whether there was a COI disclosure, our findings are consistent with coordination frictions between the two regulators being less likely when prior concerns about the reliability of the FO client firm's disclosures require their joint effort.

A second factor capturing conflicts that could prompt a joint effort by the SEC and FINRA is whether the bidding firm is private. When the bidder is private, it does not have publicly traded equity to offer in the transaction. Most such acquisitions are thus cash deals and target shareholders receive, on average, a lower premium (Bargeron et al., 2008). Moreover, once the deal is closed, target shareholders become owners of a private firm with a reduced possibility to liquidate their investment and a higher exposure to expropriation risk. These features of private bidders imply a greater need for joint scrutiny by the two regulators to protect target shareholders. We test this conjecture by separately examining deals featuring private bidder and public bidders. Results are reported in Table 4 Panel C.

Column (1) shows the results for deals with a public bidder and displays a significantly negative coefficient on *FINRA x Merger.* In contrast, in Column (2) the coefficient is not statistically significant in deals with a private bidder in line with the idea that, when target shareholders need to be protected, coordination frictions between the two regulators are less likely to arise. The coefficients are statistically different from each other at the five percent level. The inference changes when examining the results from columns (3) and (4), where the dependent variable is the indicator for whether there was a COI disclosure. In these columns, the coefficient on *FINRA x Merger* is not significantly different from zero and across the two columns the estimates on *FINRA x Merger* do not significantly differ from each other.

Lastly, we consider whether the deal is a management buyout or a going-private transaction (i.e., "contentious deals"). Management buyouts and going-private transactions are deals that historically exhibit greater exploitation of minority shareholders and are exposed to more litigation risk (e.g., Bruere and Shaffer, 2021). In MBOs, managers have a direct financial incentive to minimize the takeover price paid. Similarly, in going-private transactions, target shareholders typically receive cash payments and cannot participate in any potential upside of the firm's post-going-private performance. Thus, both types of deal are exposed to higher litigation and appraisal risk (Imperatore et al., 2021). Given the higher litigation risk, the SEC and FINRA have stronger incentives to coordinate to protect the interests of target shareholders. We test this conjecture by separately examining MBOs and going-private transactions (Contentious Deals), and all other mergers (Non-Contentious Deals). We present the results in Table 4 Panel D.

In Column (1), we observe that the coefficient on *FINRA x Merger* is significantly negative in non-contentious deals, whereas in Column (2) the coefficient is insignificantly negative in contentious deals. The column (1) and (2) estimates are not significantly different from each other. The Panel D inference is, however, sensitive to instead using the indicator dependent variable for the presence of COI disclosure, as shown in the estimations in columns (3) and (4). Across these two columns, the coefficient estimate on *FINRA x Merger* is significantly more negative in non-contentious deals, consistent with our conjecture that regulator coordination frictions are reduced when target shareholders are more exposed to agency conflicts.

Overall, Panels B – D of Table 4 provide mixed support for the notion that, when joint scrutiny by the two regulators is more needed, the SEC and FINRA oversee higher quality or quantity of COI disclosure in FOs. In Panels B and D, the findings are consistent with this notion for the outcome of whether or not there is a COI disclosure, but not for the SEC-based outcome measure capturing the quality of COI disclosure. In contrast, in Panel C we do not find results consistent with our speculation for the binary outcome measure, but do report results consistent with it for the quality of COI disclosure.

## 4. Conclusion

We study the effectiveness of the SEC and FINRA in enforcing the quality and quantity of fairness opinion conflict of interest disclosures that are included in SEC filings related to M&A activity. We find that each regulator achieves better COI disclosure when benchmarking the regulator acting alone relative to no regulator. However, we also find that when FINRA begins after 2007 to regulate the same merger COI disclosures that had already long been subject to SEC oversight, FINRA's addition as a second regulator is harmful rather than helpful in enforcing better quality and higher quantity of COI disclosures. Finally, cross-sectional tests indicate that the substitutive relation between FINRA and SEC regulation is more likely when the SEC is resource constrained due to busy periods with other filings, but is less likely when the SEC has more reason to be concerned about potential conflicts of interest between the filing firm and its external shareholders.

We view uur paper's findings as being generalizable to the regulatory design of financial reporting disclosures, especially when different regulatees must coordinate in order to provide an informative financial reporting disclosure or when disclosures have negative implications. Previous literature suggests information about incentive alignment and the relative ability and resources of regulators is predictive of their interactions (Tullock 1969, Strumpf and Oberholzer-Gee 2002, and Besley and Coate 2003). Banking regulators have unique variation in their incentive overlap with other regulators because of differences in their objective functions (e.g., the stability of the banking industry versus the protection of investors). The objective functions of banking regulators can sometimes align with those of disclosure regulators, resulting in joint enforcement, as for risk disclosures after Basil II (Bischof et al. 2021). Alternatively, the objective functions may differ for banking and securities disclosure regulators (e.g., Kim and Kim 2023). Sometimes, the incentive functions might diverge, as for loan loss provisions, where the SEC is concerned about earnings management leading to overly large reserves and banking regulators worry about insufficient recognition of risk (Beck and Narayanamoorthy 2013).

Although we focus on the FO COI disclosure setting, the incentives and the relative strengths of the various organizations should remain consistent and generalizable for other financial reporting disclosures regulated by either or both of the SEC and FINRA. DeMarzo et al. (2005) treat the incentive misalignment of a regulator as equally important for government agencies (e.g., the SEC) and self-regulatory bodies (e.g., FINRA and the AICPA). Schantl and Wagenhofer (2020) study the interaction between public (e.g., the SEC) and private (e.g., the state court) enforcement and consider each parties' strategic incentives in the relationship. Thus, there is a theoretical underpinning indicating that our findings can generalize to other agencies with similar incentives.

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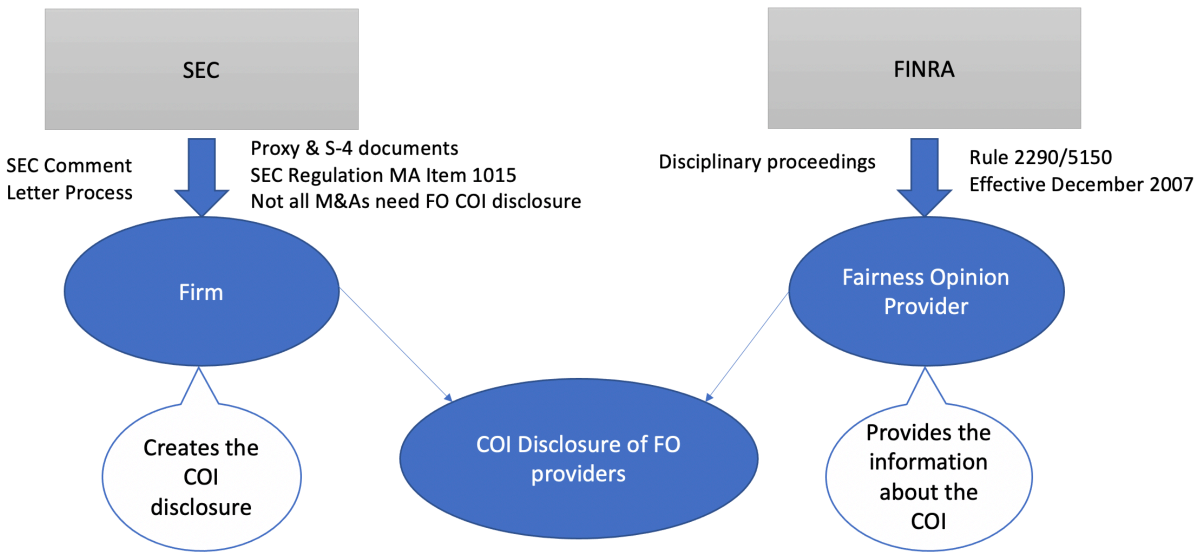
**Figure 1**




*Notes:* Figure 1 shows the relationship in our setting between different regulators and regulatees. Although both regulators oversee the same disclosure, each has authority over a different regulate. The SEC has authority over the managers who create the filings; and FINRA has authority over the FO providers. These regulatees need to coordinate with each other to generate informative COI disclosures. For instance, FO writers have the most information about their own COIs with a company (i.e., information production) and should communicate this information with the board of directors, who contract with an advisor who can write the FO. Managers, with the oversight of their board of directors, disseminate COI information to the public.

## Appendix A1

*Example of Conflict of Interest Disclosures*

**Companies:** 20th Century Industries & American International Group, Inc.
**Fairness Opinion Writer:** Smith Barney
**Year:** 1994

Pursuant to the terms of Smith Barney's engagement, the Company [20th Century Industries] has paid Smith Barney an initial financial advisory and opinion fee of $1 million and Smith Barney will be entitled to receive an additional $1 million upon consummation of the Transaction. The Company has also agreed to reimburse Smith Barney for its out-of-pocket expenses incurred in performing its services, including reasonable attorneys' fees and expenses, and to indemnify Smith Barney and related persons against certain liabilities, including liabilities under federal securities laws, arising out of Smith Barney's engagement. The Company has been advised by Smith Barney that it believes that its fees are reasonable based on the services performed and fees payable in other transactions.

Smith Barney has advised the Company that, in the ordinary course of business, it may actively trade the securities of the Company and AIG for its own account or for the account of its customers and, accordingly, may at any time hold a long or short position in such securities. Smith Barney also advised the Company that in the past it has provided financial advisory and investment banking services to AIG and received fees for the rendering of such services and that Smith Barney and its affiliates (including The Travelers, Inc. and its affiliates) maintain business relationships with AIG. In January 1994, Smith Barney was retained by AIG to sell one of its insurance subsidiaries, and, in June 1994 when AIG decided not to sell the subsidiary, Smith Barney received a $100,000 fee from AIG for its services. Prior to 1994, AIG had engaged Smith Barney in a variety of assignments.

Smith Barney is a nationally recognized investment banking firm and was selected by the Company based on Smith Barney's experience and expertise. Smith Barney regularly engages in the valuation of businesses and their securities in connection with mergers and acquisitions, negotiated underwritings, competitive bids, secondary distributions of listed and unlisted securities, private placements and valuations for estate, corporate and other purposes. Prior to the Transaction, the Company had not previously engaged Smith Barney to render any financial advisory services.

**Companies:** Jupitermedia Corporation & Getty Images, Inc.
**Fairness Opinion Writer:** Merrill Lynch, Pierce, Fenner & Smith Incorporated
**Year:** 2009

We are acting as financial advisor to the Seller in connection with the Transaction and will receive a fee from the Seller for our services which is contingent upon the consummation of the Transaction. In addition, the Seller has agreed to indemnify us for certain liabilities arising out of our engagement.
We have, in the past, provided financial advisory and financing services to the Seller, the Purchaser and/or their respective affiliates and may continue to do so and have received, and may receive, fees for the rendering of such services. In addition, in the ordinary course of our business, we or our affiliates may actively trade in securities of the Seller for our own account and for the accounts of customers and, accordingly, may at any time hold a long or short position in such securities.

## Appendix A3

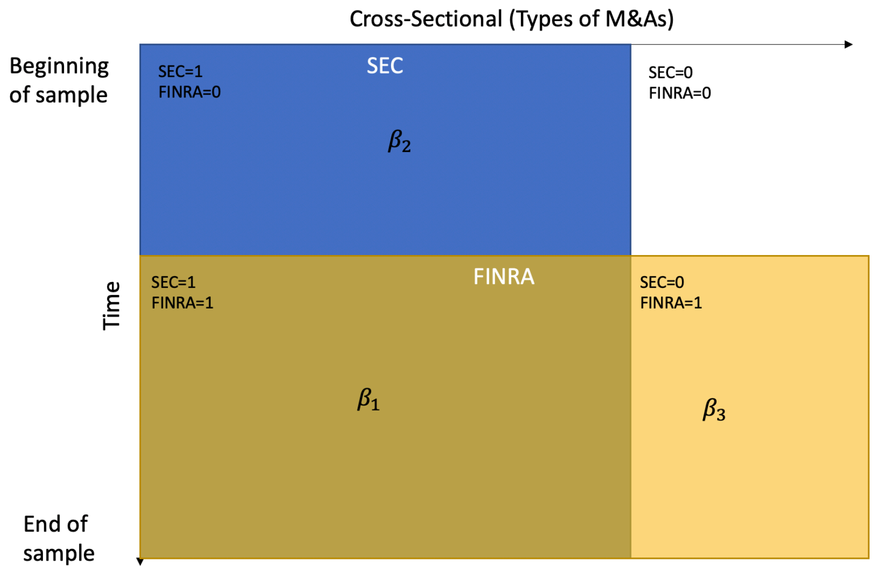
*Instructions to Research Assistants for the Identification of High and Low Quality Conflict of Interest Disclosures*

Characteristics of a high quality disclosure:

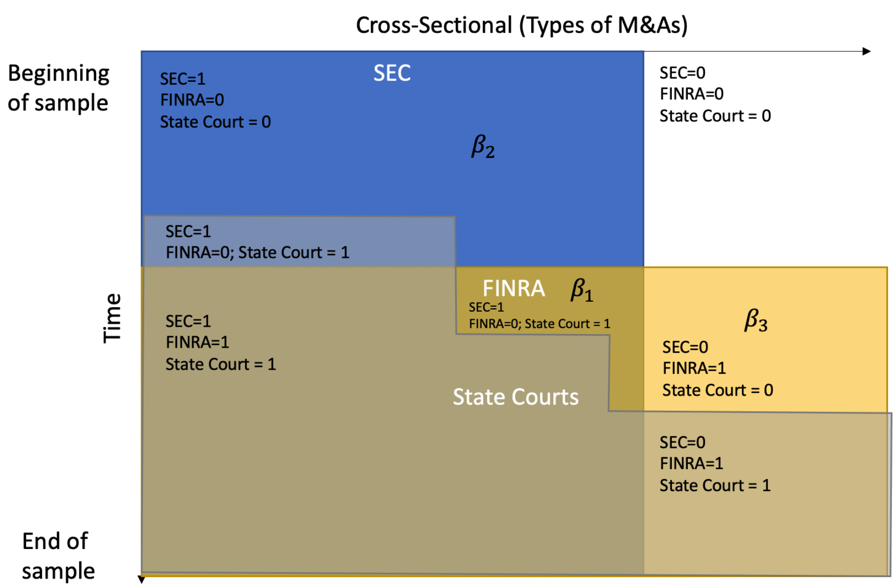
- You can easily determine from the disclosure if the FO provider definitively does or does not have a conflict of interest
    - See highlighted sections in examples document for examples where FO provider is clear on lacking a conflict of interest
- If the FO does have a conflict of interest, details about the specific nature of the conflict of interest are provided (this needs to go beyond giving a specific number or the percentage of compensation paid)
    - See first two examples in examples document for COI disclosures where there is a COI and the specifics of that relationship are disclosed
- Amount of boilerplate language is low
    - The boilerplate language will often make it harder to determine if a COI does or does not exist
    - Language in low quality examples like "In the ordinary course of Morgan Stanley's trading and brokerage activities, Morgan Stanley or its affiliates may at any time hold long or short positions, may trade or otherwise effect transactions, for its own account or for the account of customers in debt or equity securities of Seagate or Conner" from the examples document is boilerplate.
        - Note how it creates ambiguity as to whether or not they have positions, etc. which might constitute a COI. Disclosure is clearly designed by lawyers to cover a large swath of relationships if such relationships are later discovered by regulators/shareholders/etc., without giving any of the specifics of those potentially hypothetical relationships to shareholders.

## Appendix B1

*Panel A:*




*Panel B:*




*Notes:* This figure shows the empirical variation in the paper. For the SEC, there is no time variation, but we do have variation in the types of M&As that are subject to SEC regulation. For FINRA, we have timing variation. For state courts, we have variation in timing and in types of M&A.

# Appendix B2

*Illustrative Example*

| | 2004 | | | 2009 | | |
|---|---|---|---|---|---|---|
| ***Regulatory Body*** | *Tender offers incorporated in Delaware* | *If shareholders need to vote to approve the merger incorporated in California* | *If target will be going private as a result of merger incorporated in NY* | *Tender offers incorporated in Delaware* | *If shareholders need to vote to approve the merger incorporated in California* | *If target will be going private as a result of merger incorporated in NY* |
| ***SEC*** | 0 | 1 | 1 | 0 | 1 | 1 |
| ***FINRA*** | 0 | 0 | 0 | 1 | 1 | 1 |
| ***State*** | 1 | 0 | 1 | 1 | 1 | 1 |

*Notes:* This figure shows an example of how we code for whether certain firm deals are subject to different types of regulator enforcement. We use the empirical variation from Appendix B1.

## Appendix C

*State Judicial Ruling on Fairness Opinion Conflict of Interest Disclosure*

| State | Court Case | Date | Case Facts |
|---|---|---|---|
| California | Greensan v. Interix Media | 11/10/2008 | In addition to asserting that management projections should have been disclosed in connection with the fairness opinions, appellants alleged that the proxy inadequately disclosed Montgomery's and Weisel's fee by characterizing it as "customary." But the proxy specifically described the fee payable to each investment bank as a success fee equal to .425 percent of the total consideration involved in the transaction consummated with News Corp. Delaware courts recognize such engagements as proper. (E.g., *In re TOYS "R" US, Inc.* (Del.Ch. 2005) 877 A.2d 975, 1005 & fn. 44; *In re MONY Group Inc. Shareholder Lit.* (Del.Ch. 2004) 852 A.2d 9, 22.) The authority upon which appellants rely is inapposite. Unlike the incomplete disclosures in *Louisiana Mun. Police Ret. Sys. v. Crawford* (Del.Ch. 2007) 918 A.2d 1172, 1190-1191, which did not include the contingent nature of the investment banker's fee and hence omitted material information about the banker's incentive, the proxy here fully disclosed the nature of the "success fee" payable to Montgomery and Weisel.<br><br>With respect to Montgomery, appellants further alleged that its bias toward the merger was undisclosed. Appellants cite a comment Montgomery made when it confirmed its retention that "`we will decide to write a fairness opinion. Our agreement was that this would be the "love."" But again, appellants have not shown how this comment would have significantly altered the total mix of information already available, as it was neither inconsistent with nor different from information disclosed in the proxy. (*Skeen, supra,* 750 A.2d at p. 1174.) In discussing the background of the merger agreement, the proxy disclosed that Rosenblatt met with representatives of Montgomery in April |

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| | | | 2005 to discuss the business and Intermix's strategic opportunities and challenges. At that time, Montgomery suggested exploring financial alternatives, including "fundraising options and a possible sale of our company or one or more of our business units." The proxy further disclosed that on June 9, 2005, Montgomery made a presentation to the board at which it stated that News Corp. had expressed interest in a transaction, proposed that News Corp. would be an attractive strategic partner and offered to facilitate a meeting between the board and News Corp. According to the proxy, Montgomery acted as a co-financial advisor to the board in connection with the merger agreement and was retained on July 12, 2005 to prepare a fairness opinion.<br><br>In view of the multiple disclosures outlining Montgomery's involvement with and motivation to complete the merger agreement, we construe the "love" comment as "merely `helpful or cumulative'" information beyond the scope of the duty to disclose. (*Globis Partners, supra,* 2007 WL 4292024 at p. *11; see also *In re Best Lock Corp. Litigation* (Del.Ch. 2001) 845 A.2d 1057, 1072 [granting motion to dismiss claim asserting failure to disclose the lack of independence of an "`independent financial advisor,'" where advisor's current and past relationships and fee arrangement with company were disclosed and thus there was no basis to conclude that "further disclosure regarding the purported independence of [the advisor] (or lack thereof) would change the total mix of information available to the shareholders"].) |
| Delaware | In Re Rural/Metro Corp. Stockholders Litigation | 2/7/2014 | RBC Capital, a sell-side financial advisor, was found liable for aiding and abetting breaches of fiduciary duty by the board of Rural/Metro. RBC did not disclose its conflict in seeking to finance the buyer’s bid, engaged in behind-the-scenes manipulation of the sale process, and did |

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| | | | not appropriately analyze the company's value. |
| Delaware | In Re Zale Corporation Stockholders Litigation | 10/1/2015 | The Court permitted a claim to proceed against Merrill Lynch, Zale's financial advisor, for aiding and abetting a breach of fiduciary duty by Zale's board of directors. The Court reaffirmed that financial advisors should disclose all potential conflicts of interest to their client in order to mitigate any potential aiding and abetting liability. |
| Delaware | In re Del Monte Foods Co. Shareholder Litigation | 12/31/2010 | The court held that the investment bank's conflicts tainted the board's process. One reason is because the investment banker structured its own private process to secure acquisition financing after it secured its sell-side role. Another reason is the investment bank made a "late-stage request" for permission to provide acquisition financing. Accordingly, the investment banker withholding information about its buy-side intentions, its involvement with the potential buyer, and it structuring its own private process to obtain the buy-side role resulted in the direct financial conflict.<br><br>. |
| Delaware | Clements v. Rogers | 8/14/2001 | The plaintiff challenged a fairness opinion based on the company's engagement letter to the investment banker that stated $50,000 would be paid as retainer and $200,000 would be paid upon delivery of a fairness opinion for a proposed acquisition. The plaintiff alleged that 80% of the fairness opinion fee was contingent upon the receipt of an opinion affirming—rather than rejecting—the transaction's fairness. The court held that the plaintiff interpreted the engagement letter unreasonably, and it should instead be read as paying the investment banker for an FOrmal fairness opinion letter, whether good or bad. The plaintiff also argued that the engagement letter tainted the fairness opinion because it required the investment banker to update the |

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| | | | opinion for inclusion in any proxy statement connected to the transaction. The court disagreed with the plaintiff because this clause would naturally occur in a positive opinion, but not a negative one. Thus, the engagement letter did not influence the fairness opinion. |
| Delaware | In re Unocal Exploration Corp. Shareholders Litigation | 6/13/2000 | The plaintiff claimed that the investment bank's contingent fee structure adversely influenced the fairness opinion. The contingency fee was structured that it would pay the investment bank $600,000 if it rendered an opinion or $150,000 if it did not. The court held that that the fee structure did not give the investment bank a direct incentive to render a "favorable" opinion because it would be paid the same regardless of the opinion's outcome. |
| Delaware | In re El Paso Corporation Shareholder Litigation | 2/29/2012 | Vice Chancellor Laster granted injunction postponing merger vote sought by plaintiff because a sell-side advisor failed to disclose to the board its interest in buy-side financing from the very beginning |
| New York | Higgins v. New York Stock Exchange | 11/2/2005 | The investment bank argues that it did not provide substantial assistance or aid and abet the NYSE breach of fiduciary duty because it disclosed the potential conflicts of interest; however, "simply disclosing the potential conflicts to the NYSE Board does not necessarily absolve" potential liability for a role in breach of fiduciary duty. The court concluded that the investment bank did in fact have a conflict of interest, but whether the conflicts was a breach of fiduciary duty is meant for a jury. |
| Delaware | In re Tri-Star Pictures, Inc., Litigation | 11/24/1993 | The investment banker had "inextricably tied" relationships with Coca-Cola because the banker owned over 1.1 million shares of Coca-Cola stock, was a director of Coca-Cola, and was scheduled to become a director of the newly-merged entity. *Id.* The court noted that the fairness opinion had "questionable reliability under the circumstances" of the transaction because some of the information that the investment |

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| | | | banker used were from Coca-Cola. *Id.* Thus, although the court did not primarily focus on the fairness opinion, the court held it had questionable reliability. |
| Delaware | Crescent/Mach I Partners, L.P. v. Turner | 12/23/2005 | The plaintiffs reasoned that the investment bank was influenced by financial interests in the merger's consummation and by the managing director's affiliation with the investment bank. Id. Addressing the financial interests claim, the court held that the investment bank was entitled to compensation for its efforts in consummating the merger. Id. In terms of the managing director's affiliation with the investment bank, the court held that the "mere existence" of a director's affiliation with an investment bank is insufficient to invalidate a fairness opinion. Id. Thus, the investment bank did not submit a fairness opinion tainted by conflict of interest. |
| Wisconsin Federal | Dixon v. Ladish Co., Inc. | 5/22/1984 | The plaintiff alleged the investment banker had a conflict of interest because it owned shares of the buy-side company, which then compromised the sell-side's board's ability to act in the best interests of the company. 785 F. Supp.2d 746, 755 (E.D. Wis. 2011). The court disagreed with the plaintiff because the investment banker actively disclosed the potential conflict to the board. *Id.* at 755–56. Also, disagreed with the argument that a conflict in an investment banker, disclosed by the board, imputes a conflict on the board. *Id.* at 756. Accordingly, without any other facts to impute an investment banker's alleged conflict to a board, the plaintiff's argument is no more than a suspicion of bad faith. |
| Colorado Federal | City Partnership Co. v. Lehman Bros., Inc. | 10/27/2004 | This is because the investment bank "received sizeable sums" from the opposing company for financial services and expected future compensation for subsequent work. Id. The court, however, found that this conflict of interest did not adversely affect the transaction because the investment bank "duly disclosed such potential or actual |

conflicts of interest in the proxy materials" and there was no evidence that the ongoing relationship affected its conclusions in the fairness opinion. Id. ("this is an instance of businesses and professionals intertwined in myriad disclosed relationships . . . yet there is no special reason to show that [the investment bank] acted with improper scienter in doing what it did.").

## Appendix D1

*SEC Regulation M-A on Fairness Opinion Conflict of Interest Disclosures*

§ 229.1015 (Item 1015) Reports, opinions, appraisals and negotiations.

(A) Report, opinion or appraisal. State whether or not the subject company or affiliate has received any report, opinion (other than an opinion of counsel) or appraisal from an outside party that is materially related to the Rule 13e-3 transaction, including, but not limited to: Any report, opinion or appraisal relating to the consideration or the fairness of the consideration to be offered to security holders or the fairness of the transaction to the issuer or affiliate or to security holders who are not affiliates.

(B) Preparer and summary of the report, opinion or appraisal. For each report, opinion or appraisal described in response to paragraph (a) of this section or any negotiation or report described in response to Item 1014(d) of Regulation M-A (§ 229.1014) or Item 14(b)(6) of Schedule 14A (§ 240.14a-101 of this chapter) concerning the terms of the transaction:

(1) Identify the outside party and/or unaffiliated representative;

(2) Briefly describe the qualifications of the outside party and/or unaffiliated representative;

(3) Describe the method of selection of the outside party and/or unaffiliated representative;

(4) Describe any material relationship that existed during the past two years or is mutually understood to be contemplated and any compensation received or to be received as a result of the relationship between:

(i) The outside party, its affiliates, and/or unaffiliated representative; and

(ii) The subject company or its affiliates;

(5) If the report, opinion or appraisal relates to the fairness of the consideration, state whether the subject company or affiliate determined the amount of consideration to be paid or whether the outside party recommended the amount of consideration to be paid; and

(6) Furnish a summary concerning the negotiation, report, opinion or appraisal. The summary must include, but need not be limited to, the procedures followed; the findings and recommendations; the bases for and methods of arriving at such findings and recommendations; instructions received from the subject company or affiliate; and any limitation imposed by the subject company or affiliate on the scope of the investigation.

Instruction to Item 1015(b): The information called for by paragraphs (b)(1), (2) and (3) of this section must be given with respect to the firm that provides the report, opinion or appraisal rather than the employees of the firm that prepared the report.

(c) Availability of documents. Furnish a statement to the effect that the report, opinion or appraisal will be made available for inspection and copying at the principal executive offices of the subject company or affiliate during its regular business hours by any interested equity security holder of the subject company or representative who has been so designated in writing. This statement also may provide that a copy of the report, opinion or appraisal will be transmitted by the subject company or affiliate to any interested equity security holder of the subject company or representative who has been so designated in writing upon written request and at the expense of the requesting security holder.**Appendix D2**

**Sections 215 to 216. [Reserved]**

**Section 217. Schedule 13E-3**

**217.01.** Neither Rule 13e-3 nor the disclosure requirements in Schedule 13E-3 require the preparer of a report, opinion or appraisal materially related to the going private transaction, such as an investment banker, to be "independent" of the issuer. Any material relationship between the issuer and/or its affiliates and the preparer of the report, opinion or appraisal, however, must be disclosed pursuant to Item 9 of Schedule 13E-3 and corresponding Item 1015(b)(4) of Regulation M-A. This disclosure should describe whether or not any of the compensation is contingent upon the successful completion of the transaction, and must quantify, including cases in which the fee is zero, any compensation received or to be received as a result of the relationship. [January 26, 2009]

*http://www.sec.gov/divisions/corpfin/guidance/13e-3-interps.htm*

## Appendix D3

*FINRA Rule 5150*

**(a) Disclosures**

If at the time a fairness opinion is issued to the board of directors of a company the member issuing the fairness opinion knows or has reason to know that the fairness opinion will be provided or described to the company's public shareholders, the member must disclose in the fairness opinion:

(1) if the member has acted as a financial advisor to any party to the transaction that is the subject of the fairness opinion, and, if applicable, that it will receive compensation that is contingent upon the successful completion of the transaction, for rendering the fairness opinion and/or serving as an advisor;

(2) if the member will receive any other significant payment or compensation contingent upon the successful completion of the transaction;

(3) any material relationships that existed during the past two years or that are mutually understood to be contemplated in which any compensation was received or is intended to be received as a result of the relationship between the member and any party to the transaction that is the subject of the fairness opinion;

(4) if any information that formed a substantial basis for the fairness opinion that was supplied to the member by the company requesting the opinion concerning the companies that are parties to the transaction has been independently verified by the member, and if so, a description of the information or categories of information that were verified;

(5) whether or not the fairness opinion was approved or issued by a fairness committee; and

(6) whether or not the fairness opinion expresses an opinion about the fairness of the amount or nature of the compensation to any of the company's officers, directors or employees, or class of such persons, relative to the compensation to the public shareholders of the company.

**(b) Procedures**

Any member issuing a fairness opinion must have written procedures for approval of a fairness opinion by the member, including:

(1) the types of transactions and the circumstances in which the member will use a fairness committee to approve or issue a fairness opinion, and in those transactions in which it uses a fairness committee:

(A) the process for selecting personnel to be on the fairness committee;

(B) the necessary qualifications of persons serving on the fairness committee;

(C) the process to promote a balanced review by the fairness committee, which shall include the review and approval by persons who do not serve on the deal team to the transaction; and

(2) the process to determine whether the valuation analyses used in the fairness opinion are appropriate.

Amended by SR-FINRA-2008-028 eff. Dec. 15, 2008.
Adopted by SR-NASD-2005-080 eff. Dec. 8, 2007.

**Selected Notices:** 07-54, 08-57.

## Appendix E1

*Example of Fairness Opinion Timeline*

Synthorx- Target,
Sanofi- Acquirer,
Centerview- FO provider for Target

SEC filing :
https://www.sec.gov/Archives/edgar/data/1609727/000119312519322708/d855631dsc14d9.htm

Nov 25th
Sanofi submitted unsolicited offer of $36 (112% of closing price) to Synthorx

Nov 26th
Sythorx hires FO provider, Centerview. Centerview does analysis and advizes that price too low. Centerview reaches out to 3 other companies about buying Synthorx.

Nov 29th
Centerview provides COI disclosure, tells Acquirer that Target won't take less than $45

Dec 3rd
Sanofi offers $47.75

Dec 5th
Other company contacted by Centerview offers $62

Dec 6th
Sanofi offer $68, Centerview writes FO opinion saying $68 is fair

## Appendix E2

*Example of Fairness Opinion from Sythorx Merger Referenced in E1*

The full text of Centerview's written opinion, dated December 6, 2019 which describes the assumptions made, procedures followed, matters considered, and qualifications and limitations upon the review undertaken by Centerview in preparing its opinion, is attached as Annex I and is incorporated herein by reference. **Centerview's financial advisory services and opinion were provided for the information and assistance of the Board (in their capacity as directors and not in any other capacity) in connection with and for purposes of its consideration of the Transactions and Centerview's opinion addressed only the fairness, from a financial point of view, as of the date thereof, to the holders of Shares (other than Excluded Shares) of the $68.00 per Share in cash, without interest, to be paid to such holders pursuant to the Merger Agreement. Centerview's opinion did not address any other term or aspect of the Merger Agreement or the Transactions and does not constitute a recommendation to any stockholder of Synthorx as to whether or not such holder should tender Shares in connection with the Offer or otherwise act with respect to the Transactions or any other matter.**

**The full text of Centerview's written opinion should be read carefully in its entirety for a description of the assumptions made, procedures followed, matters considered, and qualifications and limitations upon the review undertaken by Centerview in preparing its opinion.**

In connection with rendering the opinion described above and performing its related financial analyses, Centerview reviewed, among other things:

- a draft of the Merger Agreement dated December 6, 2019, referred to in this summary of Centerview's opinion as the "Draft Merger Agreement";
- the Registration Statement on Form S-1 of Synthorx, dated November 13, 2018, as amended;
- the Annual Report on Form 10-K of Synthorx for the year ended December 31, 2018;
- certain interim reports to stockholders and Quarterly Reports on Form 10-Q of Synthorx;
- certain publicly available research analyst reports for Synthorx;
- certain other communications from Synthorx to its stockholders; and
- certain internal information relating to the business, operations, earnings, cash flow, assets, liabilities and prospects of Synthorx, including certain financial forecasts, analyses and projections relating to Synthorx prepared by management of Synthorx and furnished to Centerview by Synthorx for purposes of Centerview's analysis, which internal information is collectively referred to in this summary of Centerview's opinion as the "Internal Data."

Centerview also participated in discussions with members of the senior management and representatives of Synthorx regarding their assessment of the Internal Data. In addition, Centerview reviewed publicly available financial and stock market data, including valuation multiples, for Synthorx and compared that data with similar data for certain other companies, the securities of which are publicly traded, in lines of business that Centerview deemed relevant. Centerview also compared certain of the proposed financial terms of the Transactions with the financial terms, to the extent publicly available, of certain other transactions that Centerview deemed relevant, and conducted such other financial studies and analyses and took into account such other information as Centerview deemed appropriate.

Centerview assumed, without independent verification or any responsibility therefor, the accuracy and completeness of the financial, legal, regulatory, tax, accounting and other information supplied to, discussed with, or reviewed by Centerview for purposes of its opinion and, with Synthorx's consent, Centerview relied upon such information as being complete and accurate. In that regard, Centerview assumed, at Synthorx's direction, that the Internal Data (including, without limitation, the Projections) were reasonably prepared on bases reflecting the best currently available estimates and judgments of the management of Synthorx as to the matters covered thereby and Centerview relied, at Synthorx's direction, on the Internal Data for purposes of Centerview's analysis and opinion. Centerview expressed no view or opinion as to the Internal Data or the assumptions on which it was based. In addition, at Synthorx's direction, Centerview did not make any independent evaluation or appraisal of any of the assets or liabilities (contingent, derivative, off-balance-sheet or otherwise) of Synthorx, nor was Centerview furnished with any such evaluation or appraisal, and was not asked to conduct, and did not conduct, a physical inspection of the properties or assets of Synthorx. Centerview assumed, at Synthorx's direction, that the final executed Merger Agreement would not differ in any respect material to Centerview's analysis or opinion from the Draft Merger Agreement reviewed by Centerview. Centerview also assumed, at Synthorx's direction, that the Transactions will be consummated on the terms set forth in the Merger Agreement and in accordance with all applicable laws and other relevant documents or requirements, without delay or the waiver, modification or amendment of any term, condition or agreement, the effect of which would be material to Centerview's analysis or Centerview's opinion and that, in the course of obtaining the necessary governmental, regulatory and other approvals, consents, releases and waivers for the Transactions, no delay, limitation, restriction, condition or other change will be imposed, the effect of which would be material to Centerview's analysis or Centerview's opinion. Centerview did not evaluate and did not express any opinion as to the solvency or fair value of Synthorx, or the ability of Synthorx to pay its obligations when they come due, or as to the impact of the Transactions on such matters, under any state, federal or other laws relating to bankruptcy, insolvency or similar matters. Centerview is not a legal, regulatory, tax or accounting advisor, and Centerview expressed no opinion as to any legal, regulatory, tax or accounting matters.

Centerview's opinion expressed no view as to, and did not address, Synthorx's underlying business decision to proceed with or effect the Transactions, or the relative merits of the Transactions as compared to any alternative business strategies or transactions that might be available to Synthorx or in which Synthorx might engage. Centerview's opinion was limited to and addressed only the fairness, from a financial point of view, as of the date of Centerview's written opinion, to the holders of the Shares (other than Excluded Shares) of the $68.00 per Share in cash, without interest, to be paid to such holders pursuant to the Merger Agreement. For purposes of its opinion, Centerview was not asked to, and Centerview did not, express any view on, and its opinion did not address, any other term or aspect of the Merger Agreement or the Transactions, including, without limitation, the structure or form of the Transactions, or any other agreements or arrangements contemplated by the Merger Agreement or entered into in connection with or otherwise contemplated by the Transactions, including, without limitation, the fairness of the Transactions or any other term or aspect of the Transactions to, or any consideration to be received in connection therewith by, or the impact of the Transactions on, the holders of any other class of securities, creditors or other constituencies of Synthorx or any other party. In addition, Centerview expressed no view or opinion as to the fairness (financial or otherwise) of the amount, nature or any other aspect of any compensation to be paid or payable to any of the officers, directors or employees of Synthorx or any party, or class of such persons in connection with the Transactions, whether relative to the $68.00 per Share in cash, without interest, to be paid to the holders of the Shares pursuant to the Merger Agreement or otherwise. Centerview's opinion was necessarily based on financial, economic, monetary, currency, market and other conditions and circumstances as in effect on, and the information made available to Centerview as of, the date of Centerview's written opinion, and Centerview does not have any obligation or responsibility to update, revise or reaffirm its opinion based on circumstances, developments or events occurring after the date of Centerview' written opinion. Centerview's opinion does not constitute a recommendation to any stockholder of Synthorx as to whether or not such holder should tender Shares in connection with the Offer or otherwise act with respect to the Transactions or any other matter. Centerview's financial advisory services and its written opinion were provided for the information and assistance of the Board (in their capacity as directors and not in any other capacity) in connection with and for purposes of its consideration of the Transactions. The issuance of Centerview's opinion was approved by the Centerview Partners LLC Fairness Opinion Committee.

***Summary of Centerview Financial Analysis***

The following is a summary of the material financial analyses prepared and reviewed with the Board in connection with Centerview's opinion, dated December 6, 2019. **The summary set forth below does not purport to be a complete description of the financial analyses performed or factors considered by, and underlying the**

**opinion of, Centerview, nor does the order of the financial analyses described represent the relative importance or weight given to those financial analyses by Centerview. Centerview may have deemed various assumptions more or less probable than other assumptions, so the reference ranges resulting from any particular portion of the analyses summarized below should not be taken to be Centerview's view of the actual value of Synthorx. Some of the summaries of the financial analyses set forth below include information presented in tabular format. In order to fully understand the financial analyses, the tables must be read together with the text of each summary, as the tables alone do not constitute a complete description of the financial analyses performed by Centerview. Considering the data in the tables below without considering all financial analyses or factors or the full narrative description of such analyses or factors, including the methodologies and assumptions underlying such analyses or factors, could create a misleading or incomplete view of the processes underlying Centerview's financial analyses and its opinion.** In performing its analyses, Centerview made numerous assumptions with respect to industry performance, general business and economic conditions and other matters, many of which are beyond the control of Synthorx or any other parties to the Transactions. None of Synthorx, Sanofi, Purchaser or Centerview or any other person assumes responsibility if future results are materially different from those discussed. Any estimates contained in these analyses are not necessarily indicative of actual values or predictive of future results or values, which may be significantly more or less favorable than as set forth below. In addition, analyses relating to the value of Synthorx do not purport to be appraisals or reflect the prices at which Synthorx may actually be sold. Accordingly, the assumptions and estimates used in, and the results derived from, the financial analyses are inherently subject to substantial uncertainty. Except as otherwise noted, the following quantitative information, to the extent that it is based on market data, is based on market data as it existed on or before December 6, 2019 (the last trading day before the public announcement of the Transactions) and is not necessarily indicative of current market conditions.

***Selected Public Company Analysis***

Centerview reviewed certain financial information of Synthorx and compared it to corresponding financial information of certain publicly traded, early-stage biopharmaceutical companies that Centerview selected based on its experience and professional judgment (which are referred to as the "selected companies" in this summary of Centerview's opinion). Although none of the selected companies is identical or directly comparable to Synthorx, they were chosen by Centerview, among other reasons, because they are publicly traded, early-stage oncology biopharmaceutical companies with certain operational, business and/or financial characteristics that, for purposes of Centerview's analysis, may be considered similar to those of Synthorx.

However, because no selected company is identical or directly comparable to Synthorx, Centerview believed that it was inappropriate to, and therefore did not, rely solely on the quantitative results of the selected public company analysis. Accordingly, Centerview made qualitative judgments, based on its experience and professional judgment, concerning differences between the operational, business and/or financial characteristics of Synthorx and the selected companies that could affect the public trading values of each in order to provide a context in which to consider the results of the quantitative analysis.

Using publicly available information obtained from SEC filings and other data sources as of December 6, 2019, Centerview calculated, for each of the selected companies, the selected company's enterprise value (calculated as the equity value (determined using the treasury stock method and taking into account outstanding in-the-money options, warrants, restricted stock units and other convertible securities) plus the book value of debt and certain liabilities less cash and cash equivalents), as a multiple of Wall Street research analyst consensus estimated revenues for calendar year 2025 of such company. Such multiple is referred to, with respect to the selected companies, as the "2025 EV/REV Multiple."

The selected companies are summarized below:

| Selected Companies | Enterprise Value | 2025E Revenue | 2025 EV/REV Multiple |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Zymeworks Inc. | $ 1,635 | $ 258 | 6.3x |
| Constellation Pharmaceuticals, Inc. | 1,519 | 558 | 2.7x |
| Arvinas, Inc. | 1,315 | 310 | 4.2x |
| NextCure, Inc. | 1,138 | N/A | N/A |
| Fate Therapeutics, Inc. | 793 | 456 | 1.7x |
| ZIOPHARM Oncology, Inc. | 861 | 780 | 1.1x |
| IGM Biosciences, Inc. | 487 | N/A | N/A |
| Autolus Therapeutics plc | 438 | 278 | 1.6x |
| Forty Seven, Inc. | 467 | 380 | 1.2x |
| RAPT Therapeutics, Inc. | 455 | 156 | 2.9x |
| Innate Pharma S.A. | 240 | 184 | 1.3x |
| **Median** | **$ 793** | **—** | **1.7x** |

Based on its analysis and other considerations that Centerview deemed relevant in its experience and professional judgment, Centerview selected a reference range of 2025 EV/REV Multiples of 2.0x to 5.5x. In selecting this range of 2025 EV/REV Multiples, Centerview made qualitative judgments based on its experience and professional judgment concerning differences between the business, financial and/or operating characteristics of Synthorx and the selected companies that could affect their public trading values in order to provide a context in which to consider the results of the quantitative analysis. Applying this range of 2025 EV/REV Multiples to Synthorx's estimated calendar year 2025 risk adjusted total net revenue attributable to Synthorx of $122 million (which assumes a THOR-707 50% profit share in United States and excludes upfront and milestone payments), as set forth in the Projections, adding it to Synthorx's estimated net cash of $137 million as of December 31, 2019, as set forth in the Internal Data, and dividing by the number of fully-diluted outstanding Shares (determined using the treasury stock method and taking into account outstanding in-the-money options) as of December 6, 2019 and as set forth in the Internal Data, resulted in an implied per share equity value range for each Share of approximately $11.15 to $22.75, rounded to the nearest $0.05. Centerview then compared this range to the $68.00 per share in cash, without interest, proposed to be paid to the holders of Shares (other than Excluded Shares) pursuant to the Merger Agreement.

***Selected Precedent Transaction Analysis***

Centerview reviewed and analyzed certain information relating to selected transactions involving early-stage biopharmaceutical companies that Centerview, based on its experience and professional judgment, deemed relevant to consider in relation to Synthorx and the Transactions. Although no company or transaction used in this analysis is identical or directly comparable to Synthorx or the Transactions, these transactions were selected, among other reasons, because their participants, size or other factors, for purposes of Centerview's analysis, may be considered similar to the Transactions. Centerview used its experience and professional judgment and knowledge of these industries to select transactions that involved companies with certain operational, business and/or financial characteristics that, for purposes of this analysis, may be considered similar to certain characteristics of Synthorx.

However, because none of the selected transactions used in this analysis is identical or directly comparable to the Transactions, Centerview believed that it was inappropriate to, and therefore did not, rely solely on the quantitative results of the selected precedent transaction analysis. Accordingly, Centerview also made qualitative judgments, based on its experience and professional judgment, concerning differences between the operational, business or financial characteristics of Synthorx and each target company as well as the Transactions and the selected transactions that could affect the transaction values of each in order to provide a context in which to consider the results of the quantitative analysis.

Using publicly available information obtained from SEC filings and other data sources as of December 6, 2019, Centerview calculated, for each selected transaction, the transaction value (calculated as the offer value, which means the equity value of common equity (determined using the treasury stock method and taking into account outstanding in-the-money options, warrants, restricted stock units and other convertible securities), plus the book value of debt and certain liabilities less cash and cash equivalents) implied for each target company based on the consideration payable in the applicable selected transaction, in each case excluding any contingent payments, which is referred to, with respect to the selected transactions, as "Transaction Value."

The selected transactions considered in this analysis are summarized below (dollars in millions):

| Date Announced | Target | Acquiror | Transaction Value (in millions) |
|---|---|---|---|
| 09/30/14 | Alios BioPharma, Inc. | Johnson & Johnson | $ 1,750 |
| 10/16/19 | Achillion Pharmaceuticals, Inc.* | Alexion Pharmaceuticals, Inc. | 735 |
| 09/08/10 | ZymoGenetics, Inc. | Bristol-Myers Squibb Company | 770 |
| 07/02/14 | Seragon Pharmaceuticals Inc.* | Roche Holding AG | 725 |
| 06/17/13 | Aragon Pharmaceuticals, Inc.* | Johnson & Johnson | 650 |
| **Median** | | | **$ 735** |

* *Indicates transactions with contingent consideration. Transaction Values exclude contingent payments.*

Based on its analysis and other considerations that Centerview deemed relevant in its experience and professional judgment, Centerview selected a reference range of Transaction Values of $650 million to $800 million. In selecting this range of Transaction Values, Centerview made qualitative judgments based on its experience and professional judgment concerning differences between the business, financial and/or operating characteristics of Synthorx and the target companies included in the selected transactions, as well as the Transactions and the selected transactions, and other factors that could affect each transaction or other values in order to provide a context in which to consider the results of the quantitative analysis. Applying this range of Transaction Values and adding it to Synthorx's estimated net cash of $137 million as of December 31, 2019, as set forth in the Internal Data, and dividing by the number of fully-diluted outstanding Shares (determined using the treasury stock method and taking into account outstanding in-the-money options) as of December 6, 2019 and as set forth in the Internal Data, resulted in an implied per share equity value range for each Share of approximately $22.20 to $26.25, rounded to the nearest $0.05. Centerview then compared this range to the $68.00 per share in cash, without interest, proposed to be paid to the holders of Shares (other than Excluded Shares) pursuant to the Merger Agreement.

***Discounted Cash Flow Analysis***

Centerview performed a discounted cash flow analysis of Synthorx based on the Projections and the calculations of risk adjusted, after-tax unlevered free cash flows set forth in "—*Certain Financial Projections*". A discounted cash flow analysis is a traditional valuation methodology used to derive a valuation of an asset or set of assets by calculating the "present value" of estimated future cash flows of the asset or set of assets. "Present value" refers to the current value of future cash flows and is obtained by discounting those future cash flows by a discount rate that takes into account macroeconomic assumptions and estimates of risk, the opportunity cost of capital, expected returns and other appropriate factors.

In performing this analysis, Centerview calculated a range of equity values for the Shares by (a) discounting to present value as of December 31, 2019 using discount rates ranging from 12.5% to 14.5% (reflecting Centerview's analysis of Synthorx's weighted average cost of capital) and the mid-year convention: (i) the forecasted risk adjusted, after-tax unlevered free cash flows of Synthorx over the period beginning on January 1, 2020 and ending on December 31, 2041 (excluding revenues and expenses associated with Synthorx's platform), utilized by Centerview as set forth in "—*Certain Financial Projections*", (ii) an implied terminal value of Synthorx, calculated by Centerview by assuming that Synthorx's after-tax unlevered free cash flows would decline in perpetuity after December 31, 2041 at a rate of 80% year-over-year and (iii) tax savings from usage of Synthorx's estimated federal net operating losses of approximately $32.9 million as of December 31, 2018 and future losses as set forth in the Projections and (b) adjusting for (i) Synthorx's estimated net cash balance of $137 million as of December 31, 2019, as set forth in the Internal Data, and (ii) the value of Synthorx's platform based on the median pre-money enterprise valuation of a select set of pre-clinical companies in initial public offerings from 2017 to 2019 year to date.

The initial public offerings considered in the analysis of Synthorx's platform are summarized below (dollars in millions):

| Issuer | Offer Date | Pre-Money Enterprise Value |
|---|---|---|
| TFF Pharmaceuticals, Inc. | 10/25/19 | $ 54 |
| Morphic Holding, Inc. | 07/01/19 | 183 |
| Atreca, Inc. | 06/20/19 | 229 |
| Prevail Therapeutics | 06/20/19 | 353 |
| Axcella Health Inc. | 05/09/19 | 322 |
| LogicBio Therapeutics | 10/19/18 | 126 |
| Arvinas Inc. | 09/26/18 | 295 |
| Rubius Therapeutics | 07/18/18 | 1,319 |
| Cue Biopharma, Inc. | 12/27/17 | 81 |
| Krystal Biotech, Inc. | 09/19/17 | 53 |
| **Median** | | **$ 206** |

Centerview divided the result of the foregoing calculations by the number of fully-diluted outstanding Shares (determined using the treasury stock method and taking into account outstanding in-the-money options) as of December 6, 2019 and as set forth in the Internal Data, resulting in an implied per share equity value range for each Share of approximately $33.30 to $38.50, rounded to the nearest $0.05. Centerview then compared this range to the $68.00 per share in cash, without interest, proposed to be paid to the holders of Shares (other than Excluded Shares) pursuant to the Merger Agreement.

***Other Factors***

Centerview noted for the Board certain additional factors solely for informational purposes, including, among other things, the following:

- Historical closing trading prices of the Shares during the 52-week period ended December 6, 2019 (the last trading day before the public announcement of the Transactions), which reflected low and high closing prices for the Shares during this 52-week period of $11.49 and $25.03 per Share.
- Stock price targets for the Shares in publicly available Wall Street research analyst reports, which indicated low and high stock price targets for the Shares ranging from $23.00 to $35.00 per Share.
- An analysis of premiums paid in the selected precedent transactions involving early-stage biopharmaceutical companies, as set forth above in "— *Summary of Centerview Financial Analysis — Selected Precedent Transaction Analysis*", for which premium data was available. The premiums in this analysis were calculated by comparing the per share acquisition price in each transaction to the closing price of the target company's common stock for the date one day prior to the date on which the trading price of the target company's common stock was perceived to be affected by a potential transaction. Based on the analysis above and other considerations that Centerview deemed relevant in its experience and professional judgment, Centerview applied a range of 70% to 90% to the closing price of the Shares on December 6, 2019 (the last trading day before the public announcement of the Transactions) of $25.03, which resulted in an implied price range of approximately $42.55 to $47.55 per Share, rounded to the nearest $0.05.

***General***

The preparation of a financial opinion is a complex analytical process involving various determinations as to the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances and, therefore, a financial opinion is not readily susceptible to summary description. In arriving at its opinion, Centerview did not draw, in isolation, conclusions from or with regard to any factor or analysis that it considered. Rather, Centerview made its determination as to fairness on the basis of its experience and professional judgment after considering the results of all of the analyses.

Centerview's financial analyses and opinion were only one of many factors taken into consideration by the Board in its evaluation of the Transactions. Consequently, the analyses described above should not be viewed as determinative of the views of the Board or management of Synthorx with respect to the $68.00 per Share in cash, without interest, proposed to be paid to the holders of Shares (other than Excluded Shares) pursuant to the Merger Agreement or as to whether the Board would have been willing to determine that a different consideration was fair. The consideration for the Transactions was determined through arm's-length negotiations between Synthorx and Sanofi and was approved by the Board. Centerview provided advice to Synthorx during these negotiations. Centerview did not, however recommend any specific amount of consideration to Synthorx or the Board or that any specific amount of consideration constituted the only appropriate consideration for the transaction.

Centerview is a securities firm engaged directly and through affiliates and related persons in a number of investment banking, financial advisory and merchant banking activities. In the two years prior to the date of its written opinion, except for its current engagement, Centerview has not been engaged to provide financial advisory or other services to Synthorx, and Centerview did not receive any compensation from Synthorx during such period. In the two years prior to the date of its written opinion, Centerview has not been engaged to provide financial advisory or other services to Sanofi, and Centerview did not receive any compensation from Sanofi during such period. Centerview may provide financial advisory and other services to or with respect to Synthorx or Sanofi or their respective affiliates in the future, for which Centerview may receive compensation. Certain (i) of Centerview's and its affiliates' directors, officers, members and employees, or family members of such persons, (ii) of Centerview's affiliates or related investment funds and (iii) investment funds or other persons in which any of the foregoing may have financial interests or with which they may co-invest, may at any time acquire, hold, sell or trade, in debt, equity and other securities or financial instruments (including derivatives, bank loans or other obligations) of, or investments in, Synthorx, Sanofi or any of their respective affiliates, or any other party that may be involved in the Transactions.

The Board selected Centerview as its exclusive financial advisor in connection with the Transactions based on Centerview's reputation, industry experience and expertise in mergers and acquisitions, as well as its familiarity with Synthorx, in part, based upon Centerview's prior contact in connection with various strategic opportunities (which for the avoidance of doubt did not result in an engagement of Centerview) and because Centerview is an internationally recognized investment banking firm that has substantial experience in transactions similar to the Transactions.

In connection with Centerview’s services as the exclusive financial advisor to Synthorx, Synthorx has agreed to pay Centerview an aggregate fee of approximately $44 million, $1 million of which was payable upon the rendering of Centerview’s opinion and approximately $43 million of which is payable contingent upon consummation of the Transactions. In addition, Synthorx has agreed to reimburse certain of Centerview’s expenses arising, and to indemnify Centerview against certain liabilities that may arise, out of Centerview’s engagement.

## Appendix F1

*Variables' Definition*

| **Dependent Variables** | Definition |
|---|---|
| *COI score* | Factor of FINRA_Item 1 (Contingent_fees), FINRA_I.tem 2 (Additional_fees), FINRA_Item 3 (Material_past_ties), SEC_Item B point 4 (Material_past_ties) and SEC_Item B point 4bis (Contingent_fees) |
| *FINRA_COI_score* | Sum of FINRA_Item 1 (Contingent_fees), FINRA_Item 2 (Additional_fees) and FINRA_Item 3 (Material_past_ties), divided by the maximum value of the score (9) |
| *SEC_COI_score* | Sum of SEC_Item B point 4 (Material_past_ties) and SEC_Item B point 4bis (Contingent_fees), divided by the maximum value of the score (6) |
| *COI Disclosure Indicator* | Indicator variable equal to one if the fairness opinion claims the presence of a conflict of interest (COI) due to either contingent fees or past ties, and zero otherwise. |

| **Independent Variables** | Definition |
|---|---|
| *FINRA* | An indicator variable equal to one if the deal has been announced after 2007, and zero otherwise |
| *Merger* | An indicator variable equal to one in the case of a merger and zero in the case of a tender offer. |
| *Public Acquiror* | An indicator variable equal to one if the bidder is a public firm, and zero otherwise |
| *Contentious deal* | An indicator variable equal to one if the deal is a MBO or going private transactionm and zero otherwise. |
| *SEC Resource Constraints* | Year-month sum of the following filings: S-1, S-4, PREM14A and SC 13E3. The filings have been taken from WRDS SEC Analytics and we merged the year-month of the filing date in SEC with the year-month of the deal announced. |
| *Prior SEC comment letters* | An indicator variable equal to one if in the year before the deal, the target received a SEC comment letter, and zero otherwise |

| **Control Variables** | **Definition** |
|---|---|
| *Target ROA* | The ratio of the target firm's income before extraordinary items to total assets for the fiscal year prior to the merger announcement. |
| *Target BTM* | The ratio of the target firm's book value of assets to the market value of assets for the fiscal year prior to the merger announcement, where market value of assets is defined as the book value of assets plus the market value of equity minus the book value of equity. |
| *Target Loss* | An indicator variable equal to one if the target firm's net income is negative for the fiscal year prior to the merger announcement, and zero otherwise. |
| *Target Lev* | The target firm's total current and long-term debt scaled by total assets, for the fiscal year prior to the merger announcement. |
| *Target Asset turnover* | The ratio of the target firm's total sales to total assets for the fiscal year prior to the merger announcement. |
| *Deal size* | The natural log of the value of the merger transaction measured at the announcement date of the merger. |
| *Deal length* | The number of days between the merger announcement date and completion date. |
| *Percent cash* | The percentage of the overall merger consideration consisting of cash, per SDC. |

**Table 1: Sample selection**

| Sample: | |
|---|---|
| SDC mergers with U.S. public target and U.S. acquirer (2000-2015) | 8,350 |
| Less: Mergers unable to identify a FO | 2,211 |
| SDC mergers with U.S. public target and a FO available | 6,139 |
| Less: Elimination of observations not randomly selected for FO extraction | 5,239 |
| Random subset of mergers with FO available selected for FO extraction | 900 |
| Less: FOs for clients with missing data required for control variables | 159 |
| Sample of mergers and FOs | 741 |

**Table 2**

**Panel A. Descriptive statistics of FINRA COI and SEC COI disclosure scores in the full sample**

| Variable | N | Mean | SD | Min | p25 | p50 | p75 | Max |
|---|---|---|---|---|---|---|---|---|
| *COI score* | 741 | 0.615 | 0.233 | 0 | 0.479 | 0.637 | 0.796 | 1.000 |
| *FINRA_COI_score* | 741 | 0.544 | 0.239 | 0 | 0.333 | 0.556 | 0.667 | 1.000 |
| *SEC_COI_score* | 741 | 0.621 | 0.248 | 0 | 0.500 | 0.667 | 0.833 | 1.000 |
| *COI Disclosure Indicator* | 741 | 0.991 | 0.097 | 0 | 1.000 | 1.000 | 1.000 | 1.000 |

**Panel B. Descriptive statistics of FINRA sub-components in the full sample**

| Variable | N | Mean | SD | Min | p25 | p50 | p75 | Max |
|---|---|---|---|---|---|---|---|---|
| *FINRA_Item 1 (Contingent_fees)* | 741 | 2.104 | 0.931 | 0 | 2 | 2 | 3 | 3 |
| *FINRA_Item 2 (Additional_fees)* | 741 | 1.252 | 1.212 | 0 | 0 | 1 | 2 | 3 |
| *FINRA_Item 3 (Material_past_ties)* | 741 | 1.537 | 1.067 | 0 | 1 | 1 | 2 | 3 |
| *FINRA_Item 4 (info_independent_verification)* | 741 | 0.862 | 0.345 | 0 | 1 | 1 | 1 | 1 |
| *FINRA_Item 5 (FO_committee_approval)* | 741 | 0.536 | 0.499 | 0 | 0 | 1 | 1 | 1 |
| *FINRA_Item 6 (fairness_officers_compensation)* | 741 | 0.430 | 0.495 | 0 | 0 | 0 | 1 | 1 |
| *FINRA_Cont_fee_dummy* | 741 | 0.784 | 0.412 | 0 | 1 | 1 | 1 | 1 |
| *FINRA_Past_ties_dummy* | 741 | 0.632 | 0.483 | 0 | 0 | 1 | 1 | 1 |
| *FINRA_Future_ties_dummy* | 740 | 0.618 | 0.486 | 0 | 0 | 1 | 1 | 1 |

**Panel C. Descriptive statistics of SEC sub-components in the full sample**

| Variable | N | Mean | SD | Min | p25 | p50 | p75 | Max |
|---|---|---|---|---|---|---|---|---|
| *SEC_Item A (FO_presence)* | 740 | 0.992 | 0.090 | 0 | 1 | 1 | 1 | 1 |
| *SEC_Item B point 1 (FO_provider_identity)* | 741 | 1.000 | 0.052 | 0 | 1 | 1 | 1 | 2 |
| *SEC_Item B point 2 (FO_provider_qualifications)* | 741 | 1.030 | 0.437 | 0 | 1 | 1 | 1 | 2 |
| *SEC_Item B point 3 (FO_provider_selection)* | 740 | 0.966 | 0.393 | 0 | 1 | 1 | 1 | 3 |
| *SEC_Item B point 4 (Material_past_ties)* | 741 | 1.617 | 1.038 | 0 | 1 | 2 | 3 | 3 |
| *SEC_Item B point 4bis (Contingent_fees)* | 741 | 2.107 | 0.911 | 0 | 2 | 2 | 3 | 3 |
| *SEC_Item B point 5 (Consideration_determination)* | 741 | 0.966 | 0.181 | 0 | 1 | 1 | 1 | 1 |
| *SEC_Item B point 6 (FO_valuation_methods)* | 741 | 1.623 | 0.617 | 0 | 1 | 2 | 2 | 2 |
| *SEC_Item C (FO_impact_voting)* | 741 | 0.866 | 0.340 | 0 | 1 | 1 | 1 | 1 |
| *SEC_Cont_fee_dummy* | 741 | 0.787 | 0.410 | 0 | 1 | 1 | 1 | 1 |
| *SEC_Past_ties_dummy* | 741 | 0.629 | 0.483 | 0 | 0 | 1 | 1 | 1 |
| *SEC_Future_ties_dummy* | 740 | 0.616 | 0.487 | 0 | 0 | 1 | 1 | 1 |

**Panel D. Descriptive statistics of independent variables and control variables**

| Variable | N | Mean | SD | Min | p25 | p50 | p75 | Max |
|---|---|---|---|---|---|---|---|---|
| *Merger* | 741 | 0.799 | 0.401 | 0.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| *Target ROA* | 741 | -0.072 | 0.677 | -13.057 | -0.040 | 0.016 | 0.055 | 0.340 |
| *Target BTM* | 741 | 0.774 | 0.328 | 0.168 | 0.546 | 0.768 | 0.985 | 1.906 |
| *Target Loss* | 741 | 0.364 | 0.482 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 |
| *Target Lev* | 741 | 0.226 | 0.238 | 0.000 | 0.006 | 0.163 | 0.369 | 1.126 |
| *Target Asset turnover* | 741 | 1.027 | 0.876 | 0.035 | 0.410 | 0.809 | 1.420 | 4.803 |
| *Deal size* | 741 | 5.833 | 1.859 | 0.554 | 4.601 | 5.918 | 7.113 | 10.927 |
| *Deal length* | 741 | 102 | 70 | 0 | 56 | 89 | 136 | 513 |
| *Percent cash* | 741 | 79 | 36 | 0 | 70 | 100 | 100 | 100 |
| *Tot filings* | 741 | 479 | 255 | 79 | 276 | 410 | 613 | 1481 |
| *Prior comment letters* | 741 | 1.395 | 2.517 | 0.000 | 0.000 | 0.000 | 2.000 | 15.000 |
| *No SEC comment letters and restatements* | 741 | 0.421 | 0.494 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 |

**Table 3 – Panel A: The complementary role of SEC and FINRA regulations on COI disclosure in FO valuations**

| Dependent variable: | | *COI_ score* | *FINRA_ COI_score* | *SEC_ COI_score* | *COI Disclosure Indicator* |
|---|---|---|---|---|---|
| | Pr. Sign | (1) | (2) | (3) | (4) |
| *Merger* | + | 0.075** | 0.084*** | 0.069*** | 0.047*** |
| | | (2.66) | (4.64) | (2.84) | (4.01) |
| *FINRA × Merger* | ? | -0.073* | -0.077** | -0.082** | -0.044*** |
| | | (-1.92) | (-2.19) | (-2.34) | (-4.42) |
| *Target ROA* | | 0.006*** | -0.001 | 0.015*** | -0.007*** |
| | | (5.65) | (-0.31) | (10.06) | (-3.82) |
| *Target BTM* | | 0.003 | 0.007 | -0.012 | 0.011** |
| | | (0.15) | (0.37) | (-0.74) | (2.38) |
| *Target Loss* | | 0.032** | 0.021 | 0.038** | 0.057*** |
| | | (2.60) | (0.77) | (2.36) | (6.78) |
| *Target Lev* | | 0.014 | 0.006 | 0.038* | -0.120*** |
| | | (0.61) | (0.20) | (1.82) | (-4.50) |
| *Target Asset turnover* | | -0.033*** | -0.030*** | -0.035*** | 0.000 |
| | | (-4.63) | (-3.98) | (-4.17) | (0.02) |
| *Deal size* | | 0.005 | 0.003 | 0.005 | 0.012*** |
| | | (0.82) | (0.60) | (1.02) | (12.74) |
| *Deal length* | | 0.000 | -0.000 | 0.000 | -0.000*** |
| | | (0.25) | (-1.11) | (0.64) | (-9.77) |
| *Percent cash* | | 0.001*** | 0.001*** | 0.001*** | -0.000** |
| | | (3.98) | (4.95) | (3.31) | (-2.09) |
| State FE x Year FE | | Yes | Yes | Yes | Yes |
| Industry FE x Year FE | | Yes | Yes | Yes | Yes |
| S.E. clustered at the state level | | Yes | Yes | Yes | Yes |
| Observations | | 741 | 741 | 741 | 741 |
| R-squared | | 0.73936 | 0.72530 | 0.72711 | 0.59667 |

**Table 3 – Panel B: The complementary role of SEC and FINRA regulations on COI disclosure in FO valuations**

| Dependent variable: | Pr. Sign | *COI_ score* (1) | *FINRA_ COI_score* (2) | *SEC_ COI_score* (3) | *COI Disclosure Indicator* (4) |
|---|---|---|---|---|---|
| *FINRA* | + | 0.360*** | 0.198*** | 0.357*** | 0.056*** |
| | | (13.37) | (6.48) | (12.47) | (7.33) |
| *FINRA × Merger* | ? | -0.046* | -0.034 | -0.056* | -0.042*** |
| | | (-1.85) | (-1.65) | (-2.00) | (-7.90) |
| *Target ROA* | | 0.009*** | 0.004* | 0.017*** | -0.006*** |
| | | (4.20) | (1.85) | (7.75) | (-2.90) |
| *Target BTM* | | 0.025 | -0.002 | 0.016 | 0.016 |
| | | (0.81) | (-0.07) | (0.49) | (1.43) |
| *Target Loss* | | 0.015 | -0.002 | 0.033*** | 0.030*** |
| | | (1.67) | (-0.20) | (3.33) | (5.64) |
| *Target Lev* | | 0.007 | 0.000 | 0.015 | -0.042** |
| | | (0.27) | (0.02) | (0.44) | (-2.32) |
| *Target Asset turnover* | | -0.002 | -0.004 | 0.001 | -0.003* |
| | | (-0.28) | (-0.53) | (0.11) | (-1.87) |
| *Deal size* | | 0.007* | -0.000 | 0.011** | 0.006** |
| | | (1.80) | (-0.01) | (2.53) | (2.41) |
| *Deal length* | | -0.000 | -0.000 | -0.000 | -0.000*** |
| | | (-0.83) | (-0.13) | (-0.43) | (-3.39) |
| *Percent cash* | | 0.001*** | 0.001*** | 0.001*** | -0.000*** |
| | | (3.91) | (3.13) | (3.71) | (-2.99) |
| State FE x Merger | | Yes | Yes | Yes | Yes |
| Industry FE x Merger | | Yes | Yes | Yes | Yes |
| Time trend | | Yes | Yes | Yes | Yes |
| S.E. clustered at the state level | | Yes | Yes | Yes | Yes |
| Observations | | 741 | 741 | 741 | 741 |
| Adj R-squared | | 0.33201 | 0.31965 | 0.31012 | 0.20093 |

**Table 4 Panel A: The moderating role of SEC resource constraints**

| Dependent variable: | | *SEC COI score* | | *COI Disclosure Indicator* | |
|---|---|---|---|---|---|
| Grouping | | *Low SEC Resource Constraints* | *High SEC Resource Constraints* | *Low SEC Resource Constraints* | *High SEC Resource Constraints* |
| | Pr. Sign | (1) | (2) | (3) | (4) |
| *FINRA* | + | 0.309*** | 0.415*** | 0.031*** | 0.068*** |
| | | (8.67) | (15.04) | (4.25) | (6.01) |
| *FINRA × Merger* | ? | -0.011 | -0.135*** | -0.031*** | -0.042*** |
| | | (-0.24) | (-6.50) | (-3.15) | (-8.99) |
| *Target ROA* | | 0.017*** | 0.080 | -0.002 | -0.062*** |
| | | (4.14) | (1.53) | (-1.27) | (-5.21) |
| *Target BTM* | | -0.020 | 0.046 | 0.007 | 0.039*** |
| | | (-0.47) | (1.43) | (1.39) | (2.87) |
| *Target Loss* | | 0.012 | 0.043* | 0.034** | 0.022* |
| | | (0.63) | (1.89) | (2.40) | (1.77) |
| *Target Lev* | | -0.080 | 0.116*** | -0.025* | -0.087*** |
| | | (-1.68) | (4.15) | (-1.99) | (-3.61) |
| *Target Asset turnover* | | 0.001 | -0.022 | 0.003 | -0.002 |
| | | (0.07) | (-1.07) | (0.65) | (-0.37) |
| *Deal size* | | 0.005 | 0.013*** | 0.007** | 0.008** |
| | | (1.01) | (3.35) | (2.70) | (2.50) |
| *Deal length* | | 0.000 | -0.000 | -0.000** | 0.000*** |
| | | (1.06) | (-0.24) | (-2.33) | (4.08) |
| *Percent cash* | | 0.000 | 0.001** | -0.000 | -0.000 |
| | | (0.33) | (2.79) | (-0.95) | (-1.53) |
| *One-tailed T-test* | | <0.01 | | 0.08 | |
| State FE x Merger | | Yes | Yes | Yes | Yes |
| Year FE | | Yes | Yes | Yes | Yes |
| Industry FE | | Yes | Yes | Yes | Yes |
| S.E. clustered at the state level | | Yes | Yes | Yes | Yes |
| Observations | | 349 | 332 | 349 | 332 |
| R-squared | | 0.33778 | 0.33973 | 0.41439 | 0.15993 |

**Table 4 Panel B: The moderating role of SEC incentive compatibility**

| Dependent variable: | | *SEC COI score* | | *COI Disclosure Indicator* | |
|---|---|---|---|---|---|
| Grouping | | *No SEC comment letters & Restatement* | *Yes SEC comment letters or Restatement* | *No SEC comment letters & Restatement* | *Yes SEC comment letters or Restatement* |
| | Pr. Sign | (1) | (2) | (3) | (4) |
| *FINRA* | + | 0.517*** | 0.372*** | 0.094* | 0.088*** |
| | | (5.62) | (12.00) | (1.86) | (51.83) |
| *FINRA* × *Merger* | ? | -0.191** | -0.151*** | -0.216*** | -0.083*** |
| | | (-2.36) | (-8.71) | (-3.23) | (-48.90) |
| *Target ROA* | | 0.327*** | 0.017*** | 0.007 | -0.010*** |
| | | (4.04) | (4.16) | (0.11) | (-16.16) |
| *Target BTM* | | 0.132*** | -0.055** | 0.030*** | 0.030*** |
| | | (3.42) | (-2.09) | (3.33) | (17.58) |
| *Target Loss* | | 0.034 | 0.024 | 0.078 | 0.022*** |
| | | (1.05) | (1.36) | (1.74) | (5.60) |
| *Target Lev* | | 0.120** | 0.025 | -0.173*** | -0.071*** |
| | | (2.30) | (0.95) | (-5.66) | (-9.66) |
| *Target Asset turnover* | | 0.052*** | -0.025** | 0.004 | -0.004*** |
| | | (3.03) | (-2.14) | (0.63) | (-5.60) |
| *Deal size* | | -0.011 | 0.004 | 0.007 | 0.012*** |
| | | (-1.47) | (0.78) | (1.60) | (5.98) |
| *Deal length* | | 0.000 | 0.000 | -0.000 | -0.000*** |
| | | (0.17) | (0.69) | (-1.24) | (-6.15) |
| *Percent cash* | | 0.002*** | -0.000 | -0.000** | -0.000*** |
| | | (6.43) | (-0.09) | (-2.17) | (-4.44) |
| *One-tailed T-test* | | 0.28 | | 0.01 | |
| State FE x Merger | | Yes | Yes | Yes | Yes |
| Year FE | | Yes | Yes | Yes | Yes |
| Industry FE | | Yes | Yes | Yes | Yes |
| S.E. clustered at the state level | | Yes | Yes | Yes | Yes |
| Observations | | 152 | 385 | 152 | 385 |
| R-squared | | 0.49542 | 0.33678 | 0.33454 | 0.19546 |

**Table 4 Panel C: The moderating role of buyer type**

| Dependent variable: | | *SEC COI score* | | *COI Disclosure Indicator* | |
|---|---|---|---|---|---|
| Grouping | | *Public Acquiror* | *Non-Public Acquiror* | *Public Acquiror* | *Non-Public Acquiror* |
| | Pr. Sign | (1) | (2) | (3) | (4) |
| *FINRA* | + | 0.314*** | 0.353*** | 0.026*** | 0.095*** |
| | | (7.59) | (8.93) | (6.63) | (2.89) |
| *FINRA × Merger* | ? | -0.078*** | 0.004 | -0.009 | -0.046 |
| | | (-4.06) | (0.08) | (-0.84) | (-0.94) |
| *Target ROA* | | 0.009 | 0.027*** | -0.006*** | -0.007 |
| | | (0.89) | (4.05) | (-7.99) | (-1.50) |
| *Target BTM* | | 0.117*** | -0.123*** | 0.019** | 0.033 |
| | | (2.79) | (-3.34) | (2.62) | (1.24) |
| *Target Loss* | | 0.046*** | 0.037** | 0.024*** | 0.036*** |
| | | (3.06) | (2.20) | (3.97) | (4.30) |
| *Target Lev* | | -0.006 | -0.067 | -0.087*** | -0.013 |
| | | (-0.07) | (-1.29) | (-5.05) | (-0.46) |
| *Target Asset turnover* | | 0.021 | -0.022 | -0.008*** | -0.005 |
| | | (1.28) | (-1.45) | (-4.32) | (-1.03) |
| *Deal size* | | 0.021** | 0.001 | 0.008*** | 0.008* |
| | | (2.24) | (0.18) | (3.49) | (1.86) |
| *Deal length* | | -0.000 | 0.000 | -0.000*** | 0.000** |
| | | (-0.79) | (0.07) | (-4.40) | (2.30) |
| *Percent cash* | | 0.001** | 0.001** | -0.000 | -0.000 |
| | | (2.41) | (2.34) | (-1.46) | (-0.63) |
| *One-tailed T-test* | | 0.045 | | 0.225 | |
| State FE x Merger | | Yes | Yes | Yes | Yes |
| Year FE | | Yes | Yes | Yes | Yes |
| Industry FE | | Yes | Yes | Yes | Yes |
| S.E. clustered at the state level | | Yes | Yes | Yes | Yes |
| Observations | | 407 | 334 | 407 | 334 |
| R-squared | | 0.36470 | 0.42942 | 0.16619 | 0.24988 |

| **Table 4 Panel D: The moderating role of deal type** | | | | | |
|---|---|---|---|---|---|
| Dependent variable: | | *SEC COI score* | | *COI Disclosure Indicator* | |
| Grouping | | *Contentious deal No* | *Contentious deal Yes* | *Contentious deal No* | *Contentious deal Yes* |
| | Pr. Sign | (1) | (2) | (3) | (4) |
| *FINRA* | + | 0.286*** | 0.477*** | 0.067*** | -0.040 |
| | | (7.43) | (13.75) | (8.25) | (-0.60) |
| *FINRA × Merger* | ? | -0.061* | -0.043 | -0.043*** | 0.108 |
| | | (-1.78) | (-0.80) | (-9.92) | (1.28) |
| *Target ROA* | | 0.012 | 0.025*** | -0.013*** | 0.004 |
| | | (1.53) | (3.96) | (-9.94) | (0.76) |
| *Target BTM* | | 0.072 | -0.104* | 0.026*** | 0.031 |
| | | (1.40) | (-1.79) | (5.37) | (1.63) |
| *Target Loss* | | 0.037** | 0.036 | 0.034*** | 0.002 |
| | | (2.28) | (1.43) | (3.05) | (0.19) |
| *Target Lev* | | 0.008 | -0.061 | -0.126*** | 0.052** |
| | | (0.11) | (-1.67) | (-5.07) | (2.13) |
| *Target Asset turnover* | | 0.028 | -0.026* | -0.006*** | -0.011* |
| | | (1.22) | (-1.76) | (-4.15) | (-1.96) |
| *Deal size* | | 0.020** | -0.003 | 0.013*** | 0.003 |
| | | (2.14) | (-0.34) | (3.97) | (0.78) |
| *Deal length* | | -0.000 | -0.000 | -0.000*** | 0.000*** |
| | | (-0.20) | (-0.17) | (-4.14) | (4.08) |
| *Percent cash* | | 0.001** | 0.002*** | -0.000* | 0.000 |
| | | (2.69) | (3.12) | (-1.92) | (0.39) |
| *One-tailed T-test* | | 0.36 | | 0.02 | |
| State FE x Merger | | Yes | Yes | Yes | Yes |
| Year FE | | No | No | No | No |
| Industry FE | | Yes | Yes | Yes | Yes |
| S.E. clustered at the state level | | Yes | Yes | Yes | Yes |
| Observations | | 468 | 226 | 468 | 226 |
| R-squared | | 0.29980 | 0.40010 | 0.16584 | 0.46390 |