Time Well Spent?

An economic rationale for the negotiation of confidentiality agreements during corporate mergers and acquisitions

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Abstract[*]

In 2004, over \$2 trillion were spent worldwide on over 30,000 mergers and acquisitions (M&A) transactions. While the negotiation of confidentiality agreements represents only a small portion of this activity, the quantity of time and money it expends is considerable. A comparison to similar agreements in other areas (namely Reporter-Source and Intellectual Property) indicates that protracted negotiations are unique to corporate finance, begging the question, why? This paper postulates that three factors account for this difference: the value of information, an adverse selection process, and a principal-agent conflict presented by attorneys. A model is developed to test the first two. The findings indicate that information that is not valuable enough to justify court action, yet too valuable to forfeit, accounts for a significantly greater portion of negotiations, suggesting that negotiation is employed primarily in areas where settlement is the expected enforcement mechanism. In addition, those bidders, who are most uncertain of their probability of emerging as the final bidder, tend to negotiate more aggressively. These results signify that corporate finance NDAs allow sellers to safeguard information, which is otherwise too costly to protect, and to screen prospective parties. These findings provide an economic rationale for the negotiation of confidentiality agreements.

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I.   ***Introduction***

Mergers and acquisitions (M&A) represent a sizable component of corporate

finance activity.[1] According to the Wall Street Journal, in the year 2004, global M&A

activity grew 45% to over $2 trillion (Dixon, 2004) on a volume of over 30,000 deals

with the U.S. alone reaching $833.5 billion on a volume of over 8,000 deals (Gallagher,

2004). Despite considerable volatility, ranging from a peak of $3.4 trillion in 2000

(Gallagher, 2004) to $1.38 trillion in 2003 (Stewart, 2004), M&A transactions remain

core instruments for corporate expansion and development.

A crucial component of these transactions, the confidentiality agreement (CA),

also referred to as a Non-Disclosure Agreement (NDA), allows parties to openly transact

by safeguarding valuable information (Lesser, Lederer, Steinberg, 1992). However, this

protection is generally obtained at considerable cost **(**Hagans, 1990**)**. Depending on

various factors, the interval between the proffer of a confidentiality agreement and its

signing can span as little as several hours, to the more common series of days, and can

easily exceed a week, all the while paralyzing the exchange of information and

generating costs (e.g. attorneys fees, work hours for bankers and executives). While a

precise figure for the financial cost of these negotiations is unavailable, it suffices to say

that fees paid to lawyers and bankers involved in these negotiations for services rendered

are often in the millions and tens of millions per transaction. Recognizing that NDA

negotiations represent only a minor portion of these services, yet considering the number

of yearly transactions mentioned above, even such a minor portion would easily be

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[1] Merger is defined as: The combining of two or more entities into one, through a purchase acquisition or a
pooling of interests (InvestorWords, 2005, Merger). Acquisition is defined as: Acquiring control of a
corporation, called a target, by stock purchase or exchange, either hostile or friendly; also called takeover
(InvestorWords, 2005, Acquisition).

represented in the hundreds of millions or even billions of dollars (Daniel Lee, personal communication, August 8, 2004).

Realizing the magnitude of this expenditure begs one to question its dispensability. Skepticism is furthered by the existence of legislation, such as the Uniform Trade Secrets Act (UTSA), which serves as a de facto agreement absent a written one.[2] Thus, at least as it pertains to confidentiality, these agreements seem somewhat superfluous or overcautious at best. Nonetheless, one is inclined to believe that in a sophisticated market where transactions are continuously reoccurring, processes tend to move towards efficiency. This paper's aim is to determine the value added by a Non-Disclosure Agreement and attempt to form an economic rationale for its costly negotiation. Specifically this paper postulates that three factors account for the quantity and pattern of negotiation: the value of information, an adverse selection process, and the principal-agent conflict presented by attorneys. An investigation of the data provides evidence regarding the prior two, while the latter is discussed more deductively. The findings indicate that information with intermediate value and buyers with intermediate desirability account for a significantly greater portion of negotiations. These results signify that corporate finance NDAs allow sellers to safeguard information, which is otherwise too costly to protect, and to screen prospective bidders.

Section II will provide some background regarding the nature of corporate finance transactions, specifically related to the negotiation of confidentiality agreements, and expand on the three aforementioned factors that appear to drive negotiation.

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[2] A copy of the Uniform Trade Secrets Act can be found at the National Conference of Commissioners on Uniform State Laws website: http://www.nccusl.org/.

Sections III and IV will discuss the area of focus in related works to date and report their current findings. In section V, I will present the economic rationale for the maintenance of confidentiality and outline an economic justification for confidentiality agreements in a buy/sell process. In doing so, I will elaborate regarding the function of the document and attempt to validate the commitment of resources to its negotiation. Section VI will present an economic model for negotiation in corporate finance transactions. Sections VII and VIII will describe and analyze existing agreements, exploring the model from Section VI. Finally, section IX will argue the implications of those findings as well as suggest methods to increase the efficiency of the confidentiality agreement process going forward.

II.   *Background*

While individual countries may have distinctive nuances, most M&A procedures follow a similar procedural pattern (Murra-Johnson, 2004). An M&A engagement is a structured, yet complex, process which regularly requires mediation by an investment bank or other advisory institution (Lesser et al, 1992). Proposals are generally initiated via a seller's indication of willingness to consider the sale of an asset, although the unsolicited tender of an interested buyer or suggestion of an advisor are not uncommon catalysts. Assuming the prior framework, the decision to consider a sale is preferably expressed to a mediating party – typically an investment bank – which provides an assessment of market interest based on preliminary discussions with potential buyers, the evaluation of market sector experts and the results of financial modeling. Based on these findings, the decision to actively pursue a sale will hinge on the discrepancy between the

reported level of interest and the seller's expectations. Presuming their sufficient proximity, the mediator, on behalf of the seller, will contact prospective buyers and offer them an opportunity to bid on the asset. Those buyers expressing interest will be provided with sensitive, detailed financial and operational information for the purposes of evaluating the asset. Prior to this dissemination, the seller will request that each buyer sign a confidentiality agreement, to ensure the security of all information (Daniel Lee, personal communication, August 8, 2004).

Throughout the 90's and into the 21st century, this document has assumed greater importance in mergers and acquisitions, as more parties join the tables and deals take longer to complete (Lesser et al, 1992). The necessity of such a document is universally accepted and its general structure and content are fairly standard. Nonetheless, this routine aspect of initiating a buy/sell process is replete with arduous and time consuming negotiations of its terms.

Lesser et al (1992) describe the basic function of the agreement as "protecting sellers against misuse of confidential information". Thus the logical justification for an agreement would seem to stem from legal roots. Presumably the terms of a contract are binding and any terms negotiated by two parties will be honored by judicial bodies (Shavell, 2003). It follows that negotiation serves to provide clarity for the judicial bodies who will inevitably interpret the contents of the agreement. Following this theory, one would expect negotiation to occur in situations where the product of the perceived benefit to a party, resulting from a concession, and the probability of attaining the concession, outweighed the cost of attempting to procure it (Kaufman, 1993).

However, there exist several faults with this model: First, as mentioned, protection via the UTSA reduces the need for an agreement and decreases the benefit to negotiation (Hosteny, 2004). Secondly, while courts will generally honor any lawful agreement between two parties, judicial bodies are empowered to take liberal interpretation, using standards of reasonability (Financial Law Panel, 2000). This, assuming the courts are the intended body of enforcement, eliminates any incentive to engage in finicky negotiation, which occurs regularly (Financial Law Panel, 2001). In addition, given the sheer volume and frequency of transactions one would expect a consensus to form regarding the expectations of both parties. In fact, NDAs in areas outside corporate finance, such as intellectual property, generally receive only a cursory review before signature, an indication of such efficiency (Dykeman, 2004). Finally, and perhaps most surprising, is the absence of significant case law regarding breaches of confidentiality in corporate finance transactions (Lesser et al, 1992). Under the assumption that the terms of CA's exist primarily to provide clarity or guidance for a judicial body, one would expect to find cases to serve as evidence of their effect. If in reality confidentiality is enforced primarily by reputation effects, and the lack of case law is a result of the infrequency of actions resulting in breach, then too, NDAs or at least their negotiation would be unnecessary. Despite the collective avocation by attorneys of a legally based rationale, the factual inconsistencies render a model based solely on the rationale for contracting inadequate.

Notwithstanding, the fact that confidentiality agreements are a *sine qua non* in corporate finance M&A transactions is undeniable. Clearly there exists an underlying foundation for their structure, content and methods. Given the considerable investment

of time and resources towards the process of drafting and negotiating the terms of such documents, it follows that a greater value – in some form – must be returned. This paper suggests that NDAs within the context of corporate finance transactions are uniquely complex, and presents several economic justifications for their negotiation: First, unlike other situations requiring the protection of confidentiality, M&A transactions include a massive amount of information differing greatly in terms of value. In addition, also unique to M&A transactions, are the costs associated with going to court, which are prohibitive in many cases. The combination of these two factors creates a situation where information is valuable but cannot feasibly be protected, given a reliance on the courts. As a result, in such cases, settlement becomes the primary means of enforcement and negotiation serves an economically justifiable purpose: establishing behavioral guidelines or "rules of the game" (Lesser et al, 1992). Secondly, this paper points to the process of negotiation as an example of a screening game[3] with an adverse selection component.[4] Finally, this paper suggests that there is a principle-agent conflict created by the role and compensation structure of attorneys.

III.   *Literature Review – Confidentiality Agreements*

The term "confidentiality agreement" is a loaded one and applies to any pledge to protect the confidentiality of information and restrict exploitative use. As such, the context of available literature spans multiple settings beyond the buy-sell NDA,

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[3] Definition – "Screening": A screening game is a game in which an uninformed player offers a menu of choices to the player with private information (the informed player). The selection of the elements of that menu is a choice for the uninformed player to optimize on the basis of expectations about the possible types of the informed player (About.com, 2005, Screening).
[4] Definition – "Adverse Selection": In a market where buyers cannot accurately gauge the quality of the product that they are buying, it is likely that the marketplace will contain generally poor quality products. (About.com, 2005, Adverse Selection).

including reporter-source relationships, protection of intellectual property and the sealing of court proceedings. While these fall outside the corporate finance arena, many of the underlying principles can be easily extended and adapted to the M&A process.

a. *Corporate Finance Literature*

The majority of literature pertaining to corporate finance confidentiality agreements takes the form of commentary from or advice to lawyers. As attorneys have a financial incentive to promote topics requiring legal counsel, such commentary must be regarded with a degree of scrutiny. Pietrafesa (2003) provides a brief introduction to the components of a confidentiality agreement and offers a glimpse at the differing perspectives of a buyer and seller when entering an agreement. In addition to providing an outline of the contents generally included in a confidentiality agreement, Pietrafesa (2003) aptly points out that concerns regarding the misuse of confidential information are contingent upon a party's failure to complete the sale.[5]

Mann and Schwartzbaum (1992) expand on the buyer's perspective, explaining that confidentiality agreements can impose significant obligations on a bidder and that "the consequences of breaching a definitive confidentiality agreement can be severe." In doing so, they identify three functions for a NDA: "1) restrict the bidder's use of confidential information during the evaluation process by limiting who can see it and how it can be used; 2) control the overall sales process by prescribing how and when the

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[5] From the seller's perspective, if a transaction is completed, it is no longer in possession of the asset or its associated information.

bidder may submit an offer to acquire the target company; and 3) confine the bidder's conduct and use of the confidential information for a specified period after the evaluation process in the event the bidder does not acquire the corporation." Asserting a requisite for legal representation, Mann and Schwartzbaum (1992) define the buyer's counsel's motives as "minimizing the risk the bidder will be unable to perform its obligations under the agreement."

Lesser et al (1992) take the seller's perspective and note two functions for the NDA: "confidentiality provisions to protect the company against the business risks of disclosure or misuse of information by competitors; and standstill provisions to protect the company against unsolicited takeover attempts by bidders while providing for an orderly process of marketing the business." In addition, they provide suggestions for protection across three types of information: financial, technical and human resource material. Most importantly, Lesser et al (1992) note that solid agreements serve to establish ground rules, and identify that in cases where a bidder's behavior is not egregious and harm is not clearly identifiable, court action is unlikely.

Differentiating between confidentiality in principle and agreements, Murra-Johnson (2004) points out that the law protects confidentiality absent a written agreement, but that drafting and negotiating may simply provide parties with peace of mind. As evidence for this claim Murra-Johnson (2004) points to foreign practices which generally involve shorter agreements and a greater reliance on enforcement via reputation effects. For example, in the United Kingdom "you don't have to show evidence of a contractual relationship, but you have to show evidence of the breach." Similarly, in far eastern cultures, Japan in particular, there is a greater focus on inherent

trust and reputation than institutional protection (Fukuyama, 1995). Murra Johnson

(2004) believes that the "raft of issues [that] emerge when discussing confidentiality

agreements, are often more lawyer issues rather than real world issues" and suggests that

a significant portion of such agreements are entirely devoted to issues other than

confidentiality.

Perhaps the most substantive work related to corporate finance confidentiality

was a study conducted by the Financial Law Panel (2000 and 2001) to assess the

efficiency of confidentiality agreements in response to complaints regarding their

arduous and costly negotiation. In the initial consultation paper (2000) the panel

recognizes immediately that the "practical benefits of achieving subtle changes in

wording are limited, and are outweighed by the time and effort needed to agree to them."

In an attempt to uncover a remedy the panel set out to promote standardization of

agreements by analyzing typical clauses in hopes of recommending compromising

terms. While the panel acknowledges that some degree of negotiation is probably

necessary and even preferable, it indicates five areas where agreements require

improvement:

1) Balance: "Confidentiality agreements sometimes go well beyond what is
   reasonable to protect the provider of information."

2) Enforceability: "Agreements contain clauses that are drafted so widely that they
   may be unenforceable…In extreme cases, those clauses can be counter-
   productive."

3) Practicality: "One sees clauses that in practice cannot or will not be fully
   complied with by recipients."

4) Brevity: "It is important that the agreement is not unnecessarily long and onerous to evaluate."

5) Relevance: "Clauses appear in confidentiality agreements that are not directly relevant to the question of confidentiality of information."

Perhaps most importantly the panel states that "courts have developed a detailed body of legal rules to protect the owners of confidential information and to impose duties on those who receive information in circumstances where they ought properly to deal with the information in a restricted way." As such, "if the drafter of such an agreement proposes to adopt a position on a specific point which is different from that developed by the courts as fair and reasonable, he or she should have a clear view of why that difference is desirable." Failing to follow such guidelines generally leads to unproductive negotiation and potentially frivolous litigation.

After receiving input from attorneys, investment bankers and other parties, the Financial Law Panel published a final report (2001). The report indicated that standardization was likely beneficial as it would eliminate "negotiating terms that subsequently turn out to be unimportant," but that a form would likely serve only as a template for modification. The only parties opposed to standardization were legal advisors, whose billable hours would be reduced by standardization. Additional noteworthy findings include: the discovery that most parties are naturally inclined to honor obligations and that motives external to legal ramifications exist for both parties to maintain confidentiality (e.g. reputation).

The aforementioned documents provide differing perspectives regarding the functions of CA's and the motives for each party to engage in such agreements. In

addition, they shed light on current issues of concern and attention within the corporate finance sector, mainly the specific purpose of these agreements and questions regarding their efficiency. Addressing similar concerns, this paper will attempt to develop an economic rationale for the negotiation of confidentiality agreements. In doing so, it will differ from other works by looking beyond solely legal based arguments.

b. *Reporter-Source Literature*

Reporter-source literature addresses situations where sources request confidentiality in exchange for providing information. Reporters have claimed that on certain occasions such agreements violate their First Amendment rights. The parallels to corporate finance confidentiality agreements lie in the court's rationale for interpretation and the economic model presented as a legally external enforcer.

According to Fallon (1992) there are two key questions in the examination of reporter-source conflicts: do the two parties intend to be legally bound by their contract; and does any existing First Amendment imposition outweigh the social good of enforcing such an agreement. In addressing the first question, Fallon (1992) points to Promissory Estoppel Theory, "whereby a court enforces a promise that is otherwise unenforceable, but that has been relied upon by the promisee." According to contract law in order for a court to identify an agreement as binding three elements are necessary:

1) Offer: "The source's proposal to provide information, conditioned upon confidentiality, is an offer."

2) Acceptance: "The reporter's consent to the condition constitutes an acceptance."

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3) Consideration: "The consideration going to the source is the promise of confidentiality, while the consideration going to the reporter is the promise of information."

In short, "the promisee must have reasonably relied upon the promise, and the promisor must have reasonable expected such reliance by the promisee." Given this legal doctrine, Fallon – supported by a Supreme Court decision[6] – concludes the existence of a binding agreement between a reporter and source as it pertains to the divulgence on information. Promissory Estoppel Theory, as presented by Fallon (1992), can and should be extended to corporate finance negotiations. Clearly under this criterion for enforcement, negotiations should be minimal and focused only on principle differences rather than nuances in wording. As Fallon (1992) rightfully states "contract law is directed not at the words themselves, but at one party's failure to honor his or her promise."

In addressing the second question, Fallon (1992) refers to a "balancing test" and suggests that it "should favor enforcement of the agreement". Similarly, while it is certainly possible that literal translations of NDAs could differ from their intent, courts should, and likely would, uphold a reasonable intent.

Lastly, Fallon (1992) concedes news organizations have non-legal incentives, such as reputation, to keep their promises and that failure to do so will automatically result in damage. However, Fallon argues that while this self-policing mechanism exists, exclusive reliance on it "circumvents a central purpose of contract law –

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[6] For more information regarding this ruling, see the U.S. Supreme Court decision for *Cohen v. Cowles Media Co.*

enforcing promises rather than permitting one party to choose when to breach its promises at the other party's expense."

Kaufman (1993) expands on Fallon's argument by developing an economic approach to the problem. Kaufman is primarily concerned with reporters' defenses which hinge upon their First Amendment rights. While Kaufman realizes that the inability to publish the source of information infringes a newspaper's ability to provide maximum available information to the public, he argues that not enforcing confidentiality agreements will result in a reduction in the supply of information or a substantial increase in the costs of acquiring it. As such, enforcing confidentiality agreements in actuality increases the amount of public information and thus is preferable even under First Amendment standards. Ultimately, Kaufman concludes that the transaction costs associated with legal recourse make contracting less desirable and that reputational considerations will effectively diminish the level of source revelation even absent a legal means for recourse. However, like Fallon, Kaufman (1993) maintains that enforceable publisher-source promises are necessary in order maintain efficiency, arguing that the threat of source revelation without either legal recourse or compensation will reduce disclosure. The parallel to corporate finance NDAs is easily identifiable. Just as society is interested in maximizing the amount of public information at the lowest cost in reporter-source cases, so is the market interested in maximizing the number of transactions while minimizing transacting costs. It follows, that Kaufman's argument is readily transposable.

Lastly, recognizing that in certain cases society would best be served via a government sanction for violation, Kaufman (1993) points to an economic model to

determine when such a case exists. Using a test developed by Judge Learned Hand and later modified by Judge Richard Posner, the "Hand-Posner" constitutionality test states that "government regulation is desirable only when V + E is less than P x L, where V is the loss to society of suppressing information, E is the error costs in determining what is valuable information, P is the probability that harm will result from the speech, and L is the resulting harm from the speech, discounted for present values. Simply put, if the societal costs of suppression are less than the harm from speech, then a speaker should enjoy no First Amendment protection." According to Kaufman (1993) in the reporter-source case, "V+E represent the cost to society of not publishing the name of a confidential source when a publisher makes a binding agreement," and PxL represents the probability and volume of harm to the source given source revelation, both of which are very high. Thus, "the benefits of permitting contracts between publishers and sources generally exceed the costs of information loss." In the corporate finance setting, a similar test could be used when examining breach. Rather than adhering solely to verbatim translations of NDAs, the applicable test should follow a "Hand-Posner" derivative, where V+E represents the cost to society of refusing to adhere to a literal interpretation of a document and PxL represents the harm to the victim of breach. Just as Kaufman (1993) claims in the majority of situations, society will be best served via the protection of confidentiality.

Reporter-source confidentiality agreements include themes and issues of concern similar to buy-sell confidentiality agreements. Both include the exchange of information under an umbrella of protection for a specific purpose – in the reporter-source case providing the public with information, and in the buy-sell case allowing the buyer to

properly evaluate the business for sale. Similarly, in both cases one party is solely at risk, due to the release of information which can not be returned, and which if misused could result in severe consequences.

The major differences appear not to be in regards to the preservation of information but rather in the method of contracting. Reporter-source contracts are generally formed verbally and enforced using standards of reasonability and social value, such as Promissory Estoppel Theory or the Hand-Posner Test. Conversely, corporate finance contracts are almost always written and include extensive negotiations, supposedly in an effort to avoid misinterpretation by the courts. Realizing this difference begs one to question what is specifically unique to an M&A confidentiality agreement that demands an alternative to standards of reasonability. Furthermore, given that both Fallon (1992) and Kaufman (1993) deem the minor transaction cost associated with contracting in reporter-source cases as undesirable (yet ultimately necessary), the significantly greater transaction costs associated with corporate finance NDAs require justification. Reflecting on the reporter-source literature, this paper will resolve these issues by focusing on what separates the corporate finance NDA from the other members of the confidentiality agreement family.

c. *Intellectual Property Literature*

Similar to reporter-source, intellectual property ("IP") holds the protection of valuable information in common with corporate finance confidentiality. Bar-Gill and Parchmonsky (2004) consider the impact of confidentiality on the value of information by immediately recognizing that "information that is not afforded legal protection cannot

be bought or sold on the market." Expanding on this principle, an analogy is drawn between intellectual property and tangible property. Bar-Gill and Parchmonsky (2004) make the argument that failing to provide confidentiality for intellectual property is similar to failing to protect tangible assets. In such a situation, they liken exchanging information without legally binding confidentiality to delivering a product without legally binding requirement for payment. As a result, information that is difficult to obtain confidentiality for, such as pre-patent information, must be developed within the firm as a lack of protection renders integration and collaboration unviable.

Aside from the relevance to corporate finance in terms of the protection of confidentiality, the notion of transactions not occurring due to a large transaction cost (in the intellectual property case associated with the risk of losing valuable information) can and should be applied to M&A deals. Given the large costs associated with considering or offering an asset, there likely exist low-value assets that cannot be sold. Reducing the transacting costs, by increasing the efficiency of the NDA process, would allow sellers to offer and buyers to consider additional assets.

However, perhaps the most interesting factor in comparing corporate finance CA's to intellectual property CA's is the procedural norm. In contrast to corporate finance transactions, intellectual property NDAs are generally fairly standardized and receive only a cursory review with little, if any, commentary or negotiation (Dykeman, 2004). While this point was also made in the context of reporter-source agreements, it is particularly notable here due to the potentially significant value of the information. One may have difficulty supporting the equation of individual or small group loss in reporter-source breach with the potentially massive corporate and shareholder impact in M&A

cases. However, in certain cases, intellectual property agreements can protect

information of comparatively equal or greater value. When one also considers that

corporate finance NDAs often protect intellectual property or technical information, the

irregularity of their sizable negotiations is further highlighted.

     d. Court Proceedings Literature

     Occasionally initial court proceedings (such as discovery and grand jury

hearings) as well as settled cases are sealed from the public (Philp, 2003). Hagans

(1990) and Philp (2003) argue that in certain cases the public good of knowing the

contents of the settlement outweigh the value of allowing them to remain confidential.

Others like Morrison (1999) have countered that failing to provide for confidence would

reduce the possibility of settlement and prompt court based resolution of disputes. Not

only would this present an immeasurable burden on the justice system, but since

settlement "restores the status quo" (Morrison, 1999) by providing appropriate

compensation for damages discounted by the probability of receiving no compensation,

it is a fair and just solution. In decisions where courts agreed to remove confidentiality,

the turning point seemed to hinge upon a concern that potential victims are

unrepresented at a settlement table (Philp, 2003). Similarly, the sealing of settlements in

regard to breaches of confidentiality prevents future parties from identifying the risks of

transacting with breaching parties.

     The crucial difference is that the cases generally referenced in these arguments

involve the public at large with regards to health, politics and moral values. However,

the key factor in a marketplace of ideas or assets – such as M&A – should be to

maximize their value and thus their exchangeability. As I will argue in Section VI, a core component to considering the sale of an asset is the knowledge that confidential settlement is a possible means for resolving dispute. Removing this instrument would require resolution via public court proceedings, which would significantly increase the transactions costs associated with pursuing a remedy to breach and could potentially change the landscape of M&A activity. Given the impact of this factor on corporate finance transactions, it is essential to remain cognizant of developments in the confidentiality of court-proceedings.

While the above sets of literature certainly addresses common issues across all forms of confidentiality agreements, there seems to be a notable differentiator between corporate finance agreements and all others: the cost of negotiating them. As stated above, corporate finance CA's generally require an exhaustive (and expensive) investment in legal counsel before finalizing an agreement, while reporter-source CA's can be negotiated orally in a matter of minutes with no particular expertise. In addition the majority of literature points to legal bodies (Promissory Estoppel, Hand Posner, USTA, etc.) that seem to adequately protect the rights to confidence. This realization begs one to question whether the negotiations of NDAs in a corporate finance setting are in fact inefficient proceedings or whether, as this paper contends, agreements in this space are reasonably more complex, requiring additional attention.

IV.   *Literature Review – Additional Economic Theory*

a. *Adverse Selection Theory*

The seminal work related to adverse selection is Akerlof (1970), in which Akerlof raises the issue in the context of the automobile market. Akerlof divides automobiles in two categories, "good" and "bad" (also referred to as lemons). Despite a disparity in quality, Akerlof claims that uncertainty drives the market price to a single price – that of the "bad" car. This is due to the inability of the buyer to distinguish between "good" and "bad" prior to purchase. Knowing this, sellers only offer lemons due to an inability to realize the value of a "good" car in the market, thus eliminating the market for a quality automobile. In the short, the "bad…drive out the good."

In order to combat this undesirable outcome, Akerlof claims that institutions may arise to reduce uncertainty. Examples of such include guarantees, insurance, and return policies. These assurances increase buyer confidence and allow sellers to realize the value of their asset – by selling at a "good" price – but they generally incur some additional cost associated with the institution. In the case of confidentiality agreements the "institution" is created by the transaction cost of negotiating confidentiality agreements. Given the limited number of resources available to a party, they can only choose to engage so many parties or transactions. By investing in the consideration of an asset the buyer distinguishes itself as a "good" party. Similarly, by investing in the consideration of a buyer the seller distinguishes itself.

Milgrom & Roberts (1992) address screening via a discussion regarding the relationship between age and wage – even when controlling for factors such as experience, individual talent, and matching roles to an individual's skills, wages tend to increase with age. Milgrom & Roberts (1992) account for this by reference to attrition rates. Basically, employees have an interest in reducing turnover, which can be costly,

so they tend to discount other qualities when employees are young, thus "screening" for the long-term candidates. The relationship can be described as an investment in an opportunity. In the case of an employee, an older employee, who is married with kids, experiences greater transaction costs when switching jobs and thus is less likely to do so. As a result, when this employee chooses an occupation or position he/she is more heavily invested in it. This, too, is analogous to CA's, as sellers have an interest in rewarding the more serious bidders and dissuading those with disingenuous intentions. By increasing the cost to considering an asset, sellers can "screen" the willingness of parties to invest in the consideration of the asset.

b. *Principal-Agent Theory*

Essentially there are two common types of compensation used to procure external legal representation or services: contingency and hourly billing. In addition, internal representation, within a firm, can be contracted on a yearly basis, as is the case with a "general counsel" position. Dana & Spier (1993) compare contingency and hourly billing in court cases and propose a model for determining which is more efficient. Ultimately, Dana & Spier conclude that the contingency form is most efficient, citing that particularly in cases where it is difficult for the client to identify the merits of his/her case, billable hours provide no incentive for an attorney to properly advise its client. However, Dana & Spier point out that in certain cases, particularly ones involving contract disputes by corporate or commercial plaintiffs, the billable hours form is preferred. This is explained by the client's ability to identify the merits of cases and thus decide whether court action is preferable without an attorney's guidance.

This suggests that perhaps billable hours are optimal for corporate clients when engaging in legal action. However this provides no guidance regarding the appropriate compensation structure during contracting. During the period of contracting, an information asymmetry exists whereby commercial or corporate clients are unable to judge the effectiveness of their attorney's actions. It is fair to assume that clients are unable to accurately discern between phrases or clauses from a legal perspective. As such they rely exclusively on the advice of their attorneys. In such a case, billable hours would create the same inefficiency described by Dana & Spiers (1993), whereby attorneys would be incentivized to negotiate more than optimally necessary. In the case of NDAs it would seem that this compensation conflict would be exacerbated by the ethical obligation of an attorney to procure the best contractual terms for his/her client. As such, the attorney is dually – both financially and ethically – incentivized to negotiate whenever and wherever possible. While modeling the effect of this conflict or quantifying its cost is beyond the scope of this paper, it suffices to say a principle-agent conflict exists and that it results in increased negotiation. However, contingency is certainly not a proper compensation form for contracting services. While not investigated by Dana & Spiers, perhaps in the case of NDAs the use of in-house counsel, a price-per-contract, or price-per-deal model would help to eliminate or reduce this conflict.

V.   *Theoretical Framework*

In attempting to determine the rationale for drafting and negotiating confidentiality agreements in a corporate finance setting, it is important to assess the

motivations and perceived benefits of each participating party, as well as their respective

decision making processes. Doing so requires a division between the protection of

confidence, in principal, and the existence of a definitive agreement. Further separation

is required within each partition to account for the perspectives of the buyer, seller and

the process overall. Finally, supplemental externalities may play a contributory role.

For each subset, an argument must consider predominant costs and benefits associated

with the topic and ultimately determine which action best serves the process at large.

a. *The Case for Confidentiality*

Examining confidentiality, in principle, yields several justifications for its

existence and enforcement in a corporate M&A transaction. From the buyer's

perspective, it allows for increased disclosure by the seller and maximizes access to

relevant information (Mann & Schwartzbaum, 1992). With an improved understanding

of the target and its business, the buyer reduces the potential for unknown risks and is

able to more accurately appraise the value of the business (Mann & Schwartzbaum,

1992). Furthermore, the complete disclosure reduces the cost to consider a purchase by

diminishing barriers such as expertise or specific knowledge, which may inhibit the

participation of certain buyers, absent of confidentiality (Mann & Schwartzbaum,

1992).[7] By reducing the costs to consider a business and increasing the probability of an

accurate valuation, confidentiality increases the number of potential buyers and

encourages their participation in a buy/sell process. However, confidentiality imposes

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[7] The reduced necessity of "expertise" in a field is exemplified by the private-equity industry, where firms often acquire companies in various industries without necessarily possessing unique knowledge of the space. However, absent confidentiality the likelihood of such transactions taking place would be greatly reduced.

restrictions on the buyer's actions and introduces potential consequences for violations, thereby increasing the cost of transacting (Mann & Schwartzbaum, 1992). It is important to note that this cost is imposed on all potential bidders and not only the eventual buyer (Pietrafesa, 2003). Although far from trivial, this cost is significantly outweighed by the benefits associated with confidentiality.

From the seller's perspective, the primary function of confidentiality is to ensure that information provided during the buy/sell process is used solely for the evaluation of the asset in the context of forming a bid (Lesser et al, 1992). This in turn yields increased control over the sale process including: the elimination of discussions amongst groups of bidders, preventing their ability to engage in hostile bid activity, and reducing the potential for employee solicitation by competitors (Lesser et al, 1992). These factors increase the seller's willingness to provide information to bidders and reduce the costs associated with selecting and protecting confidential information. In addition, it affords the maintenance of transaction secrecy with respect to non-key personnel (Lesser et al, 1992). As public knowledge of the consideration of a sale could result in market speculation and/or unrest amongst employees regarding the transaction's impact on them, confidentiality thereby reduces the risks associated with considering a sale (Lesser et al, 1992). However, confidentiality also imposes costs on the seller by requiring the monitoring of buyers' actions and seeking legal recourse in cases of perceived violations.

In aggregate, the presence of confidentiality potentially creates significant value by ensuring a comprehensive and detailed understanding of the asset, increasing the price paid, and reducing the costs to a seller to consider a sale, which results in increased

transaction activity. The level of disclosed information permits the buyer to discard or

moderate risks associated with speculation in its valuation. This in turn allows the buyer

to increase its bid for a given asset. By reducing the costs to considering a transaction,

additional buyers are afforded the opportunity to bid on an asset and as such create a

more competitive market. Through the institution of confidence a seller is protected

from risks associated with considering a sale which results in increased consideration of

transactions. The overall social effect is an increase in consideration (due to reduced

cost of consideration) and completion of transactions (due to greater number of bidders

and higher offers).[8]

b. *The Case for Agreements*

Recognizing the validity of the case for confidence certainly justifies the body of

laws protecting it. As stated, these laws provide a de facto shield for companies and thus

negate the necessity for a written agreement with regards to the basic protection of

confidentiality (Hosteny, 2004). However, to the extent that parties wish to supplement

provisions, restrictions or interpretations regarding confidentiality laws a written

contract serves as a means for doing so (Financial Law Panel, 2000). In addition, the

contract provides an opportunity to insert clauses regarding the sale process which may

or may not be directly associated with confidentiality (Financial Law Panel, 2000). This

function is the product of two distinct motives shared by both parties: the desire to assert

strict control over the buy/sell process and to minimize the costs of breach.

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[8] It is worth noting that the while on the whole, the number of transactions are increased as a result of
instituting confidentiality, the costs can be preventative in certain cases. Section III.c noted Bar-Gill and
Parchmonsky's (2004) argument regarding an inability to trade pre-patent information due to a lack of
protection. The reverse of this is true in the case of confidentiality, with certain low value assets becoming
unmarketable – at least under the protection of confidentiality – due to the costs.

As a result of various factors, buy/sell processes have become increasingly complex (Lesser et al, 1992). Modern technology and telecommunications have improved the transferability of information, making the control of its dissemination more difficult. Multiple advisors – legal, financial, accounting – have become fixed attachments to buyers, increasing the number of parties having access to information and reducing the ability to assign accountability (Lesser et al, 1992). In an effort to exert control and provide clarity amongst would-be disorder, parties have turned to the terms of Non-Disclosure Agreements.

The function of the NDA is furthered by the prohibitively severe consequences of breach. From the buyer's perspective the costs associated with breach include legal fees, a likely substantive punitive judgment and perhaps most importantly, grave reputation effects. Given that the results of a judicial decision would almost certainly be made public, a finding of breach against a buyer would jeopardize its ability to transact in the future. Presumably, sellers would be hesitant to risk critical financial and operational data by interacting with a disreputable buyer. This would result in both an inability to bid on certain assets and an increased cost to bid on others – resulting from greater scrutiny and regulation by the seller. While the seller also undergoes legal costs in the pursuit of a remedy for breach, it bears costs directly resulting from the breach itself. By default the seller will lose the confidentiality of its information, and depending on the severity of the breach, the information may become public and/or valueless. In addition, it would assure public disclosure of the consideration of a sale, potentially resulting in public market activity, employee unrest, and even the inability to sell the asset in the future.

Presumably if a buyer attempts to use information in a manner that is harmful to the seller, the seller will become aware and seek a legal remedy, and in cases where indisputable breach has occurred, swift settlement or decisive rulings are likely. [9] However, absent substantive case law, matters are complicated by the inability to accurately estimate the probability of a verdict or damages in unclear cases[10]. Given the aforementioned consequences of breach and the instability of their application, both parties may prefer to avoid the risk of total loss via settlement consideration. While settlement may in itself be costly, it may be favored due to the elimination of more costly consequences of appealing to the courts: reputation destruction for the buyer and public disclosure for the seller. Relative to solely relying on the legal alternative, an NDA affords both parties superior control over the buy/sell process and an opportunity to reduce the cost of breach by preemptively broadening guidelines and definitions. The confidentiality agreement provides more precise descriptions of the boundaries separating the acceptable from the intolerable and discusses the repercussions for violation. As the parties to the confidentiality agreement (legal and business) will be those initially responsible for resolving disputes, CA negotiation ensures their familiarity with and acceptance of its terms. In the case of perceived breach this mutual understanding will provide a reference for settlement, thereby reducing the need for mediation by an unpredictable and more constrained judicial body. In essence the agreement gives parties an opportunity to transfer authority from a courtroom to a conference room, in which case the NDA will serve as the legal basis.

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[9] Indisputable breach is defined as readily identifiable action deemed by existing legal clauses to be strictly prohibited (e.g. securities transactions, competitive investments, etc.)
[10] Unclear breach is a de facto definition encompassing all perceived breaches that are not readily identifiable or not strictly conforming to legal definitions.

c. *The Case for Negotiation*

Like the argument for drafting above, negotiation serves as a tool to alter the contractual agreement, providing increased clarity and control. The interaction of both parties in verbal and written correspondence regarding the terms of the agreement facilitates a comprehensive understanding of expectations for the process and increases the likelihood that perceived breach will result in settlement.

A macro outline for the negotiation process begins with the seller drafting a NDA seeking maximum protection and constraint, knowing its terms will likely be contested by the buyer (Lesser et al, 1992). In negotiation, the seller will attempt to maintain the most constrictive definition of permissive use of information (Lesser et al, 1992). By doing so, the seller maximizes its ability to encompass potentially dangerous behavior within the requisites of breach. Concessions will be determined by a balance of the risk of concession against the potential loss of the bidder, keeping in mind that concessions made to one bidder on one deal may be requested during future deals (Lesser et al, 1992). In addition, the seller recognizes that concessions with regards to the dissemination of information increase the likelihood of unrecognizable breach.

From the opposite perspective, the buyer realizes that it is likely not the only bidder of the asset and in the case that it is not awarded the sale of the asset it is still bound by the terms of the agreement (Pietrafesa, 2003). In such a case, it acquires the cost of adhering to procedural requirements without any additional incentive. Keeping in mind that the negotiation of the agreement will not affect the quantity or quality of

information the bidder receives, the buyer attempts to reduce the constraints imposed on it by the agreement (Mann & Schwartzbaum, 1992). For the buyer, concessions will be determined by a balance of the risk of concession against the perceived value of the opportunity to bid on the asset. This value is the product of the perceived return on the investment and the probability of being awarded the asset. In addition, the buyer considers the future implications, in terms of alternative investments which may be prohibited by the agreement.[11]

While the primary purpose of negotiation is certainly the desire to alter the agreement for the aforementioned reasons, this paper contends that negotiation is also driven by two additional factors (which will be discussed individually under their own sub-headings below): the desire to screen the opposing party and the incentives of attorneys.

d. *Additional Considerations: The Role of Screening*

While contractual alterations are likely the primary driver of negotiations, the process itself may have significant value. As the first official transaction-specific interaction between parties, the NDA and its negotiation may serve as an information gathering tool. Specifically, the negotiation process may serve as an example of a screening game, with an adverse selection motive, as described in Section IV.

The formation of a bid is a fairly costly process for any buyer, regardless of expertise or familiarity with the specific asset. It requires significant research, complex

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[11] Depending on the terms of the NDA and the specific circumstances surrounding an alternative investment, a bidder may be prohibited from engaging in other investment activities. For example, if after failing to emerge as the final buyer of an asset, a bidder purchases a competitor, the original seller could claim that information acquired during due diligence and information exchange was used to evaluate another asset. If brought to court, an injunction could be issued and/or damages awarded.

analytics, consideration of regulatory restrictions, a team of consultants (legal, financial, tax, strategic, etc.), and access to capital. This is not to mention, perhaps the most limited of all resources, time. Bidders are required to make a substantial investment for the possibility of purchasing an asset. As the bidders are unaware of both the seller's expectation (e.g. expected premium to current market value) and the number of competing bidders, it becomes difficult to estimate the likelihood of emerging as the final bidder. Given every potential bidder's limited access to resources, and that ultimately the decision to accept a bid lies in the seller's hands, it seems reasonable for the bidder to attempt to extract information from the seller regarding its "desirability" or "standing."[12] Simply put, buyers may be using negotiation as a tactic to better understand how many additional bidders are considering the asset and how interested the seller is in having the buyer participate. Presumably, the manner in which the seller responds to requests, particularly under pressure, will serve as an indication of interest. Armed with such information the buyer is better positioned to decide whether the evaluation costs are justified. In addition, irrespective of the buyer's ability to extract information, the buyer would also favor negotiation as it would introduce a transaction cost to the inclusion of each additional bidder, thus reducing the seller's incentive to engage as many bidders as possible.

Once again, from the seller's perspective the key element is the protection of confidential information. Buyers may have an incentive to obtain the information being

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[12] The words "desirability and "standing" refer to the subjective preference of the seller amongst the potential bidders. This is generally a product of multiple variables including: past transactions in the space, expertise, reputation, regulatory concerns and access to capital. In reality this may or may not correspond to an actual rank assigned to all potential buyers prior to initial bid indications. Ultimately, this term can be thought of as the descending order by which a seller would choose its final buyer given the same bid price.

offered by the seller without a genuine interest in acquiring the asset. Absent any

transaction cost associated with receiving the information, certain parties may choose to

feign interest in an asset, acquire valuable information and either decline to bid or submit

a bargain offer.[13] While in the long term, reputation may limit such behavior, it may be

difficult to differentiate genuine disinterest from trickery, and absent repeated interaction

between the same parties, the benefit to determining this difference is likely minimal.

Through negotiation, the seller is able to create a transaction cost which reduces an

insincere buyer's incentive to participate in the process. Furthermore, as mentioned in

Section III, the security of information is most critical once a party is no longer involved

in the buy/sell process (Pietrafesa, 2003). Thus, the seller may be capable of varying

this transaction cost according to its buyer "standing", increasing the cost for those

bidders it feels are least likely to emerge as the final buyer.

Overall, the drafting and ensuing lengthy negotiation of confidentiality

agreements creates a transaction cost, reducing the incentive for ill-intentioned parties to

participate. In terms of adverse selection, this process resembles an institution designed

to separate the "bad"[14] from the "good"[15].

e. *Additional Considerations: The Role of Attorney Incentives*

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[13] A bargain offer is defined as a low-value offer, designed to remove the bidder from consideration. If for some unforeseen reason, the bid were accepted, the bidder would consider the purchase price to be very attractive and would likely be interested in completing the transaction.

[14] A "bad" buyer attempts to procure information without an intention to formulate a sincere bid. A "bad" seller attempts to include buyers that it does intend to sell the asset to in order to increase the likelihood of a premium bid and potentially spark a bidding war at later stages.

[15] A "good" buyer attempts to procure information for the purpose of forming a bid. A "good" seller solicits bids only from buyers it reasonably expects to sell the asset to.

The above justifications focus closely on the negotiation itself and the benefits associated with it, but ignore the agent responsible for the process. While the bidder and seller are certainly the primary opposing parties, both transfer authority, for this portion of the buy/sell process, to their legal counsel. Attorneys are empowered by their clients to negotiate the best terms possible. In the context of a confidentiality agreement this entails maximum protection for the seller and minimal accountability for the buyer. Given the already discussed severe repercussions associated with breach, it is no surprise that parties are willing to invest relatively paltry sums – compared to the costs associated with breach – to minimize risk. However, while this is a reasonable attitude to assume, it is not necessarily economically efficient. It is certainly possible, if not probable, for attorneys in a zealous attempt to protect their client, to cross the equilibrium where the marginal cost of negotiation equals the benefit extracted from that negotiation.

This problem is exacerbated by their method of compensation. Aside from their ethical obligation to pursue their client's wishes to the best of their ability, attorneys also have a financial incentive to prolong negotiations: an hourly fee. The majority of extra-firm counsels are compensated on an hourly basis.[16]

Lastly, while investment bankers are also participants in the negotiation process, they are not incentivized to promote negotiation and thus do not present a similar agency problem.[17] However, as bankers are not empowered to make legal decisions for their

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[16] While beyond the scope of this paper, it may be worth noting that there may be a difference between internal and external legal counsel in terms of methods of compensation and its metrics for reasonable negotiation as a result.

[17] Bankers are not uniquely knowledgeable regarding confidentiality laws and as a result are in no position to offer guidance pertaining to NDAs. In addition, bankers are not responsible for securing specific terms for either party. Lastly, and perhaps most importantly, a banker's compensation is determined as a percentage of the final asset sale price. Each incremental hour of negotiation is costly to a banker with no

client, having them serve as the middleman between negotiating parties creates an additional degree of inefficiency.

VI. *Modeling Negotiation*

As discussed in sections I and II, the purpose of this paper is to develop an economic rationale and model for the negotiation of these agreements in an attempt to justify their sizable costs. The "cases" above validate the protection of confidence as well as contracting. However, each of the explanations yields an incomplete representation of the negotiation process. Under the assumption that negotiation occurs to increase or specify the protections of the law, one would expect to see negotiation concentrated in the areas associated with the greatest value/risk; those shielding confidential information. Alternatively, if the goal is solely to familiarize both parties with the terms of the agreement, negotiating clauses at random would seem sufficient. However, neither of the above would provide any color regarding the finicky nature of NDA negotiation. If the contract is intended to be enforced in a court – where principles of reasonability are applied – one would expect negotiation only in cases of conflict of principle. Alternatively if, due to the transactions costs associated with going to court, settlement is preferred, one would not expect wording to be particularly important given the ability of both parties to reach an understanding regarding their opponent's position.

The following is a simple model for the negotiation of a corporate finance NDA which will hopefully address the aforementioned issues more comprehensively. Given that it will generally be the seller's decision to pursue an alleged breach of

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associated benefit. Thus, unlike attorneys, a banker has no financial incentive or ethical obligation to promote negotiation for its client.

confidentiality it makes sense to build the model from the seller's perspective. I have

already stated that the seller possesses information that it fears may be appropriated by

the bidder. The value of this information is directly dependant on the type of

information and the scale of the transaction. Let us call this value, **V**. If the buyer does

violate confidence, the seller faces a cost of going to court. This cost is comprised of

litigation costs as well as the ramifications of disclosing that a sale was in progress

(public market effects, internal turmoil, etc.). Let us designate this cost, **C**. For

simplicity, let us assume that when the seller takes the buyer to court he is awarded

damages, **D**, which is equal to the value of the information appropriated, **V**. Given these

assumptions, if appropriation occurs and **V > C**, the seller will choose to go to court.

However, assuming perfect information, whenever **V < C** the bidder knows the seller

won't go to court and so the bidder has an incentive to ignore confidentiality, effectively

stealing information. By drafting an NDA and engaging in negotiations, the seller can

potentially avoid the courts (and the associated costs) and enforce confidentiality via

settlement. However, this process is also costly.[18] Let us term the cost of negotiation,

N. It is fair to assume that the costs of negotiation are generally far less than those

associated with going to court. That is, *ceteris paribus*, **N < C**. Given that when **V > C**

the seller will choose to go to court and when **V < N** the seller is better off giving the

information away, it will only be in the seller's interest to negotiate when **N < V < C**.[19]

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[18] The costs associated with negotiation include the hourly fees of attorneys and the lost productivity for bankers as a result of time spent on the negotiation.

[19] One could expand this model to take into account the probability of the court awarding damages (**p**). However, this seems to unnecessarily complicate the model. The overwhelming majority of "high-value" information can be expected to already be covered, to some extent, by existing legal structures. Therefore, *ceteris paribus*, one would expect the courts to recognize breach in these areas and award damages accordingly. For this reason, the model assumes **p** for cases where **V > C** to be close to one. Similarly, one would expect courts to be able to identify information bearing negligible value and as a result are

There exists, in fact, considerable variability in the value of information contained in a corporate finance NDA. Assuming perfect information regarding the value of information and the costs of transacting, one would expect to see negotiation occur solely in the area deemed efficient above ($N < V < C$), and increase relative to the value of information within that interval. The graph below depicts the relationship between the value of information and negotiation, assuming perfect information:

Figure 6.1 – Theoretical Relationship between the Value of Information and Negotiation, Given Perfect Information
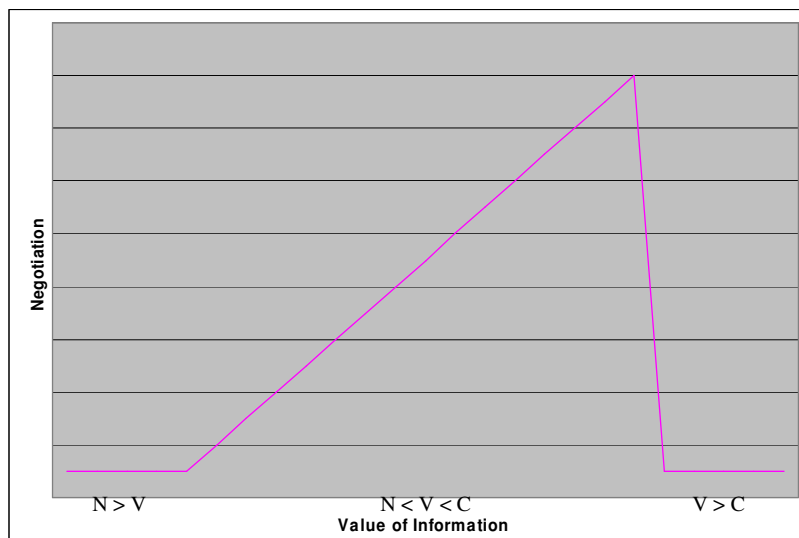
At the low value extreme ($N > V$), no negotiation occurs as the cost of negotiation outweighs the value of the information. Similarly, at the high-value extreme ($V > C$) no negotiation occurs as one would expect a court to enforce breach, thus reducing the value of negotiation. Conversely in the middle interval, negotiation increases

unlikely to award significant damages for such forms of breach. For this reason, the model assumes **p** for cases were $V < N$ to be close to zero. The area where there is the greatest ambiguity regarding what courts would decide (due to an absence of case law and the unique circumstances of every transaction) seems to be when $N < V < C$. However, since the model contends that these cases are unlikely to go to court, **p** in such cases is not influential.

proportionately to the value of information until it reaches the high-value barrier (**V >**

C).

In reality information is likely imperfect and at the margins (where N ≈ V or V ≈

C) it may be difficult to predict whether items should be negotiated or not. As a result,

negotiation may occur in "inefficient" areas and/or not occur in "efficient" areas. In

addition, given imperfect information it is difficult for parties to assign value to

information along a continuum (as done above) and compartmentalization into one of

three areas seems more reasonable. The graph below depicts a more "realistic"

representation of negotiation:

Figure 6.2 - Theoretical Relationship between the Value of Information and Negotiation, Absent Perfect

Information
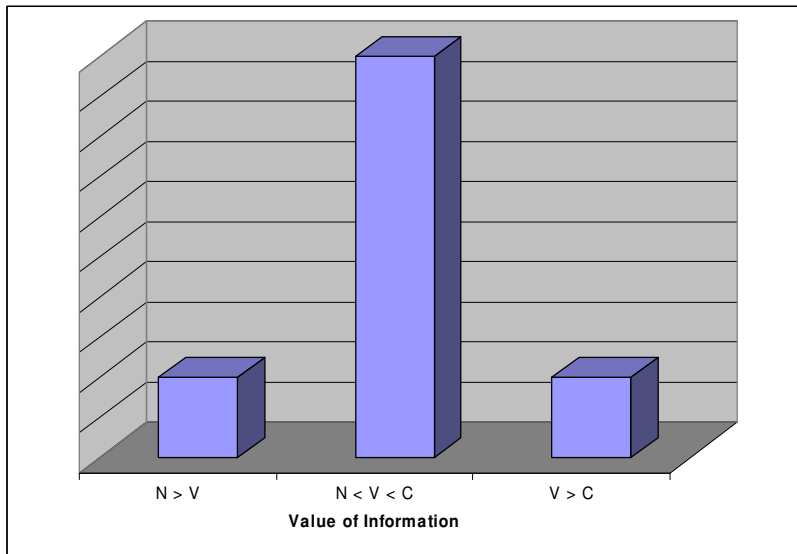
While the majority of negotiation still occurs in the interval (**N < V < C**), as a result of

imperfect information, negotiation also occurs in inefficient areas (**N > V** and **V > C**).[20]

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[20] While both extremes (N >V & V > C) are represented here at the same height, this is not meant to imply that errors would necessarily occur with equal frequency at both margins. No prediction is made here regarding the relationship between these two extremes, only between intermediate value and extreme value.

While there may be additional factors contributing to the desire to draft and negotiate written confidentiality agreements, the aforementioned seem to encompass the principal drivers of negotiation. In addition, isolating the above model provides a testable hypothesis: If the value of information affects negotiation in the manner described, then the primary purpose of a CA, as it pertains to the protection of confidentiality, is to protect the moderately valuable information which would potentially be forfeited under a court-only system. Under such a model, when examining the relationship between the value of information and negotiation, one would expect to find less negotiation at the upper and lower value tiers, with the majority concentrated in between.

VII. *Data*

To investigate the validity of the above model, I will examine a confidentiality agreement used by JP Morgan Chase during the sale of the subsidiary of a Fortune 100 company. This agreement was presented to and negotiated by 31 potential buyers. The analysis will involve a comparison between the template non-disclosure agreement sent to all buyers, and the initial altered agreement returned by each buyer. Each buyer initially commented on the NDA in writing absent any written correspondence with JP Morgan Chase or the seller, and each buyer was represented by legal counsel. As the template non-disclosure agreement was identical for every buyer (with the exception of name and date), it serves as a fair basis for comparison against the commented, returned draft.

It is important to acknowledge several weaknesses with the data. While this sale, and its CA negotiation, are typical of corporate finance M&A transactions it is only one example and NDAs from additional transactions will have to be analyzed to replicate any findings. In addition, this analysis is based on snapshot observations (initiation & response) which fail to account for interactions in the interim or after. It would perhaps be best to measure negotiations more fluidly over the entire period of the process and consider not only written but verbal negotiations. Similarly, while I will relate negotiations to the number of lines,[21] it would perhaps be ideal to relate negotiations to some temporal variable (e.g. time spent negotiating), as occasionally one word alterations demanded significantly greater attention than an entirely reconstructed clause. While these weaknesses are certainly notable, none presents any considerable obstacle to providing an initial indication of the model's accuracy. Certainly, as mentioned, there are more accurate means of measurement, however, there is no reason to assume that these measurements would provide results systematically different from the measurements used, meaning there is no reason to believe that verbal negotiations would take place in areas that written negotiations would not. The ideal forms of measurement would simply provide more data for analysis and imply an even greater transaction cost.

a. *Information Value*

Each clause of the NDA is classified according to the value associated with the information contained in that clause. As indicated in the model, this classification will be in one of three groups: low value, medium value and high value. Low value

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[21] Lines were chosen as the observed variable instead of clauses due to the considerable variability in the length of clauses (between 1 and 22 lines) as well as the partitioning of clauses across different topics.

information (V < N) can be generally summarized as minor issues that if not adhered to would likely not result in punitive action (e.g. whether documents should be returned or destroyed following the transaction). The purpose of including this information is generally to insert preferences of either party and the assumption is that these would be enforced by reputation effects and/or indifference. High value information (V > C) generally pertains to the most crucial of information (e.g. detailed financial records, performance statistics, and intellectual property). In addition to being covered by legal codes, information in that category is valuable enough to justify court action. All other information (N < V < C) falls in the middle value category (e.g. procedures for informing third parties of confidentiality).

While given the data available and the scope of this paper, these are valid measures for estimating the impact of information value on negotiation, there are several weaknesses worth noting: First, as discussed in Section VI, in reality information value exists along a continuum and cannot be strictly compartmentalized into one of three categories. Second, estimation of value is not a science and the standards described above are highly subjective, even with a compartmental format. Thirdly, the cost of negotiation is equally difficult to quantify. This is particularly important given the framework of the model whereby the size of the compartments are relative to the cost of negotiations, thus if **N** were to change so would the ranges of each of the information value categories.

The table below provides some summary statistics regarding the breakdown of the NDAs with respect to the value of the information contained and negotiated:[22]

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[22] For a detailed breakdown of the data by bidder see, "Appendix C".

Table 7.1 - Summary Statistics related to the Value of Information (all 31 bidders, initial response draft)

Information Value	Total # of Clauses	Total # of Lines	Total # of Negotiations	Total Negotiations per line	Total Negotiations per 100 lines
High Value	258	1499	98	0.0654	6.54
Medium Value	**279**	**2584**	**364**	**0.1409**	**14.09**
Low Value	205	1856	39	0.0210	2.10
Total	742	5939	501	0.0844	8.44

While these summary statistics will be broken down and analyzed further in Section

VIII, what is most notable here is the disparity between the "Medium" value information

and the other two value categories. This is best illustrated by the bar graph below:

Figure 7.1 - The Distribution of the Value of Information as a Percentage of Total Clauses, Lines, and Negotiations (all 31 bidders)
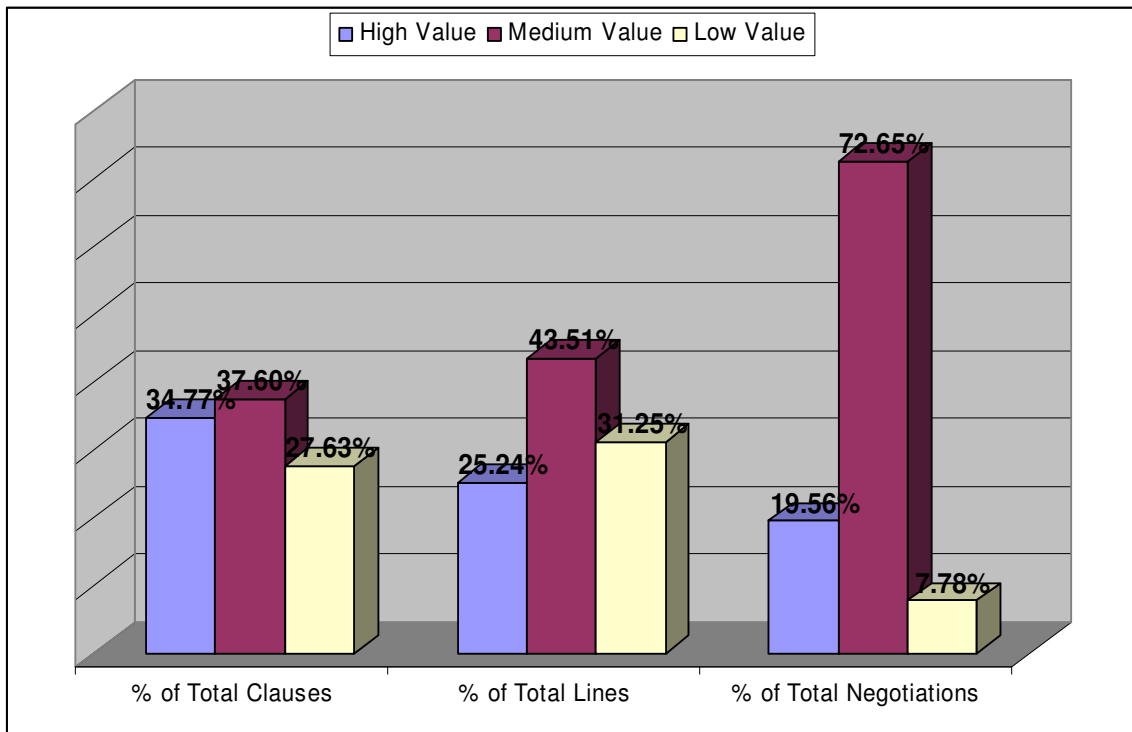
The graph above visually indicates the dominance of "Medium" value information, in content (represented by the percent of total lines) and more importantly in negotiations.

b. *Buyer Type: Strategic vs. Financial*

The potential buyers are each classified as either "Strategic" or "Financial". Strategic buyers are defined as direct competitors, corporations with investments or interests in the market of the seller, or companies looking to enter the market of the seller. On the other hand, Financial buyers view the asset primarily as a financial instrument or short-term investment. Occupied overwhelmingly by private equity firms, Financial buyers may be interested solely in the particular asset as opposed to the industry overall. This difference is significant for several reasons which will be further addressed in Section VIII.b.

The table below provides some summary statistics regarding the breakdown of the NDAs with respect to buyer type:

Table 7.2 - Summary Statistics related to Buyer Type (all 31 bidders, initial response draft)

Buyer Type	Total # of Bidders	Total # of Lines	Total # of Negotiations	Total Negotiations per line	Total Negotiations per 100 lines
Financial	27	5184	456	0.0880	8.80
Strategic	4	755	45	0.0596	5.96
Difference	**23**	**4429**	**411**	0.0284	2.84
Total	31	5939	501	0.0844	8.44

While these summary statistics will be broken down and analyzed further in Section VIII, what is most notable here is the unbalance between the quantity of data

representing Financial buyers and the quantity of data representing Strategic buyers. This discrepancy may result in difficulty analyzing the differences between these two groups.

c. *Buyer Rank*

Lastly, each buyer has been assigned a rank based on a consensus reached by JP Morgan and the seller regarding the "desirability" of each potential buyer. Desirability is comprised of multiple factors, including: the buyer's perceived interest in the market in general, the buyer's history of transactions with similar assets, the buyer's ability to fully appreciate and properly evaluate the asset, the buyer's access to capital, the buyer's organizational structure and any regulations (particularly anti-trust) restricting the buyer's ability to complete a transaction. Certainly any unique history between the buyer/seller and any reputation attached to the buyer will contribute to a buyer's desirability.

Bidders were separated into one of three categories: very favorable, favorable, and not favorable. Very favorable bidders are the ones, subjectively designated by the seller and bankers, as most likely to complete the transaction. Favorable bidders are somewhat less desirable, but are still strong potential buyers. Finally not favorable bidders are unlikely to complete the transaction but are included for reasons such as: maintenance of long-term relationship, to create context for other bids, potential to

"surprise"[23], to increase the competitiveness of the market and potentially induce

bidding war down the line.

The table below provides some summary statistics regarding the breakdown of

the NDAs with respect to buyer rank:

Table 7.3 - Summary Statistics related to Buyer Rank (all 31 bidders, initial response draft)

Buyer Rank	Total # of Bidders	Total # of Lines	Total # of Negotiations	Total Negotiations per line	Total Negotiations per 100 lines
Very Favorable	8	1502	111	0.0739	7.39
Favorable	**13**	**2554**	**291**	**0.1139**	**11.39**
Not Favorable	10	1883	99	0.0526	5.26
Total	31	5939	501	0.0844	8.44

While these summary statistics will be broken down and analyzed further in Section

VIII, what is most notable here is the disparity between the "Favorable" ranked buyers

and the other rank categories. This is best illustrated by the bar graph below:

Figure 7.2 - The Distribution of the Buyer Rank as a Percentage of Total Clauses, Lines, and Negotiations

(all 31 bidders)

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[23] "Surprise" refers to the fact that assuming the bidder has access to capital it is conceivable, although not necessarily probable, for any bidder to submit the highest bid.
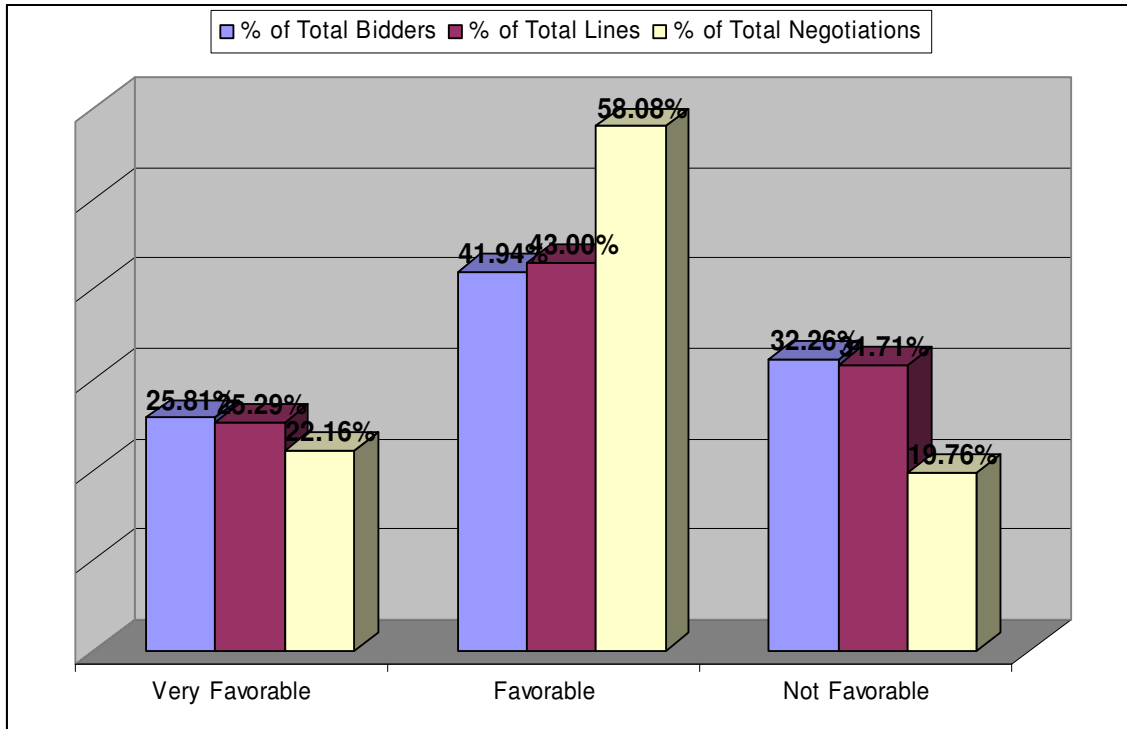
The graph above visually portrays a trend for each buyer rank category. Most notably, while the "Favorable" buyers represent 41.9% of the bidders and 43.0% of the content (# of lines) they account for more than 58.0% of negotiations. Conversely, the "Very Favorable" and "Not Favorable" categories account for disproportionately fewer negotiations.

As stated and shown above, the specific units of measurement will be the number of negotiations per line (low value, medium value, high value). Since these are generally small decimals, negotiations per 100 lines will often be used simply to provide a more visually friendly perspective. These variables will provide evidence of the negotiation strategy undertaken by the parties.

VIII. *Empirical Specification & Findings*

To reiterate, this paper will examine several factors influencing the negotiation of confidentiality agreements: Information Value, Buyer Type (Financial/Strategic), Buyer Rank and Agency. For each of these factors, this paper provides a clear prediction and for each, with the exception of agency, an empirical test.

a. *Information Value*

In section VI, the model predicted that negotiation would primarily occur where the value of information exceeded the cost of negotiation but was less than the cost associated with going to court ($N < V < C$). This assertion presumes that the role of negotiation is primarily to establish ground rules between both parties in an effort to facilitate settlement. While it is beyond the scope of this paper to precisely quantify any of these variables, the division of information of value across three value categories – high, medium, low – allows me to adequately address the role of information value in negotiation. Following the aforementioned model, one would expect more negotiation to occur in the "Medium" value category with less occurring in the "High" and "Low" value categories. In order to test this claim, a comparison of means will be used. More specifically, a statistical comparison between the means of "High", "Medium" and "Low" value clauses will be made across all bidders. If the average number of negotiations is significantly greater for the "Medium" value of information it would provide evidence in support of negotiation as a means of facilitating settlement. If, however, negotiation serves primarily to provide clarity for the courts, then one might expect to find significantly greater negotiation in the "High" value category, where

parties potentially have the most to gain from negotiation or in the "Low" value category
where issues are most unsettled.

A casual observation of the data indicates that there is a difference in the amount
of negotiation across the value of information. The table below provides summary
statistics related to the value of information:

Table 8.1 - Relationship between the Value of Information and the Amount of Negotiation (all 31 bidders)

Value of Information	Avg. # of Lines	Avg. # of Negotiations	Avg. # Negotiations per 100 lines
High	48.35	3.16	**6.37**
Medium	83.35	11.74	**13.89**
Low	59.87	1.26	**1.26**
Total	191.58	16.16	8.31

Clearly there are distinct differences between the value of information categories and the
quantity of negotiation taking place, with the most negotiations per lines taking place in
the "Medium" value category, as hypothesized. However, further analysis must be done
in order to determine whether these observations are statistically significant.

In order to test whether there is a significant difference of any kind between the
three value categories, an Analysis of Variance (ANOVA) test is used, with the value of
information as the independent variable and the negotiations per line as the dependant
variable. The results of the F-Test are provided in the table below:

Table 8.2 - Analysis of Variance – Negotiations per Line By Value of Information (H, M, L)

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Value of Information (H, M, L)	2	0.22056254	0.110281	28.7227	<.0001
Error	90	0.34555633	0.003840		
C. Total	92	0.56611886			

The results indicate that the probability of producing the data provided given a hypothesis that the means of each of the information value categories are equal is very unlikely (P < .0001). Thus we can conclude that there is some significant difference between the information categories and their effect on negotiation, but this does not provide any information regarding the specific relationship between the information value categories.

The Tukey-Kramer Honestly Significant Difference (HSD) test[24] allows us to examine this in detail. The results of the HSD are provided in the table below:

Table 8.3 - Comparisons for all pairs using Tukey-Kramer HSD for Information Value

q*	Alpha		
2.38312	0.05		
Abs(Dif)-LSD	Medium	High	Low
Medium	-0.03751	0.03772	0.08028
High	0.03772	-0.03751	0.00505
Low	0.08028	0.00505	-0.03751

Note: Positive values show pairs of means that are significantly different.

The results indicate that there are significant differences between all three variables, but that the most pronounced difference is between Medium-High (.038) and Medium-Low (0.080), with a more minor difference between High-Low (0.005). This is also represented graphically below:

Figure 8.1 - Tukey-Kramer Circle Comparison Graph for the Value of Information

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[24] The Tukey-Kramer HSD test investigates all possible comparisons in a group of two or more means. For more information on how to interpret the results of this test, see "Appendix A".
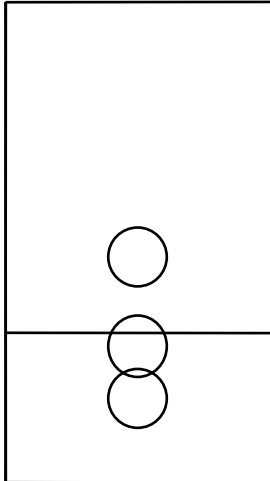
In this comparison circle graph the top circle represents the "Medium" value, followed by "High" and "Low". While the High and Low are slightly significantly different from one another, the "Medium" category is profoundly different.

These results support my hypothesis regarding the value of information, indicating that there is significantly greater negotiation taking place in the "Medium" value category than in the "High" or "Low" value categories. It is important to note that this relationship holds even when controlling for "Buyer Type" and "Buyer Rank".[25]

b. *Buyer Type: Strategic vs. Financial*

In order to determine the impact of "Buyer Type" (Strategic/Financial) on negotiations, a similar comparison of means will be made between the mean number of negotiations per line for Strategic and Financial buyers. Unfortunately, the differences in the characteristics of Strategic and Financial buyers are not easily comparable. Each buyer type has incentives to both negotiate more and less than the other type, making the formation of a prediction fairly complex.

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[25] However, in terms of "Buyer Type" these results are driven by Financial buyers, as the sample of Strategic buyers is too small. For the details of this analysis see "Appendix B".

In terms of desirability, Strategic bidders are significantly advantaged due to their potential realization of synergies.[26] This potential for synergies increases the value of the asset in the eye of a Strategic buyer and thus allows Strategic bidders the opportunity to submit bids generally exceeding those of Financial buyers. This increases the desirability of a Strategic buyer in the eyes of the seller. More importantly, unlike Financial buyers, Strategic buyers are chosen based on their expertise or affiliation with a certain industry related to the asset being sold. Thus there is less of a need to justify their interest in an asset. Overall, unlike Financial buyers, Strategic buyers do not need to "justify" their interest in a given asset and thus based on desirability one would expect Strategic bidders to negotiate less than their Financial counterparts.

On the other hand, in terms of restrictions imposed by the NDA, Strategic buyers suffer greater penalties than most Financial buyers. As already stated, Financial buyers may invest in a variety of industries, whereas most Strategic bidders are focused on one. Thus any industry-specific limitations inserted in the confidentiality agreement would affect Strategic buyers more. It would follow then that Strategic buyers would have more to gain from concessions than Financial buyers, so based on this factor alone one would expect Strategic buyers to negotiate more heavily than Financial buyers. This argument is furthered when one considers that Strategic bidders are capable of violating confidentiality in a manner that is particularly difficult to prove in court (e.g. adjusting their business activity). However, given the repeated interaction between two companies in the same industry (such as the Strategic bidder and the seller) one would expect the

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[26] Strategic buyers have the opportunity to realize economies of scale as well as reduced competition as a result of acquisition.

consequences of reputation to be greater in such a situation and potentially great enough to balance out this effect.

Weighing the merits of the opposing motives mentioned above, the argument regarding the desirability of each buyer type seems more compelling, particularly in light of this paper's focus on the role of screening, as described in Section V.d. While a Strategic bidder's ability to use the disclosed information is certainly of concern to a seller, it would likely be better investigated via an examination of concessions granted rather than quantity of negotiations. Thus, empirically, one would expect the mean number of negotiations for Strategic bidders to be significantly less than that of their Financial counterparts.

A casual observation of the data indicates that there is a difference in the amount of negotiation between Strategic and Financial buyers. The table below provides some summary statistics:

Table 8.4 - Relationship between Buyer Type and the Amount of Negotiation (all 31 bidders)

Type	# of Bidders	Avg. # of Lines	Avg. # of Negotiations	Avg. # of Negotiations per 100 Lines
Financial	27	167.23	16.89	**8.66**
Strategic	4	188.75	11.25	**5.91**
Difference		(21.52)	5.64	**2.75**

According to the table, despite having on average fewer lines in their contracts, Financial bidders negotiate more per contract than Strategic bidders, resulting in an average 2.75 increase in the average number of negotiations per 100 lines (an increase of 46.5%).

In order to test the significance of these observations a t-test was used. The standard deviation of "Avg. Negotiations per 100 Lines", for Financial bidders was 5.17 and 5.26 for the Strategic bidders. The results of the t-test are provided below:

Table 8.5 – Summary of t-test regarding the Relationship between Buyer Type and Negotiations per 100 Lines

Difference	2.747	t Ratio	0.976157
Std Err Dif	2.814	DF	3.908243
Upper CL Dif	10.632	Prob > |t|	0.3855
Lower CL Dif	-5.138	Prob > t	0.1927
Confidence	0.95	Prob < t	0.8073

The t-test indicated that the probability of getting results as extreme as the data indicated, given that the true means of negotiations per lines for Strategic and Financial buyers were equal was not likely (P < 0.20). However, these results are not significant at the P < 0.05 level necessary to confirm the validity of the observations above. It is worth noting that the small sample of Strategic bidders makes it difficult to assert definitively that the relationship described does not exist. Further investigation with a larger sample could provide a more conclusive result.

An additional flaw of this analysis is that it is potentially confounded by the implications of buyer rank, which is further discussed in section VIII.c, below. All four of the Strategic buyers are labeled as "Very Favorable" and thus are systematically different from the complete pool of Financial buyers which are distributed across all three rank categories. Comparing the Strategic buyers directly with "Very Favorable" Financial buyers yields a different picture, as shown in the table below:

Table 8.6 - Relationship between Buyer Type and the Amount of Negotiation (only for "Very Favorable" bidders)

Type	# of Bidders	Avg. # of Lines	Avg. # of Negotiations	Avg. # of Negotiations per 100 Lines
Financial	4	183.25	11.5	6.21
Strategic	4	188.75	11.25	5.91
New Difference	0	**(5.5)**	**0.25**	**0.3**
Old Difference (w/all 27 Financial bidders)	23	**(21.52)**	**5.64**	**2.75**

The gap between the Financial and Strategic buyers, when controlled for buyer rank, is reduced dramatically. These results perhaps suggest that there is no difference in the way Strategic and Financial buyers negotiate, outside of the role of rank, given that Strategic buyers will generally be classified as "Very Favorable". Alternatively it might suggest that the mixed motives, mentioned above, could balance or cancel each other out.

c. *Buyer Rank*

As indicated in section VII, the buyers have been each assigned a rank of favorability: very favorable, favorable or not favorable. Like the Strategic buyers, one would expect certain Financial buyers (particularly those at both extreme ends) to be aware of their favorability.[27] This would in turn reduce the need for such bidders to negotiate as heavily as those in the "Favorable" category which may be trying to sort out

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[27] While bidders are unaware of which other bidders are participating in the process, they are aware of the qualifications relevant to a seller and are also aware of their ability to satisfy those qualifications.

their proximity to the higher or lower end. Keeping this in mind, using a statistical

comparison of means, one would expect the mean number of negotiations to be

significantly greater in the "Favorable" category than in the "Very Favorable" or "Not

Favorable" categories.

A casual observation of the data indicates that there is a difference in the amount

of negotiation across buyer rank. The table below provides some summary statistics:

Table 8.7 - Relationship between Buyer Rank and the Amount of Negotiation (all 31 bidders)

Type	# of Bidders	Avg. # of Lines	Avg. # of Negotiations	Avg. # of Negotiations per 100 Lines
Very Favorable	8	186	11.375	**6.06**
Favorable	13	196.77	22.92	**11.58**
Not Favorable	10	189.3	11.2	**5.85**

Clearly there are distinct differences across the buyer ranks related to quantity of

negotiation taking place, with almost twice as many negotiations taking place in the

"Favorable" category as in either of the other categories. These summary statistics

support my hypothesis. However, further analysis must be done in order to determine

whether these observations are statistically significant.

In order to test whether there is a significant difference of any kind between the

three rank categories an ANOVA test is again used, with Buyer Rank as the independent

variable and negotiations per line as the dependant variable. The results of the F-Test

are provided in the table below:

Table 8.8 - Analysis of Variance – Negotiations per Line By Buyer Rank (VF, F, NF)

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Buyer Rank (VF, F, NF)	2	0.02394863	0.011974	5.9440	0.0071

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Error	28	0.05640662	0.002015		
C. Total	30	0.08035525			

The results indicate that the probability of producing the data provided given a hypothesis that the means of each of the buyer rank categories is very unlikely ($P < 0.007$). Thus we can conclude that there is some significant difference between the buyer rank categories and their effect on negotiation, but this does not provide any information regarding the specific relationship between the buyer rank categories.

As in the case of "Information Value", here an HSD test will allow us to examine the relationship with buyer rank in greater detail. The results of the HSD test are provided in the table below:

Table 8.9 - Comparisons for all pairs using Tukey-Kramer HSD for Buyer Rank

	q*	Alpha	
	2.47429	0.05	
Abs(Dif)-LSD	Favorable	Very Favorable	Not Favorable
Favorable	-0.04356	0.00521	0.01054
Very Favorable	0.00521	-0.05553	-0.05054
Not Favorable	0.01054	-0.05054	-0.04967

Note: Positive values show pairs of means that are significantly different.

The results indicate that there is only a significant difference in the negotiations per line between the "Favorable" buyers and the two other types, with no significant difference between the "Very Favorable" and "Not Favorable". This is also represented graphically below:

Figure 8.2 - Tukey-Kramer Circle Comparison Graph for Buyer Rank
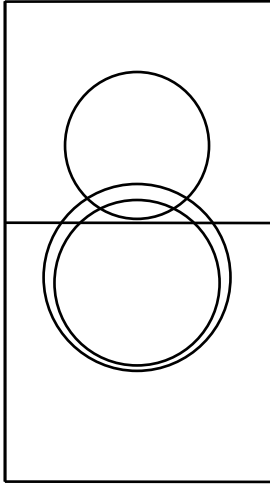
In this comparison circle graph the top circle represents the "Favorable" buyers, followed by the larger "Very Favorable" and the enclosed "Not Favorable" buyers. The separation of the "Favorable" buyers from the other two indicates that these buyers produce significantly more negotiations per line than the other two buyer ranks.

These results support my hypothesis regarding buyer rank, indicating that there is significantly greater negotiation by "Favorable" bidders than by "Very Favorable" or "Not Favorable" bidders.

d. *Principal-Agent Conflict*

As mentioned in Section V, part e, attorneys likely generate a principal-agent conflict which increases the overall volume of negotiation. However, assuming bidders do not provide their attorneys with specific instructions regarding the determination of rank and/or the value of information – and there is no literature or other indication otherwise – from the attorney's perspective it doesn't matter what is being negotiated, more is better. Thus, one would not expect to find any specific pattern embedded in the types of parties or clauses, related to the agency problem presented by attorneys.

However, this does not discount the role of attorneys in the creation of negotiation and it may be worth noting that random dispersion of such efforts could potentially cloud the results of the other factors.

IX.   *Conclusion and Discussion*

The purpose of this study was to evaluate the efficacy of non-disclosure agreements in M&A transactions and to determine what, if any, economic function was served by the associated costly negotiations. From the literature review three points are made profoundly clear: First, the negotiation of CA's in corporate finance transactions is certainly arduous and time consuming. Second, corporate finance NDAs and their negotiations clearly differ from confidentiality agreements in other areas (e.g. Reporter-Source, and Intellectual Property). Third, and most important, there does not seem to be any consensus regarding whether negotiation is desirable and if so, what purpose it serves.

In an effort to answer the "why" related to the three issues mentioned above, a model was constructed to justify the role of negotiations in corporate finance NDAs. According to this model, introduced in Section V and developed further in Section VI, there are three factors that influence the form and quantity of negotiation specific to M&A confidentiality agreements: the latitude of value across the document's contents, the role screening and adverse-selection, and a principal-agent conflict.

The value of information hypothesis suggests that individual contract clauses protect content with varying degrees of value. Depending on the value of the information contained in the clause, different enforcement mechanisms are exercised.

Specifically, those at the higher end of the spectrum are generally resolved via court action and those at the lower end are simply sacrificed or enforced via reputation effects. Since the intermediate group is too valuable to risk, yet not valuable enough to justify the costs associated with court action, CA's are constructed primarily to provide protection for these clauses. Negotiation facilitates interaction and mutual understanding by both parties prior to the dissemination of information. This, combined with the threat of reputation effects and court action, enables settlement, thus creating a mechanism for the protection of intermediate value information without incurring sizable court costs. An empirical investigation indicated that a highly significant difference existed between the three value categories (High, Medium, Low). Specifically, the "Medium" value of information was negotiated significantly more heavily than either of the other two value categories, confirming the value of information hypothesis. However, there was also a slightly significant difference between the "High" and "Low" value categories. Although this was not initially predicted it is not completely surprising. As shown in Figure 6.2, given imperfect information one would expect to find inefficient negotiations taking place at the margins. Comparing such marginal decisions in the "High" versus the "Low" value categories, one would expect parties to be more cautious at the "High" end. More simply put, when unsure of whether a clause was worth negotiating, parties preferred to err on the safe side at the high-end and negotiate it regardless, but were content to potentially forfeit information on the low-end rather than incur an immediate cost.

The screening and adverse-selection hypothesis assumes that buyers have an interest in gauging their probability of emerging as the final bidder. Accordingly, it

suggests that buyers use negotiation as a tactic for determining their "rank" relative to other bidders. More specifically, it asserts that intermediate tier buyers ("Favorable") will be most incentivized to engage in screening and as a result will negotiate more heavily than upper ("Very Favorable) or lower ("Not Favorable") tier buyers. This prediction rests primarily on the assumption that the majority of information used to determine desirability in the eyes of the seller is known and easily accessible (e.g. access to capital, historical interest in an industry/asset, regulation restrictions, etc.) and as a result those at the upper and lower ends are aware of their status. Analysis of the data yielded results consistent with the hypothesis: "Favorable" bidders negotiated significantly more than "Very Favorable" or "Not Favorable" bidders. Moreover, unlike the case with information value, there was no significant difference between the negotiation of "Very Favorable" and "Not Favorable" bidders.

In addition to determining the role of rank, the screening hypothesis attempted to investigate the role of buyer type (Strategic vs. Financial). Based on an analysis of the motives of the respective bidder types, I expected the Financial buyers to negotiate more heavily. While initial observations of summary statistics appeared to offer some evidence of such a relationship, further analysis accounting for the confounding effect of rank indicated very little difference related to the quantity of negotiation. Reflective explanations for the failure to discover a significant difference include: the inexistence of any difference, the mixed motives of Strategic buyers, and an inadequate sample size.

Finally, this paper postulated that attorneys are incentivized, both morally and financially, to negotiate aggressively wherever beneficial terms are potentially obtainable. However, attorneys do not necessarily take into account the cost-benefit

related to each negotiation and likely do not act optimally. More specifically, it is likely the case that attorneys negotiate "Low" value clauses where the procurement of a concession is outweighed by the cost of negotiation, as well as "High" value clauses where a concession is discounted or voided by the need to pursue legal recourse. It is beyond the scope of this paper to attempt to quantify or model the impact of this principal-agent conflict.

As noted throughout, there are limitations to this paper, particularly related to the data and its investigation. While this does not discount the model presented, replication of these findings using more comprehensive data would be needed to further support the conclusions above. In addition to performing similar analysis on a larger dataset, future studies should attempt to use more accurate measures (e.g. time as opposed to lines as a measurement of negotiation) and perhaps develop a more precise method for quantifying the value of information. Doing so would reveal a more detailed pattern of negotiation, allowing for greater behavioral implications (e.g. the incorporation of upper "Medium" value clauses in law or efficiently ignoring upper and lower value clauses). Future studies should also revisit the impact of buyer type on negotiation. Most importantly, as already mentioned, future studies could attempt to form a model for measuring the role of attorney agency. Given that no such model was formed here it is not only unrealistic to quantify the cost associated with attorney agency but it is even difficult to determine its contribution to negotiation relative to the other hypotheses.

Despite the limitations of this paper, several notable recommendations can be made based on its findings. Following the suggestions of the Financial Law Panel (2001) some degree of standardization could reduce unnecessary negotiations by

establishing industry guidelines. According to the value of information theory presented in this paper, such guidelines would be particularly useful for "High" and "Low" value clauses. As noted, given perfect information no negotiations would take place in these areas. While not the focal point of this study, "High" and "Low" value clauses combined to produce 137 negotiations which accounted for 27.3% of all negotiations. If industry standards in these areas could help reduce judgment errors at the margins, significant gains in terms of costs and efficiency would be realized. The role of screening is likely irreducible as parties will always seek a method to reduce any information asymmetry and there does not seem to be a way to reduce negotiation while still permitting parties to discern their relative rank. However, the role of attorneys certainly merits investigation. Beyond the suggestions for future studies, increased scrutiny of attorney behavior could potentially yield significant benefits. First, more specific instruction regarding the goals of the negotiation process would limit an attorney's focus only to worthy clauses and compel the use of cost-benefit analyses. In addition, the removal or elimination of bankers as intermediaries would significantly reduce the inefficiencies generated by having a legally unqualified and unauthorized party act as a middleman. Lastly an exploration of alternative compensation structures (e.g. per-deal fees or internal counsel) could yield interesting results with respect to changes in attorney behavior.

Most importantly, while this paper has managed to present an economic rationale for the justification of negotiation in M&A transactions it does not defend the level of negotiation currently taking place. Regardless of the benefits associated with negotiation, the process is both costly and time consuming. Despite various complaints,

there is an apparent lack of industry awareness regarding the relative inefficiencies of corporate finance NDA negotiations. While beyond the reach of this paper alone, continued research and commentary on this topic would help increase attentiveness and potentially result in the adoption of change.

Appendices

Appendix A: Interpreting the Tukey-Kramer Honestly Significant Difference Test

Note: The following is exerted it its entirety from the manual for a statistical software program, *JMP IN*.[28]

Tukey HSD gives a test that is sized for all differences among the means. This is the Tukey or Tukey-Kramer HSD (honestly significant difference) test. This test is an exact alpha-level test if the sample sizes are the same and conservative if the sample sizes are different. Each multiple comparison test begins with a comparison circles plot, which is a visual representation of group mean comparisons. The plot follows with a reveal table of means comparisons. You can compare each pair of group means visually by examining how the comparison circles intersect. The outside angle of intersection tells you whether group means are significantly different. Circles for means that are significantly different either do not intersect or intersect slightly so that the outside angle of intersection is less than 90 degrees. If the circles intersect by an angle of more than 90 degrees or if they are nested, the means are not significantly different.

Angle of Intersection and Significance

angle greater than 90 degrees	angle equal to 90 degrees	angle less than 90 degrees
not significantly different	borderline significantly different	significantly different
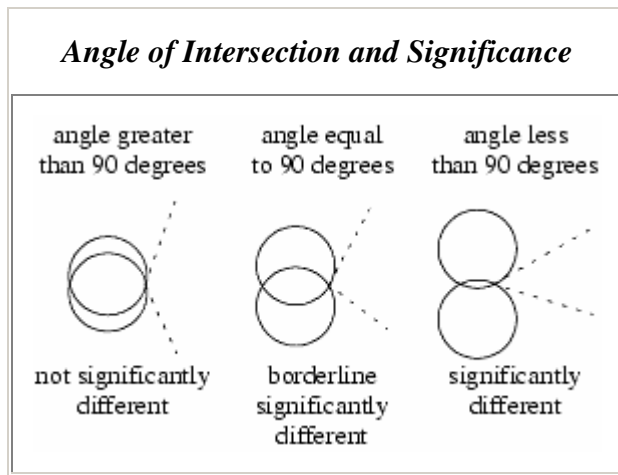
Confid Quantile shows the *t*-statistic or other corresponding quantiles used for confidence intervals.

t	Alpha
2.04227	0.05

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[28] For additional information see: Creighton, L., Lehman, A. & Sall, J. (2005). *JMP Start Statistics: A Guide to Statistics and Data Analysis Using JMP and JMP IN Software*. Toronto: Thomson & Brooks/Cole.

LSD Threshold Matrix shows a matrix showing if a difference exceeds the least significant difference for all comparisons.

Abs(Dif)-LSD

	C	B	A
C	-2.8802	-1.9183	1.4679
B	-1.9183	-3.0791	0.2867
A	1.4679	0.2867	-1.9202

Positive values show pairs of means that are significantly different.

Appendix B: The Impact of Information Value, Controlled for "Buyer Rank" & "Buyer

Type"

Buyer Rank:

The table below provides summary statistics regarding the number of

negotiations per 100 lines across the information value categories, separated by each

buyer rank:

Table A.1 - Relationship between the Value of Information and the Amount of Negotiation, Separated by

Buyer Rank (all 31 bidders)

Value of Information	Very Favorable Avg. # of Negotiations per 100 lines	Favorable Avg. # of Negotiations per 100 lines	Not Favorable Avg. # of Negotiations per 100 lines
High	5.05	8.63	4.49
Medium	**12.15**	**18.85**	**8.85**
Low	2.42	2.96	0.77

Clearly, at least from a preliminary observation, the concentration of negotiation in the

"Medium" value category, as described in VIII.a, appears to hold when controlling for

"Buyer Rank".

In order to test the significance of this observation an ANOVA test was

conducted for each of the buyer rank categories. The results of the F-Tests are provided

below:

Table A.2 - Analysis of Variance – Negotiation per Line By Value of Information (H, M, L), Very
Favorable Buyers

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Value of Information (H, M, L)	2	0.04056677	0.020283	5.6990	0.0105
Error	21	0.07474159	0.003559		
C. Total	23	0.11530836			

Table A.3 - Analysis of Variance – Negotiation per Line By Value of Information (H, M, L), Favorable Buyers

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Value of Information (H, M, L)	2	0.16851910	0.084260	19.0473	<.0001
Error	36	0.15925352	0.004424		
C. Total	38	0.32777262			

Table A.4 - Analysis of Variance – Negotiation per Line By Value of Information (H, M, L), Not Favorable Buyers

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Value of Information (H, M, L)	2	0.03266989	0.016335	11.8005	0.0002
Error	27	0.03737497	0.001384		
C. Total	29	0.07004486			

Table A.2, A.3 and A.4 indicate that the difference in negotiation across information

values for "Very Favorable", "Favorable" and "Not Favorable" buyers, respectively, is

highly significant.

The Tukey-Kramer HSD test confirms these results:

Table A.5 - Comparisons for all pairs using Tukey-Kramer HSD for Information Value, Very Favorable Buyers

	q*	Alpha	
	2.52057	0.05	
Abs(Dif)-LSD	Medium	High	Low
Medium	-0.07519	-0.00415	0.02215
High	-0.00415	-0.07519	-0.04889
Low	0.02215	-0.04889	-0.07519

Note: Positive values show pairs of means that are significantly different.

Table A.6 - Comparisons for all pairs using Tukey-Kramer HSD for Information Value, Favorable Buyers

	q*	Alpha	
	2.44430	0.05	
Abs(Dif)-LSD	Medium	High	Low
Medium	-0.06377	0.03837	0.09510
High	0.03837	-0.06377	-0.00703
Low	0.09510	-0.00703	-0.06377

Note: Positive values show pairs of means that are significantly different.

Table A.7 - Comparisons for all pairs using Tukey-Kramer HSD for Information Value, Not Favorable Buyers

	q*	Alpha	
	2.47942	0.05	

Abs(Dif)-LSD	Medium	High	Low
Medium	-0.04125	0.00235	0.03949
High	0.00235	-0.04125	-0.00411
Low	0.03949	-0.00411	-0.04125

Note: Positive values show pairs of means that are significantly different.

The positive values in the Medium-High and Medium-Low boxes of Table A.5, A.6 and A.7 indicate that for Very Favorable, Favorable, and Not Favorable buyers, respectively, the "Medium" value category is negotiated significantly more than the other two value categories.

Buyer Type:

The table below provides summary statistics regarding the number of negotiations per 100 lines across the information value categories, separated by each buyer type:

Table A.8 - Relationship between the value of information and the amount of negotiation, separated by buyer type (all 31 bidders)

Value of Information	Strategic Avg. # of Negotiations per 100 lines	Financial Avg. # of Negotiations per 100 lines
High	4.03	6.71
Medium	**10.35**	**14.41**
Low	1.54	2.20

Clearly, at least from a preliminary observation, the concentration of negotiation in the "Medium" value category, as described in VIII.a, appears to hold when controlling for "Buyer Type".

In order to test the significance of this observation an ANOVA test was conducted for each of the buyer type categories. The results of the F-Tests are provided below:

Table A.9 - Analysis of Variance – Negotiation per Line By Value of Information (H, M, L), Financial Buyers

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Value of Information (H, M, L)	2	0.22056254	0.110281	28.7227	<.0001
Error	90	0.34555633	0.003840		
C. Total	92	0.56611886			

Table A.10 - Analysis of Variance – Negotiation per Line By Value of Information (H, M, L), Strategic Buyers

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Value of Information (H, M, L)	2	0.01649450	0.008247	2.0976	0.1787
Error	9	0.03538519	0.003932		
C. Total	11	0.05187969			

Table A.9 indicates that the difference in negotiation across information values for the Financial buyers is highly significant (P <.0001). While Table A.10 indicates that there is a noticeable difference in the negotiation across information values for the Strategic buyers (P < 0.20) it does not indicate that these results are statistically significant. Reflecting on the summary statistics, it is hard to imagine that a difference in the number of negotiations of such magnitude (157% between Medium-High and 572% between Medium-Low) is not significant. The inability of the ANOVA test to deem these results as statistically significant can be attributed to the small sample of four Strategic bidders.

The Tukey-Kramer HSD test provides similar results:

Table A.11 - Comparisons for all pairs using Tukey-Kramer HSD for Information Value, Financial buyers

q*	Alpha		
2.38927	0.05		
Abs(Dif)-LSD	Medium	High	Low
Medium	-0.04044	0.03657	0.08174
High	0.03657	-0.04044	0.00473
Low	0.08174	0.00473	-0.04044

Note: Positive values show pairs of means that are significantly different.

Table A.12 - Comparisons for all pairs using Tukey-Kramer HSD for Information Value, Strategic buyers

q*	Alpha		
2.79201	0.05		
Abs(Dif)-LSD	Medium	High	Low
Medium	-0.12379	-0.06062	-0.03570
High	-0.06062	-0.12379	-0.09887
Low	-0.03570	-0.09887	-0.12379

Note: Positive values show pairs of means that are significantly different.

The positive values in the Medium-High and Medium-Low boxes of Table A.11 indicate that for Financial buyers the "Medium" value category is negotiated significantly more than the other two value categories. Table A.12 shows no significant difference between the value categories for the Strategic buyers, but again, this is likely the result of the small sample size.

Appendix C: Summary of Data Separated by Bidder

Buyer	Rank	Type	Total			High Value			Med Value			Low Value		
			Lines	Negot.	N/L	Lines	Negot.	N/L	Lines	Negot.	N/L	Lines	Negot.	N/L
B1	1	Financial	191	17	0.089	49	3	0.061	81	13	0.160	61	1	0.016
B2	2	Financial	209	34	0.163	49	8	0.163	84	23	0.274	76	3	0.039
B3	2	Financial	181	20	0.110	47	2	0.043	77	12	0.156	57	6	0.105
B4	1	Financial	204	25	0.123	51	6	0.118	96	17	0.177	57	2	0.035
B5	3	Financial	194	12	0.062	46	1	0.022	86	10	0.116	62	1	0.016
B6	2	Financial	190	5	0.026	46	1	0.022	79	2	0.025	65	2	0.031
B7	3	Financial	188	7	0.037	47	2	0.043	82	5	0.061	59	0	0.000
B8	2	Financial	196	24	0.122	51	4	0.078	86	20	0.233	59	0	0.000
B9	3	Financial	187	5	0.027	47	1	0.021	81	4	0.049	59	0	0.000
B10	2	Financial	206	34	0.165	49	6	0.122	98	26	0.265	59	2	0.034
B11	2	Financial	186	31	0.167	46	5	0.109	79	25	0.316	61	1	0.016
B12	2	Financial	202	23	0.114	52	6	0.115	88	11	0.125	62	6	0.097
B13	3	Financial	185	14	0.076	46	3	0.065	80	11	0.138	59	0	0.000
B14	3	Financial	184	7	0.038	46	1	0.022	78	5	0.064	60	1	0.017
B15	3	Financial	195	19	0.097	55	5	0.091	81	14	0.173	59	0	0.000
B16	3	Financial	183	0	0.000	46	0	0.000	78	0	0.000	59	0	0.000
B17	1	Strategic	197	16	0.081	49	3	0.061	83	9	0.108	65	4	0.062
B18	2	Financial	201	16	0.080	48	3	0.063	94	13	0.138	59	0	0.000
B19	2	Financial	208	35	0.168	55	10	0.182	94	25	0.266	59	0	0.000
B20	1	Financial	181	22	0.122	47	3	0.064	77	17	0.221	57	2	0.035
B21	2	Financial	208	23	0.111	52	4	0.077	88	17	0.193	68	2	0.029
B22	1	Strategic	187	23	0.123	50	5	0.100	78	18	0.231	59	0	0.000
B23	2	Financial	189	5	0.026	45	1	0.022	85	4	0.047	59	0	0.000
B24	2	Financial	189	29	0.153	48	3	0.063	80	25	0.313	61	1	0.016
B25	2	Financial	189	12	0.063	47	3	0.064	81	8	0.099	61	1	0.016
B26	3	Financial	187	13	0.070	46	3	0.065	82	10	0.122	59	0	0.000
B27	3	Financial	184	17	0.092	51	3	0.059	88	12	0.136	45	2	0.044
B28	1	Financial	171	2	0.012	47	0	0.000	80	0	0.000	44	2	0.045
B29	1	Strategic	185	4	0.022	46	0	0.000	80	4	0.050	59	0	0.000
B30	1	Strategic	186	2	0.011	46	0	0.000	81	2	0.025	59	0	0.000
B31	3	Financial	196	5	0.026	49	3	0.061	79	2	0.025	68	0	0.000

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