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Creating Value with Acquisition Based Dynamic Capabilities (ABDC): A Study of Mergers and Acquisitions in the Regulated Energy Industry

Rich Berard Jr.
Georgia State University

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The author of this dissertation is:

Rich Berard, Jr.
Georgia State University
Robinson College of Business
35 Broad Street NW
Atlanta, GA 30303

The director of this dissertation is:

Dr. Conrad Ciccotello
Atlanta, GA 30326
Georgia State University
3344 Peachtree Road,
Atlanta, GA 30326

Creating Value with Acquisition Based Dynamic Capabilities (ABDC): A Study of Mergers and Acquisitions in the Regulated Energy Industry

BY

Rich Berard, Jr.

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

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ACCEPTANCE

This dissertation was prepared under the direction of the *Rich Berard, Jr.* dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctoral of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

Richard D. Phillips, Dean

DISSERTATION COMMITTEE

Dr. Conrad Ciccotello (Chair)

Dr. Steven Dionne

Dr. Felix Rioja

ABSTRACT

Creating Value with Acquisition Based Dynamic Capabilities (ABDC): A Study of Mergers and Acquisitions in the Regulated Energy Industry

BY

Rich Berard, Jr.

Committee Chair: Conrad Ciccotello
Major Academic Unit: Robinson School of Business

M&A research has consistently shown that value is destroyed for a majority of acquirers. Despite initial small positive gains at deal announcement, within a year of closing the transaction a majority of acquirers experience overall negative returns. Nevertheless, the constant pressures to grow leave company leaders few other viable options than pursuing M&A. This ever present cycle of value destruction is of interest to both scholars and practitioners. Of interest is what can be done differently by the acquirer to prevent the inevitable value erosion from occurring. To investigate this question, the author develops an adapted version of the Acquisition Based Dynamic Capabilities (ABDC) framework, a theoretical extension of Dynamic Capability theory. The framework is helpful in identifying what corporate M&A capabilities contribute to value creation through a transaction lifecycle. The adapted ABDC framework provides a means to quantify the differing impacts to value creation among the M&A capabilities of "Selecting and Identifying", "Transacting and Executing" and "Reconfiguring and Integrating".

The empirical study utilizes 337 regulated energy, public company transactions, closed between 1995 and 2014. This industry is appropriate to study the application of this theory as it benefits from long dated deal timelines and specific milestone events (deal announcement, regulatory approval, financial closing, etc.) providing clear points of delineation for measurement purposes. Performance is measured using weak and semi-strong specifications of shareholder returns with a "golden set" of measures identified. Additionally, the impacts on the ABDC measures from shock waves, bandwagon effects, management traits, financial factors, deal complexity and other relevant factors are all evaluated to test for their impacts on the analyzed transactions. The results suggest that despite many acquirers receiving some positive value accretion from announcement and short-term post-closing returns, larger one year post-close reductions in value eclipse previous gains for most acquirers. The results validate the importance of the Reconfiguring and Integrating (R&I) phase of an acquisition. Comparisons to Top and Poor Performers provide a clear set of recommendations for future energy industry acquirers.

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ABBREVIATIONS AND DEFINITIONS

ABDC – Acquisition Based Dynamic Capabilities

BHAR – Buy and Hold Abnormal Returns

CAR – Cumulative Abnormal Return

DC – Dynamic Capabilities

DOE – Department of Energy

EPA – Environmental Protection Agency

FMA – First Mover Advantage

GSU – Georgia State University

"Laggard" – A company that exhibits bottom quartile performance prior to its acquisition

"Leader" – A company that exhibits top quartile performance prior to an acquisition

LOI – Letter of Intent

M&A – Mergers and Acquisitions

NDA – Non Disclosure Agreement

OLS – Ordinary Least Squares

"Poor Performer" – A company that has bottom quartile performance in an ABDC category

R&I – Reconfiguring and Integrating

RBV – Resource Based View of the Firm

S&I – Selecting and Identifying

SEC – Securities and Exchange Commission

"Top Performer" – A company that has top quartile performance in an ABDC category

T&E – Transacting and Executing

VRIN – Valuable, Rare, Inimitable and Non Substitutable

8K – Form 8-K signed and submitted to the SEC

CHAPTER I - INTRODUCTION

The Problem

Researchers have provided a rather robust body of scholarly work in the field of mergers and acquisitions. It has been over four decades since the pioneers in the field such as: Fama, Pfeifer, Gort, Chandler and Rumelt published their foundational works in industrial organization and applied merger and acquisition research, thus jumpstarting the academic inquiry of why firms merge, acquire or are sold. Throughout the 1970s and 1980s hundreds of journal articles were published, further advancing theory as new contributors stood on the shoulders of the early luminaries. The 1990s with the advancements in technology, the field continued its rapid advancement with many contributions featuring massive data sets and increasingly complex quantitative methodologies. By the 2000s the body of research had become so vast that dozens of literature, meta and systematic review articles were published to assist the academic community in synthesizing the hundreds of M&A related papers spanning fields such as economics, finance, management, sociology, accounting, and organizational behavior.

There is ample support in the literature to conclude that when taken on average and across industries from a value creation perspective: targets (sellers) gain, bidders (buyers) lose or break even and the combined returns to the combined firms are modest but positive (Becher et al. 2012). More specifically average premiums paid to sellers have been estimated to be between 12-14%, while buyer gains hover around 0%. The positive performance of the targets is not surprising. In most situations, if it were not for an attractive deal (oftentimes via some material transaction premium) a target is highly unlikely to transact. Nevertheless, to some the performance findings regarding the bidders are far more surprising. Specifically, evaluating 50 M&A studies evaluating buyer performance by transaction (Bruner 2009 and 2011), found that 26% of deals show value destruction (significant negative returns), 31% show value conservation (returns insignificant from zero) and only 43% show value creation (significant positive returns). Although the averages derived from the Bruner analysis is enlightening it should be digested with some caution. Bruner's methodology was to take an average of

estimates across 50 published studies irrespective of industry or geography. The Bruner results also failed to take into account the importance of time horizons. Buyer positive returns tend to primarily exist around the period of deal announcement and some short time window following deal closing. Returns from the acquirer's perspective tend to deteriorate soon thereafter.

The primary focus of this Dissertation is an attempt to provide a new methodology of evaluating M&A transactions where results are provided across specific periods of time throughout a deal lifecycle. This multiple measurement approach when mapped to critical business activities is informative in determining what capabilities add or destroy value at different critical M&A milestone points. To accomplish this, the research is framed in an adapted theoretical context that provides an enhancement to common practice.

Theoretical Framing

To gain insight into what drives the acquirer's true financial outcome and to help inform practitioners on what can be done differently, a better theoretical approach to analyzing an M&A transaction is needed. The simple financial algorithmic approach of a single metric of return calculated once at some interval (often 3, 10 or 30 days) post-closing (or post-announcement) of the transaction is somewhat limited. A far superior approach would be to evaluate the transaction through an alternative lens to observe how the firm's resources deployed on the deal are creating or destroying value throughout the deal lifecycle. The regulated energy industry is a rather attractive industry for such an analysis as its transactions tend to have long deal cycles with multiple critical and publicly disclosed transaction milestone dates. To operationalize this approach requires first introducing the Resource Based View of the Firm (RBV) theory and working up through Dynamic Capability (DC) theory and ultimately adapt Acquisition Based Dynamic Capability (ABDC) concepts.

To fully grasp the saliency of ABDC theory in addressing the primary research question of this study, one needs to start with a brief introduction of RBV. Despite RBV being able to trace its origin all the way back to Ricardian economics, it was another economist Edith Penrose who is widely considered as the single individual whose contribution is the most

influential in the development of what is now known as the RBV. Penrose's master work "The Theory of the Growth of the Firm" (Penrose, 1959), conceptualized the firm as an entity meaning much more than a simple administrative unit by adding depth to the definition. Penrose regarded the firm as a complex institution created by people to serve the needs of people and with its success linked to the efficient deployment of productive resources. According to Penrose, dynamic interactions between resources and managerial decisions organized within an administrative framework not only provide a thorough explanation of heterogeneity between firms but also enable firms to have unique advantages relative to their competitors. Additionally, according to Penrose, in order for a firm to have a true lasting competitive advantage, the transfer of resources between firms must be difficult and the chance or ability of replication also made difficult. Cut to its core, Penrose provided the notion that firms are people, people are resources with heterogeneous skill sets, to the extent that these abilities are organized and managed efficiently they have the potential of providing a competitive advantage. This competitive advantage is sustainable as long as the skills are not easily imitable and the resources (people) are not free to flow from one administrative unit (firm) to another. Much of modern day RBV is built on these basic Penrose conclusions that were established six decades ago.

Whereas RBV provides a well thought out theory of how firms can earn super normal profits in equilibrium in a static world, the RBV has a limited ability to address several aspects of how firms today should develop and deploy their resources to achieve sustainable competitive advantage. The theory of Dynamic Capabilities (DC) evolved from the static limitations of RBV and is better equipped to dealing with a dynamic world. As a result, DC should be viewed as a logical extension and compliment to RBV and in many aspects an improved method of evaluating and understanding firm performance in today's business environment (Kamasak, 2013).

Teece is considered by most to be the forefather of Dynamic Capability theory. In seminal works first published in 1997 with Pisano and Shuen and then in multiple individual contributions in the following years, most academics credit Teece with not only the initial labeling of Dynamic Capabilities but also the widespread acceptance that the theory now enjoys. According to Teece, the Dynamic Capabilities framework provides that organizations must integrate and reconfigure their resources and capabilities to renew or alter their resource mix to

be able to maintain competitive advantage in a dynamic and changing environment (Teece, 1997). Furthermore, according to Teece, resources are acquired from a "sensing", "seizing" and "reconfiguring" process which provides a fundamental theoretical framework with regards to how DC theory addresses resource acquisition or M&A activity in general. However, this simplistic framework is generally light on specifics and is purely theoretical in nature.

So, to better understand the theoretical application of Dynamic Capabilities under the situation of a corporate acquisition, the focus must shift from Dynamic Capabilities and introduce its extension, Acquisition Based Dynamic Capabilities (ABDC) theory. According to the pioneers of the theory including Helfat, Anand, Capron and Mitchell, Acquisition Based Dynamic Capabilities (ABDC) includes three main elements; acquisition Selection, Identification and Reconfiguration activities (Helfat, 2009) thus shifting from the Teece general model.

An enhancement to the Capron and Anand ABDC framework can be accomplished via a few slight definitional modifications. Whereas Capron and Anand divided the ABDC capabilities into "Selection", "Identification" and "Reconfiguration" a more practitioner friendly (or stated differently, what happens in the real world) approach would be to define the groupings as "Selecting and Identifying", "Transacting and Executing" and "Reconfiguring and Integrating". Capron and Anand were correct to identify the importance of Selection and Identification. However, in practice these are activities that are occurring simultaneously and in many ways are interlinked with each other. Additionally, these activities are almost always performed by the same individuals (resources) within an acquiring firm. To have them as two of the three identified ABDC groupings distorts the manner in which these activities are performed as well as how resources performing these activities are deployed. Thus the first modification to the Capron and Anand ABDC model is the combining of what were once the two categories of Selection and Identification.

One additional necessary modification to the Capron and Anand framework is the identification of the unique category of "Transacting and Executing". In the original framework these critical capabilities (and resources) appear to be embedded in the "Identification" category. Grouping these critical capabilities into the "Identification" category distorts what "Identification" is intended to capture. Additionally, it also muddies the waters as to what

capabilities that are really being identified in addition to the resources that are being deployed to perform these activities. Similar to the redefining of "Selection and Identification" the creation of the "Transacting and Executing" grouping is an enhancement to the original Capron and Anand framework.

The final Capron and Anand grouping, "Reconfiguration" and "Reconfiguring and Integrating" in this author's enhancement is virtually identical. The only practical difference is a slight modification to the grouping name to reflect the term "integration" which is a term of art for M&A practitioners. Otherwise the capabilities and resources necessary to be deployed to be successful are the same for "Reconfiguration" and "Reconfiguring and Integrating". Making these slight modifications to the ABDC framework of Capron and Anand provides a practical enhancement to the ABDC theory and has the added benefit of closer resembling the true real world process and necessary capability and resource requirements of M&A practitioners.

Once the modified ABDC approach is developed, the researcher is now well positioned to query this Dissertation's primary research question:

"What Acquisition Based Dynamic Capabilities (ABDC) are the most critical in enhancing value for energy companies engaged in M&A?"

Methods

To attempt to answer the question of "What acquisition based dynamic capabilities are the most critical in enhancing value for energy companies engaged in M&A?" a methodology was needed to be established. The sections below summarize the data sampling and collection method, identified theoretical constructs, definitions of groupings, descriptions of dependent and independent variables, specified models and the approach to the analysis.

The subject of the research is the effectiveness of ABDC capabilities in M&A transactions occurring in US investor owned (excludes municipal "munis" and cooperative "co-ops") regulated energy companies. As the research utilizes equity stock returns as part of the calculation of the dependent variable, the sample set is limited to publicly owned and traded

companies as there is a daily near real time public mark of their traded equity. To provide for a robust data set the study contains all the regulated energy transactions that have occurred over the twenty year time horizon 1995 to 2014. The twenty year window provided adequate variation among industry conditions and also provided a robust set of observations for the analytical inquiry.

The desire to bind the study to the regulated energy industry had some attractive benefits. For example, by keeping the study focused within one industry provides for a more controlled environment where factor effects were more easily isolated and evaluated. An additional benefit of utilizing the regulated energy industry was the long transaction cycles that occurs from deal origination to when the acquisition is finally approved and eventually integrated into the acquirer. It is not uncommon for regulatory cycles to occur over a period of multiple months and for deals to span from start to finish 18 months or more. This amount of elapsed time provided for very discernible periods to test the ABDC capability groups.

The study was limited to using public companies. As a limitation of utilizing shareholder value metrics (stock price) as a means of determining changes in equity value, the study was limited in using firms that have publicly available reporting of the their share prices. Private companies by their general nature do not have this requirement. SNL Energy Transaction Database, Thompson Reuters and Bloomberg Financial Services provided some of the necessary transaction data for the M&A deals that are the focus of this study. Capital IQ and SNL databases were helpful in providing additional industry specific transaction detail and some company specific financial and performance data. These data sources also provided basic information on the management teams and leadership experience of the acquiring firms. Company website and SEC filings were also helpful in filling in additional data gaps.

Overall 1,075 transactions were considered for inclusion into the study. 545 of the transactions were discarded as a result of having a closing cycle (the amount of time lapse between when a deal was announced to when it closed) of less than 30 days. An additional 193 transactions were excluded from the data set as a result of the corporate ownership structure of the acquirer being private (unlisted).

After discarding the private entity transactions and short cycled minor transactions, the dataset was reduced to include 337 successful acquisitions of regulated energy entities (some were entire company, some assets or subsidiary transactions) made by publicly traded companies between 1995 and 2014. As the research investigates ABDC capabilities as measured through the lens of the acquirer, the target companies need not be public companies and in many of the studied transactions they were not.

In order to evaluate the effectiveness of specific Acquisition Based Dynamic Capabilities at the firm and transaction level, a quantitative general M&A transaction model was developed. ABDC and general M&A theory was helpful in suggesting a series of theoretical constructs that should be modeled in the development of a theoretically sound set of variance models. The general research model identifies constructs (Industry Specific Shock, Consolidation Wave, Industry Dynamics, Bandwagon Factors Impacting Management, Management Traits of the Buyer, Financial Environment and Structure of the Transaction, Complexity of the Deal). The rather robust body of merger and acquisition literature was utilized to determine that these constructs should be included in the general model and also suggests what relationships these constructs should have among each other and the dependent variable.

In order to evaluate the effectiveness of specific Acquisition Based Dynamic Capabilities at the firm and transaction level, the acquisitions were classified into different groupings. One classification was based on the primary sector of the industry that the target business represented ("Industry Groups"). Another classification was based on overall company performance ("Leaders and Laggards"). One grouping was based on ABDC performance of each acquirer as measured at various timing intervals of the transaction ("Top Performers" and "Poor Performers").

Dependent variables were defined to quantify the variance observed across the ABDC groupings. As proxy measures for the effectiveness of a company's efforts towards S&I, T&E and R&I, value creation (or destruction) measurements were calculated and defined as the acquirer's change in market equity value over a specified period of time. This approach allows for the measure of the relative value enhancement (or destruction) caused by the firm's resource

performance within the various ABDC time intervals throughout the deal lifecycle. Admittedly, these are proxy measures of theoretical constructs but arguably a well-reasoned approach.

Additionally, the analysis focused on both weak and semi-strong approaches to measuring value creation. The weak forms included simple return metrics whereas the semi-strong approaches included methodologies that attempt to determine how much better off the returns are for the acquiring firm was as a result of performing a certain action vis-à-vis a hypothetical situation of having done nothing. This approach controlled for the fact that markets are dynamic and looking at static returns of a transaction without normalizing for market activity provides an inaccurate measure of true value creation.

The combination of weak and semi-strong methods in addition to the multitudes of timing horizons that could be utilized provides for ample ways of measuring the S&I, T&I and R&I capabilities. As a result, where it makes sense to work with one set of measures, a "Golden Measure" has been defined to reflect the single best way to evaluate each of the ABDC capabilities.

To operationalize the Construct Model into actual testable equations the constructs needed to be developed into a set of quantifiable independent variables to help explain variation in the dependent variables. Prior research was informative with regards to the appropriate variables to utilize and their expected impact on the ABDC categories. The prior work of Anand (2005), Capron and Pistre (2002), Capron, Dussauge and Mitchell (1998), Capron, Mitchell and Swaminathan (2001), Bruner (2011), Haleblian (2009), Helfat, et al. (2009) Teece (2009) among many others provide the guiding principles for much of the variable design.

With the construct model developed, variables defined, descriptive statistics provided and data collected, a set of empirical models was provided so that the relationships and impacts of the independent variables on the specified dependent (ABDC) variables could be evaluated. Separate models are defined for each of the ABDC categories, Selecting and Identifying, Transacting and Executing and Reconfiguring and Integrating.

Analysis

Standard analytical techniques were utilized to test for central tendencies, significant relationships and differences and to quantify expected impacts of the defined factors on the ABDC category variables in the context of the 337 regulated public company energy transaction dataset.

Central tendencies were evaluated using statistical techniques on the descriptive data. Means and medians were analyzed to determine central tendencies and data skewness was evaluated via histogram and scatterplot analysis. Outliers were evaluated to ensure data consistency throughout the data set. T-testing for the differences of the means of the variables was utilized to determine significant differences across subgroups of the transaction data set. This included analysis comparing Leaders versus Laggards, across industry segment and analysis of the factors differentiating Top Performers (for each ABDC category) with Poor Performers (for each ABDC category). Correlation analysis was used to describe the strength and the direction of the linear relationships between the variables. Pearson Moment Correlation Coefficients (r) were calculated for the continuous variables in the study, whereas Spearman (rho) was calculated for the binary dummy variables.

Seven specified models were run through ordinary least squares (OLS) multivariate and quantile regression to determine the variation in the dependent variables that are explained by the predictor variables and to also evaluate what factors have a statistically significant relationship and their impact on the dependent variables. Results were evaluated across industry groups and comparisons across Leaders and Laggards. The Models overall adequacy was evaluated utilizing the F statistic and its associated p factor. R square and adjusted R square metrics were reviewed to determine how much of the variation in the dependent variable was explained by the predictor variables. Each model was also evaluated for power and the implied factor effects of its results. The residuals of the models were evaluated to ensure for normality and to also evaluate for heteroscedasticity. Similarly, Variable Inflation Factors (VIFs) were analyzed to check for any problematic levels of multicollinearity of the independent variables. Additionally, individual independent variable analysis was conducted for significance and impact evaluating beta coefficients, t-scores and p-values.

The results were then compared to determine common themes across the data set and to help provide insight into the topic of where value is created and lost across the ABDC categories and whether certain factors are significantly contributing to the value enhancement (or destruction) during each ABDC phase of a regulated energy acquisition. This analysis provides the insight necessary to properly address the research question:

> "***What Acquisition Based Dynamic Capabilities (ABDC) are the most critical in enhancing value for energy companies engaged in M&A***.

Results

Overall, companies on average do see some small value enhancement from announcement returns as a result of their performance in Selecting and Identifying. These results suggest on average about 0-1% value enhancement for the acquirer when a transaction is announced. Of the 337 transactions studied, 184 (56.4%) had positive announcement returns when measured on a 3 day abnormal basis. On average Utility and Midstream and Transportation transactions had better announcement returns than Resource and Electric company transactions. Overall, the Top Performers gain averaged 2.2%, whereas, the Poor Performers experienced value destruction of -1.5% during S&I.

Furthermore, companies on average experience additional value enhancement at the closing of their transactions (measured on a 30 day post-close timing window) during the Transacting and Executing phase of the deal. These results suggest on average about 0.3% value enhancement for the acquirer after the closing of the transaction. Of the 337 transactions studied, 176 (52.2%) had positive post-closing short-term returns as measured on a 30 day abnormal basis. On average Resources and Utility transactions had better short-term post-close transaction results than Midstream and Transportation and Electric company transactions. The spreads between the Top Performers and Poor Performers also widened. The gains of the better acquirers averaged 5.1% short-term post-close, whereas the poorer acquirers experienced value destruction of -3.6%.

Despite the value enhancement experienced by a majority of firms between deal announcement and short-term post-close, a large majority of firms gave back those gains (and often times much more value) over the first year post-close during Reconfiguring and Integrating. The median value loss over the first 360 days post-close for the 337 studied transactions was -7.4% as only 99 of the 337 (29.4%) deals had positive returns during the Reconfiguring and Integrating phase of the transaction. Results on average were poor across all of the industry segments ranging from a high of -4.9% for the Utility deals to a low of -9.8% for the Midstream and Transportation transactions. Each industry group experienced value destruction in approximately 65-70% of the transactions in their energy segment during R&I. Even companies that are considered as being strong at R&I, averaged a mere 3.3% gain, whereas the companies who exhibited poor R&I performance experienced a loss in value of over 20% during the first 360 days.

When viewed in totality, these results are consistent with previous research concerning the relatively poor performance of acquisition returns for the acquirer. However, the results do suggest that some of the differences can be traced to different approaches to measurement and timing differences of the event window. Furthermore, what does appear to be even more interesting are the significant differences between Top Performers and Poor Performers for the individual ABDC categories. There appears to be significant differences in how these two groups approach M&A and a very significant difference in market returns as a result.

Contributions

Contributions are provided to both theory and practice as a result of the findings of this research. The theoretical contribution is twofold. Firstly, the study provides a much needed quantification of ABDC theory and, secondly, the ABDC theoretical model is extended to better reflect the M&A transaction process. Practical contributions can be grouped into three categories. Firstly, the better approach to measurement of M&A performance across critical steps of a deal transaction. Secondly, the identification of what factors contribute to differences in M&A return performance across transactions. Lastly, the reiteration of the importance of the

capabilities involved in Reconfiguring and Integrating to overall M&A deal transaction success and the large gap between Top and Poor Performers in R&I.

Dissertation Outline

This Dissertation is organized into eight primary chapters: 1) this Introduction section which provides an outline and summary of the Dissertation, 2) a Literature Review chapter which provides the theoretical framing and buildup of the applicable theory, 3) the Adapted ABDC Framework chapter develops the argument for the need to extend the existing ABDC theory, 4) the Methods section describes the study's methodology and analytical approach and utilized techniques, 5) the Results section contains the analysis and results of the utilized analytical techniques, 6) the Discussion chapter evaluates the results and provides the key findings of the research, 7) the chapter on Contributions highlight the potential contributions to both practice and theory as a result of this research, and 8) the Conclusion chapter concludes the Dissertation with the author's view on limitations, some recommendations for future research and a brief summary of the Dissertation.

CHAPTER II - LITERATURE REVIEW

M&A Overview

Researchers have provided a rather robust body of scholarly work in the field of mergers and acquisitions. It has been over four decades since the pioneers in the field published their foundational works in industrial organization and applied merger and acquisition research, thus jumpstarting the academic inquiry into why firms merge, acquire or are sold. Throughout the 1970s and 1980s hundreds of journal articles were published, further advancing theory as new contributors stood on the shoulders of the early luminaries. The 1990s with the advancements in technology and with the availability of enhanced data, the field continued its rapid advancement with many contributions featuring massive data sets and increasingly complex quantitative methodologies. By the 2000s the body of research had become so vast that dozens of literature, meta and systematic review articles were published to assist the academic community in synthesizing the vast array of M&A related papers spanning fields such as economics, finance, management, sociology, accounting, and organizational behavior.

There is ample support in the literature to conclude that when taken on average and across industries from a value creation perspective: targets (sellers) gain, bidders (buyers) lose or break even and the combined returns to the combined firms are modest but positive (Becher et al. 2012). More specifically average premiums paid to sellers have been estimated to be between 12-14%, while buyer gains hover around 0%. The positive performance of the targets is not surprising. In most situations, if it were not for an attractive deal (oftentimes via some material transaction premium) a target is highly unlikely to transact. However, to some the findings regarding the bidders are far more surprising. Specifically, evaluating 50 M&A studies evaluating buyer performance by transaction (Bruner 2009 and 2011), found that 26% of deals show value destruction (significant negative returns), 31% show value conservation (returns insignificant from zero) and only 43% show value creation (significant positive returns). Although the averages derived from the Bruner analysis is enlightening it should be digested

with some caution. Bruner's methodology was to take an average of estimates across 50 published studies irrespective of industry, time horizon or geography. Nevertheless, the conclusion of poor buyer results was consistent across these studies as buyers only added value on two out of every five transactions. The Bruner results did fail to take into account the importance of time horizons. Buyer positive returns tended to primarily exist around the period of deal announcement and some short time window following deal closing. Returns from the acquirer's perspective tended to deteriorate soon thereafter. What is unclear is how acquirers perform over the entire deal lifecycle. Although the Bruner analysis (and other papers with similar methodologies and consistent findings) is helpful in the understanding of "How?" unattractive M&A performance is for the acquirer, we need to look to merger wave theory for a slightly better explanation as to the "why?"

M&A Research Approaches

To explore potential reasons of why acquirers' performance is poor t first needs to be established how transaction and deal return measurement is performed. Four research approaches offer a means to forming a view regarding M&A success (profitability); they are Accounting Studies, Surveys of Executives, Clinical (Case) Studies and Event Studies. Each of these approaches offers its own weaknesses and strengths which are highlighted below. No research approach is perfect, however some command more respect in the academic community than others, whereas other methods tend to be the preferred method of evaluation for practitioners. For reasons that should become clear, the event study approach defined below is the most appropriate method for this research project.

Accounting Studies examine the reported financial results of acquirers before and after acquisitions to determine how financial performance changed. The focus of these studies often range across net income, return on equity or assets, earnings per share (EPS) and other standard financial metrics. A preferred approach is to utilize a method of matched sample comparisons as they benchmark firms that acquire, with a control group of firms that do not

acquire. The most appropriate comparisons commonly utilized control for drivers such as industry, size, scope of operations and other key company differentiating factors. The thrust of these studies is to determine if those who have made acquisitions have outperformed those who have not over a specific time horizon. One of the advantages of accounting studies is that the financial data is certified through an audit function and are thus deemed as trustworthy. Weaknesses of utilizing accounting studies are the timeliness (and backward looking nature) of the financial statements, as well as the actual comparability of the target and control groups being utilized (Bruner, 2011).

The Surveying of Executives is another approach utilized to study M&A performance. By asking key stakeholders (often through structured and semi-structured interviews and questionnaires) their point of view, often provides interesting insight towards the motivations, challenges and eventual effectiveness of a company specific M&A transaction. The more powerful studies (although somewhat rare in form) are conducting in a manner that provides for a statistically significant amount of informants across each study transaction to provide for data that can be analyzed through widely accepted analytical techniques. Benefits of this approach are that it provides insights into value creation that may not be understood or generally apparent in the broader equity markets. Additionally, this approach can often provide insight into nuanced specifics of the transaction otherwise unobtainable from a broader market or accounting base approach. The survey approach does have its own limitations that researchers need to work through. Low participation rates in most survey instruments and accurate recollection of past events are two weaknesses of most concern (Bruner, 2011). Additionally, rules of disclosure and treatment of Material Non Public Information (MNPI) also often prevent research programs from utilizing this design methodology from being fully transparent (Yin, 1997).

Clinical Studies are another approach commonly utilized by researchers to study M&A performance. Clinical studies focus on one transaction or on a small sample in great depth, usually deriving insights from field interviews with executives and knowledgeable observers. By its general nature it is inductive research (Myers, 2012). By drilling down into lower levels of background and detail of the target transaction, researchers can often add a

richness to their data and analysis that would otherwise not be possible. One of the strengths of this inductive research method is that it is ideal for discovering new patterns of behavior that might not be otherwise noticeable. However, like most case study research this approach does have some limitations as far as generalizability and statistical rigor. Furthermore, the time investment required to conduct a rigorous case study in the hopes of uncovering meaningful results is somewhat of a gamble (Yin, 2005).

M&A Event Studies examine the abnormal returns to shareholders in the period surrounding key dates of a transaction. One method that is commonly used is to calculate the simple return for one period, calculated as the change in share price and any dividend that is paid, divided by the closing share price over the same period. An abnormal return is simply the simple return less an industry standard measure over the same period. These studies are regarded to be forward looking on the assumption that share prices equal the present value of expected future cash flows to shareholders. Event studies come with many advantages. They provide a direct measure of the value that is created to an investor for the given event and are typically the standard approach that is utilized when evaluating the overall effectiveness of a transaction over a given time period. Despite their popularity, event studies do have some negative aspects. They do require a firm belief that equity markets are efficient, including being transparent and rational and that they provide a near real time indication of value.

Additionally, event studies are subject to confounding events which could skew the returns within a specified time window and cloud the analysis of the studied phenomenon. Nevertheless, despite the limitations, since the 1970s, event studies have dominated the field of M&A scholarship (Bruner, 2011). For the purposes of this research project the event study approach is most appropriate.

Measurement of M&A Performance

Regardless of which of the four study design approaches described above, is deemed to be optimal for the given M&A research project, the researcher must still determine the appropriate manner to measure performance for the transactions in the study. Three broad groupings exist, defined by Bruner as, "Weak form", "Semi-strong form" and "Strong form". Each measurement approach provides for its own strengths and weaknesses and is discussed below (Bruner, 2011).

Weak form methods are generally concerned with the basic question of whether the share price increased or did it decrease over a specified period of time. Is the stock price higher after the transaction than it was before? And from the answer the conclusion of whether the equity investor is better off after the transaction than they were before the transaction would be addressed. This "before and after" approach is widespread, especially in the popular press and in most practitioner based business periodicals. However, it is considered a weak form test as it neglects to control for any of the countless other factors that could have been the cause of the change in stock price. Stock prices are impacted by company events, industry events, general world and economic conditions, and a near infinite amount of other factors that could have impacted whether a given stock had a positive or negative price adjustment over a giver period. As a result, weak form test are notoriously unreliable. However, they are in many cases the standard that which company leaders (CEOs, Boards of Directors, and others) are held to and cannot be summarily discarded. Weak form performance measures though imperfect play an important role in bridging academic research with practitioner based behavior. Company leaders are well aware of the weak form performance metrics and tend to be rather oblivious to semi-strong or strong metrics so completely ignoring the inferior methods run the risk of making the research less approachable to the typical practitioner (Bruner, 2011).

An improvement from a weak form analysis is an obtained by utilizing a semi-strong form approach. Did the acquirer's returns exceed a certain benchmark? Are shareholders better off compared to the return on a benchmark investment? To the extent that the benchmark is a close proxy for what an alternative investment with a similar return and risk profile further

enhances the strength of this analysis. The semi-strong approach is widely utilized in academic research because it is far superior to the weak form approach as it controls for the possibility that the observed returns were actually driven by broader industry or economic factors out of the control of the acquiring company or directly related to the merger. Although far superior to a weak form approach, the semi-strong approach is also not perfect as it is highly sensitive to the benchmark that is selected. Researchers attempt to limit this effect by taking great care in choosing appropriate benchmarks and also whenever possible utilizing large sample sizes (Bruner, 2011).

Strong form approaches attempt to answer the question of whether shareholders are better off after the transaction than what they would have been had the deal never taken place. This approach attempts to quantify the true opportunity cost of a given transaction and would be considered the "gold standard" of M&A performance measurement. The problem is that in an absolute sense the concept is purely theoretical and unobservable. In reality, companies either transact or not and having a parallel existence of studying the acquiring company over one period of time under two versions of reality (1-transaction completed and, 2-transaction not completed) is purely theoretical and immeasurable, thus the strong form is not operational in the real research world. As a result, researchers are left with various derivations of semi-strong approaches whereas practitioners latch onto weak form measures for the reasons suggested above (Bruner, 2011).

This research project primarily utilizes semi-strong form approaches. Additionally, much care and effort is utilized in choosing appropriate benchmarks and control groups when quantifying the abnormal returns reported here. Nevertheless, a theoretical weakness of any project like this will be the appropriateness of the chosen controlling benchmarks. Additionally, despite being weak form approaches, simple returns are also reported and analyzed in this research project. Admittedly, inferior to semi-strong metrics in many instances, they are the standard bearer from a practitioner perspective and should not be summarily discarded. Many a CEO has been fired; shareholder lawsuit filed and Board of Directors reconstituted as a result of absolute poor stock performance. Whether the equity returns would have been viewed in this situation in a more positive manner on an abnormal

return basis is irrelevant. As this project attempts to tap into the motivations of CEOs and management teams to acquire despite the historically poor performance of acquirers, further supporting the fact that simple weak form return approaches should be included in this analysis

Merger Wave Theory

In addition to the importance of study approach (event study) and measurement approach (weak form and semi-strong form) timing also matters. To help in understanding M&A timing impacts on performance, merger wave theory needs to be discussed. A merger wave can be defined as a short period of intense merger activity resulting from a material industry event. Merger waves happen at the aggregate level (across industries) and within industries. Merger waves are not new although the study of them by academics is an area of relative recent interest. It is estimated that nearly 50% of the mergers that have occurred in the United States between 1890 and 1990 occurred during one of four merger waves.

Merger wave theory and its impact on the M&A research literature has really caught traction in the past decade and is now considered widely accepted across academia. Andrade et al. (2001) reasons that merger waves are the result of sudden and unexpected shocks to industry structure. Andrade, analyzing 4,300 deals over a 26 year period concluded that not only does merger activity cluster by industry into waves; these waves are the result of industry shocks. Andrade further argued that the most impactful shock to any industry is one that results in widespread deregulation. Deregulation is not the only shock capable of triggering a merger wave, although it appears to be the stimulus with the most direct result.

Continuing the work of Andrade, the contributions of Harford (2004), Carow et al. (2004) and McNamara et al. (2008), significantly advanced the study of wave impacts on M&A. Harford came first in his paper titled "What Drives Merger Waves?" The author studied M&A activity over a twenty year period with results that supported the earlier findings of Andrade. He concluded that waves are the result of shocks and are often caused by deregulation. Merger waves tended to be industry specific and when enough industries were in a simultaneous

wave, a market wide wave would be experienced. Harford also introduced market liquidity as a necessary condition to have a wave. The liquidity requirement was an enhancement building on the research of Andrade.

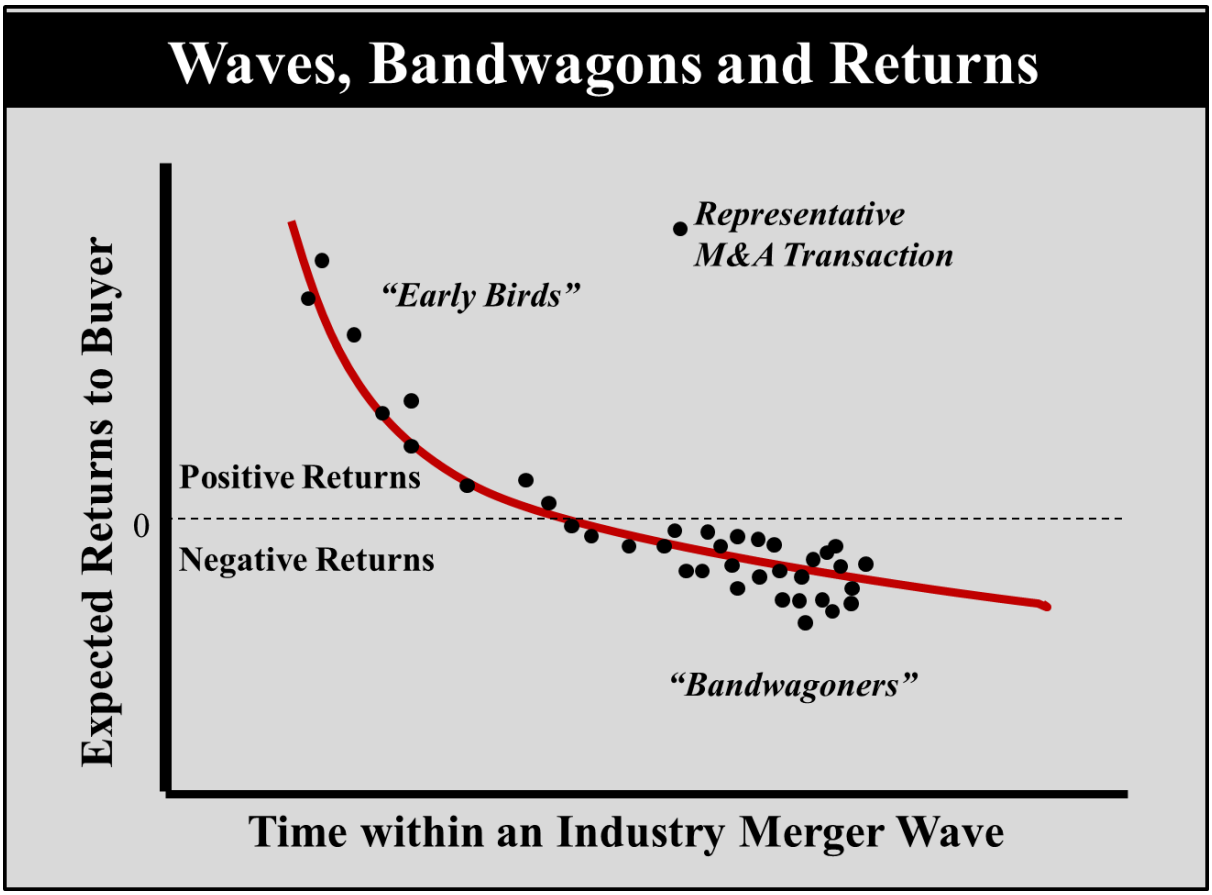
Andrade and Harford were among the first to identify (or at least name) merger wave theory and what causes them within industries, whereas Carow et al. (2004) was among the first to suggest that M&A transactions within a wave vary in expected financial outcome depending on the timing of the transaction. The Carow paper even asks within its title "Do Early Birds Get the Returns?" Carow finds that early adopters (companies that complete transactions early within a wave) have far superior financial results (wealth creation above normal expected market returns). He reasons that the company that picks first usually gets the best picking. Specifically, "strategic pioneers" are the most likely to gain value, because the pool of potential targets is the largest and the most attractive options remain available (Carow et al. 2004). Despite the contribution, Carow did not address either the apparent acceleration of M&A activity occurring at the end of an M&A cycle, or the motivations of companies to jump into the M&A game late (when terms are less attractive and number of potential counterparties dwindling).

McNamara et al. (2008) continued down a similar path to Carow. Using a twenty year sample 1984-2004 and a similar wave definition as to Carow; McNamara's results not only support the advantages of transacting early (using the phrase "first mover advantage" – FMA) with similar findings to Carow's "early birds" but also quantified the penalty of coming late to the game (defined by McNamara as "bandwagon jumpers" and by Carow as "copy cats"). The logic provided for the existence of a significant "lateness penalty" was the near equivalent to the inverse of the first mover advantage. This argument suggests that as options lessen for a potential acquirer, they may feel compelled to do a marginal deal. Simultaneously, as the market perceives an industry merger wave is in effect, all likely potential targets tend to experience an appreciation in equity value as the market bids up these expected targets in anticipation. Thus, further enhancing the potential transaction cost (and penalty) for the late participant.

Collectively, the contributions of Andrade (2001), Harford (2004), Carow (2004) and McNamara et al. (2008) better defined what a merger wave was, what caused them (shocks),

and how financial results could vary depending on where in a wave a transaction was consummated. However, none of these researchers studied the motivation of these late participants. Although it was clear that these companies where jumping into the M&A game late, what is unclear is whether their late participation in the merger wave was the result of bandwagon factors or some other motivations.

Figure 1: Waves Bandwagons and Returns



An additional gap in the literature exists due to the lack of understanding of how acquirer returns fluctuate across deal lifecycles regardless of when in a wave a deal was

occurring. This is of particular interest in transactions that span multiple years from initial screening to the completion of full integration.

Although merger wave theory helps explain some of the variation found across acquirers expected results over time; the findings remain intellectually interesting but not operationally satisfying. Unfortunately, acquirers never know precisely where they are in a merger wave or cycle. Astute M&A practitioners understand the basics of buying into a heated and perhaps overpriced M&A market as well as the difference between being an early bird versus a late comer to a rising market. However, most after the fact assessments provide little value to a firm that has already signed a deal and is contractually committed.

To develop a more useful analysis of when there are opportunities for firms to create value or when is the time to avoid certain opportunities, the M&A transaction needs to be disaggregated into component parts, the elements identified within those parts and then determine what skills or capabilities are available to create value during a discrete time interval within a M&A transaction. To accomplish this, M&A transactions need to be evaluated from a resource perspective and specifically be utilizing some of the theoretical insights developed in the Resource Based View of the Firm (RBV), Dynamic Capabilities (DC) and Acquisition Based Dynamic Capabilities (ABDC).

Regulated Energy Industry Considerations

Interestingly, the regulated energy sector has been somewhat of an ignored industry in much of the M&A literature. Arguments for this exclusion have been justified for various reasons. For example, regulated utilities by their very nature operate in non-competitive markets (and in many cases are true monopolies). Also, they often have a controlled economic and financial composition, including: approved rate base, regulated rates of equity return and mandated debt to equity capital structures. Whereas regulated energy M&A activity may share some of the same psychological motivations, the economic drivers are less critical and are often under the control of the regulator. Furthermore, regulated energy transactions tend to be

motivated by reasons such as: a means to address low organic growth or a way to offset some of the risk of pending regulatory changes. As a result, special treatment for the regulated energy industry in the M&A research literature has been justified.

Historically, regulation (state and Federal) has had a material effect on utility M&A activity. The phenomenon of regulation driving industry consolidation is not unique to utilities (e.g. banking, insurance, financial services, airlines, etc.), however, the relevant pieces of regulation tend to be industry specific. The 1935 Public Utility Company Holding Act (PUCHA), the Energy Policy Act of 1992 (EPAct 1992) and the Energy Policy Act of 2005 (EPAct 2005) among other landmark legislation collectively re-shaped the scope and scale of M&A activity in the regulated energy industry. These landmark pieces of legislation provided clear inflection points of consolidation over the past 80 years.

In their extensive evaluation of 384 utility transactions from 1980 to 2004, Becher et al (2012) provided a stirring endorsement for utility M&A. Utility M&A was found to be a significant value creating experience for the combined shareholders of the buyer and seller, providing positive and significant wealth effects. Rate payers also benefitted from these transactions, via realized cost synergies that were provided as either part of the regulatory approval or subsequent rate case. Becher et all (2012) provided a foundation by suggesting that utility M&A provides significant overall cumulative net benefits to stakeholders (buyer, seller and consumer) that far exceed results in other industries. However, the research was unclear as to what extent this trend is sustainable. Similarly, although Becher centered his study on a major shock wave event (the 1992 EPAct) this was not the focus of his study. It was unclear if this study simply measured the early stages of a wave when multiple attractive transactions were available.

There are other industry specific factors that need to be addressed to properly determine if bandwagoning impacts regulated energy industry acquisition performance. Although not as bountiful as the multi-industry M&A research that has been conducted over the past four decades, there is a growing body of industry specific research that applies. Leggio and Lien (2000) argued that researchers need to consider the role of the regulator and its impact on

return expectations of deal participants engaged in the transaction. Leggio and Lien (2000) was consistent with the arguments of Bartunek et al. (1993) in their earlier study of 57 electric utility deals from 1980 to 1991. Leggio and Lien (2000) in their study of 76 electric utility deals announced between 1983 to 1996 found that for reasons such as the time necessary for regulatory approval, the less than certainty that the deal will be ultimately approved and the fact that merger related benefits need to be shared with the consumer, targets received significantly lower premiums from buyers. Both Bartunek (1993) and Leggio and Lien (2000) suggested that despite the upside on these transactions being muted, the downside was also essentially capped. As there was a tendency for the regulatory process to kill deals that appeared to be too costly to the buyer by refusing approval (essentially protecting the buyer from themselves). Also, on cases where the buyers were positioned for an economic profit, the regulators tended to provide conditional regulatory approvals so that those windfalls were passed onto the consumer. Thus the argument for the existence of a tighter return distribution (and lower risk) paradigm is supportable.

The work of Becker-Blease et al. (2007) continued the line of thinking that major regulatory events create shocks and these shocks in turn have the potential of spawning a merger wave if the capital markets are receptive. They also anchored on the EPACT of 1992 and analyzed 70 announced energy deals announced between 1992 and 2001. Interestingly they viewed the entire period as a single wave. They concluded similar to Berry (2000) that generally speaking, deals during this period destroyed shareholder value. Interestingly, the results for the 1992 to 2001 period used by Becker-Blease were not as negative as the Berry sample of 1995 to 1998. The studies did have some differences as well with respect to approach on the treatment of diversifying mergers (electric utilities buying a gas utility) and how best to deal with complexity of geographical scope. Nevertheless, as it relates to regulated energy M&A, the period from 1995 to 1998 was harsh from a wealth creation perspective as argued by Berry, whereas the broader 1992 to 2001 period was not great but overall not nearly as bad. Suggesting that there were perhaps periods within the 1992 to 2001 range where results should have been positive (offsetting the 1995 to 1998 results some). These results support the argument that wealth creation via regulated energy M&A transactions is not consistent across all periods all times

within a wave. Stated another way, "early birds" get the returns, "bandwagon jumpers" tend to get crushed.

Despite the growing understanding of merger wave dynamics and its impact on expected acquirer returns, the literature is thin on evaluating the true decision making process that companies go through before making an acquisition decision. Furthermore, the related concept of how this decision making process changes as an industry moves deeper into a merger wave, where mounting peer pressure to transact increases or the sense of lost opportunity and diminishing viable options become more real to any company that has not consummated a transaction is also not fully understood. Although the psychology of acquirer purchasing behavior is outside the scope of this project the impact of timing and merger waves and company performance in evaluated.

To gain insight into what drives the acquirer's true motivation to transact and potential effect on financial outcomes and to help inform practitioners on what can be done better, a better theoretical approach to analyzing an M&A transaction is needed. The simple financial algorithmic approach of a single metric of return calculated once at some interval (often 3, 10 or 30 days) post-closing (or post-announcement) of the transaction is somewhat limited. A far superior approach would be to evaluate the transaction through an alternative lens to observe how the firm's resources on the deal are creating or destroying value throughout the deal lifecycle. The regulated energy industry is a rather attractive industry for such an analysis as its transactions tend to have long deal cycles with multiple critical and publicly disclosed transaction milestone dates. Furthermore, to operationalize this approach requires first introducing the Resource Based View of the Firm (RBV) theory and working up through Dynamic Capability (DC) theory and ultimately an adaptation of Acquisition Based Dynamic Capability (ABDC) concepts which is a far better approach to analyzing this topic than what is currently utilized as common practice.

The Theoretical Evolution from RBV to ABDC

Resource Based View of the Firm (RBV)

To fully grasp the saliency of ABDC theory in addressing the primary research question of this study, you have to start with the building blocks and a brief introduction of RBV. Although the term RBV is only three decades old its roots can be traced back for centuries.

Despite Wernerfelt being given credit for the inclusion of the Resource Based View (RBV) into mainstream strategic management theory, its basic tenets can be traced as far back as David Ricardo in 19th century England. As it was Ricardo who argued that rents could be earned due to the ownership of valuable resources that are scarce, immobile and likely to persist in equilibrium. This mindset influenced early RBV theorists from the perspective that these superior Ricardian resources (such as land rights, benefits of prime location, patents, copyrights, etc.) can be acquired by superior resource picking skills of the organization (Ricardo 1817). Although this perspective focused on static resources, it considered the resource picking skills as an organizational skill critical in the determination of resource acquisition which is a core building block to creating competitive advantage.

Despite RBV being able to trace its origin all the way back to Ricardian economics, it was another economist, Edith Penrose who is widely considered as the single individual whose contribution is the most influential in the development of what is now known as the RBV. Penrose's master work "The Theory of the Growth of the Firm" (Penrose, 1959), conceptualized the firm as an entity meaning much more than a simple administrative unit. Penrose regarded the firm as a complex institution created by people to serve the needs of people and with its success linked to the efficient deployment of productive resources. According to Penrose, dynamic interactions between resources and managerial decisions organized within an administrative framework not only provide a thorough explanation of heterogeneity between firms but also enable firms to have unique advantages relative to their competitors. Additionally,

according to Penrose, in order for a firm to have a true lasting competitive advantage, the transfer of resources between firms must be difficult and the chance or ability of replication also made difficult. Cut to its core, Penrose provided the notion that firms are people, people are resources with heterogeneous skill sets, to the extent that these abilities are organized and managed efficiently they have the potential of providing a competitive advantage. This competitive advantage is sustainable as long as the skills are not easily imitable and the resources (people) are not free to flow from one administrative unit (firm) to another. Much of modern day RBV is built on these basic Penrose conclusions that were established six decades ago.

Despite developing the foundational concepts of RBV, Penrose is not given credit for naming the theory. The credit for the formal labeling of the developing RBV theory is given to Wernerfelt. Wernerfelt's 1984 Strategic Management Review paper is the first occurrence of the theory being referred to as the "Resource Based View". Wernerfelt's contribution was much richer than simply naming rights as he also provided that firms should be analyzed from the resource side at the level of the firm, not just from the product side at the level of the industry (Wernerfelt, 1984). Whereas, Wernerfelt did not dismiss many of the important aspects of industry structure, he did link firm performance to the idiosyncratic and heterogeneous resources found within the firm. Wernerfelt argued that firm resources were leveraged inside the firm and that all firms had a unique collection of resources. These unique combinations of resources enable firms to create business strategies that rival firms are unable to exactly replicate and to the extent that these resource combinations and deployment strategies are market efficient competitive advantage is created. Among Wernerfelt's most significant contribution to the literature is the conclusion that it is the strategy utilized in deploying heterogeneous resource combinations that determines a firm's strength and ability to compete. This basic premise would be challenged for decades by the legion of industrial organization and economic strategists that suggest the critical element to sustained competitive advantage is inherently industry organization (I/O) driven, (Porter, 1985).

Strategic management scholars have always maintained the importance of Wenerfelt's contribution, although it was not until 1991 that RBV was christened as a full-fledged strategic management theory. In a 1991 *Journal of Management* (JOM) paper, titled

"Firm Resources and Sustainable Competitive Advantage", J.B. Barney defined competitive advantage as "an advantage that continues to hold after efforts of others to duplicate the advantage have ceased …furthermore, sustained competitive advantage is the higher levels of performance that accrue to a firm with resources advantages…due to the efficiency of these firms in exploiting those advantages" (Barney, 1991).

In a subsequent 1991 JOM special issue, the RBV theory was debated at length and much progress made in providing specificity as to its theoretical elements. This debate led to the conclusion that sustained competitive advantage can only be obtained from resources that are valuable (V), rare (R), inimitable (I), and non-substitutable (N). This development of the VRIN framework attributed to Barney, has been adopted into the strategy literature and has been extensively used to define the strategic resources for firms. Barney argued that only the resources which meet the VRIN criteria should be considered strategic resources and it is only these resources that can improve the firm's efficiency and effectiveness in a sustainable way. Barney eventually defined these strategic resources as managerial skills, organizational process and routines, and information and knowledge under the control of the firm (Barney, 2001).

Some authors have criticized Barney's VRIN framework because the fluid dynamic of resource creation had been overlooked in the framework. Some have suggested that resource imitation could occur through direct duplication or through substitution and for this reason non-substitutability (N) was not an adequate criterion but rather a form of inimitability (Black, 1994). In response to this criticism, Barney modified the VRIN framework to include an organization element (O) which included a focus on the role of organization in exploiting the full competitive potential of a firms resources (Barney, 1997). Thus the standard VRIN framework morphed into a more generally accepted VRIO construct. Barney and Hesterley state that a firm must be appropriately organized in order to take full advantage of the potential of its resources and they consider the components of a firm's organization that can affect the exploitation of resources as a firm's structure, management control systems, formal reporting structures and compensation policies (Barney and Hesterley 2010). Over time, the VRIO framework increased the practicability of the RBV for firms exploring the necessary and collectively sufficient resource characteristics that provide the firm with sustained competitive advantage.

Since the seminal works of Penrose, Wernerfelt and Barney the RBV has been extensively studied by scholars and practitioners. As the conversation has continued, the RBV has been extended and enhanced over the decades; however, much of the basic premise remains. As described by Kamasak (Kamasak, 2013), the general RBV theory can be defined as:

- The primary focus of the RBV is to sustain a competitive advantage that enables firms to accrue above normal returns
- Heterogeneous firm level resources along with capabilities controlled by a firm are the ultimate sources for providing the basis of competitive advantage
- The systematic difference between resources can be sustained over time
- Heterogeneity creates immobility that prevents resources to be transferred from firm to firm easily
- Performance variations among firms can be explained by the differences in firms' resource endowments
- Intangible resources rather than tangibles are the most effective resources in explaining firm performance differentials

In the past 15 years significant new developments have emerged in the field of RBV. One of the drivers of the need for a refreshed view of RBV is the rapid technological development across the globe. The emergence of new technologies (internet, near real-time information and communication flow, CPU processing speeds and near costless mass data storage options, etc.) was radically altering the interconnectedness of the global business world and thus the appropriate way to evaluate business management and strategy was forever altered. From its genesis, RBV was a rather static theoretical framework that worked best in a non-changing world. As the world and business changed and pace of change accelerating over the past two decades, RBV needed to evolve as well. Similarly, all strategic frameworks designed to help explain the creation and sustainability of competitive advantage were threatened to either evolve with the times or become obsolete. The collective RBV school of theorists' responded by

addressing the evolving world and its somewhat static theories with the development of Dynamic Capabilities (DC) theory.

Dynamic Capabilities (DC)

Whereas RBV is a well thought out theory of how firms can earn super normal profits in equilibrium in a static world, the RBV has a limited ability to address several aspects of how firms today should develop and deploy their resources to achieve sustainable competitive advantage. The theory of Dynamic Capabilities (DC) evolved from the static limitations of RBV and is better equipped to dealing with a dynamic world. As a result, DC should be viewed as a logical extension and compliment to RBV and in many aspects an improved method of evaluating and understanding firm performance in today's business environment (Kamasak, 2013).

Teece is considered by most to be the forefather of Dynamic Capability theory. In seminal works first published in 1997 with Pisano and Shuen and then in multiple individual contributions in the following years, most academics credit Teece with not only the initial labeling of Dynamic Capabilities theory but also the widespread acceptance that the theory now enjoys. According to Teece, the Dynamic capabilities framework provides that organizations must integrate and reconfigure their resources and capabilities to renew or alter their resource mix to be able to maintain competitive advantage in a dynamic and changing environment (Teece, 1997).

Furthermore, Dynamic Capabilities suggest that it is no longer possible for firms to gain any lasting competitive advantage with a static resource mix and in actuality with an ever changing resource mix not only is competitive advantage not possible, long-term sustainability becomes in question (Fiol, 2001). Whereas Teece's original definition of DC of "the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments" (Teece, 1997), Eisenhardt and Martin developed a slightly different definition: "dynamic capabilities are the organizational and strategic routines by which firms

achieve new resource configurations as markets emerge, collide, split, evolve and die" (Eisenhardt and Martin, 2000).

Alternatively, for Zollo a Dynamic Capability was defined as a "learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (Zollo, 2002). Further definitional fragmentation has evolved for defining DC including: Zahra's, "dynamic capabilities are the abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision maker" (Zahra, 2006). Alternatively, DC as defined by Helfat as, "the capacity of an organization to purposefully create, extend or modify its resource base" (Helfat, 2009). Further muddying the waters is the assertion by Ambrosini that Dynamic Capabilities are not really resources but a process that helps develop the most adequate resource base. This line of thinking is consistent with the evolution of Acquisition Based Dynamic Capabilities (ABDC) which is the applicable theory that will be used when applying much of this scholarship into a mergers and acquisition (M&A) context.

Despite the lack of perfect alignment on the definitional aspects of DC, the contributions of many of the pioneering DC theorists, provides for a middle ground description of Dynamic Capabilities as a combination of Kamasak and Ambrosini "…the ability to perceive and adapt to rapidly changing competitive markets through the integration and continuous reconfiguration of organizational skills, assets and functional competencies" (Kamasak, 2013), and "to assess the firm's extant resource base and transform it to create a new configuration of resources that can sustain competitive advantage" (Ambrosini, 2008).

Despite the wide breadth of definitions used to describe exactly what Dynamic Capabilities are, most scholars have agreed to the existence of four categories of capabilities. Collis is credited with this disaggregation of the broader Dynamic Capability grouping (Collis, 2008). The four groupings according to Collis:

1) Capabilities that enable firms to perform the basic functional activities of the firm such as plant layout and distribution logistics

2) Activities which deal with dynamic improvements of the firm such as learning and adapting to changing environmental conditions

3) Specific activities which provide for a finer defined set of dynamic improvements than that provided by the general improvements in category number 2

4) Meta-capabilities that relate to the ability of a capability to renew the other existing capabilities with the expectation of developing capabilities today to take advantage of opportunities tomorrow

Some researchers do not consider a dynamic capability as a resource but rather an evolving process that transforms firms by developing and shifting resource in the most efficient resource combination. In addition to this self-correcting concept, this would also imply that the difference between simple (or ordinary) capabilities and what is being described as a dynamic capability has a timing element. Whereas, ordinary capabilities are valuable and can be viewed as helpful in competing in the present and perhaps somewhat static, dynamic capabilities can be viewed as more future looking and about competing and evolving over time and thus non-static (dynamic) (Helfalt, 2011). Even though some lines can be drawn between ordinary and dynamic capabilities from a definitional perspective, in practice they are much harder to differentiate when firms are managing their existing resource bases.

Much work has been devoted towards the study of dynamic capabilities in evolving industries. Additionally, it was the rapid changing of the business climate with the rapid adoption of technology that has led to the extension of RBV theory into Dynamic Capabilities, nevertheless there is a role for Dynamic Capability Theory in slower changing and more mature industries (Zahra, 2006). This fine point is relevant as few would ever confuse the regulated energy industry (the subject of this research) with the rapidly changing environments of industries such as high tech.

As argued by Kamasak, the Dynamic Capabilities approach is considered as an offshoot of the RBV since it provides thorough explanation about how the current stock of VRIN resources can be regenerated (Kamasak, 2013). In order for firms to achieve a sustainable competitive advantage, firms need the ability to identify and invest in the resources that have the

capability of providing advantage. This adaptation of their resource base can be done via enhancements and development to internal existing resources or the introduction of new resources and resource combinations that can be obtained through some form of business combination (join venture, other forms of partnering or via acquisition).

There exist only a few published studies on acquisition capabilities that have evaluated the acquisition process through a Dynamic Capabilities lens. Teece viewed "Acquisition Capability" as a single dynamic capability that was further broken down into the "micro processes" of "sensing", "seizing" and "reconfiguring" (Teece, 1997 and 2007). Others have come along and worked with the Teece framework on acquisitions and attempted to develop an enhanced topology of the M&A process. Researchers have taken varied approaches attempting to operationalize the theoretical foundations first established by Teece regarding the dynamic capabilities associated with the acquisition process. This work has included some researchers extending the conceptual underpinnings focusing on reconfiguration (Amiryany et al., 2012), acquisition as a core capability (Keil et al., 2012) and integration capabilities (Zollo and Winter, 2002).

Other researchers have utilized a qualitative case study approach to explore specific aspects of acquisition capabilities; this has included (Hemeriks et al., 2012) integration capabilities, (Oladottir, 2010) acquisition infrastructure, and (Capasso and Meglio, 2005) on integration effectiveness. While still others have utilized a quantitative approach to study Acquisition Capabilities, including (Zollo and Singh, 2004) evaluating learning aspects of acquisition experience, (Mitchell and Shaver, 2003) focusing on integration capabilities and (Capron and Anand, 2007) where the actual Acquisition Base Dynamic Capabilities (ABDC) framework was first introduced. To better understand the theoretical application of Dynamic Capabilities under the situation of a corporate acquisition, the focus must shift from Dynamic Capabilities and introduce the Capron and Anand extension, Acquisition Based Dynamic Capabilities (ABDC) theory.

Acquisition Based Dynamic Capabilities (ABDC)

Firms commonly attempt to use acquisitions to acquire new resources that are distant from their current resource base. Internal development commonly facilitates extension of the incumbent resource base and is often referred to as resource exploration. Resource exploration is the resource development and selection process that requires firms to seek outside resources external to the firm. Although the reach outside the firm offers the potential for development and acquisition of new resource pools previously untapped by the acquiring firm, successful acquisition requires a skill set and set of capabilities that are often foreign to the acquiring firm. Firms that are more endowed with a resource base skilled in exploration will outperform their rivals who have resources less expert in this area. Acquisition Based Dynamic Capabilities (ABDC) is a valuable theoretical framework to evaluate a firm's existing resource capabilities in the area of acquisition.

According to the pioneers of the theory including Helfat, Anand, Capron and Mitchell, Acquisition Based Dynamic Capabilities (ABDC) includes three main elements; acquisition Selection, Identification and Reconfiguration activities (Helfat, 2007). Acquisition Selection capability is the capability to recognize when an acquisition would be the appropriate mode for obtaining new resources into the firm. As suggested above, due to the relatively high risk of financial success for most acquisitions (from the acquirers perspective), acquisitions should be viewed as a means of last resort for resource enhancement. Although this point is intellectually consistent when viewed from a risk and reward perspective through a purely theoretical lens, in practice many firms take an alternative view and perceive acquisitions as the most attractive means to resource development and often deploy company resources towards high risk resource acquisition at the expense of fully capitalizing on internal resource development or through simpler modes of partnership, joint venture or alliance methods of resource exchange.

If a firm possesses relevant internal resources then it should consider internal development rather than exploration outside the firm. Capron and Mitchell (2004) argue that

acquisitions should be the preferred mode of materially altering a firm's resource base only when three conditions hold: 1) when a firm's existing base set of skills has little relevance for the targeted resource, 2) when the target resources would face substantial market failures in discrete resource exchange, and 3) when utilizing the new resources involves multiple points of contact with a firm's existing resource base.

In situations where resource enhancement is best accomplished through acquisition, three distinct Acquisition Based Dynamic Capabilities become critical, namely the capabilities of resource "Selection", "Identification" and "Reconfiguration" (Capron and Anand, 2007). As defined by Capron and Anand:

- Acquisition "Selection" capability includes the ability to assess a firm's existing resource base relative to desired new resources and capabilities, to assess the degree of market failure with respect to resources that are beyond the firm's existing resource relevance and to assess the number of points of contact that inter-organizational creation or new resources would require. Firms that can accurately assess these criteria and select acquisitions as a mode of seeking new resources only when simpler modes fail, if successful can create substantial competitive advantage.

- Acquisition "Identification" Capability is the capacity to detect and negotiate with appropriate targets. This capability requires that a firm be able to carry out effective due diligence of potential targets in order to determine the value of the target to the acquirer, to negotiate appropriate terms with the a target's owner, and to walk away from a target if it lacks needed resources or its owners demand payment that exceeds value to the acquirer.

- Acquisition "Reconfiguration" Capability is the capacity to reshape resources within the target and acquiring firms. This involves the capacity to combine resources from the target and acquirer in order to create new resources, whether at the target or within the acquirer's original business units or in some new organizational unit. This capability also requires the capacity to selectively divest unneeded resources from the

target as well as old resource for the acquirer that have become obsolete as a result of the reconfiguration process.

Thus Acquisition Based Dynamic Capabilities include a hierarchy of Selection, Identification and Reconfiguration abilities. These are nontrivial skills, requiring substantial organizational discipline and coordination. As a result, firms that develop effective acquisition based dynamic capabilities may gain substantial and sustainable competitive advantage (Helfat, 2007).

One sharp criticism often lobbed at the advocates of Dynamic Capabilities is the apparent lack of empirical support for its theoretical arguments (Kamasak, 2013). The Capron and Anand framework ("Selection", "Identification" and "Reconfiguration") for ABDC is a vast enhancement over the generalized treatment of the concept of resource acquisition found within the original Dynamic Capabilities literature and is an advancement in moving the theory from the purely theoretical. The framework brings scholars and practitioners one step closer to a point where they can operationalize the theoretical DC and ABDC concepts. Although an improvement, Capron and Anand's framework should be modified slightly without torturing its theoretical strength in hopes of developing a framework that more closely resembles reality to actual practitioners conducting resource acquisition. It is with this modification that an adapted form of the ABDC framework is developed and can be used to address the primary research question of this Dissertation:

"What Acquisition Based Dynamic Capabilities (ABDC) are the most critical in enhancing value for energy companies engaged in M&A?"

CHAPTER III - APPLYING THE ADAPTED ABDC FRAMEWORK

An enhancement to the Capron and Anand ABDC framework can be accomplished via a few slight definitional modifications. Whereas Capron and Anand divided the ABDC capabilities into "Selection", "Identification" and "Reconfiguration" a more practitioner friendly (or stated differently, what happens in the real world) approach would be to define the groupings as "Selecting and Identifying", "Transacting and Executing" and "Reconfiguring and Integrating".

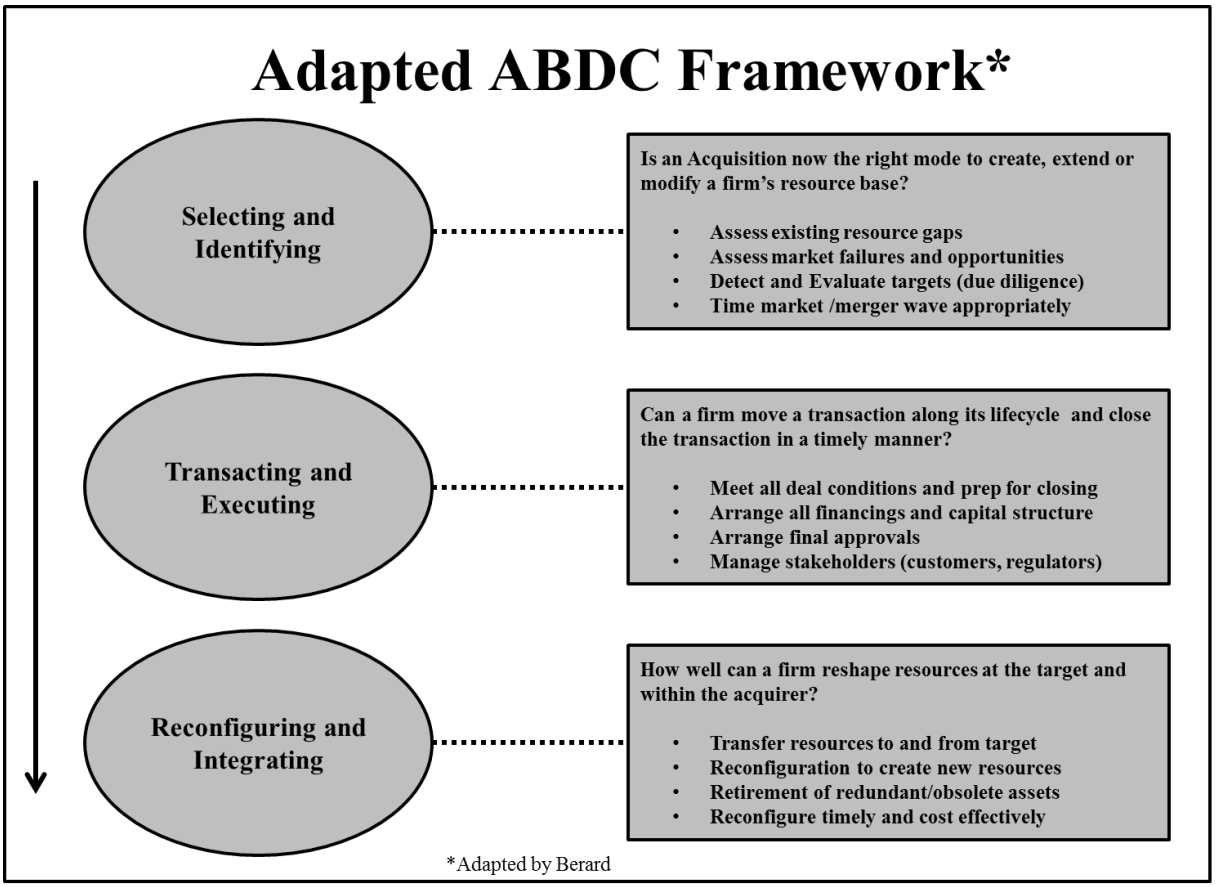
Capron and Anand were correct to identify the importance of Selection and Identification. However, in practice these are activities that are occurring simultaneously and in many ways are interlinked with each other. Additionally, these activities are almost always performed by the same individuals (resources) in an acquiring firm. To have them as two of the three identified ABDC groupings distorts the manner in which these activities are performed as well as how resources performing these activities are deployed. Thus the first modification to the Capron and Anand ABDC model is the combining of what was once Selection and Identification.

One additional necessary modification to the Capron and Anand framework is the identification of the unique category of "Transacting and Executing". In the original framework these critical capabilities (and resources) appear to be embedded in the "Identification" category. Grouping these critical capabilities into the "Identification" category distorts what "Identification" is intended to capture. Additionally, it also muddies the waters as to what capabilities that are really being identified in addition to the resources that are being deployed to perform these activities. Similar to the redefining of "Selecting and Identifying" the creation of the "Transacting and Executing" grouping is an enhancement to the original Capron and Anand framework.

The final Capron and Anand grouping, "Reconfiguration" and "Reconfiguring and Integrating" in this author's enhancement is virtually identical. The only practical difference is a slight modification to the grouping name to reflect the term "integration" which is a term of

art for M&A practitioners. Otherwise the capabilities and resources necessary to be deployed to be successful are the same for "Reconfiguration" as they are for "Reconfiguring and Integrating". Making these slight modifications to the ABDC framework of Capron and Anand provides a practical enhancement to the ABDC theory and has the added benefit of closer resembling the true real world process and necessary capability and resource requirements of successful practitioners. A visual depiction of the revised ABDC framework is provided below in Figure 2.

Figure 2: Acquisition Based Dynamic Capability Framework



Adapting the ABDC framework provides for slightly modified definitions of the ABDC groupings.

- Acquisition "Selecting and Identifying" capability includes the ability to assess a firm's existing resource base relative to desired new resources and capabilities, to assess the degree of market failure with respect to resources that are beyond the firm's existing resource base and to assess the number of points of contact that inter-organizational creation or new resources would require. It also includes the capability to be able to carry out effective due diligence of potential targets in order to determine the value of the target to the acquirer, to negotiate appropriate terms with the a target's owner, and to walk away from a target if it lacks needed resources or its owners demand a price that exceeds the value to the acquirer. Firms that can efficiently perform these tasks and have resources with well-developed capabilities can be positioned to create substantial competitive advantage.

    - Activities may include: Valuation Work, Due Diligence, Target Approaching, Signing Non-Disclosure Agreements (NDAs), Two-Sided Confirmatory Diligence, Negotiating, Financial Engineering, Deal Documentation, Deal Announcement, etc.

- Acquisition "Transacting and Executing" Capability is the capacity to manage and execute efficiently the transaction closing process, including meeting all conditions precedent in the acquisition which may involve arranging financing, obtaining approvals and consents, (regulatory, shareholder, other) and consummating all other deal closing mechanics. Firms that can manage efficiently these processes are

positioned to take advantage of the opportunity that was created in "Selecting and Identifying" and can create substantial competitive advantage.

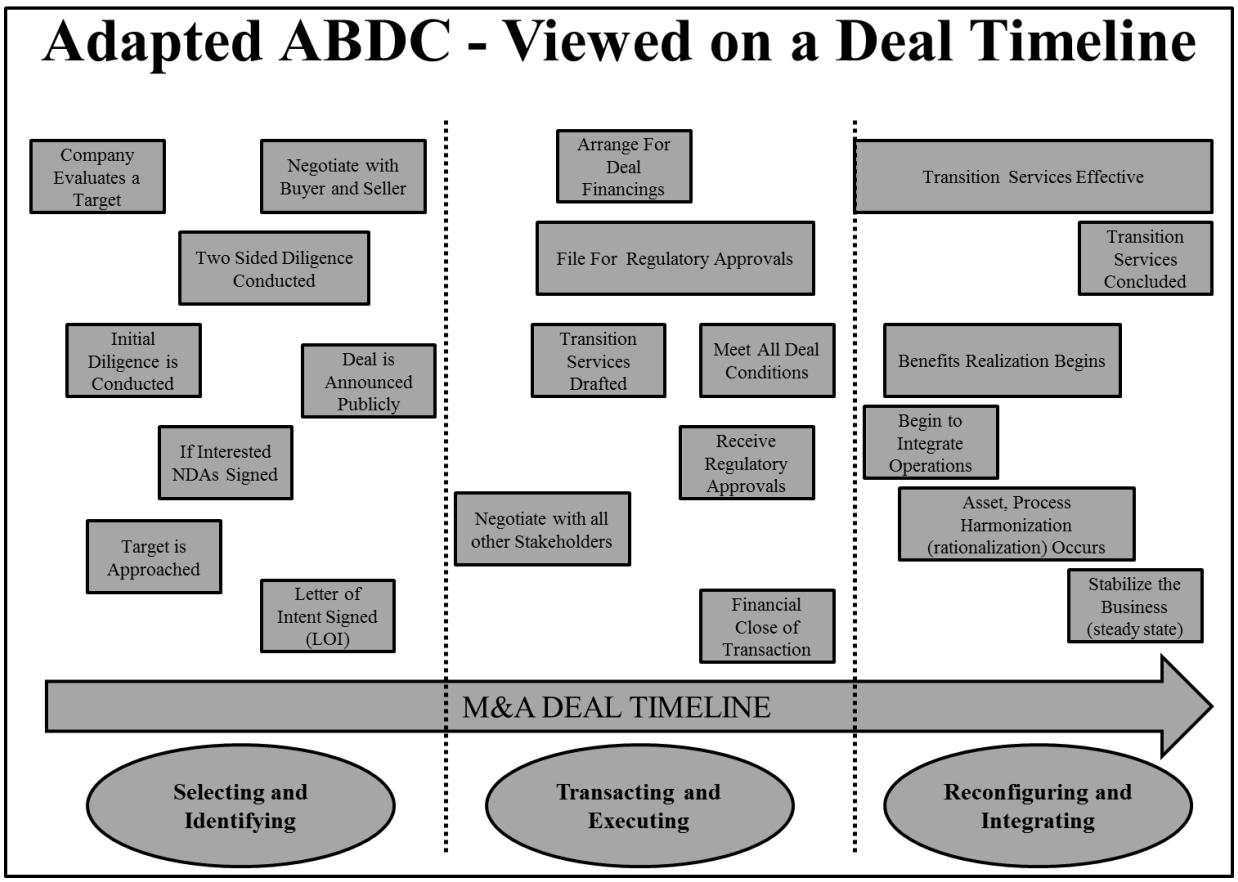
  - Activities may include: Filing For Regulatory Approval, Negotiating with 3rd Parties, Finalizing Lending Terms and Conditions, Obtaining Shareholder Support, Developing Transition Services, Preparing Deal Closing Documentation, Deal Signing, Final Deal Announcement, etc.

- Acquisition "Reconfiguring and Integrating" Capability is the capacity to reshape resources within the target and acquiring firms. This involves the capacity to combine resources from the target and acquirer in order to create new resources, whether at the target or within the acquirer's original business units or in some new organizational unit. This capability also requires the capacity to selectively divest unneeded resources from the target as well as old resource for the acquirer that have become obsolete as a result of the Reconfiguration process.

  - Activities may include: Effectuate Transition Services, Transitioning Employees, Redesigning/Rightsizing Organization, Harmonizing Policies and Procedures, Streamlining Systems and Infrastructure, etc.

While this adaptation of the Capron and Anand ABDC framework is a modification (and arguably an enhancement) from a definitional perspective it does maintain the implied linear progression of each capability grouping. Stated differently "Selecting and Identifying" will always predate "Transacting and Executing" which itself always occurs prior to "Reconfiguring and Integrating". This logical sequencing is apparent in the graphic below in Figure 3.

Figure 3: ABDC Applied to an M&A Transaction



An additional benefit of the adapted ABDC framework is the now clearly defined milestones and dates that occur at the start and completion of each ABDC phase, to be illustrative:

- "Selecting and Identifying":
    - Begins with the initial thoughts of a particular target, resource gap or identified resource opportunity that a firm is about to pursue. Operationally,

it coincides with the point at which a firm deploys firm resources to pursue or identify an opportunity.

- Ends with the announcement of a deal between acquirer and target. Operationally, this will usually result in a press release for most companies and a filing of Form 8-K with the SEC for any public company if the transaction is deemed as "material".

- "Transacting and Executing":
  - Begins with the point at which the deal has been agreed commercially by the counterparties and is about to be announced and is now in preparing for execution mode as the firm deploys resources to meet all deal conditions, approvals and consents.
  - Ends soon after the actual deal closing date and funding (or transfer of other form of financial consideration) necessary for the transaction to close. This is most often accompanied by a press release for most companies and a filing of Form 8-K with the SEC for any public company if the transaction is deemed to be "material".

- "Reconfiguring and Integrating":
  - Begins with the moment after the deal is consummated at financial close.
  - Ends with the point in time when the company stops deploying firm resources on the integration and reconfiguration of the acquired firm or its firm resources. In practice, the absolute ending point of "Reconfiguring and Integrating" may vary considerably by transaction.

As each ABDC category has a clear beginning and end date, measurement points for each ABDC category can be identified. This becomes critical as value creation (or destruction) can be calculated across these discrete time intervals and can be linked to each ABDC category. For example:

- Economic value that is created (or destroyed) between the time a firm starts working on an opportunity to when a deal is announced can be linked to the net value impact of a firm's "Selecting and Identifying" capability. The measurement of this is most important when it is believed to be noticed and valued by the market. This is best measured over a short time horizon around announcement date of the transaction.
- Similarly, the incremental economic value that is created (or destroyed) between when a firm announces a deal and when a firm closes the transaction can be linked to the net value impact of a firm's "Transacting and Executing" capability. This is best measured as some relatively short-term window around the closing of the transaction as this is when the market will place value on the company's Transacting and Executing performance capability.
- Lastly, the incremental economic value that is created or destroyed (between) when the transaction closes and when a firm has completed its work on the transaction can be linked to the net value impact of a firm's "Reconfiguring and Integrating" performance and capability. This is best measures as some relatively long period post-closing of the transaction as this is when the market will evaluate and place value on the company's Reconfiguring and Integrating performance and capability.

It is worth noting that this all assumes everything else is constant (ceteris paribus) and that the net effect is an abnormal effect (capturing what would have been the expected effect had the firm not taken its course of action). These last two caveats (ceteris paribus and abnormal

returns) are rather critical assumptions, but can be dealt with analytically and are discussed in greater detail below.

So with this theoretical foundation established and with the adapted ABDC framework introduced, an empirical research methodology can be developed to evaluate the ABDC categories in a regulated energy M&A deal context. This empirical approach allows for a deeper investigation into which ABDC categories matter the most (in terms of impacts to acquirer shareholder returns) and what factors influence difference in performance among Top and Poor Performers.

CHAPTER IV - METHODS

In attempt to quantify an answer the question of "What acquisition based dynamic capabilities are the most critical in enhancing value for energy companies engaged in M&A?" an empirical methodology was needed to be developed. The sections below define the data sampling and collection method, identified theoretical constructs, definitions of groupings, descriptions of dependent and independent variables, specified models and the general approach utilized for the analysis.

Data Sampling and Collection

The subject of the research is the effectiveness of ABDC capabilities in M&A transactions occurring in US investor owned (excludes municipal "munis" and cooperative "co-ops") regulated energy companies. As the research utilizes equity stock returns as part of the calculation of the dependent variable, the sample set is limited to publicly owned and traded companies as there is a daily near real time public mark of their traded equity. To provide for a robust data set the study contains all the regulated energy transactions that have occurred over the twenty year time horizon 1995 to 2014. The twenty year window provided adequate variation among industry conditions and also provided a robust set of observations for the analytical inquiry. Whereas an enhanced data set with additional observations is always preferable, the benefit of going further back in time than the prescribed twenty years was outweighed by the reality of constraints of data availability and accuracy.

The desire to bind the study to the regulated energy industry had some attractive benefits. For example, by keeping the study focused within one industry provides for a more controlled environment where factor effects were more easily isolated and evaluated. For example, the set of industry shocks within the narrowly defined sample set is known and any apparent industry specific merger wave would be affecting all firms similarly. Stated

simplistically, an M&A study within a narrowly defined industry has less noise to deal with in an attempt to isolate industry specific variable impacts. An additional benefit of utilizing the regulated energy industry was the long transaction cycles that occurs from deal origination to when the acquisition is finally approved and eventually integrated into the acquirer. It is not uncommon for regulatory cycles to occur over a period of multiple months and for deals to span from start to finish periods of 18 months or more. This amount of elapsed time provided for very discernible periods to test the ABDC capability groups. Whereas for transactions where the deal is announced and rapidly closed (less than 30 days for example) many of the activities associated with the ABDC capability groupings would be occurring simultaneously and thus very difficult to differentiate each capability's unique contribution to value enhancement.

The study was limited to using public companies. As a result of utilizing shareholder value metrics (stock price) as a means of determining changes in equity value, the study was limited to using firms that have publicly available reporting of the their share prices. Private companies by their general nature do not have this requirement. Fortunately, the regulated energy industry is dominated by publicly traded companies. So no systematic sampling bias was found to impact the quantitative results. Additionally, excluded from the study are entities that are organizationally set up as a municipal utility or cooperatives in addition to some privately owned enterprises. Despite the exclusion logic, these firms represent a small portion of the participants in the regulated energy industry and by omitting them it was expected to have little impact in the relevance of the study or the ability to generalize its results.

Transaction data was collected from various data sources. SNL Energy Transaction Database, Thompson Reuters and Bloomberg Financial Services provided some of the necessary transaction data for the M&A deals that are the focus of this study. This includes the critical dates that identify deal announcement and financial closing of the transaction. These dates were necessary to determine the timing of the individual ABDC groupings. Additionally, these datasets also contain some of the financial transaction data helpful in defining the deal including the transaction's proposed capital structure and other basic financial aspects of the deal. Capital IQ and SNL databases were helpful in providing additional industry specific transaction detail. This was critical in helping to determine some of the industry and competitive

dynamics of the transactions. These data sources also provided basic information on the management teams and leadership experience of the acquiring firms. Company website and SEC filings were also helpful in filling in additional data gaps and informational needs.

Overall 1,075 transactions were considered for inclusion into the study. 545 of the transactions were discarded as a result of having a closing cycle (the amount of time lapse between when a deal was announced to when it closed) of less than 30 days. The average closing cycle for transactions that fell into this category was 14 days. This is compared to the average cycle time for transactions that required above 30 days was 140 days. Many of these transactions closed on an accelerated timeline as a result of not requiring any meaningful mandated approval process (which would include any local, state or federal regulatory process, or company or SEC specific shareholder voting requirements).

Energy deals that are able to be closed over such a short cycle tend to be very small in nature (both in absolute size and in size relative to the scale of the acquirer) and do not trigger the lengthy regulatory processes that will often stretch out over many months. Excluding these transactions was not expected to provide any meaningful bias in the results as determining the impacts of these minor transactions on the acquirer's ABDC capabilities would have been difficult with the overlapping ABDC efforts occurring essentially at the same moment in time. Additionally, as these transactions tended to be relatively small from the acquirer's perspective (in most cases less than 5% of the acquirer's enterprise value versus an average deal size of 34% of the acquirer's enterprise value for the included transactions), any expected impact of the acquisition on the acquirer from a M&A perspective (and measured through valuation of the acquirer's market value) would expected to be negligible.

An additional 193 transactions were excluded from the data set as a result of the corporate ownership structure of the acquirer being private (unlisted). As a result of much of the measurement rubric utilized in this research design being centered on movements in public valuation metrics (listed equity values) to the extent that a company is private and not listed makes the observation unusable for this analysis. As a result of the acquirer being private some of these transactions also had less available information as their reporting requirements were less

stringent than that of public companies. As the research investigates ABDC capabilities as measured through the lens of the acquirer', the target companies need not be public companies as traded equity values were necessary to conduct the analysis. As a result, these 193 transactions were discarded.

A cursory review of the excluded private company transactions revealed a few interesting observations. Private investing entities (private equity funds, hedge funds and others) have increased their involvement in energy company M&A post 2000 and despite a relative lull during the market correction of 2007 have been very active investors since 2008. Whereas, in the early 2000s and before it was somewhat unusual for a private firm (or consortium of private firms) to attempt to acquire a regulated energy company through traditional M&A, the involvement of these firms is now very common. Additionally, their appetite for financial exposure for these types of deals over the past decade has upsized considerably in terms of the absolute size of some of the transactions that they have considered in addition to the absolute equity dollars they are willing to invest individually to take a position. It is now very common for traditional private equity firms (and other financial players) to partner with peer firms to pool their resources and be active participants in all but the largest of energy transactions.

It is also worth noting that failed transactions are not part of the research design. As the thrust of the project involves the evaluation of how dynamic capabilities impact value over the entire lifecycle of an M&A transaction (deal origination through full post acquisition integration) failed transactions (deals that are announced but never make it to the closing table and thus abandoned) never mature through the Transacting and Executing and Reconfiguring and Integrating stages of a deal's lifecycle. Admittedly, this leaves the research design with somewhat of a success bias in terms of studying Selecting and Identifying capabilities, it is a limitation worth noting but not one that should alter the view of how best to define the sample transactions in the study.

As a result of consolidation within the industry some of the acquiring companies in the data set were eventually acquired themselves and 'delisted'. Furthermore, a few entities that consummated a transaction in the data set were also 'delisted' for a period of time as a result

of filing for bankruptcy and going through some form of corporate restructuring. Despite the challenges of obtaining historical data for delisted companies, the delisted acquirers remain in the study as the necessary data elements utilized in the study were obtained through various alternative means. As a result, no transaction was discarded from the data set because of unavailable financial or operation information.

After discarding the private entity transactions and short cycled minor transactions, the dataset was reduced to include 337 successful acquisitions of regulated energy entities (some were entire company, some assets or subsidiary transactions) made by public companies between 1995 and 2014.

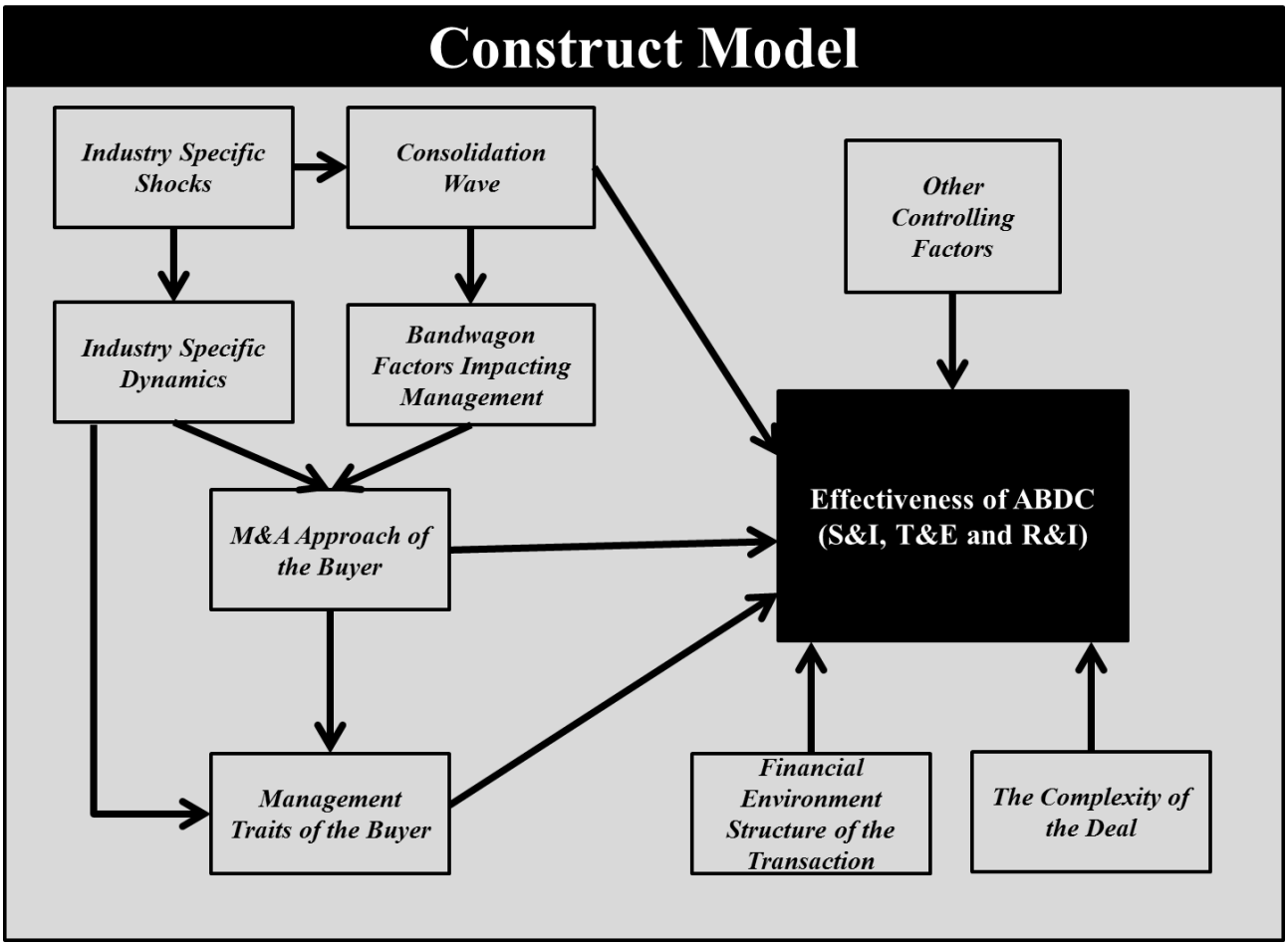
Capital IQ and Bloomberg Financial Services provided the data for the daily stock performance and return data of each of the companies. As the study evaluated transactions over time, and looks to calculate performance over very specific time spans, a continuous data set of daily company specific stock prices was required to make the appropriate calculations. Similarly, daily price data over the study time horizon was required for the calculation of certain critical indices and benchmark companies that are required to calculate various specifications of normalized and abnormal returns. Capital IQ and Bloomberg Financial Services also provided the data utilized to calculate the necessary financial metrics (return, performance and others) of the acquiring companies necessary to classify acquirers into groupings from a performance perspective. The different groupings are defined below.

Theoretical Constructs

In order to evaluate the effectiveness of specific Acquisition Based Dynamic Capabilities at the firm and transaction level, a quantitative general M&A transaction model was developed. ABDC and general M&A theory was helpful in suggesting a series of theoretical constructs that should be modeled in the development of a general M&A transaction model. The general research model identifies theoretical constructs (Industry Specific Shock,

Consolidation Wave, Industry Dynamics, Bandwagon Factors Impacting Management, Management Traits of the Buyer, Financial Environment and Structure of the Transaction, Complexity of the Deal). The rather robust body of merger and acquisition literature was utilized to determine that these constructs should be included in the general model and also suggests what relationships these constructs should have among each other and the dependent variable (see Figure below).

Figure 4: Construct Model



The theoretical constructs are described below:

- Industry Specific Shock: Industry shocks (regulatory and others) can have an effect of triggering a merger wave. The introduction and approval cycle of landmark legislation has been found to be a primary factor resulting in an industry shock. For the regulated energy industry some of the more critical pieces of legislation have included the passage of Public Utility Regulatory Policy Act of 1978, Energy Policy Act (EPAct of 1992 and 2005), FERC orders 636 and 888 (1992 and 1996) and the changes to the Greenhouse Tax Laws and Clean Power Act (2012 and 2015).

- Consolidation Wave: The ripeness of the M&A market contributes to M&A success. Shocks cause waves and when in the wave that you transact dictates whether you are a value hunting "early bird" or an over spending "band wagon jumper". Also how quickly you close the transaction also impacts where you are in a wave. Historians have identified seven distinct merger waves throughout the course of history: First wave 1893-1904, Second Wave 1919-1929, Third Wave 1955-1970, Fourth Wave 1974-1989, Fifth Wave 1993-2000, Sixth Wave 2003-2008 and the ongoing Seventh Wave that started in 2014. The study period of twenty years covers portions of the Fifth Wave, the entire Sixth Wave and the start of the Seventh Wave. Chronologically, the twenty year study period, has thirteen years of being in a global merger wave. It is worth noting that industry specific dynamics play a critical role in determining whether a specific industry will follow the global trend and itself enter a consolidation phase.

- Industry Dynamics: Industry dynamics of bringing the two firms together contribute to M&A success. Industry dynamics include: cost and operational

synergies, strategic fit of the merged firms and impacts of the market consolidating by the exit of a firm. Companies acquire to gain a competitive advantage. To the extent that the perceived competitive advantage becomes to advantageous (and thus anti-competitive) the transaction may ultimately be rejected. Any material transaction will require approval from the Department of Justice (and perhaps other agencies as well) via a Hart-Scott-Rodino (HSR) filing that addresses the impact of the transaction on industry competitiveness. At the state level regulators are also mindful of potential excess returns and attempt to regulate accordingly.

- Bandwagon Factors: The existence of "Bandwagoning" behavior and the motivations of the management team has a potential impact on M&A success. Is the firm decision maker(s) influenced by emotional factors or do they resemble and act purely in a rational manner? If in a merger wave, do firms act differently if they have not consummated their own transaction? Also of interest is whether firms will acquire as a form of protection for themselves in the hopes of not being acquired under a "kill or be killed" mentality. To the extent that these thoughts impact behavior will have a direct consequence of the effectiveness of a deal.

- M&A Approach of the Buyer: The aggressiveness of buyer (is it buy at any cost or be patient till the right deal comes along) and also the level of engagement in actively pursuing corporate opportunities (proactive business development or passive action waiting for the phone to ring) behaviors will impact performance.

- Management Traits: Characteristics of the existing management team of the acquirer as it relates to their ability to transact, directly impacts M&A performance. This includes past experience (is it the team's first deal or are they serial acquirers well down the experience curve) in transactions and their general

leadership capabilities during times of change and willingness to accept material risk.

- Financial Environment and Structure: "How you pay" is nearly as important as "what you pay". Factors include whether the deal is a stock or cash deal and how much leverage is utilized. The size of the firm being acquired relative to the acquirer, and whether the transaction was initiated as a multi-party auction, or single party (friendly or hostile) deal is also informative. Equally important is the general business climate of when the transaction is being consummated. Is the economy in rapid growth where equity values are rising (both buyers and sellers); is the access to debt capital available and affordable? The time horizon of the study (1995-2014) is conducted through a relatively prosperous period up through 2000, then a recession in 2001, followed by a recovery period and then the Great Recession from December 2007 through June 2009, followed by a long and sluggish recovery. The financial environment plays a role in how companies think about structuring their deals as well as the overall market receptiveness of the timing of any transaction which directly impacts expected M&A performance.

- Deal Complexity: Factors that account for the complexity of the deal include the business complexity of the firm being acquired (number of business segments, scope of operations, number of regulatory jurisdictions, etc.). Whether or not the companies fit with each other. Is it a "like buying like" transaction or a company diversification play into new jurisdictions or businesses? How complex (and lengthy) the expected approval process for the acquirer will also directly impact expected M&A results.

- Effectiveness of ABDC (S&I, T&E, R&I): This construct represents the study's dependent variable. This captures the returns (abnormal and other measures) that the M&A transaction has created at various time intervals across the deal lifecycle

to obtain a proxy for the relative effectiveness of the firm's resources at performing the three ABDC capabilities. In the construct model the individual ABDC capabilities are shown together, but when the construct model is operationalized below, the ABDC categories are all described independently with appropriate proxy variables identified.

Groupings for Analytical Purposes

In order to evaluate the effectiveness of specific Acquisition Based Dynamic Capabilities at the firm and transaction level the acquisitions were classified into different groupings. One classification was based on the primary sector of the industry that the targets business represented ("Industry Groups"). Another classification was based on overall company performance ("Leaders and Laggards"). One grouping was based on ABDC performance of each acquirer as measured at various timing intervals of the transaction ("Top Performers and Poor Acquirers"). Admittedly, some power is lost when the dataset of 337 transactions is reduced to define subsets of logical groupings; however, the probative value of splitting the data set in this manner was a worthwhile tradeoff. It is also worth noting that for analytical purposes the broader data set was only split by one method at a time. Additionally, Bruner (2004) cites 15 different quantitative studies of acquirer M&A performance that utilized data sets of 50 or less where the authors argue that despite the sizes of their data sets, their samples are sufficient for empirical modeling and providing for robust and generalizable results. Each grouping is defined below.

"Industry Groups"

To enhance the analytical granularity of the project each acquisition was classified into one of four primary industry groups. "Resources" are companies whose primary

core business involved the extraction or production of natural resources. This classification includes all the transactions involving coal companies and oil and gas exploration and production companies. 47 of the transactions in this study involved companies defined as "Resource" companies.

The classification "Utilities" was used to define companies whose primary line of business is regulated energy utilities. These companies include both gas and electric utilities and include both local distribution and retail operations. 76 of the transactions in this study involved companies defined as "Utilities".

The classification "Midstream and Transportation" defines companies whose primary line of business is the processing and transportation of energy products. This includes, gas, oil and product processing, treatment and transportation. 143 of the transactions in this study are defined as "Midstream and Transportation".

The classification "Electric" defines companies whose primary line of business is the generation and long hall transmission of electricity. This includes electric generation regardless of fuel source (coal, gas, oil, wind, solar, etc.). 71 of the transactions in this study involved companies defined as "Electric".

"Leaders and Laggards"

Across any industry certain companies will outperform (on a variety of performance or financial based metrics) its peers and be viewed as an attractive company. Similarly, certain companies will underperform (on a variety of performance or financial based metrics) their industry peers and be considered less attractive to the investment community. This reality is best evidenced by the varying valuation multiples that companies trade at despite having similar risk profiles and expected return profiles. This phenomenon is also apparent in the M&A world where industry leaders are for the most part given the benefit of the doubt in their business decisions and the market will act in a somewhat favorable manner for a proposed course of action or new strategic direction. Unfortunately for some would be acquirers the

opposite is also true, where for the less desirables the market may take a somewhat skeptical look at what new course of action that is being proposed (such as an M&A transaction) and maintain that market skepticism until proven otherwise. To evaluate whether historically "good companies" are also 'good acquirers" and also the negative alternative of whether historically "poor" companies are also "poor" acquirers two groupings were defined.

"Leaders" are defined as top quartile companies within their industry grouping. "Laggards" are defined as bottom quartile companies within their industry grouping. The financial measure utilized to determine the quartiling was a simple 3 year average return on shareholder equity (ROE) calculated as total return of stock appreciation and dividends paid as calculated 3 years prior to date of a company transaction. Stated another way, taking the three years prior to the date of a transaction announcement was the company on a shareholder returns basis a top or bottom quartile performer. A 3 year time internal was chosen to account for any single year anomaly that may have impacted any companies' individual results. In this analysis Top quartile performers are referred to as Leaders while bottom quartile performing companies are referred to as Laggards. 81 transactions were consummated by Leaders, 87 by Laggards and the remaining fell into the inter quartile range and labeled "All Other".

ABDC "Top Performers" and "Poor Performers"

Similar to the analytical benefits provided by classifying acquirers as Leaders and Laggards prior to the announcement of any M&A transaction, to provide a baseline of the market perception of these acquirers pre transaction, it is also informative to isolate performance differences across the ABDC time intervals to determine which acquirers exhibited strong or poor performance for each ABDC category (S&I, T&E, R&I). "Top Performers" are defined as the top quartile performing acquirers from a returns perspective for each ABDC interval. Similarly, "Poor Performers" are defined as the bottom quartile performing acquirers from a returns perspective for each ABDC interval. 82 transactions were classified as "Top Performers", 82 transactions as "Poor Performers" with the reminder falling into the inter

quartile range and labeled "All Other". It is important to note that for each ABDC measurement point (S&I, T&E, R&I) Top and Poor Performers were identified so these groups are not comprised of the same exact set of acquirers across all ABDC intervals. As an example just because a company exhibited strong S&I skills and is top quartile in that, does not necessarily imply that they are also strong in T&E and R&I and may or may not be among the top quartile performers in those categories. Although it is worth noting that many of the Top performers have top quartile performance in two of the categories, however, any one acquirer having top quartile performance across all ABDC categories was rather rare.

Dependent and Independent Variables

Dependent Variables

Dependent variables were defined to quantify the variance observed across the ABDC groupings. As proxy measures for the effectiveness of a company's efforts towards S&I, T&E and R&I, value creation (or destruction) measurements were calculated and defined as the acquirer's change in market equity value over a specified period of time. For the purposes of this research the focus was on specifications of the dependent variable that are evaluated at various measurement points coinciding with the time horizons associated with the ABDC capabilities of "Selecting and Identifying", "Transacting and Executing" and "Reconfiguring and Integrating". This approach allows for the measure of the relative value enhancement (or destruction) caused by the firm's resource performance within the various ABDC time intervals throughout the deal lifecycle. Admittedly, these are proxy measures of theoretical constructs but arguably a well-reasoned approach.

Additionally, as discussed above the analysis focused on both weak and semi-strong approaches to measuring value creation. The weak forms included simple return metrics whereas the semi-strong approaches included methodologies that attempt to determine how

much better off the returns are for the acquiring firm was as a result of performing a certain action vis-à-vis a hypothetical situation of having done nothing. This approach controlled for the fact that markets are dynamic (constantly moving) and looking at static returns of a transaction without normalizing for market activity provides an inaccurate measure of true value creation.

Stated simplistically, a transaction that provided a positive net return of 10% over a time frame when that firm's market of peers only experienced a 7% average return over the same period would be said to have a cumulative abnormal return of 3%. Similarly, if a net return of 5% was obtained on an opportunity when the industry market benchmark grew by 9%, this would be interpreted as the firm had a -4% abnormal return and thus would be actually destroying value relative to the industry benchmark and the "do nothing scenario".

Selecting and Identifying (S&I)

"Selecting and Identifying" capability includes the ability to assess a firm's existing resource base relative to desired new resources and capabilities, to assess the degree of market failure with respect to resources that are beyond the firm's existing resource base and to assess the number of points of contact that inter-organizational creation or new resources would require. It also includes the capability to be able to carry out effective due diligence of potential targets in order to determine the value of the target to the acquirer, to negotiate appropriate terms with the a target's owner, and to walk away from a target if it lacks needed resources or its owners demand a price that exceeds the value to the acquirer. Firms that can efficiently perform these tasks and have resources with well-developed capabilities can be positioned to create substantial competitive advantage.

As a proxy to measure the effectiveness of a firm's S&I capabilities, short-term value measurements are most appropriate. Additionally, the market's response to the effectiveness of these capabilities is best evidenced by how it responds when it is informed of what the acquirer intends to do. The announcement of the intentions and the market's response to how well the company has identified and selected a target becomes apparent at the announcement date of the transaction. Utilizing value measures straddling the announcement

date of the transaction is an appropriate gauge of the market's judgment of a company's S&I capabilities. Furthermore, as the market tends to be somewhat efficient, the window of time necessary to measure its response is relatively short.

A large body of literature exists that studies short-term acquirer returns. Some of the more recent work includes, Mulherin (2000), Kohers and Kohers (2000 and 2001), Beitel et al, (2002), Fuller, Netter, Stegemoller (2002), Ghosh (2002), Kuiper, Miller and Patel (2003). Each study had its own definition of short-term and how it specified its straddle logic around the announcement date. Of note is the common practice to peg the straddle date around the announcement of the transaction (not the closing date). Event windows of (-10, +10) (-5, +5), (-3, +3), (-1, +1), (0, +1), (0, +3) are pretty common in the literature.

Interestingly the event windows that are being utilized in M&A research for announcement returns are tending to be shorter than what was used decades ago. Perhaps this is a byproduct of the faster flowing of information now available and the speed at which markets are able to re-price assets. As an example 30 years ago an investor would read about a deal announcement in the Wall Street Journal, a day after the announcement, perhaps call his broker that afternoon and over the next day or two place a trade that may settle in an additional day or two. Whereas, today with the advancements of technology, the investor probably knows about the transaction just prior to the press conference announcing the deal, is able to log in online and consummate a trade in almost real time. Thus the market impact of news and events are being captured over very short (and further shortening) time horizons.

Nevertheless, our proxy measures for value created through S&I was evaluated over multiple time horizons. Weak measurements (simple returns) and semi-strong (abnormal returns) measurements were evaluated. Different time horizons were calculated all anchored around the announcement date of the transaction. Simple and abnormal returns were calculated on a (-1, +1), (-3, +3), (-5, +5) and (-10, +10) basis. For the calculation of abnormal returns the transactions in the various industry groupings were compared to the following indices: Resources - S&P Market 500 Index (S&P 500), Utility - Dow Jones Utility Index (DJUI), Midstream and Transportation – Alerian Midstream Infrastructure Index (AZL), Electric - Dow Jones Utility

Index (DJUI). These market based indices reflect peer performance and are most appropriate when calculating abnormal returns for transactions in each of the industry groups. Summary statistics for various specifications of the S&I variable are provided in Table 2 and Table 3.

To keep the presentment of the findings manageable, much of the analysis is centered on two specifications of the S&I variable; one a weak form, one a semi-strong form. Semi-strong specification of SI_CAR_AN_3DAY (Abnormal returns on a -3, +3 day event window anchored off of the announcement date) and weak form SI_CAR_AN_3DAY (Simple returns on a -3, +3 day event window anchored off of the announcement date). In instances throughout this document where a single measure was required for discussion or analytical purposes the 3 day abnormal semi-strong measure was utilized.

Transacting and Executing (T&E)

Transacting and Executing capability is the capacity to manage and execute efficiently the transaction closing process, including meeting all conditions precedent in the acquisition which may involve arranging financing, obtaining approvals and consents, (regulatory, shareholder, other) and consummating all other deal closing mechanics. Firms that can manage efficiently these processes are positioned to take advantage of the opportunity that was created in "Selecting and Identifying" and can create substantial competitive advantage.

As a proxy to measure the effectiveness of a firm's T&E capabilities, short-term value measurements are most appropriate but anchored around the closing date of the transaction. Additionally, the market's response to the effectiveness of these capabilities is best evidenced by how it responds when it is informed of how the acquirer expects to close the transaction and its strategy for satisfying any commitments it made during the announcement phase of the transaction in its short-term execution plan. Utilizing value measures straddling the closing date of the transaction is an appropriate gauge of the market's judgment of a company's T&E capabilities. Furthermore, as the market tends to be somewhat efficient, the window of time necessary to measure its response is relatively short, however, the company will spend some fair amounts of time completing the tasks necessary to effectuate the transaction and get through

its first accounting cycle and post-close critical Day 1 transition items which are all part of T&E. Even though this time period can linger for months as companies work through final regulatory approvals and meeting conditions necessary to close the transaction, the completion of and communication of outcomes for many of these tasks occur in the last month pre-closing of a transaction. Similarly the one month post-closing of the transaction and the completion of the companies first accounting cycle often is the first indication of how well much of the T&E tasks were conducted.

Unlike the scholarship done around announcement returns and long-term post-closing returns which cover many of the S&I and R&I factors, the literature does not provide much insight into how best to measure these intermediate term capabilities. This is partly the result of the fact that much of the literature does not deal well with the T&E activities and measurement at all. In most research design, much of the effects of T&E is muddled in the S&I and R&I phases as many of the studied transactions in the literature deal with virtually no approval cycle and do not account for the lag between announcement and closing. Although this treatment of the T&E aspect of the deal lifecycle is perhaps where much of this study's contribution may ultimately rest, it is the one area with the least theoretical basis to build upon.

Our proxy measures for value created through T&E was evaluated over multiple time horizons. Weak measurements (simple returns) and semi-strong (abnormal returns) measurements were evaluated. Different time horizons were calculated all anchored around the closing date of the transaction. Simple and abnormal returns were calculated on a (-30, +30), (0, +30), (0, +90) and (0, +180) basis. For the calculation of abnormal returns the transactions in the various industry groupings were compared to the following indices: Resources - S&P Market 500 Index (S&P 500), Utility - Dow Jones Utility Index (DJUI), Midstream and Transportation – Alerian Midstream Infrastructure Index (AZL), Electric - Dow Jones Utility Index (DJUI). These market based indices reflect peer performance and are most appropriate when calculating abnormal returns for transactions in each of the industry groups.

Summary statistics for various specifications of the T&E variable are provided in Table 2 and Table 3. To keep the presentment of the findings manageable, much of the analysis

is centered on two specifications of the T&E variable one a weak form and one a semi-strong form. Semi-strong specification of TE_CAR_Clsd_30DAY (Abnormal returns on a -30, +30 event window anchored off of the closing date) and weak form TE_SIM_Clsd_30DAY (Simple returns on a -30, +30 day event window anchored off of the closing date). In instances in this Dissertation where a single measure was required for discussion or analytical purposes, the 30 day abnormal semi-strong measure was utilized.

Reconfiguring and Integrating (R&I)

Reconfiguring and Integrating capability is the capacity to reshape resources within the target and acquiring firms. This involves the capacity to combine resources from the target and acquirer in order to create new resources, whether at the target or within the acquirer's original business units or in some new organizational unit. This capability also requires the capacity to selectively divest unneeded resources from the target as well as divest obsolete resources for the acquirer that have become unnecessary or sub optimal as a result of the R&I process.

As a proxy to measure the effectiveness of a firm's R&I capabilities, long-term value measurements are most appropriate. Additionally, the market's response to the effectiveness of these capabilities is best evidenced by how it responds when it has an opportunity to observe how the company performs (operationally and financially) over multiple reporting cycles. Utilizing value measures post-closing date of the transaction is an appropriate gauge of the market's judgment of a company's R&I capabilities.

A large body of literature exists that studies long-term acquirer returns. Including in this research stream are the works of Pettit (2000), Kohers and Kohers (2001), Ferris and Park (2001), and Moeller, Sclingemann and Stulz (2003). Each study had its own specification of a long-term time horizon. Interestingly these studies also pegged their anchor date to announcement date. This would be somewhat problematic in this study's industry context as in some instances the lag between announcement and closing exceeds a year. So depending on how long the long-term horizon was set, in this industry context much of that time

span could be elapsed pre-closing and not indicative of any actual R&I activities. Some of these studies did have rather robust time horizons (some upwards of 3 to 5 years). However, the longer the window, the more noise in the results as other factors become more impactful and the true effects of the acquisition on company performance becomes more muted over time. As a result, much of the literature on long-term returns pegs the event window to 360 (or 365) days out, although some variation exists on whether this is based off of announcement or closing.

The most common timing sequence appears to be one year out and no backward look (0, +365). This also seems appropriate in this study with the one adjustment that the date should be anchored off of the closing of the transaction and not the announcement date to better isolate the effect of R&I. This is also consistent with the desire of utilizing the long-term return calculation as a proxy for effectiveness of post-closing R&I capabilities.

Similar to the treatment with S&I and T&E, the proxy measures for value created through R&I was evaluated over multiple time horizons. Weak measurements (simple returns) and semi-strong (abnormal returns, both CAR and BHAR methodologies) were evaluated. Different time horizons were calculated all anchored around the closing date of the transaction. Simple and abnormal (BHAR and CAR) returns were calculated on a (0, +180), (0, +270) and (0, +360) basis. For the calculation of CAR abnormal returns the transactions in the various industry groupings were compared to the following indices: Resources - S&P Market 500 Index (S&P 500), Utility - Dow Jones Utility Index (DJUI), Midstream and Transportation – Alerian Midstream Infrastructure Index (AZL), Electric - Dow Jones Utility Index (DJUI). These market based indices reflect peer performance and are most appropriate when calculating abnormal returns for transactions in each of the industry groups. For the calculation of BHAR (Buy and Hold Abnormal Returns), representative companies within each industry grouping were selected. These representative companies were targeted to be similar in size and also one that did not conduct a M&A transaction over the study period to reflect a baseline of how a representative company would have performed over the time horizon in the same industries had they not done an M&A transaction. See Barber and Lyon (1997) for a well-respected discussion of the nuances of this approach.

Summary statistics for various specifications of the R&I variable are provided in Table 2 and Table 3. To keep the presentment of the findings manageable, much of the analysis is centered on three specifications of the S&I variable, one a weak form and two semi-strong forms. Semi-strong specification of RI_BHAR_Clsd_360DAY (BHAR returns on a 0, +360 day event window anchored off of the closing date), RI_CAR_Clsd_360DAY (CAR returns on a 0, +360 day event window anchored off of the closing date), and weak form RI_CAR_Clsd_360DAY (Simple returns on a 0, +360 day event window anchored off of the closing date). In instances in this Dissertation where a single measure was required for discussion or analytical purposes, the 0, +360 day BHAR semi-strong measure was utilized.

"Golden Measures"

The combination of weak and semi-strong methods in addition to the multitudes of timing horizons that could be utilized provides for ample ways of measuring the S&I, T&I and R&I capabilities. Table 1 provides a listing of the selected variables as well as the multiple alternative specifications that were calculated and reviewed as part of the study. Furthermore, in the hopes of keeping the analysis manageable, throughout the Analysis, Results and Discussion sections below, where it makes sense to work with one set of measures, a "Golden Measure" has been defined to reflect the single best way to evaluate each of the ABDC capabilities. The selected Golden Measures are:

- S&I – SI_CAR_AN_3DAY (CARs, -3, +3 horizon from announced date)
- T&E – TE_CAR_Clsd_30DAY (CARs, -30, +30 day horizon from closed date)
- R&I – RI_BHAR_Clsd_360DAY (BHARs, 0, +360 day horizon from closed date)

Table 1: Dependent Variable Descriptions

Dependent Variables		
Variable	**Short Name**	**Definition**
Selecting and Identifying (S&I)	**SI_CAR_AN_3DAY** **SI_SIM_AN_3DAY**	Measures for the Acquisition Based Dynamic Capabilities of Selecting and Identifying: Primary Focus on two options: CAR_AN_3Day = Abnormal Return from announced date (-3,+3 window) SIM_AN_3Day = Simple Return from announced date (-3,+3 window)
Transacting and Executing (T&E)	**TE_CAR_Clsd_30DAY** **TE_SIM_Clsd_30DAY**	Measures for the Acquisition Based Dynamic Capabilities of Transacting and Executing: Primary Focus on two options: CAR_Clsd_30Day = Abnormal Return from closed date (-30,+30 window) SIM_Clsd_30Day = Simple Return from closed date (-30,+30 window)
Reconfiguring and Integrating (R&I)	**RI_BHAR_Clsd_360DAY** **RI_CAR_Clsd_360DAY** **RI_SIM_Clsd_360DAY**	Measures for the Acquisition Based Dynamic Capabilities of Reconfiguring and Executing: Primary Focus on three options: BHAR_Clsd_360 = Buy and Hold Return from closed date (0,+360 window) CAR_Clsd_360Day = Abnormal Return from closed date (0,+360 window) SIM_Clsd_360Day = Simple Return from closed date (0,+360 window)
"Golden Measures"	**SI_CAR_AN_3DAY** **TE_CAR_Clsd_30DAY** **RI_BHAR_Clsd_360DAY**	**For presentment purposes a preferred "Golden Measure" for each ABDC is as follows:** S&I= CAR_AN_3Day = Abnormal Return from announced date (-3,+3 window) T&E= CAR_Clsd_30Day = Abnormal Return from closed date (-30,+30 window) R&I= BHAR_Clsd_360 = Buy and Hold Return from closed date (0,+360 window)
Calculated Alternatives		
S&I	Simple returns based on (-1, +1), (-3, +3), (-5, +5), (-10, +10) time intervals from announcement date Abnormal returns based on (-1, +1), (-3, +3), (-5, +5), (-10, +10) time intervals from announcement date	
T&E	Simple returns based on (-30, +30), (0. +30), (0, +90), (0, +180) time intervals from announcement dates Abnormal returns based on (-30, +30), (0, +30), (0, +90), (0, +180) time intervals from announcement dates Simple returns based on (-30, +30), (0. +30), (0, +90), (0, +180) time intervals from closed dates Abnormal returns based on (-30, +30), (0, +30), (0, +90), (0, +180) time intervals from closed dates	
R&I	Simple returns based on (0, +180), (0, +270), (0, +360) time intervals from announcement dates Abnormal returns based on (0, +180), (0, +270), (0, +360) time intervals from announcement dates Buy and Hold returns based on (0, +180), (0, +270), (0, +360) time intervals from announcement dates Simple returns based on (0, +180), (0, +270), (0, +360) time intervals from closed dates Abnormal returns based on (0, +180), (0, +270), (0, +360) time intervals from closed dates Buy and Hold returns based on (0, +180), (0, +270), (0, +360) time intervals from closed dates	

Tables 2 and 3 contain some of the descriptive statistics for the weak and semi-strong calculations for transaction returns at various timing intervals and methodologies. Generally speaking transactions appear to have small positive returns on average at announcement, they are approximately breakeven when evaluated at short time intervals around the closing and then generally speaking most transaction have negative longer term post-close returns.

Additionally, when viewed across a deal lifecycle, the small but positive gains obtained at announcement and shortly after closing are wiped away within the first year after closing. The findings on average of small initial gains (CARs) is consistent with much of the past research on expected returns to acquirers and supportive of findings including; Kohers and Kohers (2000 and 2001), Mulherin (2000), Floreani and Rigamonti (2001), Beitel, et al (2002), Fuller, Netter and Stegomoller (2002), and Rennenboog and Goergen (2003). Additionally, the findings of long-term larger negative returns (CARs and BHARs) is consistent with the previous work of Pettit (2000), Ferris and Park (2001), Kohers and Kohers (2001) and Moeller, Schlingemann and Stulz (2003). Differences do exist when evaluating the Leaders versus the Laggards as well as across the different industry subgroups. A much richer discussion of the factor impacts and differences across transactions on the estimations of the S&I, T&E and R&I variables is provided in the Results and Discussion sections below.

Table 2: Return Statistics by Performance Group

	All n=337				Leaders n=81				Laggards n=87				All Others n=169			
	Min	Max	Mean	STD	Min	Max	Mean	STD	Min	Max	Mean	STD	Min	Max	Mean	STD
SimRet_An_1day	-0.16	0.52	0.006	0.049	-0.04	0.19	0.008	0.032	-0.16	0.52	0.018	0.078	-0.16	0.16	-0.001	0.034
SimRet_An_3day	-0.27	0.32	0.007	0.057	-0.07	0.21	0.013	0.040	-0.27	0.32	0.021	0.078	-0.25	0.22	-0.004	0.050
SimRet_An_5day	-0.27	0.36	0.010	0.061	-0.08	0.22	0.018	0.043	-0.19	0.36	0.030	0.078	-0.27	0.2	-0.003	0.056
SimRet_An_10day	-0.58	0.9	0.016	0.096	-0.08	0.23	0.021	0.051	-0.33	0.9	0.036	0.130	-0.58	0.66	0.003	0.090
SimRet_An_30day	-0.47	0.88	0.019	0.125	-0.47	0.22	0.022	0.094	-0.26	0.72	0.030	0.147	-0.38	0.88	0.011	0.125
SimRet_An_180day	-0.91	2.11	0.058	0.282	-0.88	0.39	0.087	0.184	-0.91	1.98	0.051	0.399	-0.65	2.11	0.048	0.245
SimRet_An_270day	-0.76	3.03	0.085	0.362	-0.52	0.57	0.132	0.222	-0.76	3.03	0.091	0.518	0.72	2.85	0.061	0.318
SimRet_An_360day	-0.91	3.86	0.121	0.410	-0.91	0.64	0.173	0.230	-0.91	3.86	0.138	0.636	-0.72	2.93	0.090	0.327
CAR_An_1day	-0.17	0.5	0.005	0.048	-0.06	0.18	0.008	0.032	-0.17	0.5	0.016	0.075	-0.17	0.15	-0.002	0.033
CAR_An_3day	-0.28	0.32	0.005	0.053	-0.11	0.21	0.009	0.038	-0.28	0.32	0.016	0.073	-0.26	0.21	-0.003	0.046
CAR_An_5day	-0.25	0.36	0.008	0.057	-0.15	0.21	0.012	0.042	-0.19	0.36	0.024	0.074	-0.25	0.24	-0.003	0.050
CAR_An_10day	-0.59	0.84	0.009	0.089	-0.07	0.2	0.012	0.046	-0.32	0.84	0.026	0.118	-0.59	0.66	0.000	0.086
CAR_An_30day	-0.46	0.85	0.012	0.117	-0.46	0.23	0.013	0.086	-0.31	0.64	0.022	0.135	-0.44	0.85	0.007	0.121
CAR_An_180day	-0.82	2.06	0.032	0.254	-0.62	0.42	0.041	0.166	-0.82	1.87	0.032	0.354	-0.56	2.06	0.028	0.227
CAR_An_270day	-0.77	2.87	0.040	0.322	-0.72	0.56	0.062	0.189	-0.77	2.87	0.039	0.450	-0.54	2.76	0.029	0.293
CAR_An_360day	-0.91	3.65	0.054	0.363	-0.25	0.84	0.086	0.192	-0.91	3.65	0.059	0.552	-0.59	2.81	0.037	0.299
BHAR_An_1day	-0.18	0.53	0.007	0.051	-0.06	0.19	0.010	0.035	-0.15	0.53	0.017	0.078	-0.18	0.17	-0.001	0.036
BHAR_An_3day	-0.3	0.32	0.004	0.057	-0.13	0.22	0.008	0.049	-0.29	0.32	0.015	0.073	-0.3	0.24	-0.003	0.051
BHAR_An_5day	-0.3	0.35	0.004	0.062	-0.21	0.2	0.009	0.054	-0.23	0.35	0.020	0.077	-0.3	0.24	-0.006	0.056
BHAR_An_10day	-0.65	0.84	0.005	0.096	-0.22	0.2	0.008	0.055	-0.36	0.84	0.021	0.123	-0.65	0.64	-0.005	0.095
BHAR_An_30day	-0.43	0.84	0.001	0.125	-0.33	0.24	-0.001	0.095	-0.29	0.62	0.012	0.141	-0.43	0.84	-0.003	0.130
BHAR_An_180day	-0.82	2.08	-0.023	0.285	-0.82	0.44	-0.017	0.193	-0.61	1.94	-0.037	0.389	-0.65	2.08	-0.018	0.259
BHAR_An_270day	-0.82	2.93	-0.042	0.348	-0.82	0.47	-0.014	0.228	-0.72	2.93	-0.052	0.467	-0.62	2.81	-0.049	0.324
BHAR_An_360day	-0.88	3.71	-0.065	0.391	-0.88	0.58	-0.027	0.246	-0.77	3.71	-0.056	0.575	-0.78	2.87	-0.088	0.326
SimRet_Clsd_1day	-0.43	0.19	0.002	0.032	-0.03	0.05	0.003	0.014	-0.43	0.12	-0.001	0.054	-0.06	0.19	0.003	0.022
SimRet_Clsd_3day	-0.47	0.2	0.001	0.046	-0.07	0.07	0.006	0.025	-0.47	0.2	0.000	0.071	-0.19	0.19	0.000	0.038
SimRet_Clsd_5day	-0.63	0.27	0.000	0.061	-0.14	0.08	0.004	0.034	-0.63	0.27	0.000	0.089	-0.33	0.19	-0.001	0.053
SimRet_Clsd_10day	-0.83	0.23	-0.004	0.079	-0.21	0.1	0.002	0.052	-0.83	0.23	-0.003	0.113	-0.39	0.2	-0.007	0.068
SimRet_Clsd_30day	-0.9	1.31	0.005	0.147	-0.17	0.21	0.030	0.078	-0.9	1.31	0.012	0.228	-0.62	0.33	-0.010	0.113
SimRet_Clsd_180day	-0.99	1.98	0.032	0.274	-0.72	0.52	0.083	0.278	-0.99	1.98	0.022	0.383	-0.82	0.75	0.013	0.196
SimRet_Clsd_270day	-0.94	2	0.046	0.327	-0.64	0.74	0.113	0.257	-0.88	2	0.042	0.462	-0.94	1.23	0.018	0.267
SimRet_Clsd_360day	-0.72	2.77	0.084	0.360	-0.42	0.77	0.145	0.273	-0.72	2.77	0.088	0.544	-0.66	1.18	0.056	0.273
CAR_Clsd_1day	-0.42	0.21	0.002	0.033	-0.03	0.05	0.002	0.012	-0.42	0.12	-0.001	0.053	-0.06	0.21	0.003	0.024
CAR_Clsd_3day	-0.47	0.2	0.004	0.041	-0.05	0.09	0.007	0.023	-0.47	0.14	0.004	0.062	-0.09	0.2	0.002	0.032
CAR_Clsd_5day	-0.61	0.2	0.003	0.051	-0.06	0.14	0.005	0.030	-0.61	0.15	0.003	0.079	-0.14	0.2	0.001	0.040
CAR_Clsd_10day	-0.85	0.18	-0.001	0.068	-0.11	0.09	0.002	0.035	-0.85	0.18	-0.001	0.106	-0.24	0.18	-0.003	0.054
CAR_Clsd_30day	-0.9	1.29	0.003	0.133	-0.17	0.25	0.018	0.067	-0.9	1.29	0.014	0.212	-0.65	0.22	-0.009	0.099
CAR_Clsd_180day	-0.88	1.88	0.012	0.234	-0.63	0.54	0.036	0.229	-0.88	1.88	0.010	0.329	-0.7	0.74	0.002	0.170
CAR_Clsd_270day	-0.87	2.01	0.020	0.271	-0.77	0.59	0.059	0.209	-0.87	2.01	0.016	0.388	-0.7	0.97	0.003	0.218
CAR_Clsd_360day	-0.87	2.64	0.031	0.310	-0.72	0.67	0.064	0.211	-0.87	2.64	0.033	0.459	-0.43	0.99	0.015	0.250
BHAR_Clsd_1day	-0.41	0.21	0.002	0.032	-0.03	0.05	0.003	0.015	-0.41	0.11	0.000	0.051	-0.06	0.21	0.002	0.026
BHAR_Clsd_3day	-0.43	0.22	0.004	0.046	-0.05	0.1	0.007	0.025	-0.43	0.13	0.002	0.063	-0.13	0.22	0.003	0.043
BHAR_Clsd_5day	-0.58	0.21	0.002	0.059	-0.09	0.16	0.007	0.035	-0.58	0.2	0.001	0.082	-0.17	0.21	0.000	0.053
BHAR_Clsd_10day	-0.81	0.36	-0.002	0.078	-0.19	0.12	0.002	0.047	-0.81	0.2	-0.006	0.108	-0.22	0.36	-0.002	0.072
BHAR_Clsd_30day	-0.76	1.28	-0.008	0.143	-0.3	0.25	0.000	0.092	-0.76	1.28	-0.004	0.215	-0.62	0.24	-0.014	0.114
BHAR_Clsd_180day	-0.84	1.86	-0.046	0.252	-0.82	0.38	-0.028	0.254	-0.84	1.86	-0.054	0.331	-0.73	0.61	-0.051	0.198
BHAR_Clsd_270day	-0.72	1.98	-0.066	0.289	-0.52	0.65	-0.028	0.251	-0.72	1.98	-0.067	0.390	-0.63	0.91	-0.085	0.241
BHAR_Clsd_360day	-0.82	2.63	-0.092	0.330	-0.58	0.65	-0.068	0.265	-0.53	2.63	-0.085	0.452	-0.82	0.86	-0.108	0.281

Table 3: Return Statistics by Industry Group

	Resource Based n=47				Utilities n=76				Midstream and Transportation n=143				Electric n=71			
	Min	**Max**	**Mean**	**STD**	**Min**	**Max**	**Mean**	**STD**	**Min**	**Max**	**Mean**	**STD**	**Min**	**Max**	**Mean**	**STD**
SimRet_An_1day	-0.16	0.21	0.003	0.057	-0.16	0.07	-0.002	0.034	-0.14	0.52	0.013	0.055	-0.1	0.29	0.003	0.045
SimRet_An_3day	-0.15	0.22	0.004	0.067	-0.27	0.15	-0.001	0.058	-0.25	0.26	0.013	0.056	-0.09	0.32	0.006	0.053
SimRet_An_5day	-0.27	0.22	0.006	0.079	-0.19	0.17	0.002	0.056	-0.25	0.22	0.014	0.058	-0.1	0.36	0.014	0.059
SimRet_An_10day	-0.15	0.23	0.013	0.076	-0.33	0.29	0.005	0.069	-0.58	0.9	0.018	0.113	-0.12	0.66	0.024	0.096
SimRet_An_30day	-0.24	0.37	0.019	0.128	-0.26	0.28	0.010	0.086	-0.47	0.72	0.018	0.137	-0.26	0.88	0.029	0.133
SimRet_An_180day	-0.8	0.61	0.091	0.279	-0.88	0.42	0.048	0.198	-0.91	1.98	0.038	0.304	-0.24	2.11	0.088	0.314
SimRet_An_270day	-0.81	0.8	0.082	0.374	-0.81	0.7	0.072	0.265	-0.76	3.03	0.086	0.391	-0.47	2.85	0.100	0.390
SimRet_An_360day	-0.91	1.68	0.178	0.447	-0.91	0.65	0.114	0.273	-0.91	3.86	0.112	0.460	-0.85	2.93	0.109	0.414
CAR_An_1day	-0.17	0.19	0.004	0.052	-0.17	0.07	-0.003	0.033	-0.15	0.5	0.012	0.053	-0.1	0.29	0.001	0.047
CAR_An_3day	-0.07	0.21	0.005	0.049	-0.28	0.17	-0.001	0.058	-0.26	0.22	0.009	0.051	-0.11	0.32	0.003	0.056
CAR_An_5day	-0.13	0.2	0.004	0.061	-0.19	0.2	0.002	0.054	-0.25	0.21	0.011	0.051	-0.15	0.36	0.010	0.067
CAR_An_10day	-0.12	0.19	0.009	0.057	-0.32	0.27	0.002	0.065	-0.59	0.84	0.012	0.103	-0.1	0.66	0.012	0.098
CAR_An_30day	-0.23	0.37	0.005	0.110	-0.31	0.26	0.011	0.090	-0.46	0.64	0.012	0.125	-0.22	0.85	0.018	0.132
CAR_An_180day	-0.75	0.5	0.055	0.239	-0.62	0.46	0.026	0.188	-0.82	1.87	0.016	0.254	-0.35	2.06	0.055	0.318
CAR_An_270day	-0.79	0.69	0.045	0.302	-0.72	0.58	0.036	0.226	-0.77	2.87	0.039	0.341	-0.59	2.76	0.041	0.381
CAR_An_360day	-0.88	1.56	0.123	0.403	-0.91	0.64	0.053	0.214	-0.91	3.65	0.050	0.392	-0.81	2.81	0.019	0.401
BHAR_An_1day	-0.15	0.22	0.004	0.056	-0.18	0.09	0.001	0.039	-0.14	0.53	0.012	0.056	-0.09	0.29	0.003	0.045
BHAR_An_3day	-0.13	0.24	0.007	0.064	-0.29	0.17	-0.002	0.061	-0.3	0.22	0.006	0.053	-0.13	0.32	0.005	0.057
BHAR_An_5day	-0.14	0.23	0.003	0.069	-0.23	0.18	-0.002	0.063	-0.3	0.2	0.005	0.056	-0.21	0.35	0.012	0.071
BHAR_An_10day	-0.13	0.16	0.006	0.069	-0.36	0.23	-0.002	0.069	-0.65	0.84	0.004	0.111	-0.22	0.64	0.014	0.106
BHAR_An_30day	-0.26	0.37	-0.006	0.121	-0.29	0.27	0.006	0.103	-0.43	0.62	-0.003	0.128	-0.29	0.84	0.010	0.145
BHAR_An_180day	-0.87	0.8	-0.021	0.277	-0.82	0.55	-0.005	0.226	-0.61	1.94	-0.059	0.283	-0.44	2.08	0.030	0.341
BHAR_An_270day	-0.86	0.8	-0.069	0.311	-0.82	0.4	-0.007	0.249	-0.72	2.93	-0.064	0.371	-0.67	2.81	-0.015	0.410
BHAR_An_360day	-0.91	1.72	-0.048	0.419	-0.88	0.51	-0.023	0.237	-0.77	3.71	-0.094	0.425	-0.87	2.87	-0.063	0.433
SimRet_Clsd_1day	-0.43	0.07	-0.002	0.067	-0.06	0.06	0.003	0.020	-0.07	0.19	0.003	0.026	-0.06	0.05	0.001	0.016
SimRet_Clsd_3day	-0.47	0.1	0.002	0.078	-0.19	0.1	-0.005	0.036	-0.16	0.2	0.004	0.045	-0.07	0.08	0.003	0.029
SimRet_Clsd_5day	-0.63	0.11	-0.001	0.102	-0.33	0.11	-0.009	0.059	-0.2	0.27	0.003	0.052	-0.1	0.15	0.006	0.040
SimRet_Clsd_10day	-0.83	0.14	-0.009	0.135	-0.39	0.15	-0.016	0.077	-0.26	0.23	0.000	0.062	-0.18	0.2	0.005	0.059
SimRet_Clsd_30day	-0.9	0.23	-0.006	0.171	-0.44	0.22	0.003	0.095	-0.67	1.31	0.016	0.169	-0.62	0.22	-0.007	0.126
SimRet_Clsd_180day	-0.77	0.63	0.005	0.351	-0.99	0.69	0.045	0.200	-0.81	1.98	0.038	0.305	-0.82	0.49	0.023	0.217
SimRet_Clsd_270day	-0.87	0.8	0.049	0.354	-0.64	1.04	0.061	0.294	-0.88	2	0.051	0.369	-0.95	0.74	0.017	0.252
SimRet_Clsd_360day	-0.77	0.97	0.103	0.465	-0.58	0.81	0.101	0.213	-1.5	2.77	0.082	0.427	-0.66	0.77	0.059	0.270
CAR_Clsd_1day	-0.42	0.05	-0.005	0.065	-0.07	0.11	0.003	0.024	-0.08	0.21	0.004	0.025	-0.06	0.08	0.003	0.019
CAR_Clsd_3day	-0.47	0.1	0.003	0.078	-0.09	0.07	-0.001	0.026	-0.09	0.2	0.007	0.034	-0.05	0.09	0.004	0.029
CAR_Clsd_5day	-0.61	0.14	-0.002	0.100	-0.14	0.07	-0.003	0.034	-0.07	0.2	0.005	0.039	-0.09	0.12	0.008	0.040
CAR_Clsd_10day	-0.85	0.09	-0.015	0.132	-0.24	0.09	-0.010	0.051	-0.21	0.18	0.004	0.049	-0.21	0.18	0.006	0.055
CAR_Clsd_30day	-0.9	0.2	-0.012	0.155	-0.39	0.25	0.006	0.087	-0.55	1.29	0.013	0.149	-0.65	0.34	-0.010	0.124
CAR_Clsd_180day	-0.77	0.69	-0.017	0.316	-0.79	0.57	0.024	0.167	-0.74	1.88	0.023	0.257	-0.88	0.44	-0.004	0.179
CAR_Clsd_270day	-0.87	0.85	0.038	0.313	-0.77	0.98	0.022	0.231	-0.75	2.01	0.034	0.304	-0.69	0.51	-0.023	0.202
CAR_Clsd_360day	-0.77	0.99	0.071	0.445	-0.87	0.8	0.046	0.197	-0.72	2.64	0.034	0.341	-0.43	0.42	-0.016	0.226
BHAR_Clsd_1day	-0.41	0.04	-0.004	0.063	-0.03	0.09	0.000	0.026	-0.08	0.21	0.005	0.026	-0.04	0.04	0.002	0.015
BHAR_Clsd_3day	-0.43	0.11	0.002	0.076	-0.13	0.19	-0.002	0.045	-0.08	0.22	0.005	0.039	-0.05	0.08	0.007	0.029
BHAR_Clsd_5day	-0.58	0.16	-0.004	0.101	-0.17	0.21	-0.004	0.052	-0.14	0.2	0.005	0.048	-0.15	0.13	0.007	0.045
BHAR_Clsd_10day	-0.81	0.12	-0.012	0.128	-0.22	0.36	-0.012	0.073	-0.21	0.17	0.003	0.061	-0.22	0.2	0.005	0.072
BHAR_Clsd_30day	-0.76	0.23	-0.025	0.142	-0.32	0.25	0.004	0.107	-0.6	1.28	-0.007	0.163	-0.62	0.28	-0.011	0.135
BHAR_Clsd_180day	-0.63	0.54	-0.079	0.317	-0.84	0.36	-0.039	0.181	-0.84	1.86	-0.045	0.280	-0.73	0.37	-0.034	0.205
BHAR_Clsd_270day	-0.97	0.71	-0.069	0.323	-0.52	0.72	-0.050	0.224	-0.72	1.98	-0.070	0.328	-0.63	0.65	-0.074	0.245
BHAR_Clsd_360day	-0.52	0.7	-0.078	0.400	-0.53	0.63	-0.033	0.244	-0.53	2.63	-0.124	0.369	-0.82	0.57	-0.101	0.265

Independent Variables

To operationalize the Construct Model (Figure 1) into testable equations, the constructs needed to be developed into a set of quantifiable independent variables that attempt to explain variation in the dependent variables defined above. Prior research was informative with regards to the appropriate variables to utilize and their expected impact on the ABDC categories. The independent variables were defined as follows:

- Like Buying Like Business: This is a dummy variable and set equal to 1 if both the acquirer and the target company are classified as being within the same industry segment, otherwise the variable is set equal to 0. Consistent with (Haywood and Hambrick, 1997), (Lubatkin, et al. 1997) and (Walker, 2000) the literature provides a mix basis for how this variable should behave. In some instances markets appreciate a diversification play, whereas in other situations the market prefers companies to stick to their core competencies and buy similarly situated companies. From a resource and ABDC perspective acquirers know what they already know and buying like businesses can be a great advantage from an S&I, T&E and R&I perspective. In this transaction dataset, 60.5% of the evaluated deals involved companies purchasing like businesses.

- Lag from a Critical Regulatory Date: Consistent with (Andrade, 2001), (Carow et al., 2004) and (Harford, 2005), this variable measures the number of months elapsed since the last major Federal energy law that was passed that would be expected to have a substantial impact on industry consolidation within the four defined industry segments. For each of the four industry groupings only the timing of relevant Federal legislation was factored into this variable. As an example the "Resource" transactions are impacted by the timing of EPAct 1992 and 2005 and the Greenhouse Tax Law of 2012. The "Utilities" grouping is

triggered off of PURPA 1978, EPAct 1992 and 2005. Whereas, the "Midstream and Transportation" transactions are influenced by FERC 636 and FERC 888, (1992 and 1996) and the "Power" transactions, PURPA 1978 and Clean Power Act of 2015.

- Approval Cycle: The number of days required to get approval of the transaction. For planning purposes is the number of days that after deal announcement the transaction is expected to take to close (based off of the proposed approval schedule) and after the close, it is the actual number of days it takes for the transaction to go from announced to close. As described above, only transactions with a deal cycle of at least 30 days were included. Consistent with (Homburg and Bucerius, 2006) and (Vester, 2002) to the extent that the approval cycle is long and arduous, this will place considerable strain on company resources focused on ABDC activities. Similarly the longer the approval process goes the more likely the deal gets modified from an economic perspective as additional concessions are requested and thus becomes potentially less attractive to investors. The average deal cycle time for the included transactions was 140 days with the longest deal taken almost 3 years to close.

- Stock Deal: This is a dummy variable set to equal 1 if at least half of the amount paid for the acquisition was attributed to issuance of company stock. The variable is set equal to 0 otherwise. Consistent with (Franks et al., 1988) and (Walker, 2000) past research has suggested that markets tend not to favor (from the acquirers' perspective) stock based deals as much as they do deals with alternative payment options. As the markets perceive the company to believe that its own equity might be somewhat overvalued as it uses this inflated form of currency to finance the acquisition. As a result, the response of the markets tends to be a negative one. Of the 337 transactions only 18.4% were stock purchases.

- Announced Deal During a Recession: This is a dummy variable set to equal 1 if the deal was announced during a US economic recession. The variable is set to 0 otherwise. Consistent with (Geroski, 1994), (Becketti, 1986) and (Yagil, 1996) the effect of an economic recession impacts the purchasing environment for the buyer. In many cases it has a negative impact on equity markets and oftentimes has a chilling effect on debt markets. Arranging for a deal during a recession becomes a challenge in the capital markets. Equity outlooks tend to be less than ideal and the availability and cost of capital (debt and equity) makes consummating a transaction difficult and oftentimes relatively expensive. The existence of a recession is expected to slow down deal velocity and also makes completing a successful transaction more difficult. For the purposes of this study, the National Bureaus of Economic Research (NBER) definition of recession was utilized. According to this standard the US economy was in recession from March 2001 to November 2001 and from December 2007 through June 2009. Only 8.0% of the transactions in the dataset were announced during a recession.

- Closed During a Recession: This is a dummy variable set to equal 1 if the deal was closed during a US economic recession. The variable is set to equal 0 otherwise. Consistent with (Geroski, 1994), (Becketti, 1986) and (Yagil, 1996) the effect of an economic recession impacts the purchasing environment for the buyer. In many cases it has a negative impact on equity markets and often times has a chilling effect on debt markets. Closing a deal during a recession with turbulent capital markets is somewhat of a challenge. The existence of a recession is expected to slow down deal velocity and also make completing a successful transaction more difficult. For the purposes of this study, the National Bureaus of Economic Research (NBER) definition of recession was utilized. According to this standard the US economy was in recession from March 2001 to November 2001 and from December 2007 through June 2009. Only 8.3% of the transactions in the dataset were closed during a recession.

- Announced During a Merger Wave: This is a dummy variable set to equal 1 if the transaction was announced during an industry group merger wave. For the purposes of this study, merger waves were defined for each industry group (group specific waves) comparing both the existence of a broader merger wave with the level of consolidation occurring at the industry grouping level. Consistent with (Andrade, 2001), (Carow et al., 2004) and (Harford, 2005) in the event that over 5 transactions of meaningful size occurred over a 12 month time horizon, then it was defined as an industry segment that was in a consolidation wave. For the purposes of this analysis, Resource companies were in a wave from 2009-2011, Utilities, 1999, 2006, 2010-2011, Midstream and Transportation 2010 to 2015 and Electric 1998-2000, 2007, 2014-2015. It is postulated that if a company acquires early or before a formal wave is defined, there is a good opportunity for a company to make a value enhancing acquisition, whereas once the wave has started, transactions become more difficult (fewer counter parties exist due to consolidation, premiums paid to sellers to transact going up, speculation pricing hampering deals, etc.) 33.5% of the transactions in the dataset occurred during the windows defined as merger waves.

- Experienced M&A Team: This is a dummy variable set equal to 1 if the acquirer had completed more than 1 previous M&A transaction in the previous 5 years. The variable is set to 0 otherwise. Consistent with (Franks, et al., 1991), (Haleblian and Finkelstein, 1999) and (Hayward, 2002) in most instances one would think that the more experience a company has the better it should be at the given task of acquiring a company. However, this is not necessarily the case. Some research has suggested that no two M&A transactions are really every alike and that to meaningfully move up the learning curve requires multiple (perhaps dozens) iterations to make progress and gain proficiency. Serial acquirers (Cisco and Bank One for example) who have completed hundreds of transactions might be able to benefit from their experience in a tangible way, however, the expected

impact of experience for less experienced acquirers is a bit less clear. There is also the suggestion by some that having conducted a few transactions could be even worse than none at all as the team is more susceptible to become overconfident. This is despite the fact that a few transactions provide little practical and transferable knowledge and as a result the team is more likely to misstep. For the transactions in this study 38.3% of the transactions were completed by firms that would be descried as experienced.

- Company Pressured to Transact: This is an interactive dummy variable that is set equal to 1 if the company segment is both currently in a merger wave and the acquiring company has not completed its own acquisition over the previous 5 years. Consistent with (McNamara, 2008) and (Carow, 2009) when companies are in waves they feel the market pressure that they need to either acquire someone or run the risk of they themselves being acquired (which they usually do not want). As a result, companies are on the margin more likely to do a poor deal if they feel any significant pressure to transact. Only 10.7% of the transactions in the dataset met these criteria.

- First Deal for the Team: This is a dummy variable that is set to equal to 1 if the transaction being completed is the first one for the company in the data set (and going back an additional 10 years). The variable is set equal to 0 otherwise. Consistent with (Franks, et al., 1991), (Haleblian and Finkelstein, 1999) and (Hayward, 2002) similar to the experienced team variable, this variable captures experience as well as potential other deal specific motivations of management teams wanting to transact. In some instances if a company wants to transact too strongly they may on the margin decide to do a transaction that might not be in its best interest. Similarly, if a company has never completed a transaction it has little experience to rely on. As both of these factors can be problematic, it is assumed that results may suffer for transactions that are the first for a given

acquirer. In this transaction dataset 40.1% of the transactions were the first deal for the team.

- Critical Deal for the Acquirer: This is a dummy variable set equal to 1 if the enterprise value of the acquired entity represents at least 20% of the enterprise value of the acquiring firm. Consistent with (Moeller, et al., 2004) and (Finkelstein and Haleblian, 2002) this variable helps control for the size of the transactions and the expected impact it could have on the acquiring company. For example, a minuscule transaction completed by a massive acquirer would only expect to have a negligible effect on the acquiring company regardless of whether it was done well or not. The size component also captures some of the importance that the company may place on the transaction. Arguably the larger the deal the more importance that the acquirer will place on it and assign resources appropriately. In this transaction dataset, 42.7% of the transactions were coded as critical to the acquirers.

- Multi-State Transaction: This is a dummy variable that is set to equal 1 if the business being acquired has operations in multiple states. The variable is set to equal 0 otherwise. Multi-State deals require approvals, regulatory conditions and often concessions over many states. Consistent with (Capron and Anand, 2007), (Anand, et al., 2005) and (Capron et al., 1998, 2001) the more states a transaction crosses over the more complex and potentially costly the deal is to consummate. On the other hand a multi-state transaction also may provide additional market opportunities for the acquirer as it opens additional markets for the company. So the net effect on overall performance could be a net positive. Nevertheless, multi-state transactions are much harder to arrange, execute and integrate from an S&I, T&E and R&I perspective. In this transaction dataset 47.2% of the transactions cut over multiple states.

- Overlapping States: This is a dummy variable that is set to equal 1 if the business being acquired has operations in the same jurisdiction as the acquirer. The variable is set to equal 0 otherwise. Consistent with (Capron and Anand, 2007), (Anand, et al., 2005) and (Capron et al., 1998, 2001) overlapping state deals require approvals, regulatory conditions and often concessions over many states but if they are states where the acquirer already operates and has expertise and perhaps good relationships (overlap) this could be a net positive. The more states a transaction crosses over the more complex and potentially costly to consummate but to the extent there is overlap from the acquirer they may be able to benefit from skills and resources already put in place. In this transaction dataset 57.0% of the transactions involved overlapping states form an acquirer's perspective.

- Multi Business Segment: This is classified as a dummy variable and set equal to 1 if the acquisition target is involved in multi energy segment operations, otherwise the variable is set equal to 0. Consistent with (Agrawal and Jaffe, 1992), (Berger and Ofek, 1995) and (Lubatkin, 1987) the literature provides a mix basis for how this variable should behave. In some instances markets appreciate a pure play investment thesis and in other instances it prefers some diversification. Regardless of the market receptiveness issues, targets that are multi segment are more difficult to transact from an ABDC perspective. S&I is a challenge as the business is more complicated to evaluate, T&E tends to become more drawn out and costly to reflect the complexity of the business and R&I initiatives tend to be much more costly to complete and potentially riskier. In this transaction dataset 24.6% of the evaluated deals were multi business segment acquisitions.

A summarized description of the independent variables are provided in the Table 4 below. Additionally, summarized descriptive statistics are provided in Tables 5 and Tables 6. Table 5 provides descriptive statistics for all of the transactions in addition to the Leader and Laggard and All Other groupings. Similarly, Table 6 provides descriptive statistics for the independent variables broken out by industry grouping: Resources, Utilities, Midstream and Transportation and Electric.

Table 4: Independent Variable Descriptions

Independent Variables		
Variable	**Short Name**	**Definition**
Like Buying Like Businesses	**LikeBuyLike**	Dummy Variable. =1 if both acquirer and target are classified as same energy industry segment, otherwise =0.
Lag from Critical Reg Date	**RegLag**	Number of months from the enactment of the last major federal energy and segment specific regulation impacting barriers to M&A within that energy segment.
Approval Cycle	**AppCycle**	Number of days required to get regulatory approval for the proposed transaction.
Stock Deal	**Stock**	Dummy Variable. =1 if 50% or greater of the value of the transaction was provided for by the issuance of acquired company stock, otherwise =0.
Announced During a Recession	**AnnReces**	Dummy Variable. =1 if the formal announcement of the transaction occurred during an economic recession, otherwise =0.
Closed During a Recession	**CloseReces**	Dummy Variable. =1 if the formal financial closing of the transaction occurred during an economic recession, otherwise =0.
Announced During a Merger Wave	**AnnMWave**	Dummy Variable. =1 if the formal announcement of the transaction occurred during an industry segment specific merger wave. Merger wave defined as the announcement of at least 5 large (set to $500 million) transactions having occurred in the previous 12 months within the industry segment. Variable set to 0 otherwise.
Experienced M&A Team	**ExpTeam**	Dummy Variable. =1 if the acquirer had completed more than 1 M&A transaction in the previous 5 years. Variable set to 0 otherwise.
Company Pressured to Transact	**Pressured**	Dummy Variable. =1 if the acquirer had not completed at least 1 transaction in the past 5 years and the industry segment was currently in a merger wave. Variable set to 0 otherwise.
First Deal For Team	**FirstDeal**	Dummy Variable. =1 if the transaction represents the first deal for the company in 20 year study period. Variable set to 0 otherwise.
Critical Deal for Acquirer	**CrititalDeal**	Dummy Variable. =1 if the transaction size in value represents at least 20% of the size of the acquiring company at the time of announcement. Variable set to 0 otherwise.
Multi State Transaction	**MultiState**	Dummy Variable. =1 if the business being acquired has operations spanning multiple sates (regulatory overseers). Variable set to 0 otherwise.
Overlapping States	**Overlap**	Dummy Variable. =1 if the business being acquired has operations in states where the acquirer already operates. Variable set to 0 otherwise.
Multi Business Segment	**MultiBus**	Dummy Variable. =1 if the business being acquired operates in multi segments of the energy industry. Variable set to 0 otherwise.

Table 5: Summary Statistics by Performance Grouping

	All n=337				Leaders n=81				Laggards n=87				All Others n=169			
	Min	Max	Mean	STD	Min	Max	Mean	STD	Min	Max	Mean	STD	Min	Max	Mean	STD
Like Buying Like Businesses	0	1	0.605	0.490	0	1	0.654	0.479	0	1	0.506	0.503	0	1	0.633	0.483
Lag from Critical Reg Date	0.1	234.7	107.035	65.575	6	234.7	117.620	70.352	0.2	232.2	107.827	69.715	0.1	230.7	101.553	60.587
Approval Cycle	30	909	140.365	148.114	38	546	120.259	123.428	30	683	130.391	149.912	30	909	155.136	157.005
Stock Deal	0	1	0.184	0.388	0	1	0.247	0.434	0	1	0.161	0.370	0	1	0.166	0.373
Announced During a Recession	0	1	0.080	0.272	0	1	0.062	0.242	0	1	0.092	0.291	0	1	0.083	0.276
Closed During a Recession	0	1	0.083	0.276	0	1	0.062	0.242	0	1	0.046	0.211	0	1	0.112	0.317
Announced During a Merger Wave	0	1	0.335	0.473	0	1	0.444	0.500	0	1	0.322	0.470	0	1	0.290	0.455
Experienced M&A Team	0	1	0.383	0.487	0	1	0.432	0.498	0	1	0.253	0.437	0	1	0.426	0.496
Company Pressured to Transact	0	1	0.107	0.309	0	1	0.099	0.300	0	1	0.138	0.347	0	1	0.095	0.294
First Deal For Team	0	1	0.401	0.491	0	1	0.358	0.482	0	1	0.517	0.503	0	1	0.361	0.482
Critical Deal for Acquirer	0	1	0.427	0.495	0	1	0.506	0.503	0	1	0.425	0.497	0	1	0.391	0.489
Multi State Transaction	0	1	0.472	0.500	0	1	0.543	0.501	0	1	0.483	0.503	0	1	0.432	0.497
Overlapping States	0	1	0.570	0.496	0	1	0.605	0.492	0	1	0.494	0.503	0	1	0.592	0.493
Multi Business Segment Transaction	0	1	0.246	0.431	0	1	0.185	0.391	0	1	0.184	0.390	0	1	0.308	0.463

Table 6: Summary Statistics by Industry Segment

	Resource Based n=47				Utilities n=76				Midstream and Transportation n=143				Electric n=71			
	Min	Max	Mean	STD	Min	Max	Mean	STD	Min	Max	Mean	STD	Min	Max	Mean	STD
Like Buying Like Businesses	0	1	0.255	0.441	0	1	0.303	0.462	0	1	0.762	0.427	0	1	0.845	0.364
Lag from Critical Reg Date	4.5	119.8	67.106	30.177	0.2	122.4	55.497	29.289	45	234.7	168.207	49.802	0.1	121.4	65.428	27.149
Approval Cycle	30	456	85.851	108.150	46	683	215.553	154.337	36	244	63.811	48.720	42	909	250.155	186.941
Stock Deal	0	1	0.064	0.247	0	1	0.158	0.367	0	1	0.203	0.404	0	1	0.254	0.438
Announced During a Recession	0	1	0.149	0.360	0	1	0.118	0.325	0	1	0.049	0.217	0	1	0.056	0.232
Closed During a Recession	0	1	0.043	0.204	0	1	0.132	0.340	0	1	0.056	0.231	0	1	0.113	0.318
Announced During a Merger Wave	0	0	0.000	0.000	0	1	0.276	0.450	0	1	0.497	0.502	0	1	0.296	0.460
Experienced M&A Team	0	1	0.298	0.462	0	1	0.276	0.450	0	1	0.497	0.502	0	1	0.324	0.471
Company Pressured to Transact	0	0	0.000	0.000	0	1	0.092	0.291	0	1	0.119	0.325	0	1	0.169	0.377
First Deal For Team	0	1	0.447	0.503	0	1	0.434	0.499	0	1	0.329	0.471	0	1	0.479	0.503
Critical Deal for Acquirer	0	1	0.340	0.479	0	1	0.447	0.501	0	1	0.448	0.499	0	1	0.423	0.497
Multi State Transaction	0	1	0.404	0.496	0	1	0.368	0.486	0	1	0.580	0.495	0	1	0.409	0.495
Overlapping States	0	1	0.745	0.441	0	1	0.500	0.503	0	1	0.580	0.495	0	1	0.507	0.504
Multi Business Segment Transaction	0	1	0.340	0.479	0	1	0.290	0.457	0	1	0.112	0.316	0	1	0.409	0.495

Correlations for all combinations of the independent variables were calculated and are shown in Table 7. Statistically significant relationships are identified at the .05 and .01 levels. Pearson Product Moment Correlations were calculated for variables denominated as interval or scale, whereas for the binary dummy variables the Spearman correlation coefficient are reported. Additionally, correlation calculations for both dependent and independent variables based on sub groupings are provided in Appendix I.

Table 7: Independent Variable Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Like Buying Like Businesses	1													**1**
Lag from Critical Reg Date	.305**	1												**2**
Approval Cycle	.062	-.383**	1											**3**
Stock Deal	.164**	.130*	.245**	1										**4**
Announced During a Recession	-.030	-.160**	-.019	-.027	1									**5**
Announced During a Merger Wave	.001	-.206**	.104	-.060	.505**	1								**6**
Experienced M&A Team	.136*	.493**	.010	.214**	-.210**	-.100	1							**7**
Company Pressured to Transact	.086	.311**	-.117*	.114*	-.097	-.104	.113*	1						**8**
First Deal For Team	.043	.113*	.133*	.059	-.102	.000	.487**	-.272**	1					**9**
Critical Deal for Acquirer	.133*	.150**	.119*	.395**	-.056	-.086	.212**	.073	.148**	1				**10**
Multi State Transaction	.106	.233**	.044	.334**	-.082	-.048	.260**	.112*	.097	.638**	1			**11**
Overlapping States	-.064	-.029	-.199**	-.283**	.036	.023	-.119*	-.043	-.126*	-.558**	-.547**	1		**12**
Multi Business Segment Transaction	-.243**	-.232**	.296**	.155**	-.067	.052	-.056	.003	.092	.272**	.219**	-.282**	1	**13**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Operational Models

With the construct model developed, variables defined, descriptive statistics provided and data collected, a set of empirical models were developed so that the relationships and impacts of the independent variables on the specified dependent (ABDC) variables can be evaluated. The dependent variables are proxy timing measures that reflect the effectiveness of a company's ABDC capabilities during an acquisition. Separate models were defined for each of the ABDC categories, Selecting and Identifying, Transacting and Executing and Reconfiguring and Integrating.

Selecting and Identifying

2 models were developed to test for relationships and impacts of the independent variables on the ABDC category of Selecting and Identifying. A semi-strong model (Model 1) with a specification of S&I as the abnormal returns obtained over a -3, +3 day time horizon from the announcement date. And a relatively weak model (Model 2) with a specification of the dependent variable S&I as the simple returns obtained over a -3, +3 day time horizon from the announcement date.

Figure 5: Model 1: Selecting and Identifying Abnormal Returns

$$\text{SI\_CAR\_AN\_3DAY} = \propto + \beta 1(LikeBuyLike) + \beta 2(RegLag) + \beta 3(AppCycle) + \beta 4(Stock) + \beta 5(AnnReces) + \beta 6(AnnMWave) + \beta 7(ExpTeam) + \beta 8(Pressured) + \beta 9(CriticalDeal) + \beta 10(MultiState) + \beta 11(Overlap) + \beta 12(MultiBus) + \varepsilon$$

Figure 6: Model 2: Selecting and Identifying Simple Returns

$$\text{SI\_SIM\_AN\_3DAY} = \propto + \beta 1(LikeBuyLike) + \beta 2(RegLag) + \beta 3(AppCycle) + \beta 4(Stock) + \beta 5(AnnReces) + \beta 6(AnnMWave) + \beta 7(ExpTeam) + \beta 8(Pressured) + \beta 9(CriticalDeal) + \beta 10(MultiState) + \beta 11(Overlap) + \beta 12(MultiBus) + \varepsilon$$

Transacting and Executing

2 models were developed to test for the relationships and impacts of the independent variables on the ABDC category of Transacting and Executing. A semi-strong model (Model 3) with a specification of T&E as the abnormal returns obtained over a -30, +30 day time horizon from the transaction close date. And a relatively weak model (Model 4) with a specification of the dependent variable T&E as the simple returns obtained over a -30, +30 day time horizon from the transaction close date.

Figure 7: Model 3: Transacting and Executing Abnormal Returns

$$\textbf{TE\_CAR\_Clsd\_30DAY} = \propto + \boldsymbol{\beta 1}(\boldsymbol{LikeBuyLike}) + \boldsymbol{\beta 2}(\boldsymbol{RegLag}) + \boldsymbol{\beta 3}(\boldsymbol{AppCycle}) + \boldsymbol{\beta 4}(\boldsymbol{Stock}) + \boldsymbol{\beta 5}(\boldsymbol{CloseReces}) + \boldsymbol{\beta 6}(\boldsymbol{AnnMWave}) + \boldsymbol{\beta 7}(\boldsymbol{ExpTeam}) + \boldsymbol{\beta 8}(\boldsymbol{Pressured}) + \boldsymbol{\beta 9}(\boldsymbol{CriticalDeal}) + \boldsymbol{\beta 10}(\boldsymbol{MultiState}) + \boldsymbol{\beta 11}(\boldsymbol{Overlap}) + \boldsymbol{\beta 12}(\boldsymbol{MultiBus}) + \boldsymbol{\varepsilon}$$

Figure 8: Model 4: Transacting and Executing Simple Returns

$$\textbf{TE\_SIM\_Clsd\_30DAY} = \propto + \boldsymbol{\beta 1}(\boldsymbol{LikeBuyLike}) + \boldsymbol{\beta 2}(\boldsymbol{RegLag}) + \boldsymbol{\beta 3}(\boldsymbol{AppCycle}) + \boldsymbol{\beta 4}(\boldsymbol{Stock}) + \boldsymbol{\beta 5}(\boldsymbol{CloseReces}) + \boldsymbol{\beta 6}(\boldsymbol{AnnMWave}) + \boldsymbol{\beta 7}(\boldsymbol{ExpTeam}) + \boldsymbol{\beta 8}(\boldsymbol{Pressured}) + \boldsymbol{\beta 9}(\boldsymbol{CriticalDeal}) + \boldsymbol{\beta 10}(\boldsymbol{MultiState}) + \boldsymbol{\beta 11}(\boldsymbol{Overlap}) + \boldsymbol{\beta 12}(\boldsymbol{MultiBus}) + \boldsymbol{\varepsilon}$$

Reconfiguring and Integrating

3 models are developed to test for the relationships and impacts of the independent variables on the ABDC category of Reconfiguring and Integrating. 2 semi-strong models (Model 5) with a specification of R&I as the buy and hold abnormal returns obtained over a 0, +360 day time horizon from the transaction close date. (Model 6) with a specification of R&I as the cumulative abnormal returns obtained over a 0, +360 day time horizon from the transaction close date and a relatively weak model (Model 7) with a specification of the dependent variable R&I as the simple returns obtained over a 0, +360 day time horizon from the transaction close date.

Figure 9: Model 5: Reconfiguring and Integrating Buy and Hold Returns

$$\text{RI\_BHAR\_Clsd\_360DAY} = \propto + \boldsymbol{\beta 1}(\boldsymbol{LikeBuyLike}) + \boldsymbol{\beta 2}(\boldsymbol{RegLag}) + \boldsymbol{\beta 3}(\boldsymbol{AppCycle}) + \boldsymbol{\beta 4}(\boldsymbol{Stock}) + \boldsymbol{\beta 5}(\boldsymbol{CloseReces}) + \boldsymbol{\beta 6}(\boldsymbol{AnnMWave}) + \boldsymbol{\beta 7}(\boldsymbol{ExpTeam}) + \boldsymbol{\beta 8}(\boldsymbol{Pressured}) + \boldsymbol{\beta 9}(\boldsymbol{CriticalDeal}) + \boldsymbol{\beta 10}(\boldsymbol{MultiState}) + \boldsymbol{\beta 11}(\boldsymbol{Overlap}) + \boldsymbol{\beta 12}(\boldsymbol{MultiBus}) + \boldsymbol{\varepsilon}$$

Figure 10: Model 6: Reconfiguring and Integrating Abnormal Returns

$$\text{RI\_CAR\_Clsd\_360DAY} = \propto + \boldsymbol{\beta 1}(\boldsymbol{LikeBuyLike}) + \boldsymbol{\beta 2}(\boldsymbol{RegLag}) + \boldsymbol{\beta 3}(\boldsymbol{AppCycle}) + \boldsymbol{\beta 4}(\boldsymbol{Stock}) + \boldsymbol{\beta 5}(\boldsymbol{CloseReces}) + \boldsymbol{\beta 6}(\boldsymbol{AnnMWave}) + \boldsymbol{\beta 7}(\boldsymbol{ExpTeam}) + \boldsymbol{\beta 8}(\boldsymbol{Pressured}) + \boldsymbol{\beta 9}(\boldsymbol{CriticalDeal}) + \boldsymbol{\beta 10}(\boldsymbol{MultiState}) + \boldsymbol{\beta 11}(\boldsymbol{Overlap}) + \boldsymbol{\beta 12}(\boldsymbol{MultiBus}) + \boldsymbol{\varepsilon}$$

Figure 11: Model 7: Reconfiguring and Integrating Simple Returns

$$\textbf{RI\_SIM\_Clsd\_360DAY} = \propto + \boldsymbol{\beta 1}(\boldsymbol{LikeBuyLike}) + \boldsymbol{\beta 2}(\boldsymbol{RegLag}) + \boldsymbol{\beta 3}(\boldsymbol{AppCycle}) + \boldsymbol{\beta 4}(\boldsymbol{Stock}) + \boldsymbol{\beta 5}(\boldsymbol{CloseReces}) + \boldsymbol{\beta 6}(\boldsymbol{AnnMWave}) + \boldsymbol{\beta 7}(\boldsymbol{ExpTeam}) + \boldsymbol{\beta 8}(\boldsymbol{Pressured}) + \boldsymbol{\beta 9}(\boldsymbol{CriticalDeal}) + \boldsymbol{\beta 10}(\boldsymbol{MultiState}) + \boldsymbol{\beta 11}(\boldsymbol{Overlap}) + \boldsymbol{\beta 12}(\boldsymbol{MultiBus}) + \boldsymbol{\varepsilon}$$

Analysis

Standard analytical techniques were utilized to test for central tendencies, significant relationships and differences and to quantify expected impacts of the defined factors on the ABDC category variables in the context of the 337 regulated public company energy transaction dataset.

Central tendencies were evaluated using statistical techniques on the descriptive data. Means and medians were analyzed to determine central tendencies and data skewness was evaluated via histogram and scatterplot analysis. Outliers were evaluated to ensure data consistency throughout the data set. There were no M&A transactions that were summarily excluded from the data set (assuming they met the definitional criteria: regulated energy industry, public company acquirer, 30 day or longer approval cycle, announced and completed transactions between 1995 and 2014). Some observations were excluded from certain multivariate analysis in the event that a data element was missing (listwise exclusion was utilized for missing data, a far superior approach to the alternative of mean replacement). As a general rule, the continuous variables appeared relatively normal in their distributions, whereas the binary data elements benefitted from sufficient representation across both the 1 and 0 conditions.

T-testing for the differences of the means of the variables was utilized to determine significant differences across subgroups of the transaction data set. This included

analysis comparing Leaders versus Laggards, across industry segment (Resources, Utility, Midstream &Transportation and Electric Power) and analysis of the factors differentiating Top Performers (for each ABDC category) with Poor Performers (for each ABDC category). Significance was evaluated at the .10, .05 and .01 levels. Results are provided in the Results section below.

Correlation analysis was used to evaluate the strength and the direction of the linear relationships between the variables. Pearson Moment Correlation Coefficients (r) were calculated for the continuous variables in the study, whereas Spearman (rho) was calculated for the binary dummy variables. Significance at the .10, .05 and .01 levels is presented in the various tables to illustrate levels of significance. For detailed analysis, independent and dependent variable correlation coefficients are presented and the data set is divided into various subsets (industry segment, Leaders and Laggards and Top and Poor Performers). As mentioned above the data was reviewed for outliers. The data was also analyzed for linearity which is an assumption for meaningful correlation analysis. Results are provided in the results section below and in Appendix I.

The seven specified models (Models 1 through Models 7) were run through ordinary least squares (OLS) multivariate regression to determine the variation in the dependent variables that are explained by the predictor variables and to also evaluate what factors have a statistically significant relationship and its impact on the dependent variables. Results were evaluated across industry groups and comparisons across Leaders and Laggards. After careful review of the data and preliminary results it was determined best to disaggregate the data set and perform much of the analysis by industry segment (Resources, Utility, Midstream & Transportation and Electric Power). Additionally, results for both the data sub sets (by grouping) and aggregated data set are provided in the Results and Appendix I sections below.

The Models overall adequacy was evaluated utilizing the F statistic and its associated p factor. R square and adjusted R square metrics were reviewed to determine how much of the variation in the dependent variable was explained by the predictor variables. Each model was also evaluated for power and the implied factor effects of its results. The residuals of

the models were evaluated to ensure for normality and to also evaluate for heteroscedasticity. Similarly, Variable Inflation Factors (VIFs) were analyzed to check for any problematic levels of multicollinearity of the independent variables. Additionally, individual independent variable analysis was conducted for significance and impact by evaluating beta coefficients, t-scores and p-values. The results are provided in the Results section of this paper and in Appendix II.

As one of the main thrusts of the study is an evaluation of performance differences and impacts of key factors at the relative extremes (extreme high return and extreme low return) of the observed performance results, the approaches defined above (central tendency analysis, correlation and OLS regression) needed to be augmented with techniques better equipped to deal with the properties of the tail portions of the dataset. Quantile regression analysis as described by (among others) Hao and Naiman (Hao and Naiman, 2007) and Koenker (Koenker and Basset, 1978, Koenker and Bilas, 2001, and Koenker and Hallock, 2000, 2001) appears to be a very suitable approach.

As such, the seven specified models were also run through quantile regression analysis to determine the impact of the individual predictor variables at various levels (quantiles) of the dependent variables. Statistical significance and overall factor impact of the predictor variables were evaluated at the each specified quantiles (.10, .25, .50, .75, .90) of the dependent variable. Results were evaluated across industry groups and across the data set as a whole. Additionally, individual independent variable analysis was conducted for significance and impact by evaluating beta coefficients, t-scores and p-values. The results are provided in the Results section of this paper and in Appendix III.

The results were then compared to determine common themes across the data set and to help provide insight into the topic of where value is created and lost across the ABDC categories and whether certain factors are significantly contributing to the value enhancement (or destruction) during each ABDC phase of a regulated energy acquisition. This analysis provides the necessary insight to properly address the research question:

> "***What Acquisition Based Dynamic Capabilities (ABDC) are the most critical in enhancing value for energy companies engaged in M&A"***.

Following the Results section below is a Discussion of the results. Some of the questions that are evaluated in the Discussion section include:

- In which ABDC category is the most value enhancement occurring?
- In which ABDC category is the most value destruction occurring?
- Are there significant differences among the Leaders and Laggards in creating value across the three ABDC categories?
- What are the deal characteristics of firms that are the Top acquirers and how do those attributes impact value creation across the deal lifecycle?
- What are the deal characteristics of firms that are the Poor acquirers and how do those attributes impact value destruction across the deal lifecycle?

CHAPTER V - RESULTS

The results below provide some insights on the topic of value creation and ABDC capabilities in the context of regulated energy M&A transactions. This section provides summarized results and empirical findings for each ABDC category.

Summarized Results

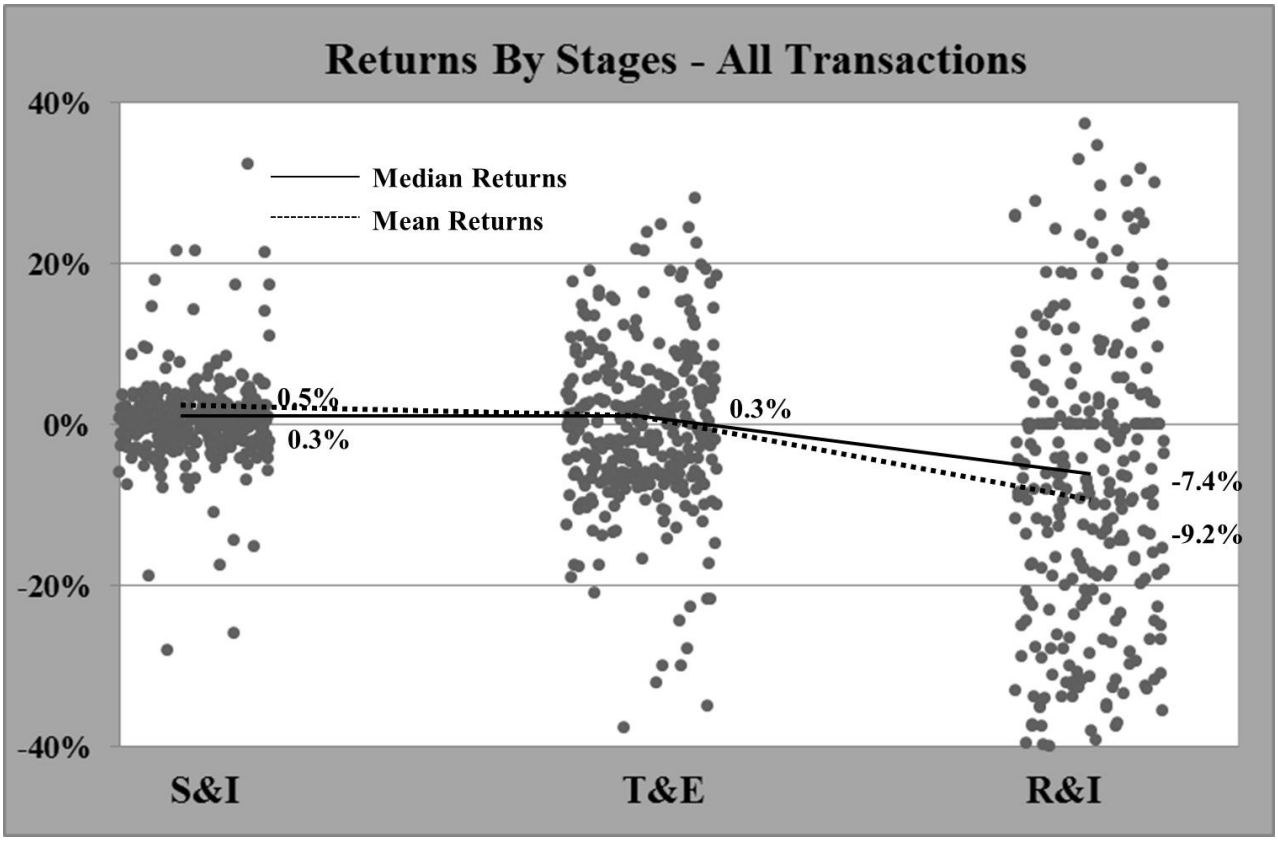
Past research has provided mixed results with respect to whether value is created or destroyed from being an M&A acquirer. Many of the differences can be traced to either different measurement approaches or timing differences of the measurement window. The results below are consistent with previous analyses in that at times value is created by some and at other times value is destroyed. This statement by itself is neither controversial nor overly enlightening but it does suggest the need for a deeper review of the issue of timing and measurement as it relates to each ABDC capability and its relative impact on value creation.

Overall, companies on average do see some small value enhancement from announcement returns as a result of their performance in Selecting and Identifying. These results suggest on average about 0-1% value enhancement for the acquirer when a transaction is announced. Of the 337 transactions studied, 184 (56.4%) had positive announcement returns when measured on a 3 day abnormal basis. On average Utility and Midstream and Transportation transactions had better announcement returns than Resource and Electric company transactions, whereas, the better acquirers gain averaged 2.2%, the poorer acquirers experienced value destruction of -1.5% during S&I.

Furthermore, companies on average experience additional value enhancement at the closing of their transactions (measured on a 30 day post-close timing window) during the Transacting and Executing phase of the deal. These results suggest on average about 0.3% value enhancement for the acquirer after the closing of the transaction. Of the 337 transactions

studied, 176 (52.2%) had positive post-closing short-term returns as measured on a 30 day abnormal basis. On average Resources and Utility transactions had better short-term post-close transaction results than Midstream and Transportation and Electric company transactions. The spreads between the Top acquirers and Poor acquirers also widened. The gains of the better acquirers averaged 5.1% short-term post-close, whereas the poorer acquirers experienced value destruction of -3.6%.

Figure 12: Returns By Transaction Stage – All Transactions



Despite the value enhancement experienced by a majority of firms between deal announcement and short-term post-close, a large majority of firms give back those gains (and often times much more value) over the first year post-close during Reconfiguring and Integrating. The median value loss over the first 360 days post-close for the 337 studied transactions is -7.4% as only 99 of the 337 (29.4%) deals had positive returns during the Reconfiguring and Integrating phase of the transaction.

Results on average were poor across all of the industry segments ranging from a high of -4.9% from the Utility deals to a low of -9.8% for the Midstream and Transportation transactions. Each industry group experienced value destruction in approximately 65-70% of the transactions in their energy segment during R&I. Even companies that are considered as being strong at R&I activities averaged a mere 3.3% gain, whereas the companies who exhibited poor R&I performance had value loss of over 20% during the first 360 days.

The trends experienced by the broader group are also experienced by the Leaders and Laggards. On average Leaders and Laggards both experience value enhancement at announcement and shortly after close but both also lose a fair share of value after a years' time from closing their transactions. Leaders tend to be good acquirers and tend to break about even throughout a deal lifecycle.

Interestingly, Laggards also come close to breaking out even on average but this is perhaps a result of starting from a valuation level that had potentially more market upside (trading at lower multiples than their peers) and perhaps the market approving of the company and management change of direction that an M&A transactions provides. Interquartile companies tend to break even at announcement, and start eroding value at close and by end of the first year many have lost 6-10% as a result of their transaction. Table 8 below provides summarized results for each ABDC category broken out by sub grouping.

Table 8: Return Results by ABDC Category

Measures of S&I Returns (-3,+3 Announcement CAR)							
	All	Leaders	Laggards	Resources	Utility	Midstream	Electric
Total Number of Deals	337	81	87	47	76	143	71
Top Quartile Returns	2.2%	2.5%	3.3%	1.7%	1.7%	2.5%	1.3%
Median Returns	0.3%	0.6%	0.7%	-0.4%	0.5%	0.7%	-0.2%
Mean Returns	0.5%	0.9%	1.6%	0.5%	-0.1%	0.9%	0.3%
Bottom Quartile Returns	-1.5%	-1.3%	-1.1%	-2.2%	-1.6%	-1.0%	-2.1%
# of Deals with Positive Returns	184	47	54	22	43	87	32
% of Deals with Positive Returns	54.6%	58.0%	62.1%	46.8%	56.6%	60.8%	45.1%
Measures of T&E Returns (-30,+30 Closed CAR)							
	All	Leaders	Laggards	Resources	Utility	Midstream	Electric
Total Number of Deals	337	81	87	47	76	143	71
Top Quartile Returns	5.1%	5.1%	7.7%	6.0%	4.2%	5.2%	4.8%
Median Returns	0.3%	1.9%	0.9%	2.1%	0.8%	0.3%	-0.6%
Mean Returns	0.3%	1.8%	1.4%	-1.2%	0.6%	1.3%	-1.0%
Bottom Quartile Returns	-3.6%	-2.2%	-3.7%	-3.2%	-3.8%	-3.1%	-3.8%
# of Deals with Positive Returns	176	52	48	29	42	74	31
% of Deals with Positive Returns	52.2%	64.2%	55.2%	61.7%	55.3%	51.7%	43.7%
Measures of R&I Returns (0,+360 BHAR)							
	All	Leaders	Laggards	Resources	Utility	Midstream	Electric
Total Number of Deals	337	81	87	47	76	143	71
Top Quartile Returns	3.3%	2.5%	5.6%	13.8%	5.4%	0.2%	3.8%
Median Returns	-7.4%	-4.6%	-4.9%	-7.0%	-4.9%	-9.8%	-6.0%
Mean Returns	-9.2%	-6.7%	-8.5%	-7.8%	-3.3%	-12.4%	-10.1%
Bottom Quartile Returns	-26.0%	-15.9%	-18.7%	-18.6%	-16.1%	-31.1%	-28.6%
# of Deals with Positive Returns	99	25	26	16	26	36	21
% of Deals with Positive Returns	29.4%	30.9%	29.9%	34.0%	34.2%	25.2%	29.6%

Differences are apparent across the industry and Leader and Laggard groups in how they approach acquisitions. These differences contribute to some of the variation that occurs across the modeled results and the observed differences in performance across the ABDC categories.

Table 9 below highlights the differences between the M&A approach of the Leaders and Laggards groups' vis-à-vis their industry peers. Utilizing t-statistics and difference of the means testing significant (.10 level or better) differences are noted in the table where the null hypotheses that the means are equivalent can be rejected.

Table 9: Factor Differences among Leaders and Laggards

	All n=337		Leaders n=81		Laggards n=87		Comparisons of Means, p values noted (null hypothesis is that means are =)					
	Mean	STD	Mean	STD	Mean	STD	All vs. Leaders		All vs. Laggards		Leader vs Laggard	
Like Buying Like Businesses	0.605	0.490	0.654	0.479	0.506	0.503	0.410	Cannot Reject Null Hypothesis	0.098	Reject Null Hypothesis	0.050	Reject Null Hypothesis
Lag from Critical Reg Date	107.035	65.575	117.620	70.352	107.827	69.715	0.218	Cannot Reject Null Hypothesis	0.924	Cannot Reject Null Hypothesis	0.365	Cannot Reject Null Hypothesis
Approval Cycle	140.365	148.114	120.259	123.428	130.391	149.912	0.206	Cannot Reject Null Hypothesis	0.579	Cannot Reject Null Hypothesis	0.632	Cannot Reject Null Hypothesis
Stock Deal	0.184	0.388	0.247	0.434	0.161	0.370	0.232	Cannot Reject Null Hypothesis	0.607	Cannot Reject Null Hypothesis	0.168	Cannot Reject Null Hypothesis
Announced During a Recession	0.080	0.272	0.062	0.242	0.092	0.291	0.549	Cannot Reject Null Hypothesis	0.730	Cannot Reject Null Hypothesis	0.462	Cannot Reject Null Hypothesis
Closed During a Recession	0.083	0.276	0.062	0.242	0.046	0.211	0.488	Cannot Reject Null Hypothesis	0.172	Cannot Reject Null Hypothesis	0.655	Cannot Reject Null Hypothesis
Announced During a Wave	0.335	0.473	0.444	0.500	0.322	0.470	0.075	Reject Null Hypothesis	0.811	Cannot Reject Null Hypothesis	0.102	Cannot Reject Null Hypothesis
Experienced M&A Team	0.383	0.487	0.432	0.498	0.253	0.437	0.422	Cannot Reject Null Hypothesis	0.016	Reject Null Hypothesis	0.014	Reject Null Hypothesis
Company Pressured to Transact	0.107	0.309	0.099	0.300	0.138	0.347	0.830	Cannot Reject Null Hypothesis	0.446	Cannot Reject Null Hypothesis	0.434	Cannot Reject Null Hypothesis
First Deal For Team	0.401	0.491	0.358	0.482	0.517	0.503	0.477	Cannot Reject Null Hypothesis	0.053	Reject Null Hypothesis	0.036	Reject Null Hypothesis
Critical Deal for Acquirer	0.427	0.495	0.506	0.503	0.425	0.497	0.204	Cannot Reject Null Hypothesis	0.973	Cannot Reject Null Hypothesis	0.295	Cannot Reject Null Hypothesis
Multi State Transaction	0.472	0.500	0.543	0.501	0.483	0.503	0.249	Cannot Reject Null Hypothesis	0.855	Cannot Reject Null Hypothesis	0.436	Cannot Reject Null Hypothesis
Overlapping States	0.570	0.496	0.605	0.492	0.494	0.503	0.564	Cannot Reject Null Hypothesis	0.211	Cannot Reject Null Hypothesis	0.150	Cannot Reject Null Hypothesis
Multi Business Segment	0.246	0.431	0.185	0.391	0.184	0.390	0.216	Cannot Reject Null Hypothesis	0.193	Cannot Reject Null Hypothesis	0.983	Cannot Reject Null Hypothesis

A significant difference is present in how Leaders and Laggards approach acquisitions of similar business. Laggards will pursue opportunities involving businesses that are dissimilar to themselves at a significantly lower rate than both the Leaders and companies as a whole. Laggards will also tend to have significantly less M&A transaction experience in their management teams than Leaders and fellow peer companies. Additionally, Laggards in this study group are statistically more likely to be a first time acquirer than both Leaders and their industry peers in general. Table 9 also highlights that Leaders tend to acquire during merger waves at a statistically higher rate than their peer companies.

Table 10 highlights the differences between the M&A approach of the four industry segments vis-à-vis their industry peers. Utilizing t-statistics and difference of the means testing for significant (.10 level or better) differences are noted in the table where the null hypotheses can be rejected that the means are equivalent across the various transaction factors.

A significant difference is present in how companies approach acquisitions of similar business. Utility companies tend to pursue opportunities involving businesses that are dissimilar to themselves at a significantly lower rate than their industry peers, whereas the Midstream and Transportation companies and Electric companies pursue similarly focused business at a significantly higher rate than their industry peers.

An interesting difference also exists in how quickly industry participants respond to a regulatory shock that opens up M&A opportunities. The Utilities and Electric companies are the quickest to act as they on average respond to an industry shock significantly quicker than their industry peers. The opposite is the case of Transportation and Midstream companies who tended to responds to an industry shock at a statistically slower rate than their peers.

Whereas on average 33% of the transactions occurred during a merger wave, nearly half of the 143 Midstream and Transportation transactions occurred during a wave which is a significantly higher rate than their industry peers. Differences are also present across management team M&A experiences. On average Transportation and Midstream firm management teams are significantly more experienced than their industry peers whereas the opposite is true for Utility firm management teams which are significantly less experienced.

This is partly the result of the fact that the Midstream and Transportation companies are far more likely to transact than the Utility companies.

Differences also exist across transaction complexity measures. Midstream and Transportation acquisitions were multi-state deals more frequently than their industry peers and they also tended to avoid multi business segment transactions. Electric companies completed multi business segment transactions 41% of the time which was significantly higher than their industry peers.

Table 10: Factor Differences among Industry Groups

	All n=337		Resource n=47		Utility n=76		Transport n=143		Electric n=71	
	Mean	**STD**	**Mean**	**STD**	**Mean**	**STD**	**Mean**	**STD**	**Mean**	**STD**
Like Buying Like Businesses	0.605	0.490	0.654	0.479	0.303	0.462	0.762	0.427	0.845	0.364
Lag from Critical Reg Date	107.035	65.575	117.620	70.352	55.497	29.289	168.207	49.802	65.428	27.149
Approval Cycle	140.365	148.114	120.259	123.428	215.553	154.337	63.811	48.720	250.155	186.941
Stock Deal	0.184	0.388	0.247	0.434	0.158	0.367	0.203	0.404	0.254	0.438
Announced During a Recession	0.080	0.272	0.062	0.242	0.118	0.325	0.049	0.217	0.056	0.232
Closed During a Recession	0.083	0.276	0.062	0.242	0.132	0.340	0.056	0.231	0.113	0.318
Announced During a Wave	0.335	0.473	0.444	0.500	0.276	0.450	0.497	0.502	0.296	0.460
Experienced M&A Team	0.383	0.487	0.432	0.498	0.276	0.450	0.497	0.502	0.324	0.471
Company Pressured to Transact	0.107	0.309	0.099	0.300	0.092	0.291	0.119	0.325	0.169	0.377
First Deal For Team	0.401	0.491	0.358	0.482	0.434	0.499	0.329	0.471	0.479	0.503
Critical Deal for Acquirer	0.427	0.495	0.506	0.503	0.447	0.501	0.448	0.499	0.423	0.497
Multi State Transaction	0.472	0.500	0.543	0.501	0.368	0.486	0.580	0.495	0.409	0.495
Overlapping States	0.570	0.496	0.605	0.492	0.500	0.503	0.580	0.495	0.507	0.504
Multi Business Segment	0.246	0.431	0.185	0.391	0.290	0.457	0.112	0.316	0.409	0.495

	Comparisons of Means, p values noted (null hypothesis is that means are =)							
	All vs. Resources		All vs.Utility		All vs. Transportation		All vs. Electric	
Like Buying Like Businesses	0.512	Cannot Reject Null Hypothesis	0.000	Reject Null Hypothesis	0.000	Reject Null Hypothesis	0.000	Reject Null Hypothesis
Lag from Critical Reg Date	0.330	Cannot Reject Null Hypothesis	0.000	Reject Null Hypothesis	0.000	Reject Null Hypothesis	0.000	Reject Null Hypothesis
Approval Cycle	0.308	Cannot Reject Null Hypothesis	0.000	Reject Null Hypothesis	0.000	Reject Null Hypothesis	0.000	Reject Null Hypothesis
Stock Deal	0.346	Cannot Reject Null Hypothesis	0.629	Cannot Reject Null Hypothesis	0.632	Cannot Reject Null Hypothesis	0.224	Cannot Reject Null Hypothesis
Announced During a Recession	0.631	Cannot Reject Null Hypothesis	0.224	Cannot Reject Null Hypothesis	0.220	Cannot Reject Null Hypothesis	0.433	Cannot Reject Null Hypothesis
Closed During a Recession	0.577	Cannot Reject Null Hypothesis	0.125	Cannot Reject Null Hypothesis	0.309	Cannot Reject Null Hypothesis	0.477	Cannot Reject Null Hypothesis
Announced During a Wave	0.158	Cannot Reject Null Hypothesis	0.348	Cannot Reject Null Hypothesis	0.001	Reject Null Hypothesis	0.510	Cannot Reject Null Hypothesis
Experienced M&A Team	0.524	Cannot Reject Null Hypothesis	0.091	Reject Null Hypothesis	0.019	Reject Null Hypothesis	0.339	Cannot Reject Null Hypothesis
Company Pressured to Transact	0.865	Cannot Reject Null Hypothesis	0.701	Cannot Reject Null Hypothesis	0.700	Cannot Reject Null Hypothesis	0.207	Cannot Reject Null Hypothesis
First Deal For Team	0.571	Cannot Reject Null Hypothesis	0.585	Cannot Reject Null Hypothesis	0.133	Cannot Reject Null Hypothesis	0.233	Cannot Reject Null Hypothesis
Critical Deal for Acquirer	0.313	Cannot Reject Null Hypothesis	0.752	Cannot Reject Null Hypothesis	0.684	Cannot Reject Null Hypothesis	0.941	Cannot Reject Null Hypothesis
Multi State Transaction	0.360	Cannot Reject Null Hypothesis	0.104	Cannot Reject Null Hypothesis	0.027	Reject Null Hypothesis	0.327	Cannot Reject Null Hypothesis
Overlapping States	0.646	Cannot Reject Null Hypothesis	0.265	Cannot Reject Null Hypothesis	0.829	Cannot Reject Null Hypothesis	0.340	Cannot Reject Null Hypothesis
Multi Business Segment	0.322	Cannot Reject Null Hypothesis	0.393	Cannot Reject Null Hypothesis	0.000	Reject Null Hypothesis	0.012	Reject Null Hypothesis

Selecting and Identifying

Selecting and Identifying capability includes the ability to assess a firm's existing resource base relative to desired new resources and capabilities, to assess the degree of market failure with respect to resources that are beyond the firm's existing resource base and to assess the number of points of contact that inter-organizational creation or new resources would require. It also includes the capability to be able to carry out effective due diligence of potential targets in order to determine the value of the target to the acquirer, to negotiate appropriate terms with the target's owner, and to walk away from a target if it lacks needed resources or its owners demand a price that exceeds the value to the acquirer. Firms that can efficiently perform these tasks and have resources with well-developed capabilities can be positioned to create substantial competitive advantage.

As a proxy to measure the effectiveness of a firm's S&I capabilities, short-term value measurements are most appropriate. Additionally, the market's response to the effectiveness of these capabilities is best evidenced by how it responds when it is informed of what the acquirer intends to do. The announcement of the intentions and the market's response to how well the company has identified and selected a target becomes apparent at the announcement date of the transaction. Utilizing value measures straddling the announcement date of the transaction is an appropriate gauge of the market's judgment of a company's S&I capabilities. Furthermore, as the market tends to be somewhat efficient, the window of time necessary to measure its response should be relatively short.

Table 11 provides factor differences among Top S&I Performers (those with top quartile performance in S&I) and Poor S&I Performers (those with bottom quartile performance in S&I). Significant results are noted (.10 level or better) where means are statistically different. Some interesting results are noteworthy. Top Performers tend to have statistically shorter deal approval cycles and less experienced M&A teams than their peers. Whereas Poor Performers tended to have statistically longer approval cycles and more complex transactions including significantly more multi-state transactions, with fewer states overlapping existing business as well as more multi business transactions than their industry peers or Top Performers.

Table 11: Factor Differences among Top and Poor Performers – S&I

	All		Top Performers		Poor Performers		Comparisons of Means - p values noted (null hypothesis is that means are =)					
	Mean	STD	Mean	STD	Mean	STD	All vs. Top Perfomers		All vs. Poor Performers		Top vs. Poor Performers	
Like Buying Like Businesses	0.605	0.490	0.655	0.478	0.663	0.476	0.403	Cannot Reject Null Hypothesis	0.330	Cannot Reject Null Hypothesis	0.916	Cannot Reject Null Hypothesis
Lag from Critical Reg Date	107.035	65.575	114.330	70.936	99.795	65.537	0.397	Cannot Reject Null Hypothesis	0.370	Cannot Reject Null Hypothesis	0.173	Cannot Reject Null Hypothesis
Approval Cycle	140.365	148.114	109.238	123.307	160.892	160.338	0.049	Reject Null Hypothesis	0.291	Cannot Reject Null Hypothesis	0.021	Reject Null Hypothesis
Stock Deal	0.184	0.388	0.167	0.375	0.229	0.423	0.710	Cannot Reject Null Hypothesis	0.381	Cannot Reject Null Hypothesis	0.319	Cannot Reject Null Hypothesis
Announced During a Recession	0.080	0.272	0.071	0.259	0.133	0.341	0.787	Cannot Reject Null Hypothesis	0.195	Cannot Reject Null Hypothesis	0.196	Cannot Reject Null Hypothesis
Closed During a Recession	0.083	0.276	0.048	0.214	0.169	0.377	0.206	Cannot Reject Null Hypothesis	0.053	Reject Null Hypothesis	0.011	Reject Null Hypothesis
Announced During a Wave	0.335	0.473	0.357	0.482	0.325	0.471	0.712	Cannot Reject Null Hypothesis	0.863	Cannot Reject Null Hypothesis	0.669	Cannot Reject Null Hypothesis
Experienced M&A Team	0.383	0.487	0.286	0.454	0.337	0.476	0.087	Reject Null Hypothesis	0.439	Cannot Reject Null Hypothesis	0.478	Cannot Reject Null Hypothesis
Company Pressured to Transact	0.107	0.309	0.119	0.326	0.133	0.341	0.759	Cannot Reject Null Hypothesis	0.533	Cannot Reject Null Hypothesis	0.796	Cannot Reject Null Hypothesis
First Deal For Team	0.401	0.491	0.488	0.503	0.398	0.492	0.156	Cannot Reject Null Hypothesis	0.961	Cannot Reject Null Hypothesis	0.244	Cannot Reject Null Hypothesis
Critical Deal for Acquirer	0.427	0.495	0.464	0.502	0.530	0.502	0.548	Cannot Reject Null Hypothesis	0.096	Reject Null Hypothesis	0.401	Cannot Reject Null Hypothesis
Multi State Transaction	0.472	0.500	0.452	0.501	0.602	0.492	0.753	Cannot Reject Null Hypothesis	0.032	Reject Null Hypothesis	0.053	Reject Null Hypothesis
Overlapping States	0.570	0.496	0.524	0.502	0.458	0.501	0.457	Cannot Reject Null Hypothesis	0.069	Reject Null Hypothesis	0.400	Cannot Reject Null Hypothesis
Multi Business Segment	0.246	0.431	0.179	0.385	0.301	0.462	0.164	Cannot Reject Null Hypothesis	0.328	Cannot Reject Null Hypothesis	0.065	Reject Null Hypothesis

Two specifications of the S&I variable, one a weak form and one a semi-strong form is provided with results provided by industry segment. Model 1 is a semi-strong specification of SI_CAR_AN_3DAY (Abnormal returns on a -3, +3 day event window, anchored off of the announcement date) Table 12 provides the OLS regression results for Model 1. Results for each energy industry segment are provided in the table.

- Resource: 42.8% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 4.437 is significant at the .01 level. The independent variables: Like Buying Like Businesses, Lag From Critical Reg Date, Stock Deal and Critical Deal for Acquirer are all significant at the .05 level or better. Multicollinearity does not appear to negatively influence the regression results. Of the 10 predictor variables, 7 have Variable Inflation Factors (VIFs) below 2.2. Of the three that do not, Critical Deal (3.9), Multi State (4.4) and Overlapping States (3.0) are all below the theoretical threshold of 5.0.

- Utility: 22.4% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 1.513 is significant at the .1 level. The independent variables: Like Buying Like Businesses is significant at the .1 level while the independent variable Multi-State Transaction is significant at the .01 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables all have Variable Inflation Factors (VIFs) below 2.0.

- Midstream and Transportation: 4.7% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model

provides insignificant results as the F statistic of 0.534 is statistically insignificant.

- Electric Power: 15.5% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides insignificant results as the F statistic of 0.885 is statistically insignificant.

Table 12: Model 1 – S&I Abnormal 3 Day (-3, +3) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.009	(0.314)		0.059	(2.381)	***	0.4	(1.614)		0.013	(0.362)	
Like Buying Like Businesses	0.072	(3.841)	***	-0.026	(-1.718)	*	-0.001	(-0.113)		-0.011	(-0.487)	
Lag from Critical Reg Date	0.001	(-2.278)	**	0.001	(-1.579)		-0.001	(-0.263)		0.001	(0.709)	
Approval Cycle	-0.001	(-0.460)		0.001	(0.292)		-0.001	(-0.687)		-0.001	(-2.234)	**
Stock Deal	-0.141	(-4.994)	***	-0.019	(-0.916)		0.022	(1.595)		-0.006	(-0.296)	
Announced During a Recession	-0.061	(-0.903)		-0.031	(-1.395)		-0.017	(-0.810)		-0.021	(-0.660)	
Announced During a Merger Wave				0.007	(0.360)		-0.006	(-0.342)		-0.018	(-0.844)	
Experienced M&A Team	-0.001	(-0.430)		0.014	(0.857)		-0.008	(-0.795)		-0.006	(-0.385)	
Company Pressured to Transact				-0.013	(-0.475)		-0.004	(-0.258)		0.024	(0.881)	
Critical Deal for Acquirer	0.051	(2.211)	**	-0.006	(-0.388)		-0.006	(-0.417)		0.019	(0.837)	
Multi State Transaction	-0.033	(-1.417)		-0.044	(-2.449)	***	-0.011	(-0.742)		0.013	(0.580)	
Overlapping States	0.021	(0.967)		-0.024	(-1.477)		-0.009	(-0.818)		0.012	(0.542)	
Multi Business Segment Transaction	0.01	(0.586)		-0.001	(-0.012)		-0.002	(-0.115)		-0.001	(-0.021)	
Number of Observations (n)	46			75			142			70		
R-Square	0.428			0.224			0.047			0.155		
F	4.437		***	1.513		*	0.534			0.885		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Table 13 provides the Quantile regression results for Model 1. Model 1 is a semi-strong form SI_CAR_AN_3DAY (Abnormal returns on a -3, +3 day event window anchored off of the announcement date). Results for each energy industry segment are provided in the table.

- Resource: 42.8% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. Furthermore, the model provides statistically meaningful results as the F statistic of 4.437 is significant at the .01 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and short term returns evaluated at various quantiles. Of interest is the negative relationship to announcement returns for transactions funded by stock where announcement returns are a negative 7 to 16% for Resource based transactions funded primarily with stock. Furthermore, transactions involving Like Businesses experienced a 2-10% increase in short term returns across the quantiles. Additionally, the predictor variables; Lag from Critical Reg Date and Critical Deal for Acquirer were both statistically significant in the OLS regression but have generally insignificant results in the quantile regression analysis of S&I returns for transactions involving Resource companies.

- Utility: 22.4% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. The OLS results provide statistically meaningful results as the F statistic of 1.513 is significant at the .1 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and short term returns evaluated at various quantiles. Of interest is the significant relationship to announcement returns for transactions that were announced during a recession. Short term announcement returns are significantly worse off for the lower quantile acquirers than for the higher quantile performers when their transactions

were consummated during a recession. Additionally, the predictor variables; Like Buying Like Businesses and Multi-State Transaction were both statistically significant in the OLS regression results but had generally insignificant results in the quantile regression analysis of S&I returns for transactions involving Utility companies.

- Midstream and Transportation: 4.7% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. The OLS regression model provides insignificant results as the F statistic of 0.534 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

- Electric Power: 15.5% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. The OLS regression model provides insignificant results as the F statistic of 0.885 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

Table 13: Model 1 Quantile Regression – S&I Abnormal 3 Day (-3, +3) Returns

Resource Based	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.010	0.007	-1.327	0.193	-0.002	0.026	-0.069	0.946	-0.005	0.019	-0.251	0.803	0.031	0.017	1.824	**0.076**	0.034	0.016	2.097	**0.043**
Like Buying Like Businesses	0.036	0.007	5.480	**0.000**	0.023	0.023	0.983	0.332	0.063	0.017	3.770	**0.001**	0.101	0.015	6.525	**0.000**	0.096	0.014	6.683	**0.000**
Lag from Critical Reg Date	0.000	0.000	-4.863	**0.000**	0.000	0.000	-0.791	0.434	0.000	0.000	-0.878	0.386	0.000	0.000	-2.734	**0.010**	0.000	0.000	-3.037	**0.004**
Approval Cycle	0.000	0.000	0.377	0.708	0.000	0.000	-0.138	0.891	0.000	0.000	0.480	0.634	0.000	0.000	-0.359	0.722	0.000	0.000	0.912	0.368
Stock Deal	-0.071	0.010	-7.037	**0.000**	-0.079	0.035	-2.222	**0.033**	-0.099	0.025	-3.919	**0.000**	-0.146	0.023	-6.260	**0.000**	-0.163	0.022	-7.467	**0.000**
Announced During a Recession	0.000	0.006	0.053	0.958	-0.001	0.023	-0.036	0.971	0.013	0.016	0.816	0.420	0.025	0.015	1.670	0.104	0.024	0.014	1.693	**0.099**
Experienced M&A Team	0.015	0.005	3.235	**0.003**	0.003	0.017	0.179	0.859	-0.011	0.012	-0.966	0.340	-0.022	0.011	-1.995	**0.054**	-0.025	0.010	-2.458	**0.019**
Critical Deal for Acquirer	-0.007	0.008	-0.917	0.365	-0.001	0.029	-0.022	0.982	0.020	0.020	0.996	0.326	0.034	0.019	1.779	**0.084**	0.060	0.018	3.387	**0.002**
Multi State Transaction	-0.002	0.008	-0.293	0.771	-0.002	0.029	-0.063	0.950	-0.057	0.021	-2.705	**0.010**	-0.069	0.019	-3.527	**0.001**	0.013	0.018	0.700	0.488
Overlapping States	-0.015	0.008	-1.987	**0.055**	0.009	0.027	0.313	0.756	0.025	0.020	1.279	0.209	0.015	0.018	0.843	0.405	-0.070	0.017	-4.174	**0.000**
Multi Business Segment Transaction	0.010	0.006	1.653	0.107	-0.013	0.021	-0.624	0.537	0.023	0.015	1.562	0.127	0.024	0.014	1.766	**0.086**	0.027	0.013	2.122	**0.041**
Utility	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	0.013	0.019	0.687	0.495	0.022	0.014	1.635	0.107	0.029	0.013	2.182	**0.033**	0.018	0.016	1.110	0.271	0.020	0.018	1.103	0.274
Like Buying Like Businesses	-0.038	0.009	-4.295	**0.000**	-0.029	0.007	-4.382	**0.000**	-0.027	0.006	-4.228	**0.000**	0.005	0.008	0.655	0.515	-0.003	0.009	-0.353	0.725
Lag from Critical Reg Date	0.000	0.000	1.095	0.277	0.000	0.000	-0.187	0.852	0.000	0.000	-1.413	0.163	0.000	0.000	-0.821	0.415	0.000	0.000	-1.427	0.158
Approval Cycle	0.000	0.000	-0.688	0.494	0.000	0.000	-0.737	0.464	0.000	0.000	-0.648	0.519	0.000	0.000	0.242	0.810	0.000	0.000	0.881	0.382
Stock Deal	-0.062	0.012	-5.258	**0.000**	-0.009	0.009	-1.055	0.295	-0.023	0.009	-2.731	**0.008**	-0.029	0.010	-2.803	**0.007**	-0.018	0.012	-1.558	0.124
Announced During a Recession	-0.229	0.013	-17.899	**0.000**	-0.019	0.009	-1.979	**0.052**	-0.022	0.009	-2.376	**0.021**	0.058	0.011	5.116	**0.000**	0.044	0.013	3.535	**0.001**
Announced During a Merger Wave	-0.039	0.012	-3.404	**0.001**	-0.013	0.009	-1.542	0.128	-0.019	0.008	-2.245	**0.028**	-0.017	0.010	-1.705	**0.093**	-0.016	0.011	-1.366	0.177
Experienced M&A Team	0.005	0.009	0.491	0.625	0.004	0.007	0.533	0.596	0.002	0.007	0.265	0.792	-0.009	0.008	-1.129	0.263	-0.009	0.009	-0.961	0.340
Company Pressured to Transact	0.021	0.016	1.317	0.193	0.012	0.012	1.046	0.300	0.026	0.012	2.237	**0.029**	0.026	0.014	1.820	**0.073**	0.040	0.016	2.553	**0.013**
Critical Deal for Acquirer	-0.043	0.010	-4.414	**0.000**	0.003	0.007	0.413	0.681	0.008	0.007	1.151	0.254	0.008	0.009	0.927	0.357	0.017	0.010	1.779	**0.080**
Multi State Transaction	0.009	0.010	0.887	0.378	-0.044	0.008	-5.840	**0.000**	-0.018	0.007	-2.370	**0.021**	-0.006	0.009	-0.704	0.484	-0.024	0.010	-2.354	**0.022**
Overlapping States	-0.020	0.009	-2.171	**0.034**	-0.020	0.007	-2.870	**0.006**	-0.014	0.007	-2.055	**0.044**	-0.006	0.008	-0.721	0.474	-0.012	0.009	-1.299	0.199
Multi Business Segment Transaction	0.001	0.010	0.142	0.888	0.000	0.007	0.050	0.960	-0.013	0.007	-1.844	**0.070**	0.009	0.008	1.087	0.281	0.022	0.009	2.360	**0.021**

Midstream and Transportation	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.052	0.014	-3.595	**0.000**	0.009	0.021	0.454	0.650	0.022	0.018	1.194	0.235	0.044	0.023	1.932	**0.056**	0.044	0.023	1.932	**0.056**
Like Buying Like Businesses	0.023	0.007	3.272	**0.001**	0.002	0.010	0.212	0.833	0.004	0.009	0.405	0.686	0.000	0.011	0.039	0.969	0.000	0.011	0.039	0.969
Lag from Critical Reg Date	0.000	0.000	1.859	**0.065**	0.000	0.000	-0.446	0.656	0.000	0.000	-0.329	0.742	0.000	0.000	-0.399	0.690	0.000	0.000	-0.399	0.690
Approval Cycle	0.000	0.000	1.702	**0.091**	0.000	0.000	0.950	0.344	0.000	0.000	0.516	0.607	0.000	0.000	-0.153	0.878	0.000	0.000	-0.153	0.878
Stock Deal	0.002	0.008	0.293	0.770	0.004	0.012	0.299	0.765	0.008	0.010	0.796	0.427	0.011	0.013	0.851	0.396	0.011	0.013	0.851	0.396
Announced During a Recession	-0.122	0.013	-9.727	**0.000**	-0.057	0.018	-3.175	**0.002**	-0.027	0.016	-1.719	**0.088**	0.013	0.020	0.641	0.523	0.013	0.020	0.641	0.523
Announced During a Merger Wave	-0.029	0.010	-2.897	**0.004**	-0.012	0.014	-0.846	0.399	-0.006	0.013	-0.508	0.612	0.005	0.016	0.321	0.749	0.005	0.016	0.321	0.749
Experienced M&A Team	-0.004	0.006	-0.692	0.490	-0.009	0.009	-1.031	0.304	-0.007	0.008	-0.939	0.349	-0.014	0.010	-1.388	0.168	-0.014	0.010	-1.388	0.168
Company Pressured to Transact	-0.007	0.010	-0.739	0.461	0.013	0.015	0.866	0.388	0.003	0.013	0.207	0.836	-0.006	0.016	-0.363	0.717	-0.006	0.016	-0.363	0.717
Critical Deal for Acquirer	-0.010	0.008	-1.271	0.206	-0.004	0.011	-0.365	0.716	-0.003	0.010	-0.297	0.767	0.005	0.012	0.397	0.692	0.005	0.012	0.397	0.692
Multi State Transaction	0.006	0.008	0.793	0.429	0.005	0.011	0.399	0.690	-0.006	0.010	-0.562	0.575	-0.016	0.013	-1.313	0.192	-0.016	0.013	-1.313	0.192
Overlapping States	0.003	0.006	0.470	0.639	-0.012	0.009	-1.310	0.193	0.003	0.008	0.434	0.665	0.005	0.010	0.467	0.641	0.005	0.010	0.467	0.641
Multi Business Segment Transaction	-0.027	0.009	-2.897	**0.004**	-0.011	0.013	-0.816	0.416	-0.010	0.012	-0.809	0.420	-0.002	0.015	-0.156	0.876	-0.002	0.015	-0.156	0.876

Electric Power	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.037	0.020	-1.839	**0.071**	-0.020	0.027	-0.739	0.463	-0.014	0.022	-0.629	0.532	0.020	0.026	0.739	0.463	0.118	0.037	3.216	**0.002**
Like Buying Like Businesses	0.008	0.012	0.702	0.486	0.009	0.016	0.604	0.548	0.007	0.013	0.560	0.578	-0.023	0.015	-1.491	0.141	0.030	0.021	1.416	0.162
Lag from Critical Reg Date	0.000	0.000	0.022	0.982	0.000	0.000	-0.330	0.742	0.000	0.000	0.228	0.820	0.000	0.000	0.192	0.849	0.000	0.000	1.193	0.238
Approval Cycle	0.000	0.000	-1.902	**0.062**	0.000	0.000	0.167	0.868	0.000	0.000	0.126	0.900	0.000	0.000	-2.111	**0.039**	0.000	0.000	-4.109	**0.000**
Stock Deal	0.005	0.011	0.447	0.656	-0.015	0.014	-1.048	0.299	-0.003	0.012	-0.231	0.818	-0.006	0.014	-0.406	0.686	-0.046	0.020	-2.308	**0.025**
Announced During a Recession	-0.013	0.018	-0.733	0.466	-0.018	0.024	-0.750	0.456	-0.006	0.020	-0.284	0.777	-0.001	0.024	-0.045	0.964	-0.021	0.033	-0.643	0.522
Announced During a Merger Wave	-0.034	0.012	-2.841	**0.006**	-0.004	0.016	-0.221	0.826	0.003	0.013	0.262	0.794	-0.016	0.016	-1.000	0.321	-0.047	0.022	-2.104	**0.040**
Experienced M&A Team	0.018	0.009	1.919	**0.060**	0.012	0.012	0.970	0.336	0.007	0.010	0.645	0.521	0.000	0.012	0.036	0.971	-0.016	0.017	-0.933	0.355
Company Pressured to Transact	0.039	0.016	2.515	**0.015**	-0.011	0.021	-0.540	0.591	0.008	0.017	0.465	0.644	0.015	0.021	0.709	0.481	0.022	0.029	0.771	0.444
Critical Deal for Acquirer	0.002	0.013	0.197	0.845	0.002	0.017	0.142	0.887	0.009	0.014	0.612	0.543	0.016	0.017	0.939	0.351	0.051	0.023	2.195	**0.032**
Multi State Transaction	-0.008	0.013	-0.628	0.533	-0.006	0.017	-0.356	0.723	-0.012	0.014	-0.878	0.384	0.013	0.017	0.766	0.447	0.043	0.023	1.840	**0.071**
Overlapping States	-0.010	0.013	-0.759	0.451	-0.014	0.017	-0.840	0.404	-0.008	0.014	-0.617	0.539	0.006	0.017	0.363	0.718	-0.057	0.023	-2.499	**0.015**
Multi Business Segment Transaction	0.020	0.011	1.780	**0.080**	0.017	0.015	1.091	0.280	0.011	0.013	0.849	0.400	0.014	0.015	0.946	0.348	-0.033	0.021	-1.592	0.117

Model 2 is a weak form SI_SIM_AN_3DAY (Simple returns on a -3, +3 day event window anchored off of the announcement date) Table 14 provides the OLS regression results for Model 2. Results for each energy industry segment are provided in the table.

- Resource: 57.2% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 4.811 is significant at the .01 level. The independent variables: Like Buying Like Businesses and Stock Deal are both significant at the .01 level, whereas the variables, Lag From Critical Reg Date and Critical Deal for Acquirer are statistically significant at the .1 level. Multicollinearity does not appear to negatively influence the regression results. Of the 10 predictor variables, 7 have Variable Inflation Factors (VIFs) below 2.2. Of the three that do not, Critical Deal (3.9), Multi State (4.4) and Overlapping States (3.0) are all below the theoretical threshold of 5.0.

- Utility: 25.8% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 1.826 is significant at the .1 level. The independent variables: Lag from Critical Reg Date, Announced During a Recession and Multi-State transaction are statistically significant at the .05 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables all have Variable Inflation Factors (VIFs) below 2.0.

- Midstream and Transportation: 5.6% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 0.644 is statistically insignificant.

- Electric Power: 16.5% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 0.952 is statistically insignificant.

Table 14: Model 2 – S&I Simple 3 Day (-3, +3) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.008	(0.230)		0.063	(2.639)	***	0.59	(2.154)	**	0.18	(0.556)	
Like Buying Like Businesses	0.112	(-4.484)	***	-0.022	(-1.503)		-0.003	(-0.201)		-0.013	(-0.707)	
Lag from Critical Reg Date	-0.001	(-1.870)	*	-0.001	(-2.126)	**	-0.001	(-0.625)		0.001	(1.023)	
Approval Cycle	0.001	(-.266)		0.001	(0.157)		-0.001	(-0.700)		-0.001	(-2.161)	**
Stock Deal	-0.19	(-5.032)	***	-0.018	(-0.887)		0.025	(1.609)		-0.005	(-0.272)	
Announced During a Recession	-0.005	(-.225)		-0.053	(-2.469)	**	-0.017	(-0.731)		-0.021	(-0.704)	
Announced During a Merger Wave				-0.033	(-0.149)		-0.001	(-0.048)		-0.01	(-0.482)	
Experienced M&A Team	0.007	(-0.415)		0.011	(0.691)		-0.013	(-1.123)		-0.009	(-0.595)	
Company Pressured to Transact				-0.012	(-0.433)		-0.006	(-0.291)		0.012	(0.480)	
Critical Deal for Acquirer	0.061	(2.003)	*	0.001	(0.071)		0.001	(0.066)		0.011	(0.507)	
Multi State Transaction	-0.047	(-1.487)		-0.043	(-2.510)	**	-0.013	(-0.833)		0.014	(0.677)	
Overlapping States	0.013	(.448)		-0.016	(-1.006)		-0.013	(-1.102)		0.004	(0.170)	
Multi Business Segment Transaction	0.004	(.197)		0.003	(0.182)		-0.008	(-0.443)		0.003	(0.160)	
Number of Observations (n)	46			75			142			70		
R-Square	0.572			0.258			0.056			0.165		
F	4.811		***	1.826		*	0.644			0.952		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Model 2 is a weak form SI_SIM_AN_3DAY (Simple returns on a -3, +3 day event window anchored off of the announcement date) Table 15 provides the Quantile regression results for Model 2. Results for each energy industry segment are provided in the table.

- Resource: 57.2% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. The OLS model provides statistically meaningful results as the F statistic of 4.811 is significant at the .01 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and short term returns evaluated at various quantiles. Of interest is the result for the variable Like Buying Like which suggests a range of 7 to 14% difference in announcement returns across the quantile range when Resource companies acquire a similar type of business. Furthermore, quantile results for transactions funded with stock suggest a 15 to 22% reduction in announcement returns across the quantiles when Resource companies use stock for their M&A deal. These effects are assuming all other variables are kept constant. Additionally, the predictor variable Critical deal for Acquirer was statistically significant in the OLS regression results but had generally insignificant results in the quantile regression analysis of S&I returns for transactions involving Resource companies.

- Utility: 25.8% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. The OLS model provides statistically meaningful results as the F statistic of 1.826 is significant at the .1 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and short term returns evaluated at various quantiles. Of interest is the result for the variable Multi State Transaction which suggests a value reduction of 3 to 4% between the quantiles when Utility acquirers attempt to conduct a transaction with business operations

in multiple states. This effect is assuming all other variables are kept constant. Additionally, the predictor variables; Lag from Critical Reg Date and Announced During a Recession, were both statistically significant in the OLS regression results but had generally insignificant results in the quantile regression analysis of S&I returns for transactions involving Utility companies.

- Midstream and Transportation: 5.6% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. However, the OLS regression model provides insignificant results as the F statistic of 0.644 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

- Electric Power: 16.5% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. The model provides insignificant results as the F statistic of 0.952 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

Table 15: Model 2 Quantile Regression – S&I Simple 3 Day (-3, +3) Returns

Resource Based	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.050	0.032	-1.559	0.128	-0.013	0.049	-0.272	0.787	0.007	0.029	0.241	0.811	0.038	0.018	2.149	**0.038**	0.048	0.015	3.097	**0.004**
Like Buying Like Businesses	0.071	0.029	2.456	**0.019**	0.083	0.044	1.858	**0.071**	0.135	0.026	5.146	**0.000**	0.119	0.016	7.463	**0.000**	0.126	0.014	9.097	**0.000**
Lag from Critical Reg Date	0.000	0.000	-1.033	0.308	0.000	0.000	-0.674	0.504	0.000	0.000	-1.224	0.229	-0.001	0.000	-3.260	**0.002**	0.000	0.000	-3.139	**0.003**
Approval Cycle	0.000	0.000	0.920	0.364	0.000	0.000	0.783	0.439	0.000	0.000	-0.445	0.659	0.000	0.000	-0.836	0.408	0.000	0.000	0.168	0.867
Stock Deal	-0.148	0.044	-3.380	**0.002**	-0.185	0.067	-2.757	**0.009**	-0.205	0.040	-5.160	**0.000**	-0.191	0.024	-7.890	**0.000**	-0.227	0.021	-10.885	**0.000**
Announced During a Recession	-0.004	0.028	-0.160	0.874	0.001	0.043	0.030	0.976	0.016	0.025	0.614	0.543	0.023	0.015	1.487	0.146	0.024	0.013	1.815	**0.078**
Experienced M&A Team	0.038	0.020	1.870	**0.070**	0.001	0.032	0.035	0.973	-0.015	0.019	-0.799	0.429	-0.022	0.011	-1.897	**0.066**	-0.015	0.010	-1.525	0.136
Critical Deal for Acquirer	0.084	0.035	2.373	**0.023**	0.072	0.054	1.313	0.197	0.043	0.032	1.346	0.187	0.031	0.020	1.578	0.123	0.026	0.017	1.530	0.135
Multi State Transaction	0.000	0.036	-0.001	1.000	-0.055	0.056	-0.984	0.332	-0.078	0.033	-2.366	**0.023**	-0.034	0.020	-1.696	**0.098**	0.007	0.017	0.383	0.704
Overlapping States	-0.053	0.034	-1.580	0.123	-0.019	0.052	-0.369	0.715	0.041	0.031	1.343	0.188	-0.008	0.019	-0.407	0.687	-0.038	0.016	-2.356	**0.024**
Multi Business Segment Transaction	-0.036	0.026	-1.389	0.173	-0.011	0.040	-0.287	0.776	0.011	0.023	0.490	0.627	0.024	0.014	1.691	**0.099**	0.001	0.012	0.112	0.911
Utility	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	0.040	0.022	1.787	**0.079**	0.019	0.032	0.588	0.558	0.031	0.025	1.244	0.218	0.039	0.022	1.776	**0.081**	0.047	0.015	3.156	**0.002**
Like Buying Like Businesses	-0.033	0.011	-3.076	**0.003**	-0.025	0.015	-1.631	0.108	-0.031	0.012	-2.646	**0.010**	0.008	0.010	0.745	0.459	0.001	0.007	0.207	0.837
Lag from Critical Reg Date	0.000	0.000	-1.166	0.248	0.000	0.000	-0.964	0.339	0.000	0.000	-1.537	0.129	0.000	0.000	-1.288	0.203	0.000	0.000	-2.902	**0.005**
Approval Cycle	0.000	0.000	-1.008	0.317	0.000	0.000	-0.100	0.921	0.000	0.000	0.062	0.951	0.000	0.000	-0.723	0.473	0.000	0.000	0.024	0.981
Stock Deal	-0.036	0.014	-2.524	**0.014**	-0.031	0.021	-1.502	0.138	-0.005	0.016	-0.296	0.768	-0.010	0.014	-0.731	0.467	0.006	0.010	0.613	0.542
Announced During a Recession	-0.208	0.015	-13.490	**0.000**	-0.016	0.022	-0.711	0.480	-0.008	0.017	-0.473	0.638	-0.009	0.015	-0.622	0.536	0.014	0.010	1.352	0.181
Announced During a Merger Wave	-0.020	0.014	-1.407	0.164	-0.016	0.020	-0.786	0.435	-0.008	0.015	-0.498	0.620	0.007	0.014	0.511	0.611	0.018	0.009	1.985	**0.052**
Experienced M&A Team	0.008	0.011	0.670	0.505	0.017	0.016	1.006	0.318	0.000	0.013	-0.024	0.981	-0.005	0.011	-0.491	0.625	-0.026	0.008	-3.395	**0.001**
Company Pressured to Transact	0.006	0.019	0.309	0.759	0.014	0.028	0.512	0.610	0.020	0.021	0.916	0.363	0.002	0.019	0.085	0.933	-0.002	0.013	-0.144	0.886
Critical Deal for Acquirer	-0.019	0.012	-1.632	0.108	0.010	0.017	0.613	0.542	0.016	0.013	1.252	0.215	0.017	0.011	1.501	0.138	0.025	0.008	3.233	**0.002**
Multi State Transaction	-0.030	0.012	-2.409	**0.019**	-0.041	0.018	-2.286	**0.026**	-0.038	0.014	-2.772	**0.007**	-0.025	0.012	-2.097	**0.040**	-0.029	0.008	-3.560	**0.001**
Overlapping States	-0.023	0.011	-2.043	**0.045**	-0.011	0.016	-0.676	0.501	-0.013	0.012	-1.055	0.296	-0.010	0.011	-0.967	0.337	0.001	0.007	0.124	0.902
Multi Business Segment Transaction	-0.003	0.012	-0.259	0.797	-0.010	0.017	-0.585	0.560	-0.005	0.013	-0.392	0.696	0.011	0.011	1.018	0.313	0.029	0.008	3.829	**0.000**

Midstream and Transportation	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*
(Constant)	-0.056	0.032	-1.732	**0.086**	0.034	0.018	1.903	**0.059**	0.033	0.024	1.379	0.170	0.079	0.037	2.122	**0.036**	0.133	0.033	4.106	**0.000**
Like Buying Like Businesses	0.018	0.016	1.166	0.246	0.010	0.009	1.168	0.245	0.009	0.012	0.756	0.451	-0.004	0.018	-0.215	0.830	-0.025	0.016	-1.589	0.115
Lag from Critical Reg Date	0.000	0.000	1.468	0.145	0.000	0.000	-2.203	**0.029**	0.000	0.000	-0.644	0.521	0.000	0.000	-0.911	0.364	0.000	0.000	-1.367	0.174
Approval Cycle	0.000	0.000	-0.554	0.580	0.000	0.000	0.235	0.815	0.000	0.000	0.126	0.900	0.000	0.000	-0.612	0.542	0.000	0.000	-1.972	**0.051**
Stock Deal	0.015	0.018	0.803	0.423	0.013	0.010	1.275	0.204	0.013	0.014	0.927	0.356	0.021	0.021	0.988	0.325	0.045	0.019	2.427	**0.017**
Announced During a Recession	-0.133	0.028	-4.743	**0.000**	-0.100	0.015	-6.467	**0.000**	-0.019	0.021	-0.932	0.353	0.021	0.033	0.660	0.511	0.194	0.028	6.855	**0.000**
Announced During a Merger Wave	-0.037	0.022	-1.681	**0.095**	0.007	0.012	0.596	0.553	-0.005	0.016	-0.328	0.743	0.017	0.026	0.680	0.498	0.035	0.022	1.541	0.126
Experienced M&A Team	-0.023	0.014	-1.681	**0.095**	-0.005	0.008	-0.622	0.535	-0.011	0.010	-1.100	0.273	-0.016	0.016	-1.020	0.310	-0.023	0.014	-1.671	**0.097**
Company Pressured to Transact	-0.025	0.023	-1.096	0.275	0.009	0.012	0.754	0.452	-0.002	0.017	-0.145	0.885	0.002	0.026	0.058	0.954	-0.025	0.023	-1.085	0.280
Critical Deal for Acquirer	-0.012	0.017	-0.701	0.485	0.017	0.010	1.732	**0.086**	0.009	0.013	0.733	0.465	0.022	0.020	1.106	0.271	0.008	0.018	0.472	0.637
Multi State Transaction	-0.005	0.018	-0.299	0.765	-0.014	0.010	-1.410	0.161	-0.013	0.013	-0.979	0.329	-0.014	0.020	-0.671	0.504	-0.019	0.018	-1.083	0.281
Overlapping States	0.005	0.014	0.331	0.741	0.004	0.008	0.458	0.648	0.008	0.010	0.744	0.458	-0.007	0.017	-0.436	0.664	0.004	0.014	0.284	0.777
Multi Business Segment Transaction	-0.005	0.021	-0.217	0.829	-0.036	0.011	-3.137	**0.002**	-0.018	0.015	-1.171	0.244	0.003	0.024	0.117	0.907	0.033	0.021	1.580	0.116

Electric Power	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*
(Constant)	0.025	0.013	1.950	**0.056**	-0.018	0.018	-0.994	0.325	0.007	0.013	0.558	0.579	0.023	0.024	0.956	0.343	-0.014	0.025	-0.550	0.585
Like Buying Like Businesses	0.004	0.007	0.528	0.599	0.017	0.010	1.652	0.104	0.000	0.007	-0.034	0.973	-0.020	0.014	-1.434	0.157	0.006	0.014	0.390	0.698
Lag from Critical Reg Date	0.000	0.000	0.191	0.849	0.000	0.000	0.609	0.545	0.000	0.000	0.955	0.344	0.000	0.000	0.929	0.357	0.001	0.000	3.682	**0.001**
Approval Cycle	0.000	0.000	-6.705	**0.000**	0.000	0.000	0.104	0.917	0.000	0.000	-1.810	**0.076**	0.000	0.000	-2.263	**0.027**	0.000	0.000	-2.056	**0.044**
Stock Deal	-0.003	0.007	-0.429	0.669	0.002	0.010	0.239	0.812	0.004	0.007	0.594	0.555	-0.008	0.013	-0.618	0.539	-0.035	0.013	-2.620	**0.011**
Announced During a Recession	-0.060	0.012	-5.131	**0.000**	-0.009	0.016	-0.534	0.595	-0.008	0.011	-0.742	0.461	-0.003	0.022	-0.145	0.885	0.028	0.023	1.259	0.213
Announced During a Merger Wave	0.001	0.008	0.184	0.854	-0.018	0.011	-1.709	**0.093**	0.006	0.008	0.813	0.420	-0.011	0.014	-0.775	0.442	-0.023	0.015	-1.570	0.122
Experienced M&A Team	-0.014	0.006	-2.335	**0.023**	0.005	0.008	0.585	0.561	-0.002	0.006	-0.288	0.774	-0.002	0.011	-0.185	0.854	0.004	0.011	0.331	0.742
Company Pressured to Transact	-0.016	0.010	-1.616	0.112	0.001	0.014	0.042	0.967	-0.025	0.010	-2.552	**0.013**	0.010	0.019	0.518	0.606	0.029	0.019	1.521	0.134
Critical Deal for Acquirer	-0.026	0.008	-3.188	**0.002**	-0.014	0.011	-1.228	0.224	-0.001	0.008	-0.106	0.916	0.007	0.015	0.477	0.635	0.023	0.016	1.450	0.152
Multi State Transaction	0.011	0.008	1.329	0.189	0.018	0.011	1.634	0.108	0.009	0.008	1.132	0.262	0.001	0.015	0.077	0.939	0.035	0.016	2.220	**0.030**
Overlapping States	-0.014	0.008	-1.774	**0.081**	-0.020	0.011	-1.763	**0.083**	-0.011	0.008	-1.358	0.180	0.013	0.015	0.851	0.398	-0.006	0.015	-0.377	0.708
Multi Business Segment Transaction	-0.010	0.007	-1.312	0.195	0.012	0.010	1.133	0.262	-0.003	0.007	-0.423	0.674	0.004	0.014	0.308	0.759	0.033	0.014	2.350	**0.022**

Transacting and Executing

Transacting and Executing capability is the capacity to manage and execute efficiently the transaction closing process, including meeting all conditions precedent in the acquisition which may involve arranging financing, obtaining approvals and consents, (regulatory, shareholder, other) and consummating all other deal closing mechanics. Firms that can manage efficiently these processes are positioned to take advantage of the opportunity that was created in Selecting and Identifying and can create substantial competitive advantage.

As a proxy to measure the effectiveness of a firm's T&E capabilities, short-term value measurements are most appropriate but anchored around the closing date of the transaction. Additionally, the market's response to the effectiveness of these capabilities is best evidenced by how it responds when it is informed of how the acquirer expects to close the transaction and its strategy for satisfying any commitments it made during the announcement phase of the transaction in its short-term execution plan. Utilizing value measures straddling the closing date of the transaction is an appropriate gauge of the market's judgment of a company's T&E capabilities.

Furthermore, as the market tends to be somewhat efficient, the window of time necessary to measure its response is relatively short. However, the company will spend some fair amounts of time completing the tasks necessary to effectuate the transaction and get through its first accounting cycle. Even though this time period can linger for months as companies work through final regulatory approvals and meeting conditions necessary to close the transaction, the completion of and communication of outcomes for many of these tasks occur in the last month pre-closing of a transaction. Similarly the one month post-closing of the transaction and the completion of the companies first accounting cycle often is the first indication to the markets of how well much of the T&E tasks were conducted.

Table 16 provides factor differences among Top T&E Performers (those with top quartile performance in T&E) and Poor T&E Performers (those with bottom quartile performance in T&E). Significant results are noted (.10 level or better) where means are statistically different. Some interesting results are noteworthy when comparing the Top versus

the Poor performers. Top Performers tend to have statistically shorter deal approval cycles, are less likely to do a deal during a recession, are more likely to transact during a merger wave and also attempt a multi-state transaction than the Poor performing acquirers.

Table 16: Factor Differences among Top and Poor Performers – T&E

	All		Top Performers		Poor Performers		Comparisons of Means - p values noted (null hypothesis is that means are =)					
	Mean	STD	Mean	STD	Mean	STD	All vs. Top Perfomers		All vs. Poor Performers		Top vs. Poor Performers	
Like Buying Like Businesses	0.605	0.490	0.560	0.499	0.560	0.499	0.457	Cannot Reject Null Hypothesis	0.444	Cannot Reject Null Hypothesis	1.000	Cannot Reject Null Hypothesis
Lag from Critical Reg Date	107.035	65.575	113.187	68.132	96.808	60.566	0.462	Cannot Reject Null Hypothesis	0.168	Cannot Reject Null Hypothesis	0.101	Cannot Reject Null Hypothesis
Approval Cycle	140.365	148.114	118.643	130.855	167.619	168.886	0.191	Cannot Reject Null Hypothesis	0.169	Cannot Reject Null Hypothesis	0.035	Reject Null Hypothesis
Stock Deal	0.184	0.388	0.143	0.352	0.179	0.385	0.355	Cannot Reject Null Hypothesis	0.907	Cannot Reject Null Hypothesis	0.530	Cannot Reject Null Hypothesis
Announced During a Recession	0.080	0.272	0.060	0.238	0.155	0.364	0.497	Cannot Reject Null Hypothesis	0.073	Reject Null Hypothesis	0.043	Reject Null Hypothesis
Closed During a Recession	0.083	0.276	0.095	0.295	0.167	0.375	0.738	Cannot Reject Null Hypothesis	0.051	Reject Null Hypothesis	0.168	Cannot Reject Null Hypothesis
Announced During a Wave	0.335	0.473	0.393	0.491	0.238	0.428	0.340	Cannot Reject Null Hypothesis	0.065	Reject Null Hypothesis	0.030	Reject Null Hypothesis
Experienced M&A Team	0.383	0.487	0.274	0.449	0.393	0.491	0.054	Reject Null Hypothesis	0.864	Cannot Reject Null Hypothesis	0.101	Cannot Reject Null Hypothesis
Company Pressured to Transact	0.107	0.309	0.155	0.364	0.107	0.311	0.273	Cannot Reject Null Hypothesis	0.994	Cannot Reject Null Hypothesis	0.363	Cannot Reject Null Hypothesis
First Deal For Team	0.401	0.491	0.464	0.502	0.369	0.485	0.303	Cannot Reject Null Hypothesis	0.589	Cannot Reject Null Hypothesis	0.211	Cannot Reject Null Hypothesis
Critical Deal for Acquirer	0.427	0.495	0.512	0.503	0.405	0.494	0.173	Cannot Reject Null Hypothesis	0.705	Cannot Reject Null Hypothesis	0.164	Cannot Reject Null Hypothesis
Multi State Transaction	0.472	0.500	0.595	0.494	0.369	0.485	0.044	Reject Null Hypothesis	0.080	Reject Null Hypothesis	0.003	Reject Null Hypothesis
Overlapping States	0.570	0.496	0.548	0.501	0.607	0.491	0.721	Cannot Reject Null Hypothesis	0.528	Cannot Reject Null Hypothesis	0.437	Cannot Reject Null Hypothesis
Multi Business Segment	0.246	0.431	0.214	0.413	0.298	0.460	0.535	Cannot Reject Null Hypothesis	0.348	Cannot Reject Null Hypothesis	0.216	Cannot Reject Null Hypothesis

Two specifications of the T&E variable, one a weak form and one a semi-strong form is provided with results provided by industry segment. Model 3 is a semi-strong specification of TE_CAR_Clsd_30DAY (Abnormal returns on a -30, +30 event window anchored off of the closing date) Table 17 provides the OLS regression results for Model 3. Results for each energy industry segment are provided in the table.

- Resource: 3.8% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 0.144 is statistically insignificant.

- Utility: 22.1% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 1.468 is statistically insignificant.

- Midstream and Transportation: 15.7% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 2.023 is statistically significant at the. 05 level. Additionally, the independent variables: Like Buying Like Business, Closed During a Recession, Experienced M&A Team and Multi Business Segment Transaction are all statistically significant at the .05 level or better. The Approval Cycle independent variable is also significant at the .1 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables, 10 have Variable Inflation Factors (VIFs) below 2.2. Of the two that do not, Lag from Critical Reg Date (3.9) and Announced During a Merger Wave (3.6) are both below the theoretical threshold of 5.0.

- Electric Power: 14.7% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 0.831 is statistically insignificant.

Table 17: Model 3 - T&E Abnormal 30 Day (-30, +30) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.001	(0.003)		0.005	(0.117)		-0.04	(-0.583)		-0.058	(-0.772)	
Like Buying Like Businesses	0.011	(0.126)		0.015	(0.641)		-0.079	(-2.370)	**	0.049	(1.052)	
Lag from Critical Reg Date	0.001	(0.524)		0.001	(1.314)		0.001	(1.631)		0.001	(0.011)	
Approval Cycle	0.001	(0.183)		-0.001	(-1.222)		0.001	(1.956)	*	-0.001	(-2.537)	**
Stock Deal	-0.011	(-0.987)		-0.017	(-0.555)		-0.009	(-0.220)		-0.02	(-0.474)	
Closed During a Recession	-0.014	(-0.100)		-0.075	(-2.375)	**	-0.109	(-1.977)	**	-0.001	(-0.020)	
Announced During a Merger Wave				0.031	(0.996)		-0.061	(-1.331)		0.006	(0.125)	
Experienced M&A Team	0.018	(0.292)		-0.019	(-0.790)		-0.063	(-2.175)	**	0.01	(0.288)	
Company Pressured to Transact				-0.036	(-0.862)		-0.04	(-0.843)		-0.009	(-0.143)	
Critical Deal for Acquirer	-0.046	(-0.438)		-0.019	(-0.752)		0.003	(0.761)		0.084	(1.691)	*
Multi State Transaction	0.022	(0.224)		0.063	(2.403)	**	0.027	(0.725)		0.024	(0.481)	
Overlapping States	-0.064	(-0.636)		-0.019	(-0.792)		0.03	(1.008)		0.043	(0.873)	
Multi Business Segment Transaction	-0.006	(-0.084)		-0.02	(-0.806)		-0.136	(-3.089)	***	0.026	(0.570)	
Number of Observations (n)	46			74			142			70		
R-Square	0.038			0.221			0.157			0.147		
F	0.144			1.468			2.023		**	0.831		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Model 3 is a semi-strong specification of TE_CAR_Clsd_30DAY (Abnormal returns on a -30, +30 event window anchored off of the closing date) Table 18 provides the Quantile regression results for Model 3. Results for each energy industry segment are provided in the table.

- Resource: 3.8% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables in the OLS regression results. The model provides insignificant results as the F statistic of 0.144 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

- Utility: 22.1% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables in the OLS regression results. The model provides insignificant results as the F statistic of 1.468 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

- Midstream and Transportation: 15.7% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables in the OLS regression results. The model provides statistically meaningful results as the F statistic of 2.023 is statistically significant at the 05 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and returns evaluated at various quantiles. Of interest is the result for the variable Multi Business Segment Transaction which suggests a value reduction of 5 to 10% between the quantiles when Midstream acquirers attempt to conduct a transaction with business operations covering multiple business segments. This effect is assuming all other variables are kept constant. Additionally, the predictor variables; Like Buying Like Businesses, Approval Cycle, Closed During a Recession and Experienced M&A Team were all statistically significant in the OLS regression results but had generally

insignificant results in the quantile regression analysis of T&E returns for transactions involving Midstream companies.

- Electric Power: 14.7% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables in the OLS regression results. The model provides insignificant results as the F statistic of 0.831 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

Table 18: Model 3 Quantile Regression – T&E Abnormal 30 Day (-30, +30) Returns

Resource Based	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.142	0.033	-4.330	**0.000**	-0.154	0.066	-2.327	**0.026**	-0.015	0.084	-0.183	0.856	-0.004	0.077	-0.048	0.962	0.003	0.039	0.087	0.931
Like Buying Like Businesses	-0.002	0.022	-0.087	0.931	-0.021	0.045	-0.466	0.644	-0.052	0.057	-0.926	0.361	-0.041	0.052	-0.782	0.439	-0.061	0.026	-2.292	**0.028**
Lag from Critical Reg Date	0.002	0.000	7.958	**0.000**	0.001	0.000	2.636	**0.012**	0.000	0.001	0.294	0.770	0.000	0.001	0.141	0.889	0.000	0.000	-0.562	0.578
Approval Cycle	0.000	0.000	1.229	0.227	0.000	0.000	1.663	0.105	0.000	0.000	0.732	0.469	0.000	0.000	-0.347	0.731	0.000	0.000	-0.685	0.497
Stock Deal	-0.016	0.033	-0.485	0.631	-0.019	0.068	-0.282	0.780	-0.009	0.086	-0.109	0.914	-0.037	0.079	-0.469	0.642	-0.023	0.040	-0.579	0.566
Closed During a Recession	-0.091	0.035	-2.611	**0.013**	-0.002	0.071	-0.034	0.973	0.022	0.090	0.247	0.806	0.086	0.083	1.034	0.308	0.113	0.042	2.696	**0.011**
Experienced M&A Team	-0.021	0.016	-1.309	0.199	0.008	0.032	0.263	0.794	0.006	0.041	0.140	0.889	-0.012	0.037	-0.327	0.745	-0.018	0.019	-0.946	0.351
Critical Deal for Acquirer	-0.162	0.027	-6.060	**0.000**	-0.102	0.054	-1.876	**0.069**	0.006	0.069	0.090	0.929	0.059	0.063	0.927	0.360	0.081	0.032	2.526	**0.016**
Multi State Transaction	0.115	0.025	4.529	**0.000**	0.021	0.051	0.409	0.685	0.047	0.065	0.718	0.477	0.046	0.060	0.760	0.452	0.046	0.030	1.502	0.142
Overlapping States	0.105	0.026	4.050	**0.000**	0.138	0.052	2.623	**0.013**	-0.014	0.067	-0.205	0.839	-0.092	0.061	-1.501	0.142	-0.123	0.031	-3.952	**0.000**
Multi Business Segment Transaction	-0.010	0.019	-0.508	0.615	-0.019	0.039	-0.488	0.629	-0.043	0.049	-0.862	0.394	-0.034	0.045	-0.758	0.453	-0.031	0.023	-1.344	0.187
Utility	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.066	0.029	-2.310	**0.024**	-0.040	0.037	-1.068	0.290	-0.008	0.036	-0.220	0.827	0.052	0.053	0.972	0.335	0.090	0.052	1.734	**0.088**
Like Buying Like Businesses	0.057	0.013	4.221	**0.000**	0.045	0.018	2.534	**0.014**	0.019	0.017	1.098	0.276	0.009	0.025	0.356	0.723	-0.052	0.025	-2.126	**0.037**
Lag from Critical Reg Date	0.000	0.000	2.081	**0.042**	0.000	0.000	0.985	0.329	0.000	0.000	1.272	0.208	0.001	0.000	1.535	0.130	0.001	0.000	1.589	0.117
Approval Cycle	0.000	0.000	-0.095	0.924	0.000	0.000	-0.922	0.360	0.000	0.000	-1.251	0.216	0.000	0.000	-2.289	**0.025**	0.000	0.000	-1.907	**0.061**
Stock Deal	-0.042	0.018	-2.277	**0.026**	-0.048	0.024	-2.002	**0.050**	-0.020	0.023	-0.846	0.401	-0.014	0.034	-0.424	0.673	-0.017	0.033	-0.512	0.611
Closed During a Recession	-0.059	0.019	-3.185	**0.002**	-0.069	0.024	-2.851	**0.006**	-0.102	0.024	-4.271	**0.000**	-0.022	0.035	-0.630	0.531	0.032	0.034	0.934	0.354
Announced During a Merger Wave	-0.093	0.018	-5.149	**0.000**	-0.080	0.024	-3.407	**0.001**	-0.013	0.023	-0.547	0.586	-0.010	0.034	-0.303	0.763	-0.037	0.033	-1.121	0.267
Experienced M&A Team	-0.022	0.014	-1.516	0.135	-0.034	0.019	-1.809	**0.075**	-0.041	0.018	-2.257	**0.028**	-0.011	0.027	-0.425	0.672	-0.006	0.026	-0.214	0.831
Company Pressured to Transact	0.031	0.025	1.271	0.209	0.049	0.032	1.530	0.131	0.025	0.031	0.787	0.434	0.021	0.046	0.469	0.641	0.065	0.045	1.451	0.152
Critical Deal for Acquirer	0.032	0.015	2.084	**0.041**	0.010	0.020	0.512	0.610	-0.006	0.019	-0.307	0.760	-0.046	0.028	-1.619	0.111	-0.036	0.028	-1.298	0.199
Multi State Transaction	0.055	0.015	3.556	**0.001**	0.058	0.020	2.882	**0.005**	0.057	0.020	2.892	**0.005**	0.048	0.029	1.655	0.103	0.101	0.028	3.571	**0.001**
Overlapping States	-0.018	0.014	-1.254	0.215	-0.009	0.018	-0.518	0.606	-0.006	0.018	-0.336	0.738	-0.022	0.026	-0.833	0.408	-0.033	0.026	-1.280	0.205
Multi Business Segment Transaction	-0.023	0.015	-1.565	0.123	-0.005	0.019	-0.262	0.794	-0.008	0.019	-0.424	0.673	0.006	0.027	0.236	0.815	-0.039	0.027	-1.485	0.143

Midstream and Transportation	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.002	0.029	-0.061	0.951	-0.064	0.029	-2.252	**0.026**	-0.023	0.054	-0.435	0.664	0.029	0.039	0.750	0.455	0.018	0.029	0.623	0.534
Like Buying Like Businesses	-0.003	0.014	-0.220	0.826	0.009	0.014	0.678	0.499	0.011	0.026	0.405	0.686	0.009	0.019	0.468	0.641	0.029	0.014	2.030	**0.044**
Lag from Critical Reg Date	0.000	0.000	-2.010	**0.047**	0.000	0.000	1.403	0.163	0.000	0.000	0.444	0.658	0.000	0.000	0.489	0.626	0.000	0.000	1.073	0.285
Approval Cycle	0.000	0.000	0.701	0.484	0.000	0.000	0.146	0.884	0.000	0.000	0.211	0.833	0.000	0.000	2.569	**0.011**	0.001	0.000	7.579	**0.000**
Stock Deal	-0.135	0.017	-8.124	**0.000**	0.006	0.016	0.367	0.715	-0.003	0.031	-0.108	0.914	-0.022	0.022	-0.988	0.325	-0.065	0.017	-3.840	**0.000**
Closed During a Recession	-0.341	0.023	-14.610	**0.000**	-0.128	0.023	-5.563	**0.000**	0.027	0.043	0.623	0.535	0.004	0.031	0.137	0.892	-0.020	0.024	-0.835	0.405
Announced During a Merger Wave	0.024	0.019	1.218	0.225	-0.008	0.019	-0.412	0.681	-0.008	0.036	-0.224	0.823	-0.001	0.026	-0.051	0.960	0.004	0.020	0.189	0.850
Experienced M&A Team	-0.012	0.012	-0.979	0.329	-0.025	0.012	-2.063	**0.041**	-0.024	0.023	-1.034	0.303	-0.025	0.017	-1.537	0.127	-0.030	0.013	-2.377	**0.019**
Company Pressured to Transact	-0.053	0.020	-2.606	**0.010**	-0.005	0.020	-0.247	0.806	0.011	0.038	0.304	0.761	0.028	0.027	1.041	0.300	0.019	0.021	0.899	0.370
Critical Deal for Acquirer	-0.014	0.016	-0.880	0.380	-0.003	0.015	-0.215	0.830	-0.006	0.029	-0.225	0.822	0.004	0.021	0.193	0.847	0.037	0.016	2.369	**0.019**
Multi State Transaction	0.048	0.016	3.001	**0.003**	0.030	0.016	1.895	**0.060**	0.041	0.029	1.383	0.169	0.002	0.021	0.089	0.929	-0.017	0.016	-1.072	0.286
Overlapping States	-0.018	0.013	-1.447	0.150	-0.020	0.013	-1.588	0.115	-0.012	0.024	-0.510	0.611	-0.014	0.017	-0.825	0.411	0.020	0.013	1.567	0.120
Multi Business Segment Transaction	-0.080	0.019	-4.294	**0.000**	-0.059	0.018	-3.186	**0.002**	-0.045	0.035	-1.296	0.197	-0.063	0.025	-2.500	**0.014**	-0.104	0.019	-5.456	**0.000**

Electric Power	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	0.051	0.054	0.952	0.345	0.013	0.060	0.211	0.834	-0.011	0.079	-0.136	0.892	0.014	0.058	0.239	0.812	0.014	0.058	0.239	0.812
Like Buying Like Businesses	-0.153	0.030	-5.018	**0.000**	-0.064	0.034	-1.884	**0.065**	-0.052	0.045	-1.155	0.253	0.013	0.033	0.412	0.682	0.013	0.033	0.412	0.682
Lag from Critical Reg Date	-0.001	0.000	-2.019	**0.048**	0.000	0.000	-0.413	0.681	0.000	0.001	0.419	0.677	0.000	0.000	0.662	0.511	0.000	0.000	0.662	0.511
Approval Cycle	0.000	0.000	-6.745	**0.000**	0.000	0.000	-1.523	0.133	0.000	0.000	-0.642	0.523	0.000	0.000	-0.500	0.619	0.000	0.000	-0.500	0.619
Stock Deal	0.059	0.028	2.138	**0.037**	0.022	0.031	0.710	0.480	-0.050	0.041	-1.234	0.222	-0.039	0.030	-1.306	0.197	-0.039	0.030	-1.306	0.197
Closed During a Recession	-0.074	0.038	-1.958	**0.055**	-0.056	0.043	-1.305	0.197	0.023	0.056	0.411	0.683	0.061	0.041	1.483	0.144	0.061	0.041	1.483	0.144
Announced During a Merger Wave	0.021	0.032	0.650	0.518	-0.016	0.036	-0.452	0.653	-0.002	0.048	-0.052	0.959	0.020	0.035	0.574	0.569	0.020	0.035	0.574	0.569
Experienced M&A Team	-0.011	0.024	-0.442	0.660	-0.010	0.027	-0.359	0.721	0.004	0.035	0.114	0.910	-0.003	0.026	-0.107	0.915	-0.003	0.026	-0.107	0.915
Company Pressured to Transact	-0.055	0.040	-1.375	0.174	0.020	0.045	0.440	0.662	-0.011	0.059	-0.193	0.848	-0.047	0.043	-1.078	0.286	-0.047	0.043	-1.078	0.286
Critical Deal for Acquirer	0.059	0.033	1.806	**0.076**	0.015	0.037	0.409	0.684	0.086	0.048	1.795	**0.078**	0.092	0.035	2.614	**0.011**	0.092	0.035	2.614	**0.011**
Multi State Transaction	-0.017	0.032	-0.511	0.611	-0.007	0.036	-0.196	0.845	0.003	0.048	0.062	0.951	-0.008	0.035	-0.216	0.830	-0.008	0.035	-0.216	0.830
Overlapping States	0.007	0.032	0.207	0.837	-0.013	0.036	-0.371	0.712	-0.040	0.047	-0.854	0.397	-0.062	0.035	-1.798	**0.077**	-0.062	0.035	-1.798	**0.077**
Multi Business Segment Transaction	0.021	0.030	0.690	0.493	0.004	0.034	0.115	0.909	0.015	0.045	0.341	0.734	0.024	0.033	0.740	0.462	0.024	0.033	0.740	0.462

Model 4 is a weak form TE_SIM_Clsd_30DAY (Simple returns on a -30, +30 day event window anchored off of the closing date) Table 19 provides the OLS regression results for Model 4. Results for each energy industry segment are provided in the table.

- Resource: 4.6% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 0.173 is statistically insignificant.

- Utility: 32.4% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 2.477 is significant at the .05 level. The independent variables: Closed During a Recession, Company Pressured to Transact and Multi-State Transaction are statistically significant at the .05 level. Additionally, the Multi Business Segment Transaction variable is significant at the .1 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables, all 12 have Variable Inflation Factors (VIFs) below 2.1.

- Midstream and Transportation: 18.0% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 2.371 is significant at the .05 level. The independent variables: Like Buying Like Businesses, Closed During a Recession, Experienced M&A Team and Multi Business Segment Transaction are statistically significant at the .05 level or better. Additionally, the Announced During a Merger Wave and Approval Cycle variables are significant at the .1 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables, 10 have Variable Inflation Factors (VIFs) below 2.2. Of the two that do not, Lag from

Critical Reg Date (3.9) and Announced During a Merger Wave (3.6) are both below the theoretical threshold of 5.0.

- Electric Power: 19.1% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 1.137 is statistically insignificant.

Table 19: Model 4 – T&E Executing Simple 30 Day (-30, +30) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.12	(0.084)		0.003	(0.068)		-0.024	(-0.307)		-0.09	(-1.213)	
Like Buying Like Businesses	-0.029	(-0.305)		0.006	(0.273)		-0.083	(-2.237)	**	0.055	(1.217)	
Lag from Critical Reg Date	0.001	(0.036)		0.001	(1.006)		0.001	(1.466)		-0.001	(-2.041)	**
Approval Cycle	0.001	(0.753)		-0.001	(-0.124)		0.001	(1.949)	*	-0.001	(-0.384)	
Stock Deal	0.038	(0.270)		-0.031	(-0.956)		-0.023	(-0.533)		-0.016	(0.154)	
Closed During a Recession	-0.056	(-0.377)		-0.121	(-3.699)	***	-0.162	(-2.631)	***	-0.064	(-1.121)	
Announced During a Merger Wave				0.032	(1.029)		-0.095	(-1.861)	*	0.007	(0.154)	
Experienced M&A Team	0.038	(0.563)		-0.019	(-0.781)		-0.081	(-2.474)	**	0.27	(0.761)	
Company Pressured to Transact				-0.105	(-2.456)	**	-0.046	(-0.853)		-0.01	(-0.167)	
Critical Deal for Acquirer	-0.053	(-0.461)		0.007	(0.277)		0.015	(0.359)		0.128	(2.606)	**
Multi State Transaction	0.028	(0.261)		0.055	(2.046)	**	0.036	(0.857)		0.014	(0.296)	
Overlapping States	-0.037	(0.333)		-0.012	(-0.505)		0.044	(1.324)		0.076	(1.571)	
Multi Business Segment Transaction	-0.023	(-0.278)		-0.044	(-1.740)	*	-0.152	(-3.075)	***	0.004	(0.081)	
Number of Observations (n)	46			74			142			70		
R-Square	0.046			0.324			0.18			0.191		
F	0.173			2.477		**	2.371		**	1.137		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Model 4 is a weak form TE_SIM_Clsd_30DAY (Simple returns on a -30, +30 day event window anchored off of the closing date) Table 20 provides the Quantile regression results for Model 4. Results for each energy industry segment are provided in the table.

- Resource: 4.6% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables in the OLS regression results. The model provides insignificant results as the F statistic of 0.173 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

- Utility: 32.4% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables in the OLS regression results. The model provides statistically meaningful results as the F statistic of 2.477 is significant at the .05 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and returns evaluated at various quantiles. Of interest is the result for the variable Company Pressured to Transact which suggests a value enhancement of 7 to 17% between the quantiles when Utility acquirers transact as a result of market pressure. Perhaps the market is rewarding a company by its willingness to do what the market was hoping. Furthermore, the quantile results suggest that transactions that were closed during a recession experienced a loss of value between 6 and 16% percent within 30 days of closing. Whereas the market rewarded the multi-state acquirers with enhancements in value of between 3 to 12% based off of the quantile regression results and holding all other factors constant. Additionally, the predictor variable Multi Business Segment Transaction was also statistically significant in the OLS regression results but had generally insignificant results in the quantile regression analysis of T&E returns for transactions involving Utility companies.

- Midstream and Transportation: 18.0% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables in the OLS regression results. The model provides statistically meaningful results as the F statistic of 2.371 is significant at the .05 level. However, the quantile regression results are relatively inconclusive. Despite the fact that the predictor variables; Like Buying Like Businesses, Approval Cycle, Closed During a Recession, Announced During a Merger Wave, Experienced M&A Team, and Multi Business Segment Transaction were all statistically significant in the OLS regression results.

- Electric Power: 19.1% of the variation in the dependent variable (the proxy measure of T&E) is explained by the independent variables. The model provides statistically insignificant results as the F statistic of 1.137 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

Table 20: Model 4 Quantile Regression – T&E Simple 30 Day (-30, +30) Returns

Resource Based	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.071	0.066	-1.079	0.288	-0.071	0.066	-1.079	0.288	-0.031	0.150	-0.204	0.839	0.016	0.049	0.319	0.751	0.001	0.061	0.017	0.986
Like Buying Like Businesses	-0.127	0.044	-2.860	**0.007**	-0.127	0.044	-2.860	**0.007**	-0.123	0.101	-1.221	0.230	-0.078	0.033	-2.397	**0.022**	-0.103	0.041	-2.507	**0.017**
Lag from Critical Reg Date	-0.001	0.000	-1.204	0.237	-0.001	0.000	-1.204	0.237	0.000	0.001	0.268	0.790	0.000	0.000	-0.680	0.501	-0.001	0.000	-3.268	**0.002**
Approval Cycle	0.000	0.000	0.511	0.613	0.000	0.000	0.511	0.613	0.000	0.000	1.151	0.257	0.000	0.000	0.967	0.340	0.000	0.000	1.675	0.103
Stock Deal	0.113	0.067	1.675	0.103	0.113	0.067	1.675	0.103	0.132	0.153	0.864	0.393	0.029	0.050	0.576	0.568	-0.010	0.062	-0.156	0.877
Closed During a Recession	0.053	0.070	0.757	0.454	0.053	0.070	0.757	0.454	0.061	0.160	0.380	0.706	0.117	0.052	2.251	**0.031**	0.240	0.065	3.700	**0.001**
Experienced M&A Team	0.027	0.032	0.853	0.399	0.027	0.032	0.853	0.399	-0.009	0.072	-0.128	0.899	-0.031	0.023	-1.341	0.188	0.019	0.029	0.657	0.515
Critical Deal for Acquirer	-0.027	0.054	-0.498	0.622	-0.027	0.054	-0.498	0.622	-0.043	0.123	-0.350	0.728	0.051	0.040	1.269	0.212	0.070	0.050	1.399	0.170
Multi State Transaction	-0.089	0.051	-1.746	**0.089**	-0.089	0.051	-1.746	**0.089**	0.022	0.116	0.187	0.853	0.100	0.038	2.650	**0.012**	0.068	0.047	1.437	0.159
Overlapping States	0.162	0.052	3.115	**0.004**	0.162	0.052	3.115	**0.004**	-0.006	0.119	-0.055	0.957	-0.155	0.038	-4.042	**0.000**	-0.170	0.048	-3.532	**0.001**
Multi Business Segment Transaction	-0.073	0.039	-1.896	**0.066**	-0.073	0.039	-1.896	**0.066**	-0.077	0.088	-0.882	0.384	-0.079	0.028	-2.787	**0.008**	-0.026	0.036	-0.743	0.462
Utility	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.097	0.031	-3.103	**0.003**	-0.088	0.032	-2.755	**0.008**	-0.032	0.046	-0.689	0.493	-0.011	0.039	-0.272	0.786	-0.065	0.049	-1.327	0.189
Like Buying Like Businesses	0.044	0.015	2.980	**0.004**	0.029	0.015	1.912	**0.061**	-0.012	0.022	-0.539	0.592	0.000	0.018	0.027	0.978	-0.012	0.023	-0.543	0.589
Lag from Critical Reg Date	0.000	0.000	-1.451	0.152	0.001	0.000	2.019	**0.048**	0.000	0.000	-0.262	0.794	0.000	0.000	0.632	0.530	0.001	0.000	3.343	**0.001**
Approval Cycle	0.000	0.000	3.826	**0.000**	0.000	0.000	-0.080	0.936	0.000	0.000	0.144	0.886	0.000	0.000	-0.388	0.699	0.000	0.000	-1.062	0.292
Stock Deal	-0.056	0.020	-2.826	**0.006**	-0.026	0.020	-1.251	0.216	-0.009	0.029	-0.303	0.763	-0.028	0.025	-1.134	0.261	-0.040	0.031	-1.268	0.209
Closed During a Recession	-0.119	0.020	-5.859	**0.000**	-0.127	0.021	-6.073	**0.000**	-0.154	0.030	-5.103	**0.000**	-0.019	0.025	-0.750	0.456	-0.059	0.032	-1.838	**0.071**
Announced During a Merger Wave	-0.097	0.020	-4.931	**0.000**	-0.043	0.020	-2.107	**0.039**	-0.013	0.029	-0.432	0.667	-0.016	0.025	-0.641	0.524	-0.029	0.031	-0.928	0.357
Experienced M&A Team	0.005	0.016	0.309	0.758	-0.028	0.016	-1.731	**0.088**	-0.025	0.023	-1.071	0.289	0.015	0.019	0.755	0.453	-0.009	0.024	-0.367	0.715
Company Pressured to Transact	0.082	0.027	3.073	**0.003**	0.066	0.028	2.377	**0.021**	0.076	0.040	1.929	**0.058**	0.096	0.033	2.877	**0.006**	0.170	0.042	4.039	**0.000**
Critical Deal for Acquirer	0.047	0.016	2.848	**0.006**	0.004	0.017	0.245	0.807	0.005	0.024	0.200	0.842	-0.014	0.021	-0.702	0.485	-0.038	0.026	-1.486	0.142
Multi State Transaction	0.013	0.017	0.772	0.443	0.032	0.017	1.842	**0.070**	0.047	0.025	1.896	**0.063**	0.045	0.021	2.137	**0.037**	0.127	0.026	4.779	**0.000**
Overlapping States	-0.003	0.015	-0.187	0.852	0.005	0.016	0.342	0.733	-0.016	0.023	-0.715	0.477	-0.034	0.019	-1.784	**0.079**	-0.019	0.024	-0.789	0.433
Multi Business Segment Transaction	-0.064	0.016	-4.041	**0.000**	-0.027	0.016	-1.645	0.105	-0.023	0.023	-0.983	0.329	-0.047	0.020	-2.408	**0.019**	-0.069	0.025	-2.783	**0.007**

Midstream and Transportation	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.069	0.046	-1.518	0.131	-0.044	0.061	-0.719	0.474	0.023	0.045	0.520	0.604	0.068	0.082	0.830	0.408	0.224	0.048	4.617	**0.000**
Like Buying Like Businesses	0.061	0.022	2.718	**0.007**	0.027	0.030	0.908	0.366	0.018	0.022	0.807	0.421	0.013	0.040	0.328	0.744	0.003	0.024	0.133	0.895
Lag from Critical Reg Date	0.000	0.000	0.041	0.967	0.000	0.000	0.456	0.649	0.000	0.000	-0.079	0.937	0.000	0.001	0.382	0.703	-0.001	0.000	-1.532	0.128
Approval Cycle	0.000	0.000	-0.358	0.721	0.000	0.000	-0.130	0.897	0.000	0.000	1.271	0.206	0.000	0.000	0.482	0.630	0.001	0.000	2.378	**0.019**
Stock Deal	-0.092	0.026	-3.492	**0.001**	0.012	0.035	0.339	0.735	-0.010	0.026	-0.399	0.691	-0.004	0.047	-0.075	0.941	-0.045	0.028	-1.613	0.109
Closed During a Recession	-0.416	0.037	-11.295	**0.000**	-0.172	0.049	-3.492	**0.001**	-0.043	0.036	-1.210	0.229	-0.032	0.066	-0.480	0.632	-0.079	0.039	-2.021	**0.045**
Announced During a Merger Wave	-0.030	0.031	-0.973	0.332	-0.021	0.041	-0.516	0.606	-0.027	0.030	-0.892	0.374	-0.046	0.055	-0.832	0.407	-0.028	0.032	-0.864	0.389
Experienced M&A Team	-0.058	0.020	-2.950	**0.004**	-0.035	0.026	-1.327	0.187	-0.019	0.019	-0.990	0.324	-0.052	0.035	-1.489	0.139	-0.017	0.021	-0.820	0.413
Company Pressured to Transact	0.008	0.032	0.254	0.800	-0.030	0.043	-0.707	0.481	0.006	0.031	0.184	0.855	0.029	0.058	0.511	0.610	0.095	0.034	2.803	**0.006**
Critical Deal for Acquirer	-0.010	0.025	-0.418	0.677	0.020	0.033	0.600	0.550	0.014	0.024	0.566	0.572	0.012	0.044	0.271	0.787	0.070	0.026	2.697	**0.008**
Multi State Transaction	0.094	0.025	3.773	**0.000**	0.019	0.033	0.569	0.570	0.008	0.024	0.308	0.759	0.042	0.045	0.935	0.351	-0.017	0.026	-0.632	0.529
Overlapping States	-0.060	0.020	-3.009	**0.003**	-0.022	0.027	-0.812	0.418	-0.016	0.020	-0.823	0.412	-0.040	0.036	-1.107	0.270	-0.040	0.021	-1.887	**0.061**
Multi Business Segment Transaction	-0.164	0.030	-5.534	**0.000**	-0.036	0.039	-0.918	0.360	-0.060	0.029	-2.064	**0.041**	-0.066	0.053	-1.240	0.217	-0.142	0.031	-4.529	**0.000**

Electric Power	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.054	0.047	-1.134	0.261	-0.012	0.032	-0.384	0.702	-0.010	0.066	-0.155	0.878	0.038	0.064	0.600	0.551	0.104	0.072	1.436	0.156
Like Buying Like Businesses	-0.186	0.027	-6.900	**0.000**	-0.067	0.018	-3.653	**0.001**	-0.030	0.038	-0.789	0.433	0.030	0.036	0.814	0.419	0.010	0.041	0.251	0.803
Lag from Critical Reg Date	0.000	0.000	-1.193	0.238	0.000	0.000	1.050	0.298	0.000	0.001	0.452	0.653	0.000	0.001	0.028	0.978	0.001	0.001	1.996	**0.051**
Approval Cycle	0.000	0.000	-5.676	**0.000**	0.000	0.000	-1.662	0.102	0.000	0.000	-0.968	0.337	0.000	0.000	-1.344	0.184	0.000	0.000	-0.972	0.335
Stock Deal	0.036	0.025	1.468	0.148	0.007	0.017	0.393	0.696	0.001	0.034	0.018	0.986	-0.014	0.033	-0.421	0.675	-0.028	0.038	-0.752	0.455
Closed During a Recession	-0.176	0.034	-5.230	**0.000**	-0.171	0.023	-7.468	**0.000**	-0.008	0.047	-0.165	0.869	0.023	0.045	0.502	0.617	0.086	0.051	1.669	**0.100**
Announced During a Merger Wave	0.068	0.029	2.378	**0.021**	0.015	0.020	0.785	0.436	0.002	0.040	0.057	0.955	-0.011	0.039	-0.276	0.784	-0.100	0.044	-2.278	**0.026**
Experienced M&A Team	0.031	0.021	1.469	0.147	-0.010	0.014	-0.696	0.489	0.000	0.029	0.012	0.991	0.006	0.029	0.215	0.831	-0.024	0.032	-0.729	0.469
Company Pressured to Transact	-0.112	0.036	-3.146	**0.003**	-0.052	0.024	-2.157	**0.035**	0.008	0.050	0.166	0.869	0.021	0.048	0.436	0.665	0.073	0.054	1.338	0.186
Critical Deal for Acquirer	0.193	0.029	6.661	**0.000**	0.082	0.020	4.166	**0.000**	0.071	0.040	1.765	**0.083**	0.106	0.039	2.716	**0.009**	0.076	0.044	1.710	**0.093**
Multi State Transaction	-0.057	0.029	-1.992	**0.051**	0.017	0.020	0.860	0.394	0.006	0.040	0.150	0.881	0.015	0.039	0.393	0.696	0.127	0.044	2.884	**0.006**
Overlapping States	-0.018	0.029	-0.646	0.521	-0.085	0.019	-4.339	**0.000**	-0.037	0.040	-0.926	0.359	-0.073	0.039	-1.899	**0.063**	-0.196	0.044	-4.478	**0.000**
Multi Business Segment Transaction	0.041	0.027	1.539	0.129	-0.002	0.018	-0.131	0.896	0.023	0.038	0.604	0.548	0.027	0.036	0.737	0.464	-0.011	0.041	-0.274	0.785

Reconfiguring and Integrating

Reconfiguring and Integrating capability is the capacity to reshape resources within the target and acquiring firms. This involves the capacity to combine resources from the target and acquirer in order to create new resources, whether at the target or within the acquirer's original business units or in some new organizational unit. This capability also requires the capacity to selectively divest unneeded resources from the target as well as old resource for the acquirer that have become obsolete as a result of the reconfiguration process.

As a proxy to measure the effectiveness of a firm's R&I capabilities, long-term value measurements are most appropriate. Additionally, the market's response to the effectiveness of these capabilities is best evidenced by how it responds when it has an opportunity to observe how the company performs (operationally and financially) over multiple reporting cycles. Utilizing value measures up to a year post-closing date of the transaction is an appropriate gauge of the market's judgment of a company's R&I capabilities.

Table 21 provides factor differences among Top R&I Performers (those with top quartile performance in R&I) and Poor R&I Performers (those with bottom quartile performance in R&I). Significant results are noted (.10 level or better) where means are statistically different. Some interesting results are noteworthy when comparing the Top versus the Poor Performers. Top Performers tend to have statistically shorter deal approval cycles, are more likely to transact during a merger wave and are less likely to attempt a multi business segment transaction than their Poor Performing peer acquirers.

Three specifications of the R&I variable one weak and two semi-strong are provided with results provided by industry segment. Model 5 is a semi-strong specification of RI_BHAR_Clsd_360DAY (BHAR returns on a 0, +360 day event window anchored off of the closing date). Table 22 provides the OLS regression results for Model 5. Results for each energy industry segment are provided in the table.

Table 21: Factor Differences among Top and Poor Performers – R&I

	All		Top Performers		Poor Performers		Comparisons of Means - p values noted (null hypothesis is that means are =)					
	Mean	STD	Mean	STD	Mean	STD	All vs. Top Perfomers		All vs. Poor Performers		Top vs. Poor Performers	
Like Buying Like Businesses	0.605	0.490	0.691	0.465	0.714	0.454	0.141	Cannot Reject Null Hypothesis	0.055	Reject Null Hypothesis	0.740	Cannot Reject Null Hypothesis
Lag from Critical Reg Date	107.035	65.575	94.298	58.305	116.916	65.600	0.084	Reject Null Hypothesis	0.221	Cannot Reject Null Hypothesis	0.020	Reject Null Hypothesis
Approval Cycle	140.365	148.114	149.214	150.343	125.048	130.999	0.632	Cannot Reject Null Hypothesis	0.355	Cannot Reject Null Hypothesis	0.272	Cannot Reject Null Hypothesis
Stock Deal	0.184	0.388	0.155	0.364	0.179	0.385	0.520	Cannot Reject Null Hypothesis	0.910	Cannot Reject Null Hypothesis	0.684	Cannot Reject Null Hypothesis
Announced During a Recession	0.080	0.272	0.095	0.295	0.071	0.259	0.673	Cannot Reject Null Hypothesis	0.787	Cannot Reject Null Hypothesis	0.583	Cannot Reject Null Hypothesis
Closed During a Recession	0.083	0.276	0.107	0.311	0.107	0.311	0.522	Cannot Reject Null Hypothesis	0.522	Cannot Reject Null Hypothesis	1.000	Cannot Reject Null Hypothesis
Announced During a Wave	0.335	0.473	0.238	0.428	0.429	0.498	0.071	Reject Null Hypothesis	0.124	Cannot Reject Null Hypothesis	0.009	Reject Null Hypothesis
Experienced M&A Team	0.383	0.487	0.321	0.470	0.393	0.491	0.292	Cannot Reject Null Hypothesis	0.867	Cannot Reject Null Hypothesis	0.341	Cannot Reject Null Hypothesis
Company Pressured to Transact	0.107	0.309	0.095	0.295	0.143	0.352	0.752	Cannot Reject Null Hypothesis	0.394	Cannot Reject Null Hypothesis	0.347	Cannot Reject Null Hypothesis
First Deal For Team	0.401	0.491	0.488	0.503	0.393	0.491	0.156	Cannot Reject Null Hypothesis	0.899	Cannot Reject Null Hypothesis	0.220	Cannot Reject Null Hypothesis
Critical Deal for Acquirer	0.427	0.495	0.393	0.491	0.488	0.503	0.570	Cannot Reject Null Hypothesis	0.325	Cannot Reject Null Hypothesis	0.220	Cannot Reject Null Hypothesis
Multi State Transaction	0.472	0.500	0.441	0.499	0.524	0.502	0.611	Cannot Reject Null Hypothesis	0.400	Cannot Reject Null Hypothesis	0.287	Cannot Reject Null Hypothesis
Overlapping States	0.570	0.496	0.583	0.496	0.500	0.503	0.824	Cannot Reject Null Hypothesis	0.259	Cannot Reject Null Hypothesis	0.286	Cannot Reject Null Hypothesis
Multi Business Segment	0.246	0.431	0.143	0.352	0.298	0.460	0.023	Reject Null Hypothesis	0.359	Cannot Reject Null Hypothesis	0.016	Reject Null Hypothesis

- Resource: 43.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 2.822 is significant at the .05 level. The independent variables: Like Buying Like Businesses and Stock Deal are both statistically significant at the .01 level. Multicollinearity does not appear to negatively influence the regression results. Of the 10 predictor variables, 7 have Variable Inflation Factors (VIFs) below 2.2. Of the three that do not, Critical Deal (3.8), Multi State (3.7) and Overlapping States (3.0) are all below the theoretical threshold of 5.0.

- Utility: 27.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 1.998 is significant at the .05 level. The independent variables: Like Buying Like Businesses and Multi Business Segment transaction are significant at the .05 level or better. Additionally, the independent variables of Lag from Critical Reg Date and Announced During a Merger Wave are significant at the .1 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables, all 12 have Variable Inflation Factors (VIFs) below 2.1.

- Midstream and Transportation: 22.5% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 3.137 is significant at the .01 level. The independent variables: Like Buying Like Businesses, Lag From Critical Reg Date, Approval Cycle, Closed During a Recession and Announced During a Merger Wave and Multi Business Segment Transaction are all statistically significant at the .05 level or better. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables, 10

have Variable Inflation Factors (VIFs) below 2.4. Of the two that do not, Lag from Critical Reg Date (3.9) and Announced During a Merger Wave (3.6) are both below the theoretical threshold of 5.0.

- Electric Power: 17.4% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides insignificant results as the F statistic of 1.018 is statistically insignificant.

Table 22: Model 5 – R&I Buy and Hold 360 Day (0, +360) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	-0.126	(-0.509)		-0.201	(-1.916)	*	-0.337	(-2.048)	**	-0.044	(-0.278)	
Like Buying Like Businesses	0.518	(3.077)	***	0.142	(2.296)	**	-0.251	(-3.160)	***	-0.008	(-0.083)	
Lag from Critical Reg Date	0.001	(0.678)		0.002	(1.820)	*	0.003	(2.407)	**	0.001	(0.627)	
Approval Cycle	-0.001	(-0.458)		0.001	(0.160)		0.002	(2.743)	***	0.001	(1.359)	
Stock Deal	-0.884	(-3.458)	***	0.114	(1.363)		0.004	(0.471)		0.063	(0.705)	
Closed During a Recession	-0.165	(-0.618)		0.184	(1.059)		-0.282	(-2.157)	**	0.039	(0.324)	
Announced During a Merger Wave				0.139	(1.669)	*	-0.368	(-3.378)	***	-0.157	(-1.513)	
Experienced M&A Team	-0.14	(-0.115)		-0.059	(-0.894)		-0.075	(-1.081)		0.117	(1.537)	
Company Pressured to Transact				-0.088	(-0.781)		-0.024	(-0.212)		0.227	(1.761)	*
Critical Deal for Acquirer	-0.183	(-0.893)		-0.017	(-0241)		-0.006	(-0.069)		-0.098	(-0.936)	
Multi State Transaction	-0.172	(-0.889)		0.069	(0.974)		0.092	(1.041)		-0.045	(-0.434)	
Overlapping States	-0.019	(-0.094)		0.07	(0.107)		0.089	(1.253)		-0.164	(-1.591)	
Multi Business Segment Transaction	0.188	(1.284)		-0.184	(-2.754)	***	-0.422	(-4.018)	***	-0.223	(-2.293)	**
Number of Observations (n)	46			74			142			70		
R-Square	0.439			0.279			0.225			0.174		
F	2.822		**	1.998		**	3.137		***	1.018		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Model 5 is a semi-strong specification of RI_BHAR_Clsd_360DAY (BHAR returns on a 0, +360 day event window anchored off of the closing date). Table 23 provides the quantile regression results for Model 5. Results for each energy industry segment are provided in the table.

- Resource: 43.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The model provides statistically meaningful results as the F statistic of 2.822 is significant at the .05 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and returns evaluated at various quantiles. Of interest is the result for the variable Like Buying Like Businesses, where value enhancement is suggested within the first year for transactions involving similar businesses. Additionally, the predictor variable Stock Deal was also statistically significant in the OLS regression results but had generally insignificant results in the quantile regression analysis for R&I returns for transactions involving Resource companies.

- Utility: 27.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 1.998 is significant at the .05 level. However, results across the quantiles are somewhat inconclusive, despite the predictor variables; Like Buying Like Businesses, Lag from Critical Reg Date, Announced During a Merger Wave and Multi Business Segment Transaction all being statistically significant in the OLS regression results but had generally insignificant results in the quantile regression analysis for R&I return of transactions involving Utility companies.

- Midstream and Transportation: 22.5% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The OLS regression model provides statistically meaningful

results as the F statistic of 3.137 is significant at the .01 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and returns evaluated at various quantiles. Of interest is the result for the variable Announced During a Merger Wave which suggests a value decline of 25 to 29% between the quantiles when Midstream acquirers transact during a merger wave. Similarly, significant value destruction is suggested across the quantiles when Midstream companies attempt multi business segment transactions. Additionally, the predictor variables; Like Buying Like Businesses, Lag from Critical Reg Date, Approval Cycle and Closed During a Recession, were all statistically significant in the OLS regression results but had general insignificant outcomes in the quantile regression analysis of R&I returns for transactions involving Midstream companies.

- Electric Power: 17.4% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. However, the model provides insignificant results as the F statistic of 1.018 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

Table 23: Model 5 Quantile Regression – R&I Buy & Hold 360 Day (0, +360) Returns

Resource Based	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.161	0.109	-1.474	0.149	-0.347	0.155	-2.241	**0.031**	-0.301	0.196	-1.536	0.133	-0.219	0.098	-2.237	**0.032**	-0.267	0.146	-1.837	**0.075**
Like Buying Like Businesses	0.403	0.074	5.479	**0.000**	0.371	0.104	3.562	**0.001**	0.246	0.132	1.859	**0.071**	0.151	0.066	2.299	**0.027**	-0.054	0.098	-0.547	0.588
Lag from Critical Reg Date	0.000	0.001	-0.048	0.962	0.002	0.001	1.933	**0.061**	0.002	0.001	1.159	0.254	0.000	0.001	0.314	0.756	0.004	0.001	3.746	**0.001**
Approval Cycle	-0.002	0.000	-10.785	**0.000**	0.000	0.000	0.686	0.497	0.000	0.000	0.145	0.886	0.000	0.000	-0.700	0.488	0.001	0.000	2.893	**0.006**
Stock Deal	-0.959	0.112	-8.585	**0.000**	-1.140	0.158	-7.202	**0.000**	-1.147	0.201	-5.718	**0.000**	0.060	0.100	0.597	0.554	0.133	0.149	0.897	0.376
Closed During a Recession	-0.062	0.117	-0.533	0.598	0.006	0.165	0.038	0.970	0.201	0.209	0.961	0.343	0.348	0.104	3.331	**0.002**	0.397	0.155	2.558	**0.015**
Experienced M&A Team	-0.123	0.053	-2.331	**0.025**	-0.078	0.074	-1.044	0.303	-0.102	0.094	-1.081	0.287	-0.133	0.047	-2.829	**0.008**	-0.232	0.070	-3.317	**0.002**
Critical Deal for Acquirer	-0.344	0.089	-3.844	**0.000**	-0.191	0.127	-1.506	0.141	-0.234	0.161	-1.455	0.154	-0.229	0.080	-2.864	**0.007**	-0.408	0.119	-3.421	**0.002**
Multi State Transaction	0.219	0.085	2.578	**0.014**	-0.001	0.120	-0.007	0.994	-0.014	0.152	-0.091	0.928	0.028	0.076	0.369	0.714	0.262	0.113	2.322	**0.026**
Overlapping States	-0.090	0.086	-1.037	0.307	0.013	0.122	0.104	0.917	0.222	0.155	1.432	0.161	0.138	0.077	1.783	**0.083**	0.165	0.115	1.435	0.160
Multi Business Segment Transaction	0.220	0.064	3.445	**0.001**	0.072	0.091	0.799	0.430	-0.081	0.115	-0.704	0.486	-0.090	0.057	-1.566	0.126	-0.410	0.085	-4.814	**0.000**
Utility	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.250	0.110	-2.283	**0.026**	-0.260	0.097	-2.694	**0.009**	-0.200	0.108	-1.860	**0.068**	0.052	0.053	0.972	0.335	0.052	0.053	0.972	0.335
Like Buying Like Businesses	-0.051	0.052	-0.987	0.327	-0.003	0.046	-0.056	0.955	0.041	0.051	0.808	0.422	0.009	0.025	0.356	0.723	0.009	0.025	0.356	0.723
Lag from Critical Reg Date	0.002	0.001	1.810	**0.075**	0.002	0.001	2.632	**0.011**	0.002	0.001	2.028	**0.047**	0.001	0.000	1.535	0.130	0.001	0.000	1.535	0.130
Approval Cycle	0.000	0.000	1.304	0.197	0.000	0.000	1.165	0.249	0.000	0.000	0.450	0.655	0.000	0.000	-2.289	**0.025**	0.000	0.000	-2.289	**0.025**
Stock Deal	0.287	0.070	4.093	**0.000**	0.006	0.062	0.089	0.929	0.078	0.069	1.140	0.259	-0.014	0.034	-0.424	0.673	-0.014	0.034	-0.424	0.673
Closed During a Recession	-0.003	0.072	-0.036	0.971	0.043	0.063	0.684	0.496	0.029	0.070	0.410	0.683	-0.022	0.035	-0.630	0.531	-0.022	0.035	-0.630	0.531
Announced During a Merger Wave	0.122	0.069	1.757	**0.084**	-0.037	0.061	-0.612	0.543	-0.181	0.068	-2.655	**0.010**	-0.010	0.034	-0.303	0.763	-0.010	0.034	-0.303	0.763
Experienced M&A Team	0.104	0.055	1.906	**0.061**	-0.001	0.048	-0.020	0.984	-0.028	0.054	-0.519	0.606	-0.011	0.027	-0.425	0.672	-0.011	0.027	-0.425	0.672
Company Pressured to Transact	-0.286	0.094	-3.031	**0.004**	0.023	0.083	0.274	0.785	0.179	0.093	1.929	**0.058**	0.021	0.046	0.469	0.641	0.021	0.046	0.469	0.641
Critical Deal for Acquirer	-0.080	0.058	-1.379	0.173	0.006	0.051	0.114	0.909	0.010	0.057	0.173	0.863	-0.046	0.028	-1.619	0.111	-0.046	0.028	-1.619	0.111
Multi State Transaction	-0.015	0.059	-0.253	0.801	0.050	0.052	0.956	0.343	0.007	0.058	0.114	0.909	0.048	0.029	1.655	0.103	0.048	0.029	1.655	0.103
Overlapping States	0.082	0.054	1.532	0.131	-0.018	0.047	-0.379	0.706	0.017	0.053	0.314	0.755	-0.022	0.026	-0.833	0.408	-0.022	0.026	-0.833	0.408
Multi Business Segment Transaction	-0.165	0.056	-2.950	**0.004**	-0.192	0.049	-3.913	**0.000**	-0.083	0.055	-1.506	0.137	0.006	0.027	0.236	0.815	0.006	0.027	0.236	0.815

Midstream and Transportation	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.573	0.224	-2.562	**0.012**	-0.495	0.167	-2.954	**0.004**	-0.451	0.138	-3.270	**0.001**	-0.308	0.145	-2.123	**0.036**	-0.308	0.145	-2.123	**0.036**
Like Buying Like Businesses	0.086	0.109	0.788	0.432	0.239	0.082	2.913	**0.004**	0.169	0.067	2.512	**0.013**	0.164	0.071	2.310	**0.022**	0.164	0.071	2.310	**0.022**
Lag from Critical Reg Date	0.001	0.002	0.782	0.436	0.002	0.001	1.715	**0.089**	0.002	0.001	2.391	**0.018**	0.002	0.001	2.129	**0.035**	0.002	0.001	2.129	**0.035**
Approval Cycle	0.001	0.001	1.403	0.163	0.001	0.001	0.878	0.381	0.001	0.001	2.080	**0.040**	0.002	0.001	3.023	**0.003**	0.002	0.001	3.023	**0.003**
Stock Deal	-0.139	0.129	-1.081	0.282	0.001	0.096	0.014	0.989	0.004	0.079	0.047	0.963	-0.095	0.083	-1.139	0.257	-0.095	0.083	-1.139	0.257
Closed During a Recession	-0.772	0.180	-4.287	**0.000**	-0.625	0.135	-4.632	**0.000**	0.038	0.111	0.345	0.731	0.009	0.117	0.077	0.938	0.009	0.117	0.077	0.938
Announced During a Merger Wave	-0.288	0.150	-1.920	**0.057**	-0.292	0.112	-2.599	**0.010**	-0.262	0.092	-2.833	**0.005**	-0.254	0.097	-2.611	**0.010**	-0.254	0.097	-2.611	**0.010**
Experienced M&A Team	0.033	0.095	0.345	0.730	-0.120	0.071	-1.684	**0.095**	-0.057	0.059	-0.974	0.332	-0.047	0.062	-0.762	0.447	-0.047	0.062	-0.762	0.447
Company Pressured to Transact	-0.020	0.157	-0.130	0.897	0.019	0.118	0.158	0.875	-0.071	0.097	-0.735	0.463	-0.093	0.102	-0.914	0.363	-0.093	0.102	-0.914	0.363
Critical Deal for Acquirer	-0.080	0.120	-0.663	0.509	-0.114	0.090	-1.271	0.206	0.000	0.074	0.000	1.000	0.037	0.078	0.473	0.637	0.037	0.078	0.473	0.637
Multi State Transaction	0.080	0.122	0.655	0.514	0.153	0.092	1.671	**0.097**	0.088	0.075	1.162	0.247	0.035	0.079	0.440	0.660	0.035	0.079	0.440	0.660
Overlapping States	0.016	0.098	0.161	0.872	-0.018	0.073	-0.246	0.806	-0.073	0.061	-1.209	0.229	-0.075	0.064	-1.176	0.242	-0.075	0.064	-1.176	0.242
Multi Business Segment Transaction	-0.405	0.145	-2.802	**0.006**	-0.396	0.108	-3.661	**0.000**	-0.242	0.089	-2.709	**0.008**	-0.215	0.094	-2.294	**0.023**	-0.215	0.094	-2.294	**0.023**

Electric Power	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.409	0.121	-3.383	**0.001**	-0.522	0.260	-2.006	**0.050**	-0.334	0.153	-2.175	**0.034**	0.025	0.147	0.170	0.865	-0.317	0.183	-1.735	**0.088**
Like Buying Like Businesses	0.134	0.069	1.959	**0.055**	0.131	0.148	0.889	0.378	-0.024	0.087	-0.271	0.787	-0.046	0.083	-0.554	0.582	0.059	0.104	0.573	0.569
Lag from Critical Reg Date	-0.003	0.001	-3.336	**0.001**	0.002	0.002	0.737	0.464	0.003	0.001	2.478	**0.016**	0.000	0.001	0.165	0.869	0.001	0.001	0.497	0.621
Approval Cycle	0.000	0.000	0.140	0.889	0.000	0.000	0.962	0.340	0.000	0.000	0.164	0.870	0.000	0.000	-0.228	0.821	0.001	0.000	3.475	**0.001**
Stock Deal	0.102	0.063	1.632	0.108	0.119	0.135	0.882	0.382	-0.045	0.079	-0.570	0.571	0.005	0.076	0.068	0.946	0.007	0.095	0.075	0.940
Closed During a Recession	-0.209	0.086	-2.437	**0.018**	0.097	0.185	0.527	0.600	0.324	0.109	2.975	**0.004**	0.106	0.104	1.012	0.316	0.120	0.130	0.929	0.357
Announced During a Merger Wave	-0.464	0.073	-6.338	**0.000**	-0.217	0.158	-1.376	0.174	-0.173	0.093	-1.867	**0.067**	-0.065	0.089	-0.736	0.465	-0.167	0.111	-1.509	0.137
Experienced M&A Team	0.249	0.054	4.616	**0.000**	0.027	0.116	0.232	0.817	0.051	0.068	0.744	0.460	0.032	0.065	0.482	0.632	0.110	0.081	1.356	0.180
Company Pressured to Transact	0.510	0.091	5.610	**0.000**	0.100	0.196	0.511	0.611	0.019	0.115	0.167	0.868	0.108	0.110	0.975	0.334	0.169	0.137	1.234	0.222
Critical Deal for Acquirer	-0.082	0.074	-1.115	0.269	-0.166	0.159	-1.040	0.303	-0.061	0.094	-0.647	0.520	-0.139	0.090	-1.542	0.128	0.225	0.112	2.018	**0.048**
Multi State Transaction	-0.206	0.073	-2.810	**0.007**	0.044	0.158	0.281	0.780	0.065	0.093	0.704	0.484	0.089	0.089	0.995	0.324	-0.313	0.111	-2.829	**0.006**
Overlapping States	0.344	0.073	4.708	**0.000**	0.055	0.157	0.352	0.726	0.030	0.093	0.321	0.749	0.010	0.089	0.113	0.911	0.198	0.110	1.799	**0.077**
Multi Business Segment Transaction	0.133	0.069	1.936	**0.058**	0.170	0.148	1.150	0.255	0.090	0.087	1.036	0.304	0.021	0.083	0.250	0.804	0.329	0.104	3.171	**0.002**

Model 6 is a semi-strong form RI_CAR_Clsd_360DAY (CAR returns on a 0, +360 day event window anchored off of the closing date) Table 24 provides the OLS regression results for Model 6. Results for each energy industry segment are provided in the table.

- Resource: 41.2% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 2.526 is significant at the .05 level. The independent variables: Like Buying Like Businesses and Stock Deal are both statistically significant at the .05 level or better. Of the 10 predictor variables, 7 have Variable Inflation Factors (VIFs) below 2.2. Of the three that do not Critical Deal (3.8), Multi State (3.7) and Overlapping States (3.0) are all below the theoretical threshold of 5.0.

- Utility: 24.5% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 1.676 is significant at the .1 level. The independent variables: Announced During a Merger Wave, Experienced M&A Team and Multi-State Transaction are all significant at the .05 level while the independent variable Company Pressured to Transact is significant at the .1 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables all 12 have Variable Inflation Factors (VIFs) below 2.0.

- Midstream and Transportation: 19.8% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically significant results as the F statistic of 2.676 is significant at the .01 level. The independent variables: Like Buying Like Businesses, Approval Cycle, Announced During a Merger Wave and Multi Business Transaction are all statistically significant at the .05 level or better. Of the 12 predictor variables, 10 have Variable Inflation Factors (VIFs) below 2.4. Of the two that do not Lag

from Critical Reg Date (3.9) and Announced During a Merger Wave (3.6) are both below the theoretical threshold of 5.0.

- Electric Power: 13.8% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables. The model provides insignificant results as the F statistic of 0.774 is statistically insignificant.

Table 24: Model 6 – R&I Abnormal 360 Day (0, +360) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	-0.019	(-0.067)		-0.04	(-0.460)		-0.073	(-0.475)		0.123	(0.866)	
Like Buying Like Businesses	0.468	(2.442)	**	0.076	(1.491)		-0.15	(-2.020)	**	-0.069	(-0.811)	
Lag from Critical Reg Date	0.001	(0.581)		0.001	(1.537)		0.001	(0.839)		0.001	(0.272)	
Approval Cycle	-0.001	(-0.340)		-0.001	(-0.700)		0.002	(3.034)	***	0.001	(1.435)	
Stock Deal	-1.052	(-3.612)	***	0.09	(1.295)		-0.035	(-0.398)		0.028	(0.360)	
Closed During a Recession	0.215	(0.706)		0.046	(0.648)		-0.06	(-0.486)		0.053	(0.502)	
Announced During a Merger Wave				0.141	(2.054)	**	-0.212	(-2.079)	**	-0.147	(-1.725)	*
Experienced M&A Team	0.07	(0.509)		-0.137	(-2.531)	**	-0.015	(-0.231)		0.056	(0.848)	
Company Pressured to Transact				-0.172	(-1.846)	*	0.022	(0.203)		0.205	(1.826)	*
Critical Deal for Acquirer	-0.202	(-0.866)		-0.055	(-0.961)		-0.007	(-0.081)		-0.089	(-0.973)	
Multi State Transaction	-0.108	(-0.491)		0.123	(2.095)	**	0.119	(1.434)		-0.063	(-0.694)	
Overlapping States	-0.021	(-0.095)		0.02	(0.381)		0.079	(1.178)		-0.152	(-1.689)	*
Multi Business Segment Transaction	0.204	(1.225)		-0.081	(-1.471)		-0.459	(-4.665)	***	-0.133	(-1.667)	*
Number of Observations (n)	46			74			142			70		
R-Square	0.412			0.245			0.198			0.138		
F	2.526		**	1.676		*	2.676		***	0.774		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Model 6 is a semi-strong form RI_CAR_Clsd_360DAY (CAR returns on a 0, +360 day event window anchored off of the closing date) Table 25 provides the Quantile regression results for Model 6. Results for each energy industry segment are provided in the table.

- Resource: 41.2% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The model provides statistically meaningful results as the F statistic of 2.526 is significant at the .05 level. However, results across the quantiles are somewhat inconclusive, despite the fact that the predictor variables; Like Buying Like Businesses and Stock Deal, were both statistically significant in the OLS regression results but had generally insignificant outcomes in the quantile regression analysis of R&I returns for transactions involving Resource companies.

- Utility: 24.5% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The model provides statistically meaningful results as the F statistic of 1.676 is significant at the .1 level. However, results across the quantiles are somewhat inconclusive, despite the fact that the predictor variables; Announced During a Merger Wave, Company Pressured to Transact, Experienced M&A Team and Multi-State Transaction, were all statistically significant in the OLS regression results but had generally insignificant outcomes in the quantile regression analysis of R&I returns for transactions involving Utility companies.

- Midstream and Transportation: 19.8% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The model provides statistically significant results as the F statistic of 2.676 is significant at the .01 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and

returns evaluated at various quantiles. Of interest is the result for the variable Multi Business Segment Transaction which suggests value destruction of 22 to 52% for Midstream transactions that involve multi business segments (holding all other factors equal). Additionally, the predictor variables; Like Buying Like Businesses, Approval Cycle and Announced During a Merger Wave were all statistically significant in the OLS regression results but had general insignificant outcomes in the quantile regression analysis of R&I returns for transactions involving Midstream companies.

- Electric Power: 13.8% of the variation in the dependent variable (the proxy measure of S&I) is explained by the independent variables in the OLS regression results. The model provides insignificant results as the F statistic of 0.774 is statistically insignificant. Furthermore, the quantile regression results are also inconclusive.

Table 25: Model 6 Quantile Regression – R&I Abnormal 360 Day (0, +360) Returns

Resource Based	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	0.201	0.236	0.850	0.401	0.055	0.236	0.234	0.816	0.074	0.183	0.405	0.688	0.255	0.276	0.925	0.361	0.194	0.113	1.721	**0.094**
Like Buying Like Businesses	0.131	0.159	0.827	0.413	0.248	0.159	1.557	0.128	0.183	0.123	1.484	0.147	0.443	0.186	2.385	**0.022**	0.346	0.076	4.557	**0.000**
Lag from Critical Reg Date	0.000	0.002	0.146	0.885	0.001	0.002	0.382	0.705	0.000	0.001	0.274	0.786	0.002	0.002	0.831	0.411	0.003	0.001	3.841	**0.000**
Approval Cycle	-0.002	0.000	-3.971	**0.000**	0.000	0.000	-0.962	0.343	0.000	0.000	-0.773	0.445	0.000	0.001	-0.431	0.669	0.000	0.000	0.516	0.609
Stock Deal	-1.075	0.241	-4.454	**0.000**	-1.628	0.242	-6.738	**0.000**	-1.624	0.187	-8.672	**0.000**	-0.286	0.282	-1.013	0.318	-0.097	0.115	-0.839	0.407
Closed During a Recession	-0.198	0.252	-0.788	0.436	-0.125	0.252	-0.495	0.624	0.063	0.195	0.325	0.747	-0.071	0.295	-0.242	0.810	0.020	0.120	0.163	0.871
Experienced M&A Team	0.027	0.114	0.238	0.813	0.121	0.114	1.063	0.295	0.107	0.088	1.214	0.233	-0.032	0.133	-0.241	0.811	-0.107	0.054	-1.972	**0.056**
Critical Deal for Acquirer	-0.663	0.193	-3.433	**0.002**	0.058	0.193	0.298	0.767	-0.307	0.150	-2.047	**0.048**	-0.269	0.226	-1.188	0.243	-0.509	0.092	-5.517	**0.000**
Multi State Transaction	0.124	0.183	0.676	0.504	0.026	0.183	0.142	0.888	0.353	0.142	2.486	**0.018**	-0.054	0.214	-0.254	0.801	0.235	0.087	2.688	**0.011**
Overlapping States	0.202	0.187	1.084	0.286	-0.093	0.187	-0.499	0.621	-0.022	0.145	-0.154	0.879	0.081	0.219	0.372	0.712	0.079	0.089	0.884	0.382
Multi Business Segment Transaction	0.013	0.138	0.097	0.924	0.009	0.138	0.062	0.951	-0.149	0.107	-1.388	0.174	0.092	0.162	0.570	0.572	-0.089	0.066	-1.355	0.184
Utility	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.187	0.086	-2.173	**0.034**	-0.160	0.156	-1.025	0.309	-0.037	0.125	-0.297	0.767	-0.016	0.177	-0.092	0.927	0.140	0.050	2.794	**0.007**
Like Buying Like Businesses	-0.007	0.041	-0.182	0.857	-0.034	0.073	-0.464	0.644	0.085	0.059	1.442	0.154	0.135	0.083	1.616	0.111	0.132	0.024	5.598	**0.000**
Lag from Critical Reg Date	0.001	0.001	1.667	0.101	0.001	0.001	1.082	0.284	0.002	0.001	1.855	**0.068**	0.002	0.001	1.218	0.228	0.001	0.000	1.698	**0.094**
Approval Cycle	0.000	0.000	-1.102	0.275	0.000	0.000	-0.280	0.781	0.000	0.000	-1.113	0.270	0.000	0.000	0.060	0.952	0.000	0.000	-4.566	**0.000**
Stock Deal	0.105	0.055	1.907	**0.061**	0.124	0.100	1.244	0.218	0.140	0.080	1.758	**0.084**	0.044	0.113	0.389	0.699	0.092	0.032	2.864	**0.006**
Closed During a Recession	0.024	0.056	0.420	0.676	-0.001	0.102	-0.006	0.996	0.089	0.081	1.088	0.281	0.043	0.116	0.376	0.708	0.079	0.033	2.420	**0.018**
Announced During a Merger Wave	-0.178	0.054	-3.274	**0.002**	-0.156	0.099	-1.586	0.118	-0.192	0.079	-2.429	**0.018**	-0.122	0.112	-1.091	0.279	0.008	0.032	0.259	0.796
Experienced M&A Team	-0.065	0.043	-1.514	0.135	-0.066	0.078	-0.847	0.400	-0.111	0.062	-1.783	**0.079**	-0.120	0.088	-1.362	0.178	-0.199	0.025	-7.959	**0.000**
Company Pressured to Transact	0.199	0.074	2.692	**0.009**	0.201	0.134	1.498	0.139	0.133	0.107	1.241	0.219	0.135	0.152	0.887	0.378	0.101	0.043	2.349	**0.022**
Critical Deal for Acquirer	-0.120	0.046	-2.643	**0.010**	-0.142	0.082	-1.726	**0.089**	-0.085	0.066	-1.282	0.204	-0.024	0.094	-0.261	0.795	-0.105	0.026	-3.972	**0.000**
Multi State Transaction	-0.024	0.047	-0.508	0.613	0.124	0.084	1.471	0.146	0.106	0.068	1.576	0.120	0.121	0.096	1.260	0.213	0.253	0.027	9.339	**0.000**
Overlapping States	0.042	0.042	0.987	0.328	0.021	0.076	0.276	0.783	0.033	0.061	0.538	0.593	-0.008	0.087	-0.093	0.927	0.007	0.025	0.294	0.770
Multi Business Segment Transaction	-0.053	0.044	-1.208	0.232	-0.072	0.079	-0.914	0.364	-0.043	0.063	-0.685	0.496	-0.041	0.090	-0.458	0.648	-0.016	0.025	-0.612	0.543

Midstream and Transportation	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*
(Constant)	-0.290	0.171	-1.703	**0.091**	-0.108	0.143	-0.756	0.451	0.044	0.078	0.570	0.570	0.230	0.166	1.393	0.166	0.211	0.250	0.844	0.400
Like Buying Like Businesses	0.102	0.083	1.227	0.222	0.081	0.070	1.152	0.251	0.064	0.038	1.697	**0.092**	-0.022	0.081	-0.266	0.791	0.105	0.122	0.857	0.393
Lag from Critical Reg Date	0.000	0.001	0.125	0.901	0.000	0.001	-0.334	0.739	-0.001	0.001	-1.242	0.217	-0.001	0.001	-0.584	0.560	0.000	0.002	0.001	1.000
Approval Cycle	0.001	0.001	1.778	**0.078**	0.001	0.001	1.344	0.181	0.000	0.000	1.225	0.223	0.001	0.001	1.009	0.315	0.002	0.001	1.744	**0.083**
Stock Deal	0.041	0.098	0.419	0.676	-0.017	0.082	-0.209	0.835	-0.032	0.045	-0.725	0.470	-0.117	0.095	-1.224	0.223	-0.137	0.144	-0.950	0.344
Closed During a Recession	-0.388	0.137	-2.825	**0.005**	0.003	0.115	0.027	0.979	0.042	0.063	0.678	0.499	0.149	0.133	1.114	0.268	0.200	0.202	0.993	0.323
Announced During a Merger Wave	-0.096	0.114	-0.838	0.403	-0.022	0.096	-0.232	0.817	-0.033	0.052	-0.635	0.526	-0.087	0.111	-0.785	0.434	-0.197	0.168	-1.176	0.242
Experienced M&A Team	-0.041	0.073	-0.557	0.579	-0.005	0.061	-0.079	0.937	0.054	0.033	1.621	0.107	0.014	0.071	0.198	0.843	0.099	0.107	0.925	0.357
Company Pressured to Transact	0.003	0.120	0.027	0.979	0.007	0.101	0.073	0.942	0.051	0.054	0.932	0.353	0.063	0.116	0.539	0.591	0.042	0.176	0.240	0.811
Critical Deal for Acquirer	-0.003	0.092	-0.027	0.978	-0.069	0.077	-0.900	0.370	-0.024	0.042	-0.581	0.562	0.019	0.089	0.210	0.834	0.054	0.134	0.399	0.691
Multi State Transaction	0.042	0.093	0.453	0.651	0.147	0.078	1.876	**0.063**	0.131	0.042	3.091	**0.002**	0.128	0.090	1.413	0.160	0.216	0.137	1.582	0.116
Overlapping States	0.038	0.075	0.511	0.610	-0.016	0.063	-0.259	0.796	-0.042	0.034	-1.247	0.215	-0.083	0.073	-1.139	0.257	-0.127	0.110	-1.156	0.250
Multi Business Segment Transaction	-0.394	0.110	-3.568	**0.001**	-0.292	0.093	-3.154	**0.002**	-0.226	0.050	-4.510	**0.000**	-0.258	0.107	-2.410	**0.017**	-0.521	0.162	-3.224	**0.002**

Electric Power	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*
(Constant)	-0.197	0.100	-1.966	**0.054**	-0.315	0.132	-2.384	**0.020**	-0.186	0.107	-1.731	**0.089**	-0.024	0.203	-0.118	0.906	0.106	0.132	0.805	0.424
Like Buying Like Businesses	0.227	0.057	3.997	**0.000**	0.126	0.075	1.679	**0.099**	0.019	0.061	0.320	0.750	-0.061	0.115	-0.532	0.597	-0.136	0.075	-1.818	**0.074**
Lag from Critical Reg Date	-0.002	0.001	-2.012	**0.049**	0.001	0.001	1.187	0.240	0.002	0.001	1.839	**0.071**	-0.001	0.002	-0.920	0.361	-0.002	0.001	-1.539	0.129
Approval Cycle	0.000	0.000	-1.161	0.250	0.000	0.000	1.214	0.230	0.000	0.000	0.827	0.412	0.000	0.000	1.100	0.276	0.000	0.000	1.942	**0.057**
Stock Deal	0.139	0.052	2.690	**0.009**	0.009	0.068	0.133	0.895	0.001	0.056	0.023	0.982	0.053	0.105	0.505	0.615	0.048	0.069	0.704	0.484
Closed During a Recession	-0.136	0.071	-1.919	**0.060**	0.092	0.094	0.982	0.330	0.203	0.076	2.672	**0.010**	0.059	0.144	0.412	0.682	-0.047	0.094	-0.498	0.620
Announced During a Merger Wave	-0.446	0.061	-7.373	**0.000**	-0.291	0.080	-3.638	**0.001**	-0.034	0.065	-0.523	0.603	-0.012	0.123	-0.094	0.926	-0.077	0.080	-0.958	0.342
Experienced M&A Team	0.071	0.045	1.585	0.119	0.047	0.059	0.801	0.426	0.003	0.048	0.071	0.944	0.078	0.090	0.863	0.392	0.109	0.059	1.847	**0.070**
Company Pressured to Transact	0.617	0.075	8.213	**0.000**	0.281	0.099	2.835	**0.006**	0.008	0.081	0.102	0.919	0.185	0.153	1.211	0.231	0.276	0.099	2.775	**0.007**
Critical Deal for Acquirer	-0.105	0.061	-1.718	**0.091**	-0.136	0.081	-1.683	**0.098**	-0.090	0.066	-1.366	0.177	-0.036	0.124	-0.290	0.773	-0.068	0.081	-0.837	0.406
Multi State Transaction	-0.157	0.061	-2.583	**0.012**	-0.040	0.080	-0.502	0.617	-0.028	0.065	-0.423	0.674	-0.032	0.123	-0.263	0.793	-0.140	0.080	-1.747	**0.086**
Overlapping States	0.219	0.060	3.625	**0.001**	0.086	0.080	1.084	0.283	0.121	0.065	1.877	**0.066**	0.128	0.123	1.044	0.301	0.198	0.080	2.482	**0.016**
Multi Business Segment Transaction	-0.028	0.057	-0.502	0.618	0.091	0.075	1.212	0.231	0.022	0.061	0.362	0.719	0.190	0.115	1.645	0.105	0.168	0.075	2.244	**0.029**

Model 7 is weak form RI_SIM_Clsd_360DAY (Simple returns on a 0, +360 day event window anchored off of the closing date) Table 26 provides the OLS regression results for Model 7. Results for each energy industry segment are provided in the table.

- Resource: 44.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically meaningful results as the F statistic of 2.609 is significant at the .05 level. The independent variables: Like Buying Like Businesses and Stock Deal are both statistically significant at the .05 level or better. Of the 10 predictor variables, 7 have Variable Inflation Factors (VIFs) below 2.4. Of the three that do not, Critical Deal (4.1), Multi State (4.6) and Overlapping States (3.1) are all below the theoretical threshold of 5.0.

- Utility: 22.3% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides insignificant results as the F statistic of 1.389 is statistically insignificant.

- Midstream and Transportation: 18.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically significant results as the F statistic of 2.156 is statistically significant at the .05 level. The independent variables: Like Buying Like Businesses, Approval Cycle, Announced During a Merger Wave and Multi Business Segment Transaction are all statistically significant at the .05 level or better. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables, 10 have Variable Inflation Factors (VIFs) below 2.4. Of the two that do not, Lag from Critical Reg Date (3.8) and Announced During a Wave (3.1) are both below the theoretical threshold of 5.0.

- Electric Power: 37.2% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides statistically significant results as the F statistic of 2.668 is statistically significant at the .01 level. The independent variables: Announced During a Merger Wave, Company Pressured to Transact and Multi Business Segment Transaction are all statistically significant at the .05 level or better. Additionally, the independent variable Approval Cycle is significant at the .1 level. Multicollinearity does not appear to negatively influence the regression results. Of the 12 predictor variables all 12 have Variable Inflation Factors (VIFs) below 2.6.

Table 26: Model 7 – R&I Simple 360 Day (0, +360) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.258	(0.826)		0.076	(0.787)		0.087	(0.414)		0.278	(1.848)	*
Like Buying Like Businesses	0.564	(2.626)	**	0.079	(1.360)		-0.254	(-2.417)	**	-0.093	(-1.016)	
Lag from Critical Reg Date	-0.002	(-0.746)		0.001	(0.297)		0.002	(1.122)		-0.001	(-0.072)	
Approval Cycle	0.001	(0.150)		-0.001	(-0.407)		0.002	(2.103)	**	0.001	(1.708)	*
Stock Deal	-1.08	(-3.471)	***	0.029	(0.381)		0.038	(0.308)		-0.057	(-0.716)	
Closed During a Recession	-0.197	(-0.626)		-0.22	(-2.810)	**	-0.232	(-1.491)		-0.166	(-1.531)	
Announced During a Merger Wave				0.095	(1.249)		-0.301	(-2.294)	**	-0.401	(-3.847)	***
Experienced M&A Team	0.043	(0.285)		-0.079	(-1.266)		-0.036	(-0.407)		0.063	(0.905)	
Company Pressured to Transact				-0.068	(-0.659)		0.019	(0.126)		0.398	(3.105)	***
Critical Deal for Acquirer	-0.175	(-0.182)		-0.024	(-0.383)		-0.046	(-0.397)		0.012	(0.132)	
Multi State Transaction	-0.255	(-0.958)		0.096	(1.474)		0.059	(0.520)		-0.083	(-0.897)	
Overlapping States	-0.054	(-0.222)		0.018	(0.302)		0.012	(0.128)		-0.12	(-1.289)	
Multi Business Segment Transaction	0.269	(1.528)		-0.031	(-0.499)		0.545	(-4.144)	***	-0.198	(-2.254)	**
Number of Observations (n)	42			70			123			66		
R-Square	0.449			0.223			0.189			0.372		
F	2.609		**	1.389			2.156		**	2.668		***

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Model 7 is weak form RI_SIM_Clsd_360DAY (Simple returns on a 0, +360 day event window anchored off of the closing date) Table 27 provides the Quantile regression results for Model 7. Results for each energy industry segment are provided in the table.

- Resource: 44.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The model provides statistically meaningful results as the F statistic of 2.609 is significant at the .05 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and returns evaluated at various quantiles. Of interest is the result for the variable Like Buying Like Business which suggests considerable value enhancement at the lower quartiles for Resource acquirers buying similar types of companies but value destruction for Resource companies in the highest quantiles for companies pursuing the same strategies. Additionally, the predictor variable Stock Deal was statistically significant in the OLS regression results but had generally insignificant results in the quantile regression analysis of R&I returns for transactions involving Resource companies.

- Utility: 22.3% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables. The model provides insignificant results as the F statistic of 1.389 is statistically insignificant. Furthermore, the quantile regression results are inconclusive.

- Midstream and Transportation: 18.9% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The model provides statistically significant results as the F statistic of 2.156 is statistically significant at the .05 level. Results across the quantiles also suggest statistically significant relationships among the predictor

variables and returns evaluated at various quantiles. Of interest is the result for the variable Multi Business Segment Transaction which suggests value destruction of 33 to 58% for Midstream transactions that involve multi business segments (holding all other factors equal) by end of the first year. Additionally, the predictor variables; Like Buying Like Businesses, Announced During a Merger Wave and Approval Cycle were statistically significant in the OLS regression results but had mixed results in the quantile regression analysis of R&I returns for transactions involving Midstream companies.

- Electric Power: 37.2% of the variation in the dependent variable (the proxy measure of R&I) is explained by the independent variables in the OLS regression results. The model provides statistically significant results as the F statistic of 2.668 is statistically significant at the .01 level. Results across the quantiles also suggest statistically significant relationships among the predictor variables and returns evaluated at various quantiles. Of interest is the result for the variable Company Pressured to Transact which suggests considerable value enhancement when Electric acquirers transact as a result of market pressure. Whereas, the quantile results suggest significant value destruction for Electric companies acquiring during a merger wave. Additionally, the predictor variables; Approval Cycle and Multi Business Segment Transaction were both statistically significant in the OLS regression results but had general insignificant outcomes in the quantile regression analysis of R&I returns for transactions involving Electric Power companies.

Table 27: Model 7 Quantile Regression – Simple 360 Day (0, +360) Returns

Resource Based	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	0.135	0.273	0.494	0.624	-0.132	0.281	-0.469	0.642	0.078	0.247	0.316	0.754	-0.004	0.077	-0.048	0.962	0.003	0.039	0.087	0.931
Like Buying Like Businesses	0.471	0.200	2.352	**0.025**	0.353	0.206	1.711	**0.097**	0.476	0.182	2.620	**0.013**	-0.041	0.052	-0.782	0.439	-0.061	0.026	-2.292	**0.028**
Lag from Critical Reg Date	-0.007	0.002	-3.108	**0.004**	-0.002	0.002	-0.965	0.342	-0.002	0.002	-0.906	0.372	0.000	0.001	0.141	0.889	0.000	0.000	-0.562	0.578
Approval Cycle	0.002	0.001	3.036	**0.005**	0.000	0.001	0.245	0.808	0.000	0.000	-0.805	0.427	0.000	0.000	-0.347	0.731	0.000	0.000	-0.685	0.497
Stock Deal	-0.664	0.290	-2.292	**0.029**	-1.269	0.299	-4.250	**0.000**	-1.729	0.263	-6.583	**0.000**	-0.037	0.079	-0.469	0.642	-0.023	0.040	-0.579	0.566
Closed During a Recession	-0.154	0.294	-0.526	0.603	0.168	0.302	0.554	0.584	0.285	0.266	1.070	0.293	0.086	0.083	1.034	0.308	0.113	0.042	2.696	**0.011**
Experienced M&A Team	-0.001	0.140	-0.004	0.997	0.149	0.144	1.032	0.310	0.057	0.127	0.448	0.657	-0.012	0.037	-0.327	0.745	-0.018	0.019	-0.946	0.351
Critical Deal for Acquirer	-0.620	0.239	-2.591	**0.014**	-0.530	0.246	-2.150	**0.039**	-0.310	0.217	-1.431	0.162	0.059	0.063	0.927	0.360	0.081	0.032	2.526	**0.016**
Multi State Transaction	-0.227	0.248	-0.917	0.366	0.305	0.256	1.193	0.242	0.139	0.225	0.617	0.542	0.046	0.060	0.760	0.452	0.046	0.030	1.502	0.142
Overlapping States	0.184	0.227	0.808	0.425	-0.154	0.234	-0.656	0.516	-0.045	0.206	-0.220	0.827	-0.092	0.061	-1.501	0.142	-0.123	0.031	-3.952	**0.000**
Multi Business Segment Transaction	0.570	0.164	3.467	**0.002**	0.280	0.169	1.653	0.108	0.013	0.149	0.088	0.930	-0.034	0.045	-0.758	0.453	-0.031	0.023	-1.344	0.187
Utility	**Quantile: .10**				**Quantile: .25**				**Quantile: .50**				**Quantile: .75**				**Quantile: .90**			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.105	0.091	-1.154	0.253	0.049	0.148	0.332	0.741	0.081	0.085	0.943	0.349	0.246	0.107	2.308	**0.025**	0.346	0.086	4.018	**0.000**
Like Buying Like Businesses	0.154	0.044	3.539	**0.001**	0.105	0.070	1.495	0.140	-0.024	0.041	-0.599	0.552	-0.048	0.051	-0.939	0.352	0.026	0.041	0.620	0.537
Lag from Critical Reg Date	-0.001	0.001	-0.971	0.336	0.000	0.001	0.073	0.942	0.001	0.001	1.361	0.179	0.001	0.001	1.167	0.248	-0.001	0.001	-1.123	0.266
Approval Cycle	0.000	0.000	1.795	**0.078**	0.000	0.000	0.038	0.969	0.000	0.000	-1.500	0.139	0.000	0.000	-0.538	0.593	0.000	0.000	-1.732	**0.089**
Stock Deal	-0.111	0.057	-1.941	**0.057**	-0.035	0.092	-0.382	0.704	0.046	0.053	0.853	0.397	0.075	0.067	1.121	0.267	0.157	0.054	2.920	**0.005**
Closed During a Recession	-0.176	0.059	-3.004	**0.004**	-0.145	0.095	-1.531	0.131	-0.122	0.055	-2.230	**0.030**	-0.124	0.068	-1.804	**0.076**	-0.268	0.055	-4.850	**0.000**
Announced During a Merger Wave	-0.311	0.057	-5.481	**0.000**	-0.159	0.092	-1.731	**0.089**	-0.074	0.053	-1.401	0.167	0.019	0.066	0.280	0.780	0.060	0.054	1.118	0.268
Experienced M&A Team	-0.148	0.047	-3.161	**0.002**	0.004	0.075	0.054	0.957	-0.057	0.044	-1.310	0.195	-0.004	0.055	-0.065	0.949	-0.117	0.044	-2.660	**0.010**
Company Pressured to Transact	0.231	0.077	2.999	**0.004**	0.048	0.125	0.381	0.704	0.096	0.072	1.330	0.189	-0.142	0.090	-1.570	0.122	-0.024	0.073	-0.326	0.745
Critical Deal for Acquirer	-0.044	0.048	-0.926	0.358	-0.031	0.077	-0.399	0.692	0.002	0.045	0.048	0.962	-0.007	0.056	-0.125	0.901	-0.127	0.045	-2.816	**0.007**
Multi State Transaction	0.158	0.049	3.249	**0.002**	-0.004	0.079	-0.048	0.962	0.049	0.045	1.084	0.283	0.112	0.057	1.975	**0.053**	0.182	0.046	3.979	**0.000**
Overlapping States	-0.006	0.044	-0.142	0.888	0.030	0.072	0.418	0.677	0.016	0.041	0.396	0.693	0.040	0.052	0.780	0.438	0.074	0.042	1.765	**0.083**
Multi Business Segment Transaction	-0.112	0.046	-2.422	**0.019**	-0.040	0.075	-0.532	0.597	-0.051	0.043	-1.190	0.239	0.028	0.054	0.524	0.603	0.064	0.043	1.479	0.145

Midstream and Transportation	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*
(Constant)	-0.070	0.309	-0.225	0.822	-0.117	0.172	-0.679	0.498	-0.132	0.184	-0.716	0.475	0.001	0.166	0.004	0.997	0.013	0.160	0.082	0.935
Like Buying Like Businesses	0.143	0.151	0.950	0.344	0.085	0.084	1.010	0.315	0.064	0.090	0.715	0.476	0.268	0.081	3.302	**0.001**	0.427	0.078	5.466	**0.000**
Lag from Critical Reg Date	-0.004	0.002	-1.692	**0.093**	-0.001	0.001	-0.494	0.622	0.002	0.001	1.497	0.137	0.002	0.001	1.301	0.196	0.003	0.001	2.264	**0.026**
Approval Cycle	0.003	0.001	2.045	**0.043**	0.002	0.001	2.409	**0.018**	0.002	0.001	1.987	**0.049**	0.001	0.001	1.432	0.155	0.001	0.001	1.135	0.259
Stock Deal	-0.370	0.175	-2.115	**0.037**	-0.044	0.097	-0.450	0.654	0.004	0.104	0.042	0.966	-0.016	0.094	-0.173	0.863	0.008	0.091	0.092	0.927
Closed During a Recession	-0.477	0.223	-2.134	**0.035**	-0.414	0.124	-3.332	**0.001**	-0.156	0.133	-1.171	0.244	0.005	0.120	0.039	0.969	0.283	0.116	2.449	**0.016**
Announced During a Merger Wave	0.167	0.188	0.886	0.377	-0.095	0.105	-0.911	0.364	-0.315	0.112	-2.810	**0.006**	-0.182	0.101	-1.794	**0.076**	-0.274	0.097	-2.815	**0.006**
Experienced M&A Team	0.139	0.128	1.092	0.277	0.023	0.071	0.323	0.748	-0.085	0.076	-1.119	0.266	-0.039	0.069	-0.570	0.570	0.039	0.066	0.588	0.558
Company Pressured to Transact	0.231	0.216	1.068	0.288	0.103	0.120	0.858	0.393	0.070	0.129	0.542	0.589	0.068	0.116	0.584	0.560	0.091	0.112	0.814	0.418
Critical Deal for Acquirer	0.000	0.165	0.000	1.000	-0.058	0.092	-0.633	0.528	-0.125	0.098	-1.278	0.204	-0.055	0.089	-0.616	0.539	-0.069	0.085	-0.811	0.419
Multi State Transaction	-0.057	0.163	-0.352	0.726	0.120	0.091	1.320	0.190	0.161	0.097	1.655	0.101	0.104	0.088	1.185	0.239	0.125	0.084	1.476	0.143
Overlapping States	0.163	0.133	1.233	0.220	0.121	0.074	1.637	0.104	-0.002	0.079	-0.024	0.981	-0.011	0.071	-0.151	0.880	-0.134	0.069	-1.955	**0.053**
Multi Business Segment Transaction	-0.325	0.188	-1.724	**0.088**	-0.339	0.105	-3.234	**0.002**	-0.422	0.112	-3.757	**0.000**	-0.330	0.101	-3.252	**0.002**	-0.580	0.097	-5.955	**0.000**

Electric Power	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*	*B*	SE	t	*p*
(Constant)	-0.303	0.176	-1.726	**0.090**	-0.116	0.271	-0.428	0.670	-0.166	0.153	-1.090	0.281	-0.166	0.153	-1.090	0.281	0.177	0.161	1.101	0.276
Like Buying Like Businesses	0.346	0.104	3.317	**0.002**	0.144	0.161	0.894	0.375	0.080	0.091	0.876	0.385	0.080	0.091	0.876	0.385	0.024	0.096	0.255	0.799
Lag from Critical Reg Date	0.000	0.002	-0.120	0.905	-0.001	0.002	-0.234	0.816	0.000	0.001	0.273	0.786	0.000	0.001	0.273	0.786	0.000	0.001	-0.011	0.991
Approval Cycle	0.001	0.000	2.251	**0.029**	0.000	0.000	0.887	0.379	0.000	0.000	1.087	0.282	0.000	0.000	1.087	0.282	0.000	0.000	0.588	0.559
Stock Deal	0.042	0.091	0.458	0.649	-0.039	0.140	-0.274	0.785	-0.005	0.079	-0.066	0.948	-0.005	0.079	-0.066	0.948	-0.042	0.084	-0.497	0.621
Closed During a Recession	-0.235	0.123	-1.900	**0.063**	-0.157	0.190	-0.823	0.414	-0.042	0.107	-0.395	0.694	-0.042	0.107	-0.395	0.694	-0.131	0.113	-1.160	0.251
Announced During a Merger Wave	-0.715	0.119	-6.031	**0.000**	-0.697	0.183	-3.812	**0.000**	-0.307	0.103	-2.982	**0.004**	-0.307	0.103	-2.982	**0.004**	-0.379	0.109	-3.486	**0.001**
Experienced M&A Team	-0.023	0.079	-0.294	0.770	0.031	0.123	0.252	0.802	0.079	0.069	1.138	0.260	0.079	0.069	1.138	0.260	0.020	0.073	0.276	0.783
Company Pressured to Transact	0.624	0.146	4.282	**0.000**	0.745	0.225	3.316	**0.002**	0.275	0.127	2.170	**0.034**	0.275	0.127	2.170	**0.034**	0.667	0.134	4.988	**0.000**
Critical Deal for Acquirer	-0.074	0.107	-0.692	0.492	-0.052	0.165	-0.315	0.754	0.037	0.093	0.396	0.693	0.037	0.093	0.396	0.693	0.011	0.098	0.117	0.907
Multi State Transaction	-0.186	0.106	-1.763	**0.084**	-0.172	0.163	-1.057	0.295	-0.070	0.092	-0.766	0.447	-0.070	0.092	-0.766	0.447	0.068	0.097	0.703	0.485
Overlapping States	0.106	0.105	1.008	0.318	0.111	0.163	0.684	0.497	0.145	0.092	1.575	0.121	0.145	0.092	1.575	0.121	-0.033	0.097	-0.346	0.731
Multi Business Segment Transaction	0.103	0.100	1.029	0.308	0.109	0.154	0.709	0.482	0.204	0.087	2.345	**0.023**	0.204	0.087	2.345	**0.023**	0.248	0.092	2.704	**0.009**

CHAPTER VI - DISCUSSION

When viewed in totality these results are consistent with previous research regarding the relatively poor performance of acquisition returns for the acquirer. However, the results do suggest that some of the previous differences can be traced to varied approaches and specifications of the measurement variable and different definitions of the event window. Oftentimes, varying outcomes can be obtained by simply altering the snapshot in time that a researcher utilizes to determine if value is being created or destroyed. Generally speaking these results suggest, that a majority of regulated energy firms see small but positive short-term announcement returns and additional small but positive short-term post-close returns. However, longer term post-close returns are both negative and of the magnitude that they erode any small previous gain (for a majority of the acquirers) thus shifting overall transaction returns negative by the one year post-close date. So "yes" acquiring firms on average do tend to create value during M&A and "yes" acquiring firms on average do tend to destroy value during M&A.

However, what does appear to be an even more interesting research theme are the significant differences of results observed between Top Performers and Poor Performers and particularly those differences across the individual ABDC categories. There appears to be significant differences in how these two groups approach M&A and a very significant difference in market returns as a result. This Discussion section aims to provide some insights into this phenomenon.

Key Findings from the Evaluation of Regulated Energy M&A

Analyzing some of the specifics of the results, overall, companies on average do see some small value enhancement from announcement returns as a result of their differences in approach to Selecting and Identifying acquisition targets. These results suggest on average about 0-1% value enhancement for the acquirer when a transaction is announced. Of the 337 transactions studied, 184 (56.4%) had positive announcement returns when measured on a 3 day

abnormal basis. These subtle differences are overshadowed by the differences between Top and Poor performers where the better acquirer's average a gain of 2.2%, while the poorer acquirers experienced value erosion of -1.5%.

Furthermore, companies on average experience additional value enhancement at the closing of their transactions (measured on a 30 day pre to post-close event window) during the phase of Transacting and Executing. These results suggest on average a 0.3% additional value enhancement for the acquirer after the closing of the transaction. Of the 337 transactions studied, 176 (52.2%) had positive post-closing short-term returns as measured on a 30 day abnormal basis. Once again, the spreads between Top Performers and Poor Performers were significant (which is only partly explained by the lengthening of the event window). The Top Performers gain averaged 5.1% over the short-term post-close period, whereas the Poor Performers experienced value destruction of -3.6% over the same period. This widening gap should be of interest to both academics as well as practitioners.

The growing performance gap between the Top and Poor Performers and its impact on relative value is even more dramatic during the R&I phase. On average, by the time at which acquirers are about to enter the R&I phase of a transaction, they on average have experienced a 1-2% value enhancement as a result of a positive announcement return (S&I) and a small positive closing return (T&E). Nevertheless, despite the value enhancement experienced by a majority of firms between deal announcement and short-term post-close, a large majority of firms lose those gains (and oftentimes additional value) over the first year post-close during the Reconfiguring and Integrating phases of their transactions. The median value loss over the first 360 days post-close for the 337 studied regulated energy transactions is -7.4% as only 99 of the 337 (29.4%) deals had positive returns during the R&I phase of the transaction. Companies that are considered strong at R&I averaged a positive 3.3% gain, whereas the bottom quartile R&I performers experienced significant one year abnormal return losses of over 20%.

The magnitude of differences in R&I outcomes between Top and Poor Performers is so dramatic that it should be the central focus point of any recommendation for a potential

change in practitioner behavior resulting from the efforts of this study. A detailed discussion of each ABDC category outcome is provided below.

Creating Value through Acquisition Based Dynamic Capabilities

To properly address the research question "***What Acquisition Based Dynamic Capabilities (ABDC) are the most critical in enhancing value for energy companies engaged in M&A"*** requires the analysis to be taken down to the individual ABDC component level. Furthermore, to provide insights into what factors impact performance at the individual ABDC category level it is informative to evaluate differences across Top Performers and Poor Performers.

Figure 13 below illustrates the differences among the characteristics of Top and Poor Performers for each ABDC category. The differences were obtained from a review of the differences of the means analysis between Top and Poor Performers discussed above of the entire 337 company dataset. The differences of the means are helpful in determining where we see differences in the factor characteristics. Whereas, the OLS and quantile regression results are informative in illustrating the magnitude of the impacts of these factors and help provides why some of these characteristics matter more than others when evaluating differences across the return outcomes.

Figure 13: Top and Poor Performer Differences

Top and Poor Performers		
ABDC Phase	**Characteristics of Top Performers**	**Characteristics of Poor Performers**
Selecting and Identifying	• Shorter approval cycles • Limited Experience (not encumbered by the past) • Avoids transacting in bad economic times • Seeks less complex transactions	• Experiences longer approval cycles and transacts in uncertainty • Transacts during bad economic conditions • Flails at complex M&A deals
Transacting and Executing	• Limited Experience (no hubris) • Avoids transacting in bad economic times Nimble during merger waves • Does multi state (mostly with overlap of existing business)	• Experiences longer approval cycles • Misses wave opportunities • Transacts during bad economic conditions • Avoids multi state (but misses opportunity)
Reconfiguring and Integrating	• Responds quickly to shocks • Nimble during merger waves (in early - out fast) • Avoids multi business and complex deals	• Slow to respond to shocks • Jumps into merger waves late and acts slowly • Attempts multi business segment deals and lacks experience

Creating Value through Selecting and Identifying

Selecting and Identifying capability includes the ability to assess a firm's existing resource base relative to desired new resources and capabilities, to assess the degree of market failure with respect to resources that are beyond the firm's existing resource base and to assess the number of points of contact that inter-organizational creation or new resources would require. It also includes the capability to be able to carry out effective due diligence of potential targets in order to determine the value of the target to the acquirer, to negotiate appropriate terms with the a target's owner, and to walk away from a target if it lacks needed resources or its owners demand a price that exceeds the value to the acquirer. Firms that can efficiently perform these

tasks and have resources with well-developed capabilities can be positioned to create substantial competitive advantage.

The results suggest that for the firms who outperform at S&I (top quartile performance) significant value creation can be realized. Top quartile firms realize a 2.2% announcement return which is significantly superior to typical results. There are certain characteristics that differentiate the firms who have superior S&I results. Top S&I performers tend to benefit from shorter regulatory approval cycles. Shorter regulatory approval cycles can be the result of managing the regulatory approval process with high levels of efficiency or perhaps transacting in jurisdictions where regulatory approvals tend to be obtained in a shorter timeline. Shorter approval cycles can also be obtained by "settling" filings with stakeholders which short circuit the otherwise lengthy and potentially litigious approval process. Markets respond well to shorter cycles, they tend to dislike timing uncertainty and deals that are delayed or tend to linger.

Top S&I performers also have less experienced (from an M&A transaction perspective) management teams. They have completed a statistically significant fewer amount of transactions than the peer group as a whole. Although somewhat surprising this fact is not unheard of as a research stream exists that investigates the negative impacts of management experience on M&A returns. The logic suggests that few transactions are ever exactly alike and that few companies ever conduct enough to make a material move along the learning curve and as a result management teams with a few transactions under their belts are perhaps no better off to manage a M&A process than the teams with less or even no experiences. Also suggested is the fact that teams with a few transactions can get a false sense of comfort and become lackadaisical in the process. Nevertheless, this outcome is somewhat counterintuitive.

Additionally, the resources that are brought to mind during the S&I phase of a transaction include not only the company's internal resources (and their collective experience and capabilities) but also the cumulative resources (experiences and capabilities) of all their transaction advisors which usually includes law firms, investment bankers, and consulting professionals. Perhaps company experience in this context is somewhat overrated as it may then

cause a situation where the acquirer relies less on the true experts (outside legal, investment banking and consulting advisors) and as a result, are on the margin worse off skillset perspective for the combined team. Additionally, an alternative explanation to why conducting multiple transactions would not be providing positive abnormal returns to the acquirer would be that companies receive their largest market value uplift from their first deal and then experience diminishing marginal market receptiveness (in terms of value uplift) to future transactions. So this effect could be capturing the effects of market receptiveness of a company performing multiple transactions as opposed to market reactions to a management team's experience in performing M&A. Also worth noting is that this factor tends not to be a statistically significant determinant of most measures of S&I returns. So despite there being a significant difference in the amount of experience between Top and Poor Performers, the true impact on S&I returns is somewhat unclear.

The results suggest that for the firms who underperform at S&I (bottom quartile performance) significant value destruction can be realized. Bottom quartile firms realize a -1.5% announcement return which is significantly inferior to typical results. There are certain characteristics that differentiate the firms who have inferior S&I results. Poor S&I performers tend to attempt more complex transactions and the added complexity, added time and increased risk is noticed by the market and as a result a negative market response is common.

Poor S&I performers attempt more multi-state transactions than their better performing peers. Multi-state transactions add complexity, time and considerable transaction cost to an acquirer, these all contribute to a somewhat negative market reaction and resulting negative announcement return. These same transactions have statistically significant longer approval cycles (on average 47% longer than Top Performing companies). Furthermore, the multi-state transactions also require substantially more effort and required expertise when transacting. As an example, each state has its own regulatory environment including unique rules of procedure. Similarly, every state has its own unique set of stakeholders who tend to intervene in most regulated transactions. To make matters worse, these same companies tend to pursue acquisition targets in states where the acquirer does not currently operate (low multi-state overlap). So in many respects each jurisdiction becomes a new territory for them. State energy

regulation varies considerably. The differences from one state to another can be as stark as setting up new operations in a foreign country for a manufacturing firm.

To make matters even worse, Poor S&I performers also tend to select acquisition targets that are statistically more diverse from an operations perspective than their peers. They tend to broaden out their portfolio with investments in business operations that they do not currently perform. Although these transactions are still defined as regulated energy company transactions there is material differences in business operations when for example, a gas utility purchases an electric power generator, or when an oil pipeline company buys an electric transmission company, etc. Completing diversifying transactions effectively requires substantial internal capabilities and a heavy reliance on outside expertise. As a result, markets tend to view these types of transactions less favorably. For Poor Performers this added complexity, risk and effort associated with their higher rate of multi-state transactions with little state overlap, multi segment business deals with longer approval cycles, etc. are all net negatives from a market investor perspective and the announcement return is indicative of the market's response and skepticism that the company has the required capabilities and resources to make these issues non factors. Although the OLS and quantile regression results are somewhat inconclusive as to the magnitude, where these complexity factors are significant they tend to have a negative impact on S&I returns and help explain some of the performance differences observed between Top and Poor Performers.

Creating Value through Transacting and Executing

Transacting and Executing capability is the capacity to manage and execute efficiently the transaction closing process, including meeting all conditions precedent in the acquisition which may involve arranging financing, obtaining approvals and consents, (regulatory, shareholder, other) and consummating all other deal closing mechanics. Firms that can efficiently manage these processes are well positioned to take advantage of the opportunity that was created in Selecting and Identifying and can create substantial competitive advantage.

The results suggest that for the firms who outperform at T&E (top quartile performance) significant value creation can be realized. Top quartile firms realize a 5.1% short-term post-close return which is significantly superior to typical results. There are certain characteristics that differentiate the firms who have superior T&E results. Top T&E performers tend to benefit from shorter approval cycles, are less likely to do a deal during a recession, are more likely to transact in a merger wave, and are more likely to attempt a multi-state transaction (but having a relatively high level of state overlap with existing operations).

It is during the T&E cycle where the benefit of an accelerated deal approval cycle is realized for Top Performers. Often regulatory approval is the final condition precedent necessary to close a transaction. Once the final approval is received most transactions close within a few working days (or as governed by the transaction's purchase and sale agreements). Shorter approval cycles are also suggestive of settlement type arrangements that tend to be viewed favorably by the acquirer's investors (otherwise the acquirer would not have settled). Regulatory resources that perform well tend to enhance the possibility of settlement, which can shorten approval cycles and can potentially be value accretive. Similarly, shorter deal cycles tend to improve an acquirer's transaction cost of capital as debt commitments can be released and any market uncertainty being created as a result of a potential equity issuance can be resolved. As a result, markets tend to reward the Top Performers for their ability to get transactions closed quickly.

Top T&E Performers are also less likely to do a deal during a recession. The market conditions of when a deal is announced and closed will have a major impact on the return profile of an acquisition soon after closing. Deals become more difficult (and often more expensive) in down markets as the cost of capital tends to increase (both debt and potentially equity). Furthermore, to the extent the deal was negotiated with the purchase and sale agreement signed (often months previously) the price is often fixed and the acquirers only recourse to not closing is often a cost prohibitive breakup fee. As a result, markets tend to frown upon transactions conducted during down economic cycles and periods of economic uncertainty. Companies who are good at T&E know this and are less likely to conduct a deal during

recessions. For example, only 6.0% of the Top Performer deals were announced during a recession, whereas 15.5% of the Poor Performers announced a deal during a recession.

Top T&E Performers also tend to transact during merger waves. For companies with less developed T&E skills this could be problematic. Most Top T&E performers benefit from their execution capabilities and ability to close quickly via shorter approval and transaction cycles and thus execute before the negative aspects of a merger wave take place (increased relative prices and decreasing amounts of options).

Companies that are strong performers at T&E tend to also consummate multi-state transactions. For some with less developed skills and resources, this can be problematic. What differentiates the Top Performers here is that the entities that attempt multi-jurisdictional transactions also tended to already be multi-jurisdictional companies and their existing footprint of operations have overlap with that of the target companies. Markets also tend to be fickle. For some the market will discount firms who attempt to transact a complicated transaction, while at other times the complicated transaction is where the most opportunity may reside and the market may reward an acquirer for that aggressiveness. Additionally, T&E in this study's context measures only deals that were eventually closed. As such, some of the market risks of closing a multi-state complex deal by definition would have already been resolved. Top Performers engaged in multi-state transactions 59.5% of the time, whereas for the Poor Performers this rate is only 36.9%. The fact is that for the companies that excel at T&E, the market appears to see the upside potential of a multi-state complicated transaction and as a result top T&E performers garner above normal returns.

However, it is a much different story for the Poor T&E performers. The results suggest that for the firms who underperform at T&E (bottom quartile performance) significant value destruction can be realized. Bottom quartile firms realize a -3.6% post-close T&E return which is significantly below typical results. There are certain characteristics that differentiate the firms who have inferior T&E results. As suggested above, Poor T&E performers tend to have longer deal approval cycles, are more likely to do a deal during a recession, are less likely to transact during a merger wave and less likely to attempt a multi-state transaction.

It is during the T&E stage where the length of the approval cycle is crystalized and the market gets transparency as to what final approval conditions were established. In deals with very litigious and relatively long approval cycles, the end results is often an economic deal that is viewed as very suboptimal from the acquirer's perspective. Additionally, in long processes that are multi-jurisdictional each governing body takes its turn extracting value (in terms of economic incentives, rate reductions and other financial and regulatory matters) throughout the process that can at times makes the transaction for the acquirer uneconomic.

Additionally, not helping the Poor T&E performers is their tendency to transact during poor economic times. As stated above, transacting during poor economic times can be problematic particularly if the transaction value is locked in, the capital in the transaction becomes more expensive (as markets erode) and the regulators keep asking for additional economic concessions. Collectively, Poor T&E companies have the combination of negative factors going against them including: poor execution, tendencies for slow performance and bad market timing. None of these are reviewed favorably by investors. Although the OLS and quantile regression results are somewhat inconclusive as to the magnitude of these impacts, where these factors are significant they tend to support the hypothesis that differences in the occurrences of the factor variables is helpful in understanding the performance differences between Top and Poor Performers.

Creating Value through Reconfiguring and Integrating

Reconfiguring and Integrating capability is the capacity to reshape resources within the target and acquiring firms. This involves the capacity to combine resources from the target and acquirer in order to create new resources, whether at the target or within the acquirer's original business units or in some new organizational unit. This capability also requires the capacity to selectively divest unneeded resources from the target as well as old resources from the acquirer that have become obsolete as a result of the Reconfiguring and Integrating process.

The results suggest that for the firms who outperform at R&I (top quartile performance) significant value creation can be realized. Top quartile firms realize a 3.3% abnormal return after the first year post-closing which is significantly superior to typical results which for this phase tends to be negative. There are certain characteristics that differentiate the firms who have superior R&I results. Top R&I performers tend to benefit by focusing their attention on acquiring less diverse businesses. Top R&I performers transact a significantly smaller amount of multi business segment businesses. They tend to acquire business that closely resembles their own in terms of scope of operations. From a resource and capability perspective it is much easier to reconfigure and integrate a business that resembles the acquirer than one that is materially different. The combination of like businesses also provides for opportunities to benefit from a capability perspective as there are opportunities for the sharing of best practices and resource harmonization as the businesses are somewhat similar. These types of integration projects tend to be easier, take less time to complete, spend fewer dollars on external experts and disrupt ongoing operations far less.

It is a far less optimistic outlook for the Poor Performers. The results suggest that for the firms who underperform at R&I (bottom quartile performance) significant value destruction can be expected. Bottom quartile firms realize over a 20% negative abnormal return one year after transaction closing. This level of value erosion also tends to eclipse any marginal (calculated to be on average between 0 to 2%) value uplift the company may have received during the S&I or T&E phases. Poor R&I performers struggle by attempting more diverse transactions and the added complexity, added time and cost, disruption to operations and increased risk is noticed by the market and as a result a negative market response is almost certain.

Poor R&I performers tend to be integrating acquired companies that are significantly more dissimilar from an operations perspective than they are and are attempting to Reconfigure and Integrate lines of business that are outside their core capabilities. Perhaps, these transactions were an attempt to broaden out and diversify their portfolios with investments in business operations that they did not currently perform. Although these transactions are still defined as regulated energy company transactions there is material differences in business

operations and Poor Performers tend to underestimate the effort involved in effectively integrating these dissimilar business. Furthermore, completing diversifying transactions effectively requires substantial internal capabilities and a heavy reliance on outside expertise. As a result, markets tend to view these types of transactions far less favorably. This added complexity, risk and effort is a large net negative from a market investor perspective and the one year return is indicative of this response and the market's skepticism that the company has the required capabilities and resources to reconfigure and to integrate seamlessly.

These results are consistent with the findings of a leading practitioner M&A study. McKinsey & Company every other year conducts one of the largest multi-industry M&A surveys available to practitioners. Its data covers over 1,500 global companies and thousands of recently completed transactions. The study also has an approach (albeit a week form method) of differentiating between Top and Poor Performers (they identify "High" and "Low" as firms who either far exceeded or underperformed expectations on a "TSR" – total shareholder return – weak form basis). Furthermore, it breaks down results into four categories "M&A Strategy and Deal Sourcing" (akin to this study's S&I), "Due Diligence and Deal Execution" (akin to this study's early stage T&E), "M&A Operating Model and Organization" (akin to this study's late stage T&E) and "Integration" (akin to this study's R&I). Although the McKinsey analysis is not fully comparable (it is a single snapshot in time, multi-industry, lacks strong form rigor, etc.) its summary results as to R&I are noteworthy (McKinsey, 2016). McKinsey concluded:

> "…high performers stand apart on the strength of their integration processes. Those that do integration well, in our experience, deliver as much as 6 to 12 percentage points higher total returns to shareholders than those that don't…Compared with other stages of M&A, integration is where companies perceive their capacities and capabilities to be the most deficient. Survey respondents were 12 to 18% less likely to report that their companies had the right capacities for integration than for any other M&A activity and

where 12 to 19% less likely to report that they had the right capabilities." (McKinsey, 2016).

When viewed over a deal lifecycle these performance differences between Top and Poor Performers are significant and compelling. The magnitude of these differences and the potential to erode value as a result of suboptimal M&A R&I places an enormously high level of importance on a company's ability to manage the R&I phase of a transaction. Even though it is every acquirer's goal to optimally manage each stage of an M&A transaction flawlessly, these results suggest that even the most savvy of acquirers with expert teams that conduct S&I and T&E seamlessly, could still be in a net negative position in the event that the business is not well positioned to manage the R&I phase of the transaction.

Furthermore, as a result of the differences in return performance between Top and Poor Performers being relatively modest in S&I and only slightly greater in T&E, a company's primary focus even before pursuing a M&A transaction should be determining its capability and commitment to properly resource the R&I stage of the transaction in the event it is successful in winning and eventually closing the deal. The magnitude of differences between Top and Poor R&I performance will overwhelm the return impact of both good or even bad performance during the previous stages of an M&A deal and will singularly determine whether a transaction is either successful or a failure form a market returns and shareholder value perspective.

One helpful fact about this issue that should be viewed as encouraging to the practitioner is that potential acquirers can decide what transactions they wish to pursue and whether to participate in the game at all. Potential acquirers may find it difficult to move immediately from a situation where they go from Poor Performer to Top Performer overnight, but they do have it in their authority to choose if and when to consider transacting and have the ability to simply opt out (by not acquiring) of the M&A game entirely. This is a decision all potential acquirers should only make after a comprehensive and honest assessment of their own resources and capabilities. Furthermore, when determining what activities are most critical in resource deployment, potential acquirers need to err on the side of caution and appropriately

resource R&I and even pass on potential transactions where R&I could become overly challenging.

If after this assessment of the company's internal capabilities, a holistic review of the M&A opportunities in the marketplace and the understanding that for most it's a losers game; if a company still desires to attempt to transact, perhaps the best advice for them might be "Buyer Beware".

CHAPTER VII - CONTRIBUTIONS

Contributions are provided to both theory and practice as a result of the findings of this research. The theoretical contribution of this Dissertation is twofold. Firstly, the study provides a much needed quantification of ABDC theory and, secondly, the ABDC theoretical model is adapted to better reflect the M&A transaction process. Whereas the Dissertation's practical contributions can be grouped into three categories. Firstly, is the measurement of M&A performance across critical steps of a deal transaction. Secondly, is the identification of what factors contribute to M&A return performance differences across transactions. Lastly, the reiteration of the importance of the capabilities involved in Reconfiguring and Integrating to overall M&A deal transaction success and the large gap between Top and Poor Performers..

Contribution to Theory

One sharp criticism often lobbed at the advocates of Dynamic Capabilities is the apparent lack of empirical support for its theoretical arguments (Kamasak, 2013). The Capron and Anand framework ("Selection", "Identification" and "Reconfiguration") for ABDC is a vast enhancement over the generalized treatment of the concept of resource acquisition through M&A found within the Dynamic Capabilities literature pioneered by Teece and his three factor model of "Sensing", "Seizing" and "Reconfiguring" see (Teece, 1997, 2003 and 2007). Additionally, Capron and Anand also quantified their model in an attempt to operationalize ABDC, thus making a positive step forward in the strategic management literature by advancing the discussion forward from the purely theoretical.

However, a material gap requiring a more comprehensive operationalization of the framework remained. This Dissertation is an attempt at addressing that perceived gap with a goal of moving one step closer to a point where researchers can adequately operationalize the theoretical DC and ABDC concepts. The quantification required a stylized approach involving

long dated transactions with transparent critical milestone dates and analysis based off of reliable and widely accepted measures of performance. This Dissertation's research design attempted to utilize an industry setting and M&A transaction definition that enabled the operationalization of the adapted ABDC theory in hopes of bridging one of the gaps that remained in the literature.

An additional theoretical enhancement is the definitional adaptation of the basic Capron and Anand framework (Helfat 2009). The enhancement is accomplished via a few slight definitional modifications. Whereas Capron and Anand divided the ABDC capabilities into "Selection", "Identification" and "Reconfiguration" a more practical approach would be to define the groupings as "Selecting and Identifying", "Transacting and Executing" and "Reconfiguring and Integrating". Capron and Anand were correct to identify the importance of Selection and Identification. However, in practice these are activities that are occurring simultaneously and in many ways are interwoven with each other and belong in one grouping and should not be separated. Additionally, these activities are almost always performed by the same individuals (resources) in an acquiring firm. To have them as two of the three identified ABDC groupings distorts the manner in which these activities are performed as well as how resources performing these activities are deployed.

An additional enhancement to the Capron and Anand framework is the identification of the unique category of "Transacting and Executing". In the original framework these critical capabilities (and resources) appear to be embedded in the "Identification" category. Grouping these critical capabilities into the "Identification" category distorts what "Identification" is intended to capture. Additionally, it also muddies the waters as to what capabilities that are really being identified in addition to the resources that are being deployed to perform these activities. Similar to the redefining of "Selection and Identification" the creation of the "Transacting and Executing" grouping is an enhancement to the original Capron and Anand framework.

The final Capron and Anand grouping, "Reconfiguration" or "Reconfiguring and Integrating" in this author's enhancement is virtually identical. The only practical difference is a slight modification to the grouping name to reflect the concept of "integration" which is a term

of art for M&A practitioners. Otherwise the capabilities and resources necessary to be deployed to be successful are the same for "Reconfiguration" and "Reconfiguring and Integrating". These modifications to the ABDC framework of Capron and Anand provides a practical enhancement to the theory and has the added benefit of closer resembling the process and necessary capabilities and resource requirements of successful practitioners.

Contribution to Practice

Additionally, the study is a contribution to practice. The impetus to conducting this work was a sincere desire to understand why acquirers continue to destroy value in their acquisition activities. The first element that needed to be addressed was a more practical measurement approach. The question of whether acquirers tended to always destroy value was not so easily answered when viewing a transaction over various time horizons. As an example consistent with previous scholarship, acquirers actually do see some (albeit small) value enhancement at deal announcement with about half seeing an additional small incremental value enhancement at dealing closing. Many times these gains were eventually offset by longer term trends of value destruction which was commonplace within the first year of closing a transaction. Thus raising the question of whether acquirers create or destroy value is not so easily answered. This study provides a better measurement rubric to level set practitioners what to expect during the various stages of an M&A transaction from an expected return outcomes perspective.

Another contribution to practice is the identification of what business factors impact returns over the course of an M&A transaction in the regulated energy industry. Factor differences attributed to shock waves, bandwagoning effects, management traits and deal complexity were all found to have statistically significant impacts to value creation under different deal scenarios. Additionally, the ABDC capabilities were highlighted to illustrate which ABDC capabilities are the most important factor impacting returns and acquisition

success. Even though much of this was consistent with previous research, the findings did provide a quantification for energy industry practitioners that was not otherwise available.

Arguably the most important practitioner focused contribution is in the highlighting of the importance of Reconfiguring and Integrating. Even though practitioners should understand the importance of R&I in a deal context, it is most likely not appreciated to the extent that these results would suggest. On average, losses of value during the R&I phase of a deal will eclipse any gains received immediately after announcement or soon after closing, resulting in shareholders of companies who have recently completed an acquisition being worse off at the 1 year anniversary of the closing of the transaction. This research identified factors that impacted R&I performance and should be illustrative to companies interested in utilizing the ABDC framework to create value in an M&A context. Furthermore, the specific examples of what Top performers do in R&I versus Poor Performers provides practitioners a reasonable list of Do's and Don'ts along with the quantification of how destructive it can be for those who underperform during the R&I phase.

By knowing what stages of the transaction are most important from a value creating perspective, companies can determine what skills are most critical and resource their firms appropriately.

It was an objective of this Dissertation to provide a meaningful contribution to both practice and theory. Considering the contributions defined above, the Project appears to have met those objectives.

CHAPTER VIII - CONCLUSION

In conclusion, this Dissertation has practical and theoretical contributions but it also has its limitations. Some of the limitations are discussed below. Additionally, with the combination of the above mentioned contributions that this research provides and its limitations listed below, recommendations for additional streams of future research are also provided.

Limitations

As a result of the research question and general thrust of the project, certain assumptions and design decisions needed to be made. These led to a handful of limitations to the research that the reader should be aware. Some (but surely not all) of these limitations are discussed below.

The regression results in some instances (Resource industry group) lack analytical power. The decision was made to disaggregate the dataset (337 transactions) in total to 4 industry segment groups. This decision was based on the fact that each sub segment had its own industry dynamics (industry drivers, wave dynamics and shock events that were different for each sub segment) and as a result the analysis with all transactions lumped together for certain techniques was providing unnecessary noise, resulting in relatively poor results. Thus, the decision was made for certain analytical procedures to disaggregate the dataset. As a result of separating the analysis into sub segments, degrees of freedom were reduced (sample sized reduced) which had the result in certain instances of reducing the power of those analytical procedures. Alternatively, the approach could have been to architect multivariate models with multiple interactive variables (with four times the number of variables that had sub segment specific tendencies resulting in dozens of combinations of new variables) to isolate and control the cross industry effects. For the sake of parsimony the decision was made that it was best to just disaggregate and run the analytics as separate industry segments and then be mindful of the

limitations in the subsequent analysis. Aggregated results are provided in the Appendix for additional review and analysis.

Continuing with study's limitations, the study relies heavily on the measurement of semi-strong measures (CARs and BHARs returns). For reasons discussed above these measures for some purposes are superior to weak form measures of return that are also included in the analysis. However, CARs and BHARs are not perfect either. They both rely on methodological assumptions and are highly sensitive to what indices (or representative company) that is being selected to benchmark these abnormal forms of return. BHARs and CARs are always going to be sensitive to the benchmark company and indices that are selected and as a results have a risk of providing less than reliable results. See Barber and Lyon, (Barber and Lyon, 1997) for a rich discussion on the benefits and limitations of using various measures of returns.

Another limitation of the study is in the design of the Transacting and Executing (T&E) variable. Unlike for short range announcement returns (the proxy variables for S&I) and long-term post-close variables (the proxy variable for R&I) which both benefit from a rich literature of how to calculate and model, the T&E variables are more of a creation of the author. Discussed previously, the -30, +30 post-closing timing interval should be a fine specification for the T&E impacts, however, this is a previously untested assumption. One of the reasons why this issue has not surfaced in the literature is perhaps the fact that most prior work done in acquirers M&A performance has not dealt with differences across closing dates and announcement dates. Additionally, little work has been done around impacts of lags between these critical dates so the period between deal announcement and up to and immediately following deal closing (where critical T&E functions are being performed) few researchers have made any effort to isolate and quantify this critical component in their studies. This author feels strongly that a -30, +30 post-close window is the most appropriate method to measure T&E effectiveness based off of the activities being performed and equally important is the markets understanding (through disclosure events required as part of the transaction) of what activities are being performed during that window. Based on one's sharing of that belief will dictate how big of a limitation this is or not.

An additional limitation is the assumption of the effectiveness of proxy measures for the ABDC categories. Each ABDC category is quantified as a specific return period over a deal lifecycle. The specified deal windows (S&I -3, +3, T&E -30, +30 and R&I 0, +360) are argued to be proxy measurements for the effectiveness of the company at performing activities within that time window. Although this not entirely a wild assumption and a similar theoretical leap is often made in empirical work where you are attempting to measure an abstract construct, nonetheless it is a limitation and worth noting.

A final limitation worth noting involves the issue of generalizability. This study evaluates 337 acquisitions involving public energy companies between 1995 and 2014. An added condition is also provided that these transactions have at least a 30 day lag between the dates when they are announced and the dates when the transaction closes. Even within the data set of regulated energy companies, material industry segment differences were apparent. The differences were material enough to justify splitting the data set into industry segments to better analyze the data and provided for meaningful results for certain analytical techniques. The generalizability of results taken from a dataset that is somewhat nuanced is a valid concern. However, domains where these results would appear to be best applied would most likely be industries with high levels of regulation (telecom, banking, insurance) and industries where there is much state by state variation in terms of rules, regulations or standards of operations in addition to industries where transaction deal lifecycles tend to be lengthy with a relatively long lag between deal announcement and transaction closing. To the extent that the industry being evaluated had similar complexity and regulatory dynamics these results should be quite applicable.

Future Research

In addition to providing some rather interesting findings and basis for the discussion above, this Dissertation provides a solid empirical analysis of the ABDC capabilities

as evidenced in a public company, regulated energy acquisition setting. The project does point directly towards some areas worth future research.

Firstly, the methodology and adapted ABDC framework designed here should be applied to another industry setting. Whereas the results provided in this Dissertation are specific to the regulated energy industry, additional industries should be identified to apply the research design here to validate the findings. As stated above, the banking, insurance or telecom industry could be likely candidates although they may not benefit from the deal volume necessary to provide an adequate sampling for rigorous empirics. Alternatively, identifying any M&A transaction with a material lag between announcement and closing could be a viable approach if attempting to look at a cross industry project.

Secondly, as a result of the magnitude of the value destruction occurring during the first 360 days post-close, a richer analysis purely on the R&I elements of a deal transaction is justified. Although these findings of large scale value erosion (after short-term gains at announcement and closing) are not surprising, the magnitude of the reduction is something of concern to practitioners. Additionally, the issue of whether this value erosion is really only a one year issue (as companies cycle through one time financial charges including deal and integration expenses in hopes of positive future returns) or perhaps are these problems symptomatic of continued losses for multiple years post-close.

Thirdly, this field of research would benefit from some specific case study research focused on specific performance attributes of ABDC capabilities of companies who are deemed to be good. This analysis has identified the companies that perform well at S&I, T&E and R&I and what are some of the factors that drive performance difference. But what is less clear is what specifically the better acquirers are doing in each of the ABDC categories purposefully to be performing well. A case study approach working with a few Top Performing acquirers would be the most appropriate manner to address this opportunity.

Summary

M&A research has consistently shown that value is destroyed for a majority of acquirers. Despite initial small positive gains at deal announcement, within a year of closing the transaction a majority of acquirers experience overall negative returns. Nevertheless, the constant pressures to grow leave company leaders few other viable options than pursuing M&A. This ever present cycle of value destruction is of interest to both scholars and practitioners. Of interest is what can be done differently by the acquirer to prevent the inevitable value erosion from occurring.

To investigate this question, the author developed an adapted version of the Acquisition Based Dynamic Capabilities (ABDC) framework, a theoretical extension of Dynamic Capability theory (itself an extension of "The Resource Based View of the Firm"). The framework was helpful in identifying what corporate capabilities contribute to value creation when viewed through the lens of M&A. The adapted ABDC framework provided a means to quantify the differing impacts to value creation among the M&A capabilities of "Selecting and Identifying", "Transacting and Executing" and "Reconfiguring and Integrating" throughout the M&A deal lifecycle.

The empirical study utilized 337 regulated energy public company transactions closed between 1995 and 2014. This industry is appropriate to study the application of this theory as it benefits from long dated deal timelines and specific milestone announcement events (deal announcement, regulatory approval, financial closing, etc.) providing clear points of delineation for measurement purposes. Performance was measured using weak and semi-strong specifications with a "golden set" of measures identified. Additionally, the impacts from shock waves, bandwagon effects, management traits, financial factors, deal complexity and other relevant factors were all evaluated to test for their each ABDC capability across the analyzed transactions.

Consistent with prior research, the results found that despite many acquirers receiving some positive value accretion from announcement and short-term post-closing returns, results suggest larger one year post-close reductions in value eclipsed previous gains for most

acquirers. The results validate the importance of the Reconfiguring and Integrating phase of an acquisition. Additionally, the stark differences between Top and Poor performers during the R&I phase was identified. Comparisons to Top and Poor Performers provide a clear set of recommendations for future energy industry acquirers and a list of Dos and Don'ts on how best to navigate the Reconfiguring and Integrating phase of a transaction was provided.

This research provides a meaningful contribution to both M&A researchers (by providing a needed empirical study and operationalization of the theoretical ABDC framework) in addition to M&A practitioners (by providing a better understanding of what capabilities impact value creation through a regulated energy M&A transaction).

APPENDIX I: SUPPORTING CORRELATION STATISTICS

Table 28: Correlation Matrix – All

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Like Buying Like Businesses	1													**1**
Lag from Critical Reg Date	.305**	1												**2**
Approval Cycle	.062	-.383**	1											**3**
Stock Deal	.164**	.130*	.245**	1										**4**
Announced During a Recession	-.030	-.160**	-.019	-.027	1									**5**
Announced During a Merger Wave	.001	-.206**	.104	-.060	.505**	1								**6**
Experienced M&A Team	.136*	.493**	.010	.214**	-.210**	-.100	1							**7**
Company Pressured to Transact	.086	.311**	-.117*	.114*	-.097	-.104	.113*	1						**8**
First Deal For Team	.043	.113*	.133*	.059	-.102	.000	.487**	-.272**	1					**9**
Critical Deal for Acquirer	.133*	.150**	.119*	.395**	-.056	-.086	.212**	.073	.148**	1				**10**
Multi State Transaction	.106	.233**	.044	.334**	-.082	-.048	.260**	.112*	.097	.638**	1			**11**
Overlapping States	-.064	-.029	-.199**	-.283**	.036	.023	-.119*	-.043	-.126*	-.558**	-.547**	1		**12**
Multi Business Segment Transaction	-.243**	-.232**	.296**	.155**	-.067	.052	-.056	.003	.092	.272**	.219**	-.282**	1	**13**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 29: Correlation Matrix – Leaders

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Like Buying Like Businesses	1													**1**
Lag from Critical Reg Date	.476**	1												**2**
Approval Cycle	-.041	-.490**	1											**3**
Stock Deal	.175	.176	.342**	1										**4**
Announced During a Recession	-.137	-.107	-.007	.091	1									**5**
Announced During a Merger Wave	.079	-.165	.094	-.147	.361**	1								**6**
Experienced M&A Team	.023	.280*	.148	.122	-.229*	-.126	1							**7**
Company Pressured to Transact	.110	.476**	-.163	.310**	-.120	-.224*	.273*	1						**8**
First Deal For Team	-.020	-.148	.205	-.190	-.085	-.085	.370**	-.289**	1					**9**
Critical Deal for Acquirer	.113	.076	.360**	.337**	.048	-.054	.237*	.164	.079	1				**10**
Multi State Transaction	.219*	.230*	.212	.410**	.029	-.074	.172	.250*	-.112	.681**	1			**11**
Overlapping States	-.216	-.048	-.317**	-.357**	-.003	.102	-.040	-.213	.014	-.596**	-.640**	1		**12**
Multi Business Segment Transaction	-.322**	-.408**	.541**	.096	.010	.010	-.043	-.095	-.051	.280*	.118	-.200	1	**13**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 30: Correlation Matrix – Laggards

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Like Buying Like Businesses	1													**1**
Lag from Critical Reg Date	.302**	1												**2**
Approval Cycle	.081	-.269*	1											**3**
Stock Deal	.308**	.234*	.126	1										**4**
Announced During a Recession	.155	-.210	.166	-.031	1									**5**
Announced During a Merger Wave	-.003	-.135	.061	-.096	.310**	1								**6**
Experienced M&A Team	.140	.742**	-.111	.100	-.219*	-.151	1							**7**
Company Pressured to Transact	.099	.102	.103	.177	-.094	-.001	-.061	1						**8**
First Deal For Team	-.005	.435**	-.037	.006	-.127	-.088	.581**	-.233*	1					**9**
Critical Deal for Acquirer	.153	.149	-.133	.446**	.048	-.078	.054	-.126	.060	1				**10**
Multi State Transaction	.127	.063	-.064	.328**	-.069	-.102	.024	-.086	.014	.797**	1			**11**
Overlapping States	.012	-.129	.078	-.183	.083	.003	-.189	.112	-.262*	-.571**	-.633**	1		**12**
Multi Business Segment Transaction	-.243*	-.073	.195	.115	-.151	-.104	-.009	.202	.068	.132	.135	-.173	1	**13**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 31: Correlation Matrix – Industry Group 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Like Buying Like Businesses	1													**1**
Lag from Critical Reg Date	-.237	1												**2**
Approval Cycle	.276	-.068	1											**3**
Stock Deal	.446**	-.062	-.008	1										**4**
Announced During a Recession	.166	-.243	.173	.135	1									**5**
Announced During a Merger Wave	-.123	-.259	-.094	-.055	.504**	1								**6**
Experienced M&A Team	.c	.c	.c	.c	.c	.c	.c							**7**
Company Pressured to Transact	-.275	.272	-.074	.020	-.142	.093	.c	1						**8**
First Deal For Team	.c	.c	.c	.c	.c	.c	.c	.c	.c					**9**
Critical Deal for Acquirer	.197	.019	-.068	.363*	-.048	-.151	.c	-.075	.c	1				**10**
Multi State Transaction	.214	-.007	.038	.140	-.223	-.174	.c	-.157	.c	.781**	1			**11**
Overlapping States	.119	-.040	.058	-.047	.108	.123	.c	-.045	.c	-.712**	-.711**	1		**12**
Multi Business Segment Transaction	-.421**	.215	-.232	-.188	-.048	-.151	.c	.023	.c	.337*	.415**	-.506**	1	**13**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

c. Cannot be computed because at least one of the variables is constant.

Table 32: Correlation Matrix – Industry Group 2

	1	2	3	4	5	6	7	8	9	10	11	12	13
Like Buying Like Businesses	1												
Lag from Critical Reg Date	.056	1											
Approval Cycle	.123	.008	1										
Stock Deal	.029	-.072	.189	1									
Announced During a Recession	-.064	-.194	.016	-.047	1								
Announced During a Merger Wave	-.002	-.218	-.002	-.062	.460**	1							
Experienced M&A Team	-.151	-.207	.141	.378**	-.226*	-.241*	1						
Company Pressured to Transact	.169	.232*	.066	.136	-.226*	-.153	.013	1					
First Deal For Team	-.111	-.095	.059	.112	-.117	-.124	.515**	-.197	1				
Critical Deal for Acquirer	.041	-.066	-.113	.264*	-.002	-.194	.095	.095	.171	1			
Multi State Transaction	-.088	-.256*	-.066	.268*	.142	.025	.077	.138	.134	.520**	1		
Overlapping States	-.086	.119	-.130	-.217	.041	.078	-.029	-.088	-.137	-.476**	-.436**	1	
Multi Business Segment Transaction	-.231*	.005	.072	.201	-.144	-.077	.254*	.125	.098	.301**	.294**	-.290*	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 33: Correlation Matrix – Industry Group 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Like Buying Like Businesses	1													**1**
Lag from Critical Reg Date	.321**	1												**2**
Approval Cycle	-.097	.066	1											**3**
Stock Deal	.159	.332**	.505**	1										**4**
Announced During a Recession	.127	-.074	-.113	-.034	1									**5**
Announced During a Merger Wave	-.007	-.216**	.072	-.123	.650**	1								**6**
Experienced M&A Team	.160	.805**	.106	.230**	-.225**	-.242**	1							**7**
Company Pressured to Transact	.095	.297**	-.012	.160	.034	-.120	.161	1						**8**
First Deal For Team	.002	.278**	.106	.030	-.083	-.089	.370**	-.365**	1					**9**
Critical Deal for Acquirer	.238**	.433**	.187*	.385**	-.074	-.158	.344**	.175*	.147	1				**10**
Multi State Transaction	.158	.342**	.230**	.394**	-.070	-.101	.362**	.164	.006	.680**	1			**11**
Overlapping States	-.142	-.187*	-.193*	-.276**	-.070	.084	-.176*	-.063	-.126	-.517**	-.522**	1		**12**
Multi Business Segment Transaction	-.375**	-.147	.220**	.097	-.081	.010	-.175*	.002	.075	.037	.077	-.013	1	**13**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 34: Correlation Matrix – Industry Group 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	
Like Buying Like Businesses	1													**1**
Lag from Critical Reg Date	-.145	1												**2**
Approval Cycle	.252*	-.223	1											**3**
Stock Deal	-.019	-.054	.354**	1										**4**
Announced During a Recession	-.064	-.233	-.216	-.002	1									**5**
Announced During a Merger Wave	.153	-.380**	.122	-.003	.492**	1								**6**
Experienced M&A Team	-.149	.110	.112	-.023	-.158	.257*	1							**7**
Company Pressured to Transact	-.119	.148	-.143	.012	-.039	-.056	-.119	1						**8**
First Deal For Team	-.015	.020	.216	-.004	-.110	.196	.696**	-.312**	1					**9**
Critical Deal for Acquirer	-.028	-.111	.464**	.550**	-.085	.146	.070	-.105	.147	1				**10**
Multi State Transaction	-.119	-.028	.415**	.372**	-.203	.066	.152	-.024	.237*	.623**	1			**11**
Overlapping States	.123	.013	-.329**	-.397**	.119	-.094	-.040	.020	-.082	-.639**	-.728**	1		**12**
Multi Business Segment Transaction	.039	-.029	.511**	.372**	-.079	.248*	.089	.098	.160	.623**	.475**	-.556**	1	**13**

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 35: Dependent Variable Correlation Matrix – All Transactions

Correlation Matrix - All Transactions

N-337	Like Buying Like Businesses	Lag from Critical Reg Date	Approval Cycle	Stock Deal	Announced During a Recession	Closed During a Recession	Announced During a Wave	Experienced M&A Team	Company Pressured to Transact	First Deal For Team	Critical Deal for Acquirer	Multi State Transaction	Overlapping States	Multi Business Segment
SimRet_An_1day	0.009	0.084	-0.098	0.014	-0.076	-0.065	0.008	-0.038	-0.028	0.038	-0.021	-0.003	0.025	-0.058
SimRet_An_3day	0.044	0.020	-0.086	-0.036	-0.093	-0.072	-0.003	-0.064	0.002	0.066	-0.040	-0.055	-0.007	-0.075
SimRet_An_5day	0.042	-0.005	-0.074	-0.041	-0.074	-.119*	0.007	-0.043	-0.031	0.028	-0.028	-0.044	-0.011	-0.061
SimRet_An_10day	-0.028	-0.016	-0.035	0.043	-0.079	-.110*	-0.066	-0.089	-0.039	0.059	-0.105	-0.094	0.061	-0.039
SimRet_An_30day	0.028	-0.024	-0.044	-0.017	-0.079	-0.051	-0.060	-0.084	-0.022	0.038	-0.044	-0.064	0.077	0.007
SimRet_An_180day	0.017	-.120*	0.062	-0.091	-0.058	-0.096	-.140*	-0.081	-0.041	0.076	-0.106	-.144**	0.086	-0.083
SimRet_An_270day	0.036	-0.043	0.075	0.001	-.122*	-.139*	-0.093	-0.035	-0.039	0.068	-0.038	-0.078	0.043	-0.085
SimRet_An_360day	-0.016	-0.070	0.062	-0.025	-0.070	-.129*	-.124*	-0.087	-0.096	0.053	-0.086	-.113*	0.092	-.123*
CAR_An_1day	-0.006	0.099	-0.092	0.025	-0.065	-0.075	0.009	-0.024	-0.034	0.032	-0.030	-0.001	0.037	-0.066
CAR_An_3day	-0.003	0.013	-0.099	-0.049	-0.084	-0.080	-0.016	-0.051	-0.006	0.048	-0.075	-0.082	0.021	-0.060
CAR_An_5day	0.003	0.001	-0.106	-0.051	-0.056	-.124*	0.004	-0.007	-0.035	-0.006	-0.066	-0.080	0.006	-0.068
CAR_An_10day	-0.080	-0.010	-0.050	0.030	-0.089	-.108*	-0.073	-0.060	-0.059	0.044	-.124*	-.112*	0.087	-0.041
CAR_An_30day	0.027	0.002	-0.054	-0.036	-0.087	-0.076	-0.035	-0.065	-0.032	0.026	-0.079	-0.098	0.104	-0.034
CAR_An_180day	0.015	-0.072	0.031	-0.100	-0.061	-0.055	-0.101	-0.088	-0.045	0.068	-.151**	-.148**	.121*	-0.104
CAR_An_270day	0.018	-0.020	0.055	-0.008	-0.078	-0.061	-0.082	-0.061	-0.046	0.072	-0.082	-0.075	0.078	-.111*
CAR_An_360day	-0.045	-0.048	0.039	-0.035	0.023	-0.011	-.119*	-0.093	-0.092	0.032	-.124*	-0.101	.115*	-.129*
BHAR_An_1day	0.008	0.085	-0.077	0.033	-0.042	-0.054	0.008	-0.071	-0.010	0.096	-0.033	-0.031	0.029	-0.065
BHAR_An_3day	0.017	-0.026	-0.053	-0.053	-0.032	-0.043	-0.067	-0.096	-0.007	0.104	-0.095	-0.094	0.041	-0.034
BHAR_An_5day	0.006	-0.033	-0.053	-0.057	-0.008	-0.084	-0.051	-0.051	-0.035	0.047	-0.079	-0.087	0.012	-0.046
BHAR_An_10day	-0.089	-0.057	-0.038	0.016	-0.051	-0.050	-.120*	-0.088	-0.063	0.056	-.154**	-.124*	0.099	-0.022
BHAR_An_30day	-0.003	-0.054	-0.055	-0.024	-0.009	-0.001	-0.058	-0.091	-0.049	0.010	-.108*	-.121*	.130*	-0.013
BHAR_An_180day	-0.008	-.142**	0.057	-0.092	-0.064	-0.044	-.149**	-.116*	-0.054	0.099	-.167**	-.165**	.137*	-0.083
BHAR_An_270day	-0.005	-0.084	0.091	-0.009	-0.080	-0.061	-.138*	-0.094	-0.046	0.101	-0.095	-.108*	0.090	-0.100
BHAR_An_360day	-0.071	-0.095	0.076	-0.010	-0.015	-0.042	-.168**	-0.104	-0.076	0.060	-.123*	-.124*	.119*	-0.103
SimRet_Clsd_1day	0.077	0.082	0.000	0.053	-0.002	-0.058	0.069	0.058	0.021	-0.027	0.082	0.086	-0.039	-0.013
SimRet_Clsd_3day	0.055	0.082	-0.026	0.004	-.159**	-.177**	0.062	0.023	0.031	-0.030	0.071	0.073	-0.035	-0.017
SimRet_Clsd_5day	0.060	0.075	-0.023	-0.009	-.196**	-.203**	0.061	0.005	0.028	-0.024	0.004	0.058	0.017	-0.055
SimRet_Clsd_10day	0.020	0.048	-0.063	-0.041	-.111*	-.168**	0.006	0.057	-0.042	-0.062	0.011	0.027	0.004	-0.063
SimRet_Clsd_30day	-0.026	0.048	-0.046	-0.001	-0.101	-.174**	-0.027	-0.031	-0.057	0.040	0.035	0.023	0.038	-0.100
SimRet_Clsd_180day	-0.006	-0.033	0.043	0.001	-0.088	-.210**	-0.102	0.009	-0.053	0.097	-0.052	-0.013	-0.023	-.127*
SimRet_Clsd_270day	0.015	-0.051	0.028	-0.043	-0.079	-.222**	-.129*	0.000	-0.072	0.066	-0.061	-0.054	0.034	-.152**
SimRet_Clsd_360day	-0.052	-0.045	0.019	-0.051	0.027	-.162**	-0.100	-0.049	-0.040	0.077	-0.105	-0.052	0.054	-.125*
CAR_Clsd_1day	0.090	0.079	0.000	0.038	0.029	-0.010	0.076	0.037	0.024	-0.015	0.076	0.068	-0.050	-0.006
CAR_Clsd_3day	0.034	0.069	-0.047	0.007	-0.033	-0.021	0.088	0.041	0.046	-0.040	0.083	0.093	-0.078	0.003
CAR_Clsd_5day	0.042	0.067	-0.057	0.011	-0.051	-0.036	0.076	0.015	0.057	-0.026	-0.004	0.045	-0.011	-0.034
CAR_Clsd_10day	0.024	0.073	-.107*	-0.032	-0.069	-0.065	0.071	0.066	-0.009	-0.063	0.021	0.054	-0.022	-0.025
CAR_Clsd_30day	-0.030	0.080	-0.078	0.015	-.118*	-.107*	0.040	-0.025	-0.012	0.056	0.049	0.066	-0.013	-0.063
CAR_Clsd_180day	0.001	0.013	0.039	0.035	-0.054	-0.022	-0.015	0.016	-0.015	0.083	-0.054	0.027	-0.023	-.119*
CAR_Clsd_270day	0.011	0.010	0.027	0.000	-0.025	-0.024	-0.052	0.007	-0.056	0.033	-0.048	0.012	0.035	-.131*
CAR_Clsd_360day	-0.055	-0.017	0.013	-0.030	0.071	0.028	-0.047	-0.042	-0.038	0.046	-0.101	-0.011	0.061	-.124*
BHAR_Clsd_1day	0.064	.118*	-0.001	0.066	0.018	-0.027	.118*	0.067	0.038	-0.048	0.085	0.104	-0.097	-0.003
BHAR_Clsd_3day	0.005	0.055	-0.046	0.028	-0.073	-0.044	0.106	0.030	0.070	-0.028	0.025	0.046	-0.047	-0.026
BHAR_Clsd_5day	0.018	0.051	-0.058	0.017	-0.084	-0.037	0.088	0.025	0.073	-0.040	-0.034	0.016	-0.003	-0.048
BHAR_Clsd_10day	0.003	0.069	-.129*	0.012	-0.069	-0.064	0.104	0.088	0.003	-0.102	0.032	0.061	-0.001	-0.023
BHAR_Clsd_30day	-0.025	0.018	-0.061	0.013	-.152**	-.124*	0.037	-0.008	-0.031	0.045	0.055	0.049	0.002	-0.076
BHAR_Clsd_180day	0.023	-0.015	0.069	0.033	-0.106	-0.076	-0.055	0.018	-0.015	0.091	-0.053	-0.003	-0.002	-.132*
BHAR_Clsd_270day	0.024	-0.027	0.088	0.021	-0.067	-.117*	-0.092	0.006	-0.057	0.046	-0.061	-0.040	0.062	-.134*
BHAR_Clsd_360day	-0.040	-0.067	0.087	0.018	0.003	-0.048	-0.084	-0.052	-0.035	0.078	-0.103	-0.064	0.069	-.133*

****. Correlation is significant at the 0.01 level (2-tailed).**

***. Correlation is significant at the 0.05 level (2-tailed).**

Table 36: Dependent Variable Correlation Matrix – Leaders

Correlation Matrix - Leaders

N=87	Like Buying Like Businesses	Lag from Critical Reg Date	Approval Cycle	Stock Deal	Announced During a Recession	Closed During a Recession	Announced During a Wave	Experienced M&A Team	Company Pressured to Transact	First Deal For Team	Critical Deal for Acquirer	Multi State Transaction	Overlapping States	Multi Business Segment
SimRet_An_1day	-0.020	0.091	-0.022	0.019	-0.147	-0.055	0.027	-0.142	0.039	0.114	-0.077	-0.047	0.059	-0.020
SimRet_An_3day	0.070	0.003	-0.009	-0.145	-0.091	0.104	0.048	-0.123	0.068	0.042	-0.138	-0.120	-0.028	-0.051
SimRet_An_5day	0.023	-0.080	0.018	-0.185	-0.029	-0.032	0.042	-0.161	-0.009	0.020	-0.124	-0.092	-0.026	-0.032
SimRet_An_10day	-0.098	0.053	-0.010	0.053	-0.176	-0.099	-0.006	-.215*	-0.031	0.095	-0.155	-0.107	0.069	-0.042
SimRet_An_30day	0.000	0.035	-0.057	-0.025	-.266*	-0.030	0.009	-.227*	0.043	0.158	-0.091	-0.030	0.019	-0.026
SimRet_An_180day	-0.116	-.211*	0.047	-0.154	-0.029	-0.030	-0.191	-0.202	-0.044	0.186	-.235*	-.228*	0.166	-0.072
SimRet_An_270day	-0.069	-0.066	0.060	0.041	-0.061	-0.074	-0.143	-0.107	-0.044	0.174	-0.140	-0.150	0.124	-0.062
SimRet_An_360day	-0.139	-0.087	0.058	-0.012	-0.028	-0.065	-0.201	-0.155	-0.157	0.155	-0.195	-0.188	0.174	-0.132
CAR_An_1day	-0.016	0.104	-0.028	0.040	-0.124	-0.022	0.031	-0.108	0.044	0.117	-0.075	-0.054	0.034	-0.020
CAR_An_3day	0.052	0.028	-0.016	-0.103	-0.142	0.074	0.086	-0.087	0.114	0.043	-0.099	-0.105	-0.100	0.013
CAR_An_5day	0.011	-0.035	0.005	-0.145	-0.056	-0.057	0.099	-0.137	0.078	0.041	-0.079	-0.072	-0.152	0.036
CAR_An_10day	-0.138	0.079	-0.042	0.096	-0.209	-0.092	0.007	-0.193	-0.007	0.110	-0.101	-0.086	-0.021	0.008
CAR_An_30day	0.061	0.106	-0.078	0.056	-.311**	-0.056	0.101	-0.195	0.044	0.088	-0.058	-0.047	-0.043	-0.054
CAR_An_180day	-0.083	-0.155	0.012	-0.119	-0.084	-0.013	-0.172	-0.193	-0.073	0.165	-0.191	-0.193	0.131	-0.071
CAR_An_270day	-0.061	-0.050	0.041	0.033	-0.083	-0.080	-0.137	-0.136	-0.059	0.179	-0.113	-0.136	0.100	-0.063
CAR_An_360day	-0.129	-0.077	0.056	-0.017	-0.021	-0.055	-0.190	-0.158	-0.154	0.139	-0.174	-0.168	0.155	-0.119
BHAR_An_1day	-0.024	0.107	0.008	0.049	-0.095	-0.024	0.040	-0.132	0.056	0.149	-0.096	-0.102	0.066	-0.014
BHAR_An_3day	0.030	-0.005	0.037	-0.064	-0.096	0.070	0.073	-0.079	0.118	0.085	-0.130	-0.159	-0.060	0.048
BHAR_An_5day	0.011	-0.060	0.070	-0.062	-0.059	-0.050	0.061	-0.113	0.039	0.051	-0.086	-0.096	-0.120	0.102
BHAR_An_10day	-0.144	0.040	-0.004	0.111	-.214*	-0.045	-0.011	-0.197	-0.022	0.115	-0.124	-0.119	0.001	0.015
BHAR_An_30day	0.026	0.051	-0.010	0.064	-.269*	0.048	0.073	-0.196	0.007	0.082	-0.093	-0.117	0.022	-0.045
BHAR_An_180day	-0.116	-0.169	0.080	-0.094	-0.148	-0.038	-0.179	-0.197	-0.086	0.201	-.214*	-0.203	0.146	-0.084
BHAR_An_270day	-0.104	-0.078	0.107	0.047	-0.124	-0.048	-0.154	-0.171	-0.067	.221*	-0.140	-0.159	0.110	-0.073
BHAR_An_360day	-0.164	-0.099	0.111	0.039	-0.061	-0.052	-0.202	-0.170	-0.154	0.161	-0.171	-0.175	0.155	-0.087
SimRet_Clsd_1day	0.148	0.089	0.061	0.087	0.065	0.019	0.106	0.039	0.022	-0.030	0.135	0.109	-0.060	0.011
SimRet_Clsd_3day	0.120	0.087	0.069	0.046	-0.102	-0.090	0.154	-0.008	0.047	-0.047	0.116	0.120	-0.058	0.012
SimRet_Clsd_5day	0.092	0.121	0.085	0.058	-0.116	-0.077	0.117	0.040	0.015	-0.064	0.052	0.070	-0.004	-0.038
SimRet_Clsd_10day	-0.003	0.049	0.021	-0.051	0.020	-0.073	0.051	0.103	-0.056	-0.129	0.071	0.062	0.005	-0.034
SimRet_Clsd_30day	-0.096	0.012	0.032	0.033	0.043	-0.115	-0.089	-0.090	-0.088	0.055	0.020	-0.036	0.118	-0.085
SimRet_Clsd_180day	-0.086	-0.153	0.146	0.010	-0.018	-0.069	-0.166	-0.094	-0.034	0.181	-0.119	-0.067	0.012	-0.005
SimRet_Clsd_270day	-0.021	-0.167	0.164	-0.026	-0.028	-0.129	-0.197	-0.074	-0.103	0.149	-0.112	-0.072	0.053	-0.083
SimRet_Clsd_360day	-0.146	-0.135	0.112	-0.130	0.097	-0.113	-0.185	-0.142	-0.098	0.217	-0.184	-0.123	0.129	-0.048
CAR_Clsd_1day	0.142	0.107	0.025	0.044	0.096	0.045	0.113	0.056	0.021	-0.052	0.118	0.104	-0.074	0.024
CAR_Clsd_3day	0.073	0.057	0.005	-0.004	-0.024	0.032	0.106	0.029	0.032	-0.065	0.100	0.095	-0.116	0.045
CAR_Clsd_5day	0.062	0.118	-0.001	0.020	-0.048	0.069	0.078	0.080	0.005	-0.096	0.019	0.017	-0.054	-0.001
CAR_Clsd_10day	0.003	0.047	-0.057	-0.078	0.005	-0.041	0.058	0.108	-0.034	-0.131	0.062	0.043	-0.025	0.013
CAR_Clsd_30day	-0.093	0.044	-0.028	0.039	0.006	-0.084	-0.072	-0.096	-0.057	0.074	0.026	-0.035	0.079	-0.038
CAR_Clsd_180day	-0.054	-0.100	0.139	0.006	0.011	0.017	-0.124	-0.102	0.014	0.201	-0.110	-0.062	0.000	-0.014
CAR_Clsd_270day	-0.011	-0.114	0.149	-0.043	0.012	-0.039	-0.176	-0.112	-0.080	0.178	-0.117	-0.081	0.071	-0.103
CAR_Clsd_360day	-0.122	-0.095	0.093	-0.133	0.131	-0.027	-0.149	-0.160	-0.071	0.211	-0.172	-0.100	0.142	-0.044
BHAR_Clsd_1day	0.139	0.123	0.031	0.039	0.045	0.039	0.165	0.067	0.051	-0.069	0.081	0.110	-0.104	0.028
BHAR_Clsd_3day	0.138	0.129	0.019	0.025	-0.158	-0.042	0.196	0.093	0.110	-0.037	0.043	0.091	-0.121	0.004
BHAR_Clsd_5day	0.114	0.191	0.003	0.061	-0.108	0.064	0.168	0.148	0.026	-0.106	-0.016	0.015	-0.073	-0.045
BHAR_Clsd_10day	0.031	0.090	-0.047	-0.026	-0.056	-0.097	0.106	0.161	-0.047	-0.159	0.040	0.007	0.005	-0.004
BHAR_Clsd_30day	-0.074	0.027	-0.018	0.019	-0.063	-0.134	-0.086	-0.123	-0.080	0.112	0.020	-0.031	0.079	-0.066
BHAR_Clsd_180day	-0.060	-0.107	0.201	0.030	-0.023	-0.038	-0.118	-0.123	0.001	.215*	-0.120	-0.060	0.007	-0.032
BHAR_Clsd_270day	-0.021	-0.121	0.199	-0.020	0.026	-0.098	-0.186	-0.148	-0.093	0.193	-0.154	-0.126	0.092	-0.123
BHAR_Clsd_360day	-0.146	-0.098	0.126	-0.056	0.100	-0.072	-0.156	-0.181	-0.052	.235*	-0.176	-0.118	0.153	-0.039

****. Correlation is significant at the 0.01 level (2-tailed).**

***. Correlation is significant at the 0.05 level (2-tailed).**

Table 37: Dependent Variable Correlation Matrix – Laggards

Correlation Matrix - Laggards

N=81	Like Buying Like Businesses	Lag from Critical Reg Date	Approval Cycle	Stock Deal	Announced During a Recession	Closed During a Recession	Announced During a Wave	Experienced M&A Team	Company Pressured to Transact	First Deal For Team	Critical Deal for Acquirer	Multi State Transaction	Overlapping States	Multi Business Segment
SimRet_An_1day	0.086	0.139	-0.160	0.097	-0.035	0.067	0.109	0.004	0.075	-0.143	0.027	-0.047	-0.006	-0.137
SimRet_An_3day	0.144	0.183	-0.209	0.102	-0.129	-0.012	0.048	-0.019	0.034	0.001	-0.036	-0.073	0.038	-.291**
SimRet_An_5day	0.157	0.136	-.232*	0.041	-0.056	0.026	0.080	0.022	0.059	-0.059	-0.070	-0.107	0.087	-.263*
SimRet_An_10day	0.044	0.022	-0.169	0.087	0.004	-0.074	0.029	-0.041	0.046	0.027	-0.111	-0.169	0.067	-0.141
SimRet_An_30day	.222*	0.009	-0.110	-0.049	0.215	0.060	0.064	-0.082	0.116	-0.003	-0.058	-.283*	0.209	-0.060
SimRet_An_180day	.239*	0.038	-0.122	-0.177	0.157	0.044	-0.063	-0.104	-0.008	0.105	-0.166	-0.219	0.153	-.324**
SimRet_An_270day	0.209	0.031	-0.137	-0.152	0.104	0.027	-0.160	-0.096	-0.076	0.111	-0.137	-0.169	0.106	-.294**
SimRet_An_360day	0.139	-0.042	-0.184	-.247*	0.095	-0.032	-0.204	-0.151	-0.003	0.171	-0.144	-0.122	0.100	-.271*
CAR_An_1day	0.018	0.154	-0.188	0.131	0.023	0.050	0.138	0.021	0.051	-0.166	0.020	-0.046	0.066	-0.147
CAR_An_3day	0.078	0.187	-.295**	0.060	-0.112	-0.055	0.046	0.052	-0.011	-0.010	-0.118	-0.128	0.148	-.302**
CAR_An_5day	0.088	0.142	-.269*	0.004	-0.061	0.019	0.103	0.104	0.022	-0.092	-0.138	-0.168	0.182	-.273*
CAR_An_10day	0.027	0.053	-.230*	0.024	-0.085	-0.066	0.108	0.059	0.009	-0.092	-.226*	-.266*	.234*	-0.131
CAR_An_30day	0.174	0.073	-0.108	-0.074	0.007	-0.065	0.177	0.053	0.120	-0.117	-0.129	-.317**	.267*	-0.110
CAR_An_180day	0.186	0.122	-0.129	-0.163	-0.033	0.075	0.135	0.002	0.072	-0.004	-.316**	-.295**	.244*	-.383**
CAR_An_270day	0.150	0.082	-0.121	-0.088	-0.042	0.138	-0.036	-0.011	0.000	0.035	-.260*	-.231*	0.173	-.398**
CAR_An_360day	0.086	-0.017	-0.086	-0.137	-0.021	0.174	-0.088	-0.051	0.067	0.035	-.252*	-0.157	0.184	-.323**
BHAR_An_1day	0.059	0.140	-0.159	0.100	0.020	-0.004	0.055	-0.023	0.011	-0.056	0.058	-0.017	-0.014	-0.116
BHAR_An_3day	0.113	0.124	-0.169	0.007	0.019	-0.001	-0.090	-0.036	-0.038	0.072	0.008	-0.029	-0.001	-0.187
BHAR_An_5day	0.158	0.127	-0.196	-0.110	0.043	0.043	-0.042	0.014	0.009	0.049	-0.031	-0.068	0.028	-.243*
BHAR_An_10day	-0.012	-0.026	-.227*	-0.122	0.132	0.151	-0.123	-0.033	-0.037	-0.014	-0.176	-0.187	0.183	-0.110
BHAR_An_30day	0.097	-0.012	-0.122	-0.131	0.210	0.093	0.018	0.025	0.010	-0.164	-0.162	-.281*	.230*	-0.104
BHAR_An_180day	0.185	-0.002	-0.090	-0.198	0.069	0.187	-0.048	-0.092	0.043	0.106	-.364**	-.299**	.219*	-.398**
BHAR_An_270day	0.137	-0.035	-0.044	-0.103	0.055	0.161	-0.112	-0.092	0.062	0.156	-.279*	-0.217	0.147	-.448**
BHAR_An_360day	0.043	-0.090	-0.037	-0.106	0.071	0.207	-0.170	-0.092	0.107	0.144	-.282*	-0.212	0.190	-.384**
SimRet_Clsd_1day	0.014	0.110	0.001	0.143	-0.067	-0.118	-0.098	0.170	-0.093	-0.001	0.090	0.056	-0.066	-0.009
SimRet_Clsd_3day	0.069	0.060	-0.081	-0.035	-0.030	-0.196	-0.175	-0.035	-0.070	0.118	0.098	0.158	-0.077	0.020
SimRet_Clsd_5day	0.031	-0.045	0.002	-0.053	-.227*	-.356**	-0.121	-0.090	0.105	.224*	0.113	0.100	-0.053	0.097
SimRet_Clsd_10day	0.111	0.094	-0.166	0.015	-0.200	-.260*	-0.069	0.016	-0.066	0.102	0.053	0.027	-0.018	-0.133
SimRet_Clsd_30day	0.185	0.065	-0.028	-0.001	-0.089	-0.021	-0.107	0.010	0.049	0.188	-0.023	-0.001	-0.041	-.291**
SimRet_Clsd_180day	0.093	0.058	-0.083	-0.089	0.028	-0.158	-0.189	0.045	-0.008	0.174	-0.199	-0.030	-0.039	-.341**
SimRet_Clsd_270day	0.138	0.026	-0.097	-0.111	0.085	-0.114	-0.224	-0.080	0.054	0.222	-0.188	-0.038	-0.066	-.318**
SimRet_Clsd_360day	0.037	0.080	-0.146	0.005	0.125	-0.232	-0.157	-0.057	0.039	0.138	-0.104	0.083	-0.080	-0.201
CAR_Clsd_1day	-0.009	0.059	0.134	0.204	0.007	-0.042	-0.060	0.135	-0.054	-0.018	0.116	0.004	-0.068	0.065
CAR_Clsd_3day	-0.148	-0.134	0.127	0.068	0.202	0.091	-0.118	-0.104	0.033	0.018	0.004	0.100	-0.052	0.039
CAR_Clsd_5day	-0.171	-0.169	0.103	0.037	0.074	-0.097	-0.105	-0.138	0.173	0.167	-0.014	0.075	0.001	0.072
CAR_Clsd_10day	-0.054	0.054	-0.183	0.029	-0.065	-0.205	-0.039	0.020	-0.126	0.069	-0.074	-0.047	-0.009	-0.155
CAR_Clsd_30day	0.042	0.119	-0.109	-0.016	-0.144	0.030	0.008	0.079	-0.017	0.102	-0.085	-0.038	-0.042	-.287**
CAR_Clsd_180day	0.063	0.139	-0.061	0.033	-0.019	-0.019	-0.080	0.111	-0.058	0.043	-0.213	-0.045	-0.023	-.365**
CAR_Clsd_270day	0.121	0.109	-0.010	0.066	-0.026	0.046	-0.113	0.038	-0.092	0.009	-0.155	-0.022	-0.051	-.260*
CAR_Clsd_360day	-0.044	0.058	-0.167	-0.002	-0.015	-0.069	-.223*	0.030	-0.141	0.005	-0.145	0.012	0.004	-.228*
BHAR_Clsd_1day	-0.048	0.150	-0.012	.303**	0.010	-0.099	0.024	.335**	-.231*	-.225*	0.039	0.066	-0.071	-0.052
BHAR_Clsd_3day	-.222*	-0.095	-0.053	-0.090	0.187	0.016	-0.126	-0.020	0.044	0.019	-0.103	-0.062	0.050	-0.025
BHAR_Clsd_5day	-.304**	-.231*	0.010	-0.066	0.023	-0.119	-0.116	-0.044	0.194	0.164	-0.112	-0.117	0.107	-0.029
BHAR_Clsd_10day	-0.176	0.089	-.268*	-0.003	0.014	-.227*	-0.003	0.127	-0.071	-0.077	-0.136	-0.107	0.108	-0.176
BHAR_Clsd_30day	-0.066	0.019	-0.110	-0.069	-0.076	-0.006	-0.006	0.130	-0.088	0.023	-0.105	-0.072	0.000	-.303**
BHAR_Clsd_180day	0.089	0.164	-0.090	0.049	-0.018	-0.083	-0.095	0.112	-0.029	0.060	-.226*	-0.073	0.019	-.439**
BHAR_Clsd_270day	0.098	0.098	0.018	0.123	-0.024	-0.037	-0.121	0.054	-0.072	0.046	-0.148	-0.070	0.008	-.300**
BHAR_Clsd_360day	-0.043	0.039	-0.122	0.015	0.023	-0.039	-.253*	0.010	-0.121	0.083	-0.161	-0.055	0.080	-.334**

**** Correlation is significant at the 0.01 level (2-tailed).**

*** Correlation is significant at the 0.05 level (2-tailed).**

APPENDIX II: INDUSTRY AND SEGMENT REGRESSION RESULTS

Selecting and Identifying

Table 38: Selecting and Identifying Abnormal 3 Day (-3, +3) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power			ALL:		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.009	(0.314)		0.059	(2.381)	***	0.4	(1.614)		0.013	(0.362)		0.027	(2.490)	**
Like Buying Like Businesses	0.072	(3.841)	***	-0.026	(-1.718)	*	-0.001	(-0.113)		-0.011	(-0.487)		0.011	(0.225)	
Lag from Critical Reg Date	0.001	(-2.278)	**	0.001	(-1.579)		-0.001	(-0.263)		0.001	(0.709)		-0.001	(-0.140)	
Approval Cycle	-0.001	(-0.460)		0.001	(0.292)		-0.001	(-0.687)		-0.001	(-2.234)	**	-0.001	(-1.711)	*
Stock Deal	-0.141	(-4.994)	***	-0.019	(-0.916)		0.022	(1.595)		-0.006	(-0.296)		0.002	(0.206)	
Announced During a Recession	-0.061	(-0.903)		-0.031	(-1.395)		-0.017	(-0.810)		-0.021	(-0.660)		-0.021	(-1.830)	*
Announced During a Merger Wave				0.007	(0.360)		-0.006	(-0.342)		-0.018	(-0.844)		-0.001	(-0.009)	
Experienced M&A Team	-0.001	(-0.430)		0.014	(0.857)		-0.008	(-0.795)		-0.006	(-0.385)		-0.007	(-1.068)	
Company Pressured to Transact				-0.013	(-0.475)		-0.004	(-0.258)		0.024	(0.881)		-0.002	(-0.161)	
Critical Deal for Acquirer	0.051	(2.211)	**	-0.006	(-0.388)		-0.006	(-0.417)		0.019	(0.837)		-0.005	(-0.624)	
Multi State Transaction	-0.033	(-1.417)		-0.044	(-2.449)	***	-0.011	(-0.742)		0.013	(0.580)		-0.009	(-1.127)	
Overlapping States	0.021	(0.967)		-0.024	(-1.477)		-0.009	(-0.818)		0.012	(0.542)		-0.009	(-1.121)	
Multi Business Segment Transaction	0.01	(0.586)		-0.001	(-0.012)		-0.002	(-0.115)		-0.001	(-0.021)		-0.003	(-0.357)	
Number of Observations (n)	46			75			142			70			336		
R-Square	0.428			0.224			0.047			0.155			0.033		
F	4.437		***	1.513		*	0.534			0.885			0.926		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Table 39: Selecting and Identifying Simple 3 Day (-3, +3) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power			ALL:		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.008	(0.230)		0.063	(2.639)	***	0.59	(2.154)	**	0.18	(0.556)		0.03	(2.538)	**
Like Buying Like Businesses	0.112	(-4.484)	***	-0.022	(-1.503)		-0.003	(-0.201)		-0.013	(-0.707)		0.006	(0.900)	
Lag from Critical Reg Date	-0.001	(-1.870)	*	-0.001	(-2.126)	**	-0.001	(-0.625)		0.001	(1.023)		-0.001	(-0.306)	
Approval Cycle	0.001	(-.266)		0.001	(0.157)		-0.001	(-0.700)		-0.001	(-2.161)	**	-0.001	(-1.622)	
Stock Deal	-0.19	(-5.032)	***	-0.018	(-0.887)		0.025	(1.609)		-0.005	(-0.272)		0.001	(0.097)	
Announced During a Recession	-0.005	(-.225)		-0.053	(-2.469)	**	-0.017	(-0.731)		-0.021	(-0.704)		-0.024	(-2.012)	**
Announced During a Merger Wave				-0.033	(-0.149)		-0.001	(-0.048)		-0.01	(-0.482)		0.001	(0.104)	
Experienced M&A Team	0.007	(-0.415)		0.011	(0.691)		-0.013	(-1.123)		-0.009	(-0.595)		-0.01	(-1.367)	
Company Pressured to Transact				-0.012	(-0.433)		-0.006	(-0.291)		0.012	(0.480)		-0.004	(-0.280)	
Critical Deal for Acquirer	0.061	(2.003)	*	0.001	(0.071)		0.001	(0.066)		0.011	(0.507)		-0.002	(-0.259)	
Multi State Transaction	-0.047	(-1.487)		-0.043	(-2.510)	**	-0.013	(-0.833)		0.014	(0.677)		-0.009	(-1.057)	
Overlapping States	0.013	(.448)		-0.016	(-1.006)		-0.013	(-1.102)		0.004	(0.170)		-0.011	(-1.328)	
Multi Business Segment Transaction	0.004	(.197)		0.003	(0.182)		-0.008	(-0.443)		0.003	(0.160)		-0.006	(-0.694)	
Number of Observations (n)	46			75			142			70			336		
R-Square	0.572			0.258			0.056			0.165			0.036		
F	4.811		***	1.826		*	0.644			0.952			1.017		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Transacting and Executing

Table 40: Transacting and Executing Abnormal 30 Day (-30, +30) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power			ALL:		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.001	(0.003)		0.005	(0.117)		-0.04	(-0.583)		-0.058	(-0.772)		0.01	(0.383)	
Like Buying Like Businesses	0.011	(0.126)		0.015	(0.641)		-0.079	(-2.370)	**	0.049	(1.052)		-0.018	(-1.069)	
Lag from Critical Reg Date	0.001	(0.524)		0.001	(1.314)		0.001	(1.631)		0.001	(0.011)		0.001	(0.640)	
Approval Cycle	0.001	(0.183)		-0.001	(-1.222)		0.001	(1.956)	*	-0.001	(-2.537)	**	-0.001	(-0.521)	
Stock Deal	-0.011	(-0.987)		-0.017	(-0.555)		-0.009	(-0.220)		-0.02	(-0.474)		0.003	(0.141)	
Closed During a Recession	-0.014	(-0.100)		-0.075	(-2.375)	**	-0.109	(-1.977)	**	-0.001	(-0.020)		-0.043	(-1.579)	
Announced During a Merger Wave				0.031	(0.996)		-0.061	(-1.331)		0.006	(0.125)		0.004	(0.209)	
Experienced M&A Team	0.018	(0.292)		-0.019	(-0.790)		-0.063	(-2.175)	**	0.01	(0.288)		-0.022	(-1.160)	
Company Pressured to Transact				-0.036	(-0.862)		-0.04	(-0.843)		-0.009	(-0.143)		-0.018	(-0.608)	
Critical Deal for Acquirer	-0.046	(-0.438)		-0.019	(-0.752)		0.003	(0.761)		0.084	(1.691)	*	0.011	(0.467)	
Multi State Transaction	0.022	(0.224)		0.063	(2.403)	**	0.027	(0.725)		0.024	(0.481)		0.016	(0.769)	
Overlapping States	-0.064	(-0.636)		-0.019	(-0.792)		0.03	(1.008)		0.043	(0.873)		0.002	(0.128)	
Multi Business Segment Transaction	-0.006	(-0.084)		-0.02	(-0.806)		-0.136	(-3.089)	***	0.026	(0.570)		-0.021	(-1.068)	
Number of Observations (n)	46			74			142			70			335		
R-Square	0.038			0.221			0.157			0.147			0.031		
F	0.144			1.468			2.023		**	0.831			0.871		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Table 41: Transacting and Executing Simple 30 Day (-30, +30) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power			ALL:		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.12	(0.084)		0.003	(0.068)		-0.024	(-0.307)		-0.09	(-1.213)		0.006	(0.214)	
Like Buying Like Businesses	-0.029	(-0.305)		0.006	(0.273)		-0.083	(-2.237)	**	0.055	(1.217)		-0.02	(-1.116)	
Lag from Critical Reg Date	0.001	(0.036)		0.001	(1.006)		0.001	(1.466)		-0.001	(-2.041)	**	0.001	(0.679)	
Approval Cycle	0.001	(0.753)		-0.001	(-0.124)		0.001	(1.949)	*	-0.001	(-0.384)		0.001	(0.456)	
Stock Deal	0.038	(0.270)		-0.031	(-0.956)		-0.023	(-0.533)		-0.016	(0.154)		-0.001	(-0.032)	
Closed During a Recession	-0.056	(-0.377)		-0.121	(-3.699)	***	-0.162	(-2.631)	***	-0.064	(-1.121)		-0.087	(-2.960)	***
Announced During a Merger Wave				0.032	(1.029)		-0.095	(-1.861)	*	0.007	(0.154)		-0.016	(-0.705)	
Experienced M&A Team	0.038	(0.563)		-0.019	(-0.781)		-0.081	(-2.474)	**	0.27	(0.761)		-0.022	(-1.183)	
Company Pressured to Transact				-0.105	(-2.456)	**	-0.046	(-0.853)		-0.01	(-0.167)		-0.026	(-0.812)	
Critical Deal for Acquirer	-0.053	(-0.461)		0.007	(0.277)		0.015	(0.359)		0.128	(2.606)	**	0.025	(1.090)	
Multi State Transaction	0.028	(0.261)		0.055	(2.046)	**	0.036	(0.857)		0.014	(0.296)		0.013	(0.572)	
Overlapping States	-0.037	(0.333)		-0.012	(-0.505)		0.044	(1.324)		0.076	(1.571)		0.021	(0.958)	
Multi Business Segment Transaction	-0.023	(-0.278)		-0.044	(-1.740)	*	-0.152	(-3.075)	***	0.004	(0.081)		-0.039	(-1.818)	*
Number of Observations (n)	46			74			142			70			335		
R-Square	0.046			0.324			0.18			0.191			0.056		
F	0.173			2.477		**	2.371		**	1.137			1.608		*

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Reconfiguring and Integrating

Table 42: Reconfiguring and Integrating Abnormal 360 Day (0, +360) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power			ALL:		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	-0.019	(-0.067)		-0.04	(-0.460)		-0.073	(-0.475)		0.123	(0.866)		0.053	(0.846)	
Like Buying Like Businesses	0.468	(2.442)	**	0.076	(1.491)		-0.15	(-2.020)	**	-0.069	(-0.811)		-0.063	(-1.623)	
Lag from Critical Reg Date	0.001	(0.581)		0.001	(1.537)		0.001	(0.839)		0.001	(0.272)		0.001	(0.551)	
Approval Cycle	-0.001	(-0.340)		-0.001	(-0.700)		0.002	(3.034)	***	0.001	(1.435)		0.001	(1.299)	
Stock Deal	-1.052	(-3.612)	***	0.09	(1.295)		-0.035	(-0.398)		0.028	(0.360)		0.011	(0.227)	
Closed During a Recession	0.215	(0.706)		0.046	(0.648)		-0.06	(-0.486)		0.053	(0.502)		0.025	(0.396)	
Announced During a Merger Wave				0.141	(2.054)	**	-0.212	(-2.079)	**	-0.147	(-1.725)	*	-0.041	(-0.831)	
Experienced M&A Team	0.07	(0.509)		-0.137	(-2.531)	**	-0.015	(-0.231)		0.056	(0.848)		-0.022	(-0.564)	
Company Pressured to Transact				-0.172	(-1.846)	*	0.022	(0.203)		0.205	(1.826)	*	-0.007	(-0.101)	
Critical Deal for Acquirer	-0.202	(-0.866)		-0.055	(-0.961)		-0.007	(-0.081)		-0.089	(-0.973)		-0.071	(-1.452)	
Multi State Transaction	-0.108	(-0.491)		0.123	(2.095)	**	0.119	(1.434)		-0.063	(-0.694)		0.077	(1.618)	
Overlapping States	-0.021	(-0.095)		0.02	(0.381)		0.079	(1.178)		-0.152	(-1.689)	*	0.171	(0.381)	
Multi Business Segment Transaction	0.204	(1.225)		-0.081	(-1.471)		-0.459	(-4.665)	***	-0.133	(-1.667)	*	-0.114	(-2.492)	**
Number of Observations (n)	46			74			142			70			335		
R-Square	0.412			0.245			0.198			0.138			0.042		
F	2.526		**	1.676		*	2.676		***	0.774			1.186		

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Table 43: Reconfiguring and Integrating Buy and Hold 360 Day (0, +360) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power			ALL:		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	-0.126	(-0.509)		-0.201	(-1.916)	*	-0.337	(-2.048)	**	-0.044	(-0.278)		-0.052	(-0.790)	
Like Buying Like Businesses	0.518	(3.077)	***	0.142	(2.296)	**	-0.251	(-3.160)	***	-0.008	(-0.083)		-0.058	(-1.425)	
Lag from Critical Reg Date	0.001	(0.678)		0.002	(1.820)	*	0.003	(2.407)	**	0.001	(0.627)		0.001	(0.152)	
Approval Cycle	-0.001	(-0.458)		0.001	(0.160)		0.002	(2.743)	***	0.001	(1.359)		0.001	(2.290)	**
Stock Deal	-0.884	(-3.458)	***	0.114	(1.363)		0.004	(0.471)		0.063	(0.705)		0.059	(1.125)	
Closed During a Recession	-0.165	(-0.618)		0.184	(1.059)		-0.282	(-2.157)	**	0.039	(0.324)		-0.079	(-1.194)	
Announced During a Merger Wave				0.139	(1.669)	*	-0.368	(-3.378)	***	-0.157	(-1.513)		-0.076	(-1.462)	
Experienced M&A Team	-0.14	(-0.115)		-0.059	(-0.894)		-0.075	(-1.081)		0.117	(1.537)		-0.018	(-0.426)	
Company Pressured to Transact				-0.088	(-0.781)		-0.024	(-0.212)		0.227	(1.761)	*	0.019	(0.269)	
Critical Deal for Acquirer	-0.183	(-0.893)		-0.017	(-0241)		-0.006	(-0.069)		-0.098	(-0.936)		-0.058	(-1.130)	
Multi State Transaction	-0.172	(-0.889)		0.069	(0.974)		0.092	(1.041)		-0.045	(-0.434)		0.035	(0.696)	
Overlapping States	-0.019	(-0.094)		0.07	(0.107)		0.089	(1.253)		-0.164	(-1.591)		0.021	(0.446)	
Multi Business Segment Transaction	0.188	(1.284)		-0.184	(-2.754)	***	-0.422	(-4.018)	***	-0.223	(-2.293)	**	-0.145	(-3.014)	***
Number of Observations (n)	46			74			142			70			335		
R-Square	0.439			0.279			0.225			0.174			0.063		
F	2.822		**	1.998		**	3.137		***	1.018			1.813		**

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

Table 44: Reconfiguring and Integrating Simple 360 Day (0, +360) Returns

	Group 1: Resource Based			Group 2: Utility			Group 3: Midstream and Transportation			Group 4: Electric Power			ALL:		
	B	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**	**B**	**t**	**(sig)**
(Constant)	0.258	(0.826)		0.076	(0.787)		0.087	(0.414)		0.278	(1.848)	*	0.176	(2.326)	**
Like Buying Like Businesses	0.564	(2.626)	**	0.079	(1.360)		-0.254	(-2.417)	**	-0.093	(-1.016)		-0.059	(-1.249)	
Lag from Critical Reg Date	-0.002	(-0.746)		0.001	(0.297)		0.002	(1.122)		-0.001	(-0.072)		0.001	(0.186)	
Approval Cycle	0.001	(0.150)		-0.001	(-0.407)		0.002	(2.103)	**	0.001	(1.708)	*	0.001	(1.500)	
Stock Deal	-1.08	(-3.471)	***	0.029	(0.381)		0.038	(0.308)		-0.057	(-0.716)		-0.007	(-0.114)	
Closed During a Recession	-0.197	(-0.626)		-0.22	(-2.810)	**	-0.232	(-1.491)		-0.166	(-1.531)		-0.228	(-3.165)	
Announced During a Merger Wave				0.095	(1.249)		-0.301	(-2.294)	**	-0.401	(-3.847)	***	-0.101	(-1.690)	*
Experienced M&A Team	0.043	(0.285)		-0.079	(-1.266)		-0.036	(-0.407)		0.063	(0.905)		-0.024	(-0.518)	
Company Pressured to Transact				-0.068	(-0.659)		0.019	(0.126)		0.398	(3.105)	***	0.035	(0.406)	
Critical Deal for Acquirer	-0.175	(-0.182)		-0.024	(-0.383)		-0.046	(-0.397)		0.012	(0.132)		-0.072	(-1.235)	
Multi State Transaction	-0.255	(-0.958)		0.096	(1.474)		0.059	(0.520)		-0.083	(-0.897)		0.046	(0.808)	
Overlapping States	-0.054	(-0.222)		0.018	(0.302)		0.012	(0.128)		-0.12	(-1.289)		-0.001	(-0.017)	
Multi Business Segment Transaction	0.269	(1.528)		-0.031	(-0.499)		0.545	(-4.144)	***	-0.198	(-2.254)	**	-0.127	(-2.339)	**
Number of Observations (n)	42			70			123			66			304		
R-Square	0.449			0.223			0.189			0.372			0.075		
F	2.609		**	1.389			2.156		**	2.668		***	1.978		**

t statistics in parenthesis, *Indicates significance at .1, **Indicates significance at .05, ***Indicates significance at .01

APPENDIX III: INDUSTRY QUANTILE REGRESSION RESULTS

Table 45: Selecting and Identifying Quantile Regression Results

-3, +3 Simple Returns	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.018	0.021	-0.840	0.401	-0.014	0.011	-1.246	0.214	0.012	0.009	1.239	0.216	0.038	0.016	2.417	**0.016**	0.065	0.019	3.446	**0.001**
Like Buying Like Businesses	0.001	0.011	0.083	0.934	0.001	0.006	0.241	0.810	0.002	0.005	0.323	0.747	-0.007	0.008	-0.845	0.399	-0.010	0.010	-1.038	0.300
Lag from Critical Reg Date	0.000	0.000	0.009	0.993	0.000	0.000	-0.266	0.790	0.000	0.000	-0.409	0.683	0.000	0.000	0.489	0.625	0.000	0.000	0.204	0.838
Approval Cycle	0.000	0.000	0.183	0.855	0.000	0.000	-0.153	0.879	0.000	0.000	-1.637	0.103	0.000	0.000	-1.305	0.193	0.000	0.000	-1.932	**0.054**
Stock Deal	-0.013	0.014	-0.910	0.364	0.005	0.008	0.582	0.561	-0.002	0.006	-0.274	0.784	-0.007	0.011	-0.691	0.490	0.012	0.013	0.916	0.361
Announced During a Recession	-0.119	0.018	-6.476	**0.000**	-0.023	0.010	-2.270	**0.024**	-0.017	0.008	-2.034	**0.043**	-0.012	0.014	-0.880	0.380	0.056	0.017	3.375	**0.001**
Announced During a Merger Wave	0.010	0.014	0.679	0.498	0.000	0.008	0.034	0.973	0.002	0.006	0.352	0.725	0.004	0.011	0.336	0.737	0.007	0.013	0.527	0.599
Experienced M&A Team	-0.007	0.011	-0.636	0.525	-0.005	0.006	-0.851	0.395	-0.007	0.005	-1.394	0.164	-0.020	0.009	-2.393	**0.017**	-0.023	0.010	-2.202	**0.028**
Company Pressured to Transact	-0.020	0.020	-1.008	0.314	-0.004	0.011	-0.391	0.696	-0.009	0.009	-1.026	0.306	-0.019	0.015	-1.256	0.210	-0.005	0.018	-0.292	0.770
Critical Deal for Acquirer	-0.016	0.014	-1.159	0.247	0.001	0.008	0.190	0.850	0.005	0.006	0.738	0.461	0.007	0.010	0.635	0.526	0.010	0.013	0.828	0.408
Multi State Transaction	-0.017	0.014	-1.271	0.205	-0.011	0.007	-1.454	0.147	-0.009	0.006	-1.543	0.124	-0.011	0.010	-1.051	0.294	0.009	0.012	0.736	0.462
Overlapping States	-0.001	0.013	-0.099	0.921	0.000	0.007	0.058	0.953	0.008	0.006	1.382	0.168	0.015	0.010	1.531	0.127	-0.009	0.011	-0.766	0.444
Multi Business Segment Transaction	-0.006	0.013	-0.441	0.659	0.009	0.007	1.223	0.222	0.004	0.006	0.642	0.521	0.004	0.010	0.408	0.684	0.006	0.012	0.524	0.601

-3, +3 Abnormal Returns	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.035	0.013	-2.669	**0.008**	-0.016	0.008	-1.926	**0.055**	-0.016	0.008	-1.926	**0.055**	0.032	0.009	3.468	**0.001**	0.059	0.013	4.479	**0.000**
Like Buying Like Businesses	0.008	0.007	1.078	0.282	0.008	0.004	1.731	**0.084**	0.008	0.004	1.731	**0.084**	-0.006	0.005	-1.156	0.249	-0.012	0.007	-1.686	**0.093**
Lag from Critical Reg Date	0.000	0.000	1.627	0.105	0.000	0.000	1.801	**0.073**	0.000	0.000	1.801	**0.073**	0.000	0.000	0.127	0.899	0.000	0.000	0.081	0.935
Approval Cycle	0.000	0.000	-0.092	0.927	0.000	0.000	-0.136	0.892	0.000	0.000	-0.136	0.892	0.000	0.000	-1.754	**0.080**	0.000	0.000	-2.552	**0.011**
Stock Deal	-0.009	0.009	-1.026	0.305	-0.001	0.006	-0.113	0.910	-0.001	0.006	-0.113	0.910	-0.008	0.006	-1.244	0.215	-0.007	0.009	-0.773	0.440
Announced During a Recession	-0.121	0.012	-10.308	**0.000**	-0.013	0.007	-1.734	**0.084**	-0.013	0.007	-1.734	**0.084**	0.002	0.008	0.293	0.770	0.052	0.012	4.436	**0.000**
Announced During a Merger Wave	-0.008	0.009	-0.919	0.359	0.003	0.006	0.600	0.549	0.003	0.006	0.600	0.549	0.007	0.006	1.165	0.245	0.006	0.009	0.623	0.534
Experienced M&A Team	0.006	0.007	0.859	0.391	-0.005	0.004	-1.107	0.269	-0.005	0.004	-1.107	0.269	-0.013	0.005	-2.518	**0.012**	-0.016	0.007	-2.261	**0.024**
Company Pressured to Transact	0.009	0.013	0.744	0.457	-0.016	0.008	-2.016	**0.045**	-0.016	0.008	-2.016	**0.045**	-0.012	0.009	-1.400	0.163	-0.024	0.013	-1.936	**0.054**
Critical Deal for Acquirer	-0.010	0.009	-1.138	0.256	-0.006	0.005	-1.157	0.248	-0.006	0.005	-1.157	0.248	0.006	0.006	1.022	0.307	0.009	0.009	0.985	0.325
Multi State Transaction	-0.007	0.009	-0.777	0.438	-0.011	0.005	-2.061	**0.040**	-0.011	0.005	-2.061	**0.040**	-0.008	0.006	-1.398	0.163	-0.013	0.009	-1.523	0.129
Overlapping States	-0.008	0.008	-0.939	0.349	0.000	0.005	0.024	0.981	0.000	0.005	0.024	0.981	0.007	0.006	1.232	0.219	0.012	0.008	1.545	0.123
Multi Business Segment Transaction	-0.002	0.008	-0.256	0.798	0.003	0.005	0.571	0.568	0.003	0.005	0.571	0.568	0.001	0.006	0.220	0.826	0.004	0.008	0.426	0.671

Table 46: Transacting and Executing Quantile Regression Results

-30, +30 Simple Returns	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.140	0.043	-3.282	**0.001**	-0.064	0.028	-2.245	**0.025**	-0.064	0.028	-2.245	**0.025**	0.054	0.026	2.104	**0.036**	0.106	0.033	3.185	**0.002**
Like Buying Like Businesses	0.020	0.023	0.870	0.385	0.007	0.015	0.454	0.650	0.007	0.015	0.454	0.650	0.007	0.014	0.511	0.610	0.025	0.018	1.414	0.158
Lag from Critical Reg Date	0.000	0.000	-0.804	0.422	0.000	0.000	-0.310	0.757	0.000	0.000	-0.310	0.757	0.000	0.000	-0.516	0.606	0.000	0.000	-0.831	0.406
Approval Cycle	0.000	0.000	1.052	0.294	0.000	0.000	1.463	0.145	0.000	0.000	1.463	0.145	0.000	0.000	-1.023	0.307	0.000	0.000	-2.302	**0.022**
Stock Deal	-0.066	0.029	-2.248	**0.025**	-0.011	0.019	-0.581	0.562	-0.011	0.019	-0.581	0.562	-0.018	0.017	-1.005	0.316	-0.008	0.023	-0.349	0.728
Closed During a Recession	-0.235	0.037	-6.409	**0.000**	-0.126	0.024	-5.192	**0.000**	-0.126	0.024	-5.192	**0.000**	-0.059	0.022	-2.678	**0.008**	0.042	0.029	1.456	0.146
Announced During a Merger Wave	0.024	0.029	0.815	0.416	0.019	0.019	0.988	0.324	0.019	0.019	0.988	0.324	-0.023	0.017	-1.345	0.180	-0.034	0.023	-1.492	0.137
Experienced M&A Team	0.030	0.023	1.295	0.196	-0.005	0.015	-0.359	0.720	-0.005	0.015	-0.359	0.720	-0.010	0.014	-0.708	0.480	-0.020	0.018	-1.101	0.272
Company Pressured to Transact	0.008	0.040	0.203	0.839	-0.042	0.027	-1.568	0.118	-0.042	0.027	-1.568	0.118	0.038	0.024	1.574	0.116	0.021	0.031	0.679	0.498
Critical Deal for Acquirer	0.003	0.028	0.088	0.930	0.020	0.019	1.044	0.297	0.020	0.019	1.044	0.297	0.033	0.017	1.918	**0.056**	0.044	0.022	2.002	**0.046**
Multi State Transaction	0.012	0.028	0.440	0.660	0.001	0.018	0.045	0.964	0.001	0.018	0.045	0.964	0.022	0.017	1.313	0.190	0.013	0.022	0.577	0.564
Overlapping States	0.011	0.026	0.415	0.678	-0.012	0.017	-0.721	0.472	-0.012	0.017	-0.721	0.472	-0.035	0.015	-2.247	**0.025**	-0.027	0.020	-1.341	0.181
Multi Business Segment Transaction	0.037	0.027	1.378	0.169	0.022	0.018	1.223	0.222	0.022	0.018	1.223	0.222	0.043	0.016	2.697	**0.007**	0.063	0.021	3.041	**0.003**

-30, +30 Abnormal Returns	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.051	0.029	-1.780	**0.076**	-0.029	0.019	-1.481	0.140	-0.029	0.019	-1.475	0.141	0.043	0.019	2.253	**0.025**	0.059	0.026	2.275	**0.024**
Like Buying Like Businesses	-0.020	0.015	-1.279	0.202	-0.002	0.010	-0.196	0.845	0.009	0.010	0.914	0.361	0.005	0.010	0.454	0.650	0.025	0.014	1.814	**0.071**
Lag from Critical Reg Date	0.000	0.000	-1.631	0.104	0.000	0.000	-1.588	0.113	0.000	0.000	-0.085	0.932	0.000	0.000	-0.085	0.933	0.000	0.000	0.203	0.839
Approval Cycle	0.000	0.000	-0.239	0.811	0.000	0.000	-1.586	0.114	0.000	0.000	0.183	0.855	0.000	0.000	-1.667	**0.096**	0.000	0.000	-2.171	**0.031**
Stock Deal	-0.036	0.020	-1.804	**0.072**	0.000	0.013	-0.030	0.976	-0.009	0.013	-0.685	0.494	-0.007	0.013	-0.508	0.612	-0.015	0.018	-0.876	0.382
Closed During a Recession	-0.180	0.025	-7.284	**0.000**	-0.087	0.017	-5.223	**0.000**	-0.048	0.017	-2.902	**0.004**	-0.005	0.016	-0.330	0.741	0.120	0.022	5.451	**0.000**
Announced During a Merger Wave	0.034	0.020	1.732	**0.084**	0.021	0.013	1.590	0.113	0.010	0.013	0.742	0.459	-0.002	0.013	-0.157	0.875	-0.001	0.017	-0.030	0.976
Experienced M&A Team	0.020	0.016	1.268	0.206	-0.003	0.010	-0.334	0.739	-0.019	0.010	-1.855	**0.064**	-0.015	0.010	-1.508	0.133	-0.036	0.014	-2.599	**0.010**
Company Pressured to Transact	-0.034	0.027	-1.258	0.209	-0.016	0.018	-0.896	0.371	-0.007	0.018	-0.397	0.692	0.030	0.018	1.691	**0.092**	0.015	0.024	0.639	0.523
Critical Deal for Acquirer	0.007	0.019	0.349	0.727	-0.001	0.013	-0.045	0.964	-0.003	0.013	-0.195	0.846	0.007	0.013	0.537	0.591	0.044	0.017	2.557	**0.011**
Multi State Transaction	0.020	0.019	1.072	0.284	0.016	0.013	1.236	0.217	0.042	0.013	3.336	**0.001**	0.019	0.012	1.522	0.129	0.021	0.017	1.244	0.215
Overlapping States	-0.003	0.017	-0.178	0.859	-0.001	0.012	-0.083	0.934	-0.003	0.012	-0.227	0.820	-0.001	0.011	-0.120	0.905	-0.015	0.015	-0.976	0.330
Multi Business Segment Transaction	-0.010	0.018	-0.562	0.575	0.015	0.012	1.229	0.220	0.027	0.012	2.221	**0.027**	0.011	0.012	0.962	0.337	0.038	0.016	2.393	**0.017**

Table 47: Reconfiguring and Integrating Quantile Regression Results

-0, +360 Abnormal Returns	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.441	0.133	-3.301	**0.001**	-0.227	0.072	-3.149	**0.002**	-0.010	0.037	-0.265	0.791	0.184	0.060	3.090	**0.002**	0.242	0.088	2.741	**0.006**
Like Buying Like Businesses	0.127	0.071	1.795	**0.074**	0.090	0.038	2.367	**0.019**	0.034	0.020	1.714	**0.088**	-0.049	0.032	-1.559	0.120	-0.047	0.047	-1.010	0.313
Lag from Critical Reg Date	0.000	0.001	0.270	0.787	0.000	0.000	0.302	0.763	0.000	0.000	-1.977	**0.049**	-0.001	0.000	-2.675	**0.008**	0.000	0.000	-0.685	0.494
Approval Cycle	0.000	0.000	0.778	0.437	0.000	0.000	0.516	0.606	0.000	0.000	-0.899	0.370	0.000	0.000	0.312	0.755	0.000	0.000	-0.106	0.916
Stock Deal	0.100	0.091	1.095	0.274	0.034	0.049	0.697	0.486	0.008	0.025	0.298	0.766	-0.062	0.041	-1.533	0.126	0.026	0.060	0.424	0.672
Closed During a Recession	-0.343	0.114	-2.995	**0.003**	0.000	0.062	0.003	0.998	0.110	0.032	3.474	**0.001**	0.093	0.051	1.830	**0.068**	0.123	0.076	1.619	0.106
Announced During a Merger Wave	-0.014	0.090	-0.152	0.880	0.032	0.049	0.652	0.515	-0.008	0.025	-0.316	0.752	-0.009	0.040	-0.215	0.830	-0.071	0.060	-1.191	0.235
Experienced M&A Team	-0.022	0.072	-0.311	0.756	0.002	0.039	0.039	0.969	-0.007	0.020	-0.365	0.715	-0.019	0.032	-0.590	0.556	-0.041	0.047	-0.869	0.386
Company Pressured to Transact	-0.006	0.125	-0.044	0.965	-0.057	0.068	-0.844	0.399	-0.007	0.035	-0.208	0.835	-0.011	0.056	-0.196	0.845	0.132	0.083	1.589	0.113
Critical Deal for Acquirer	-0.123	0.089	-1.383	0.168	-0.053	0.048	-1.109	0.268	-0.038	0.025	-1.537	0.125	-0.016	0.040	-0.400	0.690	-0.083	0.059	-1.410	0.159
Multi State Transaction	0.019	0.087	0.217	0.828	0.045	0.047	0.961	0.337	0.079	0.024	3.272	**0.001**	0.095	0.039	2.447	**0.015**	0.127	0.057	2.209	**0.028**
Overlapping States	0.106	0.080	1.319	0.188	0.009	0.043	0.219	0.827	-0.003	0.022	-0.123	0.902	-0.028	0.036	-0.779	0.436	-0.007	0.053	-0.126	0.900
Multi Business Segment Transaction	0.131	0.083	1.565	0.119	0.082	0.045	1.834	**0.068**	0.072	0.023	3.099	**0.002**	0.087	0.037	2.346	**0.020**	0.138	0.055	2.500	**0.013**

-0, +360 BHAR Returns	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.510	0.100	-5.096	**0.000**	-0.429	0.089	-4.805	**0.000**	-0.226	0.068	-3.308	**0.001**	0.088	0.054	1.624	0.105	0.203	0.092	2.216	**0.027**
Like Buying Like Businesses	0.090	0.053	1.690	**0.092**	0.141	0.047	2.985	**0.003**	0.064	0.036	1.767	**0.078**	-0.051	0.029	-1.796	**0.074**	-0.121	0.049	-2.498	**0.013**
Lag from Critical Reg Date	-0.001	0.001	-1.230	0.219	0.000	0.000	0.211	0.833	0.000	0.000	0.415	0.678	-0.001	0.000	-2.211	**0.028**	-0.001	0.000	-2.026	**0.044**
Approval Cycle	0.000	0.000	1.573	0.117	0.000	0.000	1.878	**0.061**	0.000	0.000	1.979	**0.049**	0.000	0.000	0.429	0.668	0.000	0.000	0.552	0.581
Stock Deal	-0.007	0.068	-0.104	0.917	0.018	0.061	0.302	0.763	0.039	0.047	0.834	0.405	-0.003	0.037	-0.082	0.935	0.049	0.063	0.788	0.431
Closed During a Recession	-0.523	0.086	-6.094	**0.000**	-0.065	0.077	-0.848	0.397	-0.048	0.059	-0.820	0.413	-0.014	0.046	-0.312	0.755	0.067	0.079	0.847	0.398
Announced During a Merger Wave	-0.065	0.068	-0.966	0.335	-0.061	0.060	-1.004	0.316	0.004	0.046	0.090	0.928	-0.007	0.036	-0.179	0.858	-0.003	0.062	-0.044	0.965
Experienced M&A Team	0.022	0.054	0.405	0.686	0.001	0.048	0.019	0.985	-0.016	0.037	-0.441	0.659	-0.054	0.029	-1.855	**0.065**	-0.054	0.049	-1.105	0.270
Company Pressured to Transact	-0.029	0.094	-0.305	0.761	0.004	0.084	0.046	0.963	-0.083	0.064	-1.295	0.196	0.022	0.051	0.440	0.660	0.039	0.086	0.450	0.653
Critical Deal for Acquirer	-0.140	0.067	-2.102	**0.036**	-0.039	0.059	-0.660	0.510	-0.013	0.045	-0.291	0.771	-0.035	0.036	-0.986	0.325	-0.010	0.061	-0.167	0.868
Multi State Transaction	0.168	0.065	2.583	**0.010**	0.008	0.058	0.140	0.889	0.027	0.044	0.611	0.542	0.049	0.035	1.384	0.167	0.015	0.060	0.258	0.796
Overlapping States	0.002	0.060	0.030	0.976	0.026	0.054	0.492	0.623	-0.028	0.041	-0.679	0.498	0.000	0.032	0.008	0.994	-0.003	0.055	-0.046	0.964
Multi Business Segment Transaction	0.153	0.063	2.448	**0.015**	0.110	0.056	1.963	**0.050**	0.095	0.043	2.219	**0.027**	0.097	0.034	2.872	**0.004**	0.186	0.057	3.241	**0.001**

-0, +360 Simple Returns	Quantile: .10				Quantile: .25				Quantile: .50				Quantile: .75				Quantile: .90			
	B	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***	***B***	**SE**	**t**	***p***
(Constant)	-0.195	0.089	-2.203	**0.028**	-0.084	0.068	-1.241	0.216	0.152	0.063	2.415	**0.016**	0.152	0.063	2.415	**0.016**	0.325	0.077	4.233	**0.000**
Like Buying Like Businesses	0.079	0.047	1.698	**0.091**	0.040	0.036	1.131	0.259	0.005	0.033	0.136	0.892	0.005	0.033	0.136	0.892	-0.005	0.041	-0.127	0.899
Lag from Critical Reg Date	-0.002	0.000	-4.355	**0.000**	0.000	0.000	-1.128	0.260	0.000	0.000	-0.802	0.423	0.000	0.000	-0.802	0.423	0.000	0.000	-0.154	0.877
Approval Cycle	0.000	0.000	2.034	**0.043**	0.000	0.000	1.057	0.291	0.000	0.000	0.255	0.799	0.000	0.000	0.255	0.799	0.000	0.000	-0.226	0.821
Stock Deal	-0.051	0.060	-0.846	0.398	-0.010	0.046	-0.226	0.821	-0.015	0.043	-0.359	0.720	-0.015	0.043	-0.359	0.720	-0.049	0.052	-0.936	0.350
Closed During a Recession	-0.592	0.071	-8.332	**0.000**	-0.159	0.054	-2.939	**0.004**	-0.235	0.051	-4.639	**0.000**	-0.235	0.051	-4.639	**0.000**	-0.137	0.062	-2.219	**0.027**
Announced During a Merger Wave	-0.029	0.059	-0.491	0.624	-0.001	0.045	-0.022	0.982	-0.064	0.042	-1.538	0.125	-0.064	0.042	-1.538	0.125	-0.028	0.051	-0.540	0.589
Experienced M&A Team	0.103	0.046	2.219	**0.027**	-0.005	0.035	-0.149	0.881	-0.020	0.033	-0.606	0.545	-0.020	0.033	-0.606	0.545	-0.056	0.040	-1.396	0.164
Company Pressured to Transact	0.013	0.084	0.158	0.874	0.046	0.064	0.720	0.472	-0.026	0.060	-0.434	0.665	-0.026	0.060	-0.434	0.665	-0.069	0.073	-0.946	0.345
Critical Deal for Acquirer	-0.018	0.057	-0.314	0.754	-0.084	0.044	-1.925	**0.055**	-0.045	0.041	-1.102	0.271	-0.045	0.041	-1.102	0.271	-0.030	0.050	-0.601	0.548
Multi State Transaction	-0.077	0.056	-1.374	0.170	0.024	0.043	0.552	0.581	0.061	0.040	1.536	0.126	0.061	0.040	1.536	0.126	0.167	0.049	3.438	**0.001**
Overlapping States	0.116	0.052	2.235	**0.026**	0.046	0.040	1.164	0.245	-0.036	0.037	-0.978	0.329	-0.036	0.037	-0.978	0.329	-0.088	0.045	-1.950	**0.052**
Multi Business Segment Transaction	0.064	0.053	1.204	0.229	0.081	0.041	1.976	**0.049**	0.052	0.038	1.365	0.173	0.052	0.038	1.365	0.173	0.123	0.046	2.640	**0.009**

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ABOUT THE AUTHOR

Rich Berard is senior vice president of Hunt Consolidated, Inc. In this capacity, he heads the Office of Program Management, which is responsible for the project management, oversight and coordination for many of the growth, investment and business building programs of the company. Prior to this assignment, Berard led groups within the Hunt organization in the areas of strategic management reporting, corporate finance, financial administration and strategic planning.

Prior to joining the Hunt companies in 2002, Berard was employed by Arthur Andersen, LLP, and managed multiple projects from Andersen's Global Energy practice in Houston, Texas. While at Andersen, he consulted to global energy clients in the areas of business transformation and reengineering, M&A integration, strategic cost management and organizational optimization and design. In his consulting career, Berard has consulted to dozens of clients in the energy sector including oil and gas, power and utility companies.

Before joining Arthur Andersen's consulting practice, he spent three years as an energy economist employed by an international government. Berard serves on the board of directors of Power Capital Partners, a power generating investment company in New York and the Association of Internal Management Consultants (AIMC). He is the author of articles in industry journals and books and has served as a speaker and presenter at energy-related industry events.

Berard received a Bachelor of business administration degree from the University of Miami and a Master of Science degree in economics with honors from Bentley University. He is also a graduate of the University of Chicago's Graduate School of Business' advanced management program. Berard will receive his Doctorate in Business from Georgia State University on May 1, 2016 with honors and membership in Golden Key International. .

Berard resides in Murphy, TX with his wife of 21 years (Ann) and two sons, Jake (18 years old) and Jamison (9 years old).