

The Impact of Merger and Acquisition Announcements on the US Utility

Industry

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Abstract

The purpose of this paper is to determine the relationship between mergers and acquisitions (M&A) and the post-acquisition performance of US utility firms to make a reasonable conclusion as to whether the market reaction to M&A's is good or bad. 21 acquiring firms on the New York Stock Exchange in 2010 and 25 acquiring firms in 2011 are randomly chosen for this study.

The Market model and Cumulative Abnormal Return (CAR) will be used in this paper. This study is trying to answer the question: can M&A create or destroy value for US utility firms?

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Chapter 1

Introduction

1.1 Merger and Acquisition (M&A)

A merger is referred to as one company acquiring another company, meanwhile, the acquiring company buys both assets and liabilities of the target company. Although two companies combine together, the acquirer still retains its identity. Acquisition is similar to a merger, which indicates one company purchases another company, but a new company will probably be established.

There are three forms of payment associated with M&A's, including cash, securities and tangible assets of the target firms. In a stock transaction, stock shares increase only in the new firm. Because of different motives, acquiring companies choose different kinds of transactions. For example, the acquiring firm expects that the asset in the target firms will increase in value in the future, which results in the asset transaction is chosen.

Mergers and acquisitions have several phases, but from previous studies, we find many arguments in this area. Boland (1970) classified the M&A phases into two steps, including pre-merger and post-merger. Schweiger and Weber (1989) argued that the M&A phases cover premerger and implementation. Salus (1989) argued that the M&A phases include pre-merger, merger and post-merger. Farley and Schwallie (1982) suggested the M&A phases should associate with integration of the strategic

plan, intelligent screening, evaluation of targets through creativity and analysis, understanding value and price, anticipating the post-acquisition phase, and efficient implementation. Kazemek and Grauman (1989) mentioned the following steps, involving assessment, joint planning, issue analysis, structure selection, securing approvals, final planning, and implementation. Parenteau and Weston (2003) claimed strategic planning, candidate screening, due diligence and deal execution, and the ultimate integration phase related to M&A.

Mergers and acquisitions are often linked to a business or competitive strategy, for example, entering a new product/market segment or changing the basis of competition. So these M&A motives include:

- (i) to develop or enlarge the product line, or complement the products or service of the acquiring company, which leads to investment in product differentiation.
- (ii) to increase market power. The acquiring firms have more power to decide the price of products. Also, it can increase barriers of entry the industry.
- (iii) to increase market share. In this way, the acquiring firms become more competitive.

M&A's belong to corporate strategic terms. Parts of an intentional action pattern of relationships between business units within a big family of businesses. The strategy could be a relative one of remaining within the same or related industries or branching into other industries. Three strategies can describe these as follows:

The first is a vertical merger. Vertical mergers mean that it happens between two companies in different industries, producing different products or services. For example, a firm grows vertically in the value chain from extracting raw materials to manufacturing to retailing. Most often the logic behind is to improve the merger coordination effect through the integration of enterprises.

Second is a horizontal merger, which happens between two companies in the same industry. A horizontal merger is a business integration and it is usually a rival offering the same goods or services. The horizontal merger helps acquiring firms to obtain a synergy effect, which is the effect of its co-operation between organizations ($1+1>2$) results when the performance of a combined unit is greater than what it would have been without any type of collaboration.

The third is a conglomerate merger. This is a merger between enterprises which are involved in different business activities that are completely unrelated. There are two examples of enterprise group merger: pure and mix. Pure enterprise group mergers involve companies that have much in common, and mixed enterprise group mergers involve the companies that are looking for product extension or market expansion.

1.2 New York Stock Exchange (NYSE)

The New York Stock Exchange is located in New York city. Based on total market value of listed securities, it is considered as the biggest stock exchange in the global

market. The stock exchange has been run as a private organization, but it became a public entity in 2005 after the acquisition of the electronic trading exchange archipelago. The company's parent company is now known as the New York Stock Exchange in New York after the merger of the Euronext and European exchange in 2007.

Also known as the "big board", the NYSE previously relied on exchange-trading using only the public bidding mode. However, today more than half of the NYSE trading is conducted electronically.

1.3 US utility industry

1.3.1 Overview

The electric utility industry is huge in size in the U.S. The electric power industry's value chain includes four elements. The first is fuel source (for example, coal, nuclear energy, natural gas, and wind power), which can be converted into electrical energy. The second step is to generate power to meet household individual requirements. There must be a huge network of lines and power substation after the transmission and distribution in the power. Finally, the transmission power is delivered directly to ultimate users.

American household consumption has accounted for 21% of the electric power now more than in 1978, the Edison Electric Institute estimated that the electrical energy

used by American family will go up by 11% by 2030. At the same time, the supply of resources is only expected to rise by 8.5%. Despite the long-term trend of growing energy use, the United States needs more energy saving as time goes on.

1.3.2 M&A's in the Utility Industry

In the last two decades, utility companies attempted to increase the wealth of shareholders by using mergers and acquisitions (M&A).

M&A's can reduce cost in the current market of financial, regulatory and market pressures for utilities. Framing synergistic goals around financial scale remains the key driver of achieving increasing in value and good performance. Given the current marketplace, integrating operational synergies in a coherent manner is emerging as a strategic part of capturing and sustaining value – whether financial or operational – as well as addressing current market issues.

1.4 Organization of the study

In Chapter 2, we will study the concept of the efficient market hypothesis (EMH). In addition, some previous research on mergers and acquisitions will be included. In Chapter 3, the methodology used in the study---- Market Model and Average Abnormal Returns (AAR), will be introduced in detail. We test and analyze results in Chapter 4 and Chapter 5 will be the conclusion, limitations and recommendations.

Chapter 2

Literature Review

2.1 Efficient Market Hypothesis (EMH)

According to Fama (1976), information is efficient in the market, in other words, information is widely, readily, easily and available to everyone. What's more, the stock price is fairly priced because it already reflects the available information.

The efficient market hypothesis (EMH) asserts that financial markets are efficient. On the one hand, the definitional 'fully' is a strict requirement, as a result, no real market could ever be efficient, implying that the EMH is almost certainly false. On the other hand, economics is a social science, and a hypothesis that is asymptotically true puts the EMH in contention for one of the strongest hypotheses in the whole of the social sciences.

Under EMH, no one can make abnormal returns. If it is not true, we are against the efficient market hypothesis. There is a lot of academic literature on the market efficiency theory. Jensen (1978) argued that if the market is efficient, it is impossible to earn any risk adjusted net profits by trading on the basis of an information set. Reilly and Brown (1997) referred to in an efficient capital market, where security prices adjust rapidly to the arrival of new information and, that is, the current prices of securities have already fully reflected all available information. There are three forms related to EMH. They are weak, semi-strong and strong forms.

The weak form claims that all past information is fully reflected in today's stock price. Therefore, technical analysis cannot be used to predict future stock prices. If the price changes are random, the historical pricing data does not have value when participants forecast future prices. Fama and Blume(1966) used 30 individual stocks of the NJIA. They found after transaction costs, only 4 of 30 securities had positive average returns per filter. Even before transaction costs, filter rules were inferior to the Buy and Hold (B&H) strategy for all but two securities. Although small filter rules(0.5,1.0, and 1.5%) earned higher gross average returns(11.4%-20.9% per year) per security, when considering only long positions, net returns after transaction costs were not much different from B&H returns. Gray and Nielsen(1963) used wheat futures. They found that when applying stop-loss order rules to dominant contracts, there was little evidence of non-randomness in wheat futures price.

Semi-strong form means that all public information is in the calculation for the stock current price. It means that there is no fundamental or technical analysis can be used to achieve higher returns. All investors will be unable to earn abnormal return from using the publicly available information. According to Fama(1970), the evidence shows that the dividends and earning announcement of common stock are associated with the efficient market model. Tests of semi-strong efficiency in securities markets have focused on events, including particular news items such as announcements of mergers and acquisitions.

Ball and Brown (1968) found that there is not a significant effect on the security prices after a firm's earnings announcement. Most of the annual earnings' information was taken account of by the market and had been combined into security price movement. Therefore, it provides empirical evidence of semi-strong form efficiency.

In 1972, Scholes tested the impact of secondary offerings on the stock price. The stock prices decreased resulting from some non-public information which was just known by a few sellers. Beaver (1968) examined a sample of 143 firms from the New York Stock Exchange (NYSE), including Trading Volume Activity (TVA) and Security Returns Variability (SRV), to test market reaction to annual earnings announcements. The results showed 33 percentage increases in TVA and a 61 percent increase in SRV after the earnings announcement.

Strong form efficiency means all the information in the market, whether public or private, are reflected on stock prices. No investors obtain an advantage even the inside information is given, so earning excess returns is not possible. Tests of the strong form EMH are focused on professional securities analysts, corporate insiders and portfolio managers. Many research's have tested the strong-form efficient market hypothesis, such as Kyle (1985) who provides the first analysis of strategic informed trading. He considers a monopolistic insider who can trade with competitive market makers in the presence of noise traders. Information is fully reflected in prices only

at the end of the trading session, just before the time when it is to be announced publicly. Back and Pedersen (1998) introduce a continuous-time, finite-horizon model in which a monopolistic insider receives a flow of private information during the trading session. They found that the insider reveals the information slowly. Therefore, the market is not strong-form efficient.

2.2 Event studies on M&A

Mergers, acquisitions, stock splits, dividend announcements and deaths of key executives and so on are firm specific events which are internal events to the firm. Calvet and Lefoll (1985) performed an event study for 119 Canadian mergers and acquisitions and in similar way they found that the market was efficient in semi-strong form.

Ravenscraft et al (1989) analyzed *ex ante* and *ex post* acquisitions using the manufacturing sector in the U.S. from the period 1957 to 1977. And the results showed the targeted corporations were very profitable but *ex ante* and *ex post* profitability of the targeted corporations decreased sharply.

Caves (1989) studied *ex ante* case studies and *ex post* evaluation for merger and acquisitions in the U.S. The results showed very slight increases in the value of both the stock of the targeted corporations and the purchasers

Lichtenberg (1992) studied the relationship between changes in the control of companies, productivity and investment in research and development in the U.S from 1972 to 1981. The results showed a large increase in total productivity of the factors of production after takeovers.

Brown and Medoff (1988) analyzed the effect of acquisitions on corporate wages and employment in the U.S. The results showed mergers were associated with approximately a four percent decrease in wages and a two percent increase in total employment.

Hall (1988) studied the effects of acquisitions on investment in research and development using the manufacturing sector in the U.S. from the period 1976 to 1985. The results showed no indication that acquisitions result in a reduction in research and development expenditures. He also found corporations that successfully innovate are the preferred targets of potential purchasers.

Loderer and Martin (1992) investigated 304 mergers and 155 acquisitions from 1965-1986. The results indicated a negative, but statistically insignificant abnormal return over the five subsequent years for mergers and a positive, but an insignificant abnormal return for acquisitions.

Asquith et al (1983) found a positive return of 0.20 percent for acquiring companies which did cash transaction and a negative return of -2.40 percent for those doing stock transactions. Likewise, Andrade et al (2001) concluded that for the acquiring companies that make use of 100 percent cash deals are associated with better returns than transactions with stock.

Healy et al (1992) examined the post acquisition performance for the 50 largest U.S. mergers between 1979 and mid-1984 and note that merged firms showed significant improvements in asset productivity relative to the respective industry average, leading to higher operating cash flow return.

Gallet (1996) studied the impact of mergers on the U.S. steel industry. The study employed a New Empirical Industrial Organization (NEIO) approach which estimates the degree of market power from a system of demand and supply equations. The results of the study showed market power after M&A's to some extent in certain periods. The study analyzed yearly observations over the period between 1950 and 1988 and results have revealed that in the period of 1968 to 1971 merger's did not have a significant effect on market power in the steel industry, whereas mergers in 1978 and 1983 slightly boosted market power in the steel industry.

Chapter 3

Methodology

The paper is going to explain and analyze the market reaction to merger and acquisitions in the US utility industry and to test the market efficiency based on the data from 2010 and 2011. The objective is to determine whether there exists abnormal returns before or after a M&A announcement date. According to Copeland and Weston (1988), there are three types of models to test event studies, including: the Market Model, the Average Abnormal Return Model and the Capital Asset Pricing Model.

3.1 The models

3.1.1 Market Model

Semi-strong form EMH is tested, using the Market Model. Firstly, we have to calculate the return on the stocks. The formula (Equation 3.1) is as follows:

$$R_t = P_t / (P_{t-1}) - 1 \quad (\text{Equation 3.1})$$

where:

R_t = return on stock during period t

P_t = stock price during period t

P_{t-1} = stock price during period t-1

Secondly, the following formula (Equation 3.2) represents the Market Model.

$$R_{i,t} = \hat{\alpha}_i + \hat{\beta}_i R_{m,t} + \varepsilon_{i,t} \quad (\text{Equation 3.2})$$

where:

$R_{i,t}$ = return on security i during period t

α_i = intercept of the equation for security i

β_i = slope of the equation for security i

$R_{m,t}$ = return on the market during period t

$\varepsilon_{i,t}$ = error term

The STATA program can be used to do the regression of Equation 3.2. I use the NYSE index as $R_{m,t}$. In addition, $\varepsilon_{i,t}$, the error term, stands for the risk for a specific firm.

To do the simple linear regression, we have four assumptions as follows:

The expected value of the random error e: $E(e)=0$

The variance of the random error e: $\text{var}(e)=\sigma^2$

The covariance between any pair of random errors e_i and e_j : $\text{cov}(e_i, e_j)=0$

The values of e are normally distributed about their mean: $e \sim N(0, \sigma^2)$

(See Hill et al 2011)

3.1.2 Abnormal Returns (AR) and Average Abnormal Returns (AAR) and Average Cumulative Abnormal Returns (ACAR)

Equation 3.3 represents the Abnormal Return (AR).

$$AR_{i,t} = R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{m,t}) \quad (\text{Equation 3.3})$$

where,

$AR_{i,t}$ = the abnormal return on security i during period t.

$R_{i,t}$ = return on security i during period t.

$R_{m,t}$ = NYSE index.

Equation 3.4 is for Average Abnormal Return (AAR).

$$AAR_t = \frac{1}{N} \sum AR_{it} \quad (\text{Equation 3.4})$$

where, N stands for the number of securities.

T-test can be used. Null hypothesis is stated:

$H_0: AAR_t = 0$ (if it is true, market is efficient)

Alternative hypothesis is stated:

$H_a: AAR_t \neq 0$ (if it is true, market is not efficient)

If we do not reject null hypothesis, we can conclude that market is efficient. If we fail to reject null hypothesis, market is not efficient.

3.1.3 Capital Asset Pricing Model – CAPM

CAPM is a model that describes the relationship between risk and expected return and that is used in the pricing of risky securities.

$$R_{it}=R_{ft}+\beta_i(R_{mt}-R_{ft}) \quad (\text{Equation 3.5})$$

where:

R_{it} : return on security i at time t ,

R_{ft} : risk-free rate at time t ,

R_{mt} : return on the market portfolio at time t ,

β_i : beta for security i (systematic risk)

The rationale behind the CAPM is as follows. From the Equation 3.5, we can find there is a linear relationship between the return on a particular security and beta (β_i). Beta (β_i) stands for systematic risk, which is different from unsystematic risk. It cannot be diversified. $R_{mt}-R_{ft}$ measures the market premium. If actual return is above the CAPM line, it indicates the security is underpriced. It is a good opportunity for the investor to buy the stock. If actual return is below the CAPM line, the security is overpriced. Therefore, the investor should sell the stock.

3.2 Research Procedure

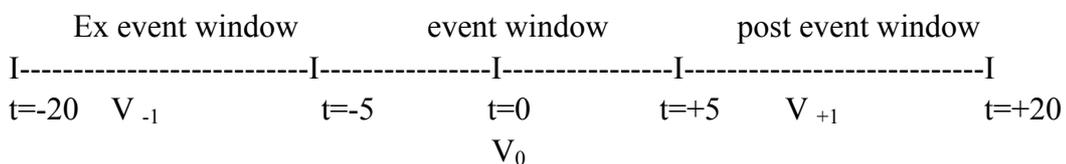
3.2.1 Trading Volume

Event studies can be used to test market reaction to M&A's. First, I select an event window of 10 days, which refers to 5 days before $t=0$ (M&A) and 5 days after that time. V_0 stands for the return on the event window. Second, I identify 20 days ex

event window and 20 days post event window. V_{-1} and V_{+1} stand for return on ex event window and return on post event window respectively.

I use STATA to test V_0 , V_{-1} and V_{+1} . Firstly, I compare V_0 and V_{-1} in order to find whether the M&A announcement has an impact on trading volume. If V_0 is bigger than V_{-1} and it is positive and significant, we can conclude that the M&A announcement does influence changes in trading volume and vice versa. Secondly, I compare V_{-1} and V_{+1} to test whether post-M&A can create value for U.S utility firms. If V_{+1} is bigger than V_{-1} and it is significantly positive, we can conclude that the value of U.S utility firms is increased after a M&A transaction and vice versa.

Figure 3.1



3.2.2 Stock price

The methodology to test stock price is the same as trading volume. STATA is used to test R_0 , R_{-1} and R_{+1} . Firstly, I compare R_0 and R_{-1} in order to find whether a M&A announcement has an impact on stock price. If R_0 is bigger than R_{-1} and it is positive and significant, we can conclude that stock prices are influenced by M&A announcements. If the result is the reverse, then M&A announcements cannot affect stock prices. In addition, I compare R_{-1} and R_{+1} to test whether post-M&A can create

Data of daily trading volume for period 2010 and 2011 can be found at the website

below:

<http://ca.finance.yahoo.com/>

Chapter 4

Analysis of Results

4.1 Overview

This section is going to analyze and explain the results of the models, which derive from Chapter 3. 21 M&A in 2010 and 25 M&A in 2011 (the list of firms is attached in Appendix A). I have collected these data and run them in STATA to get these results.

4.2 Stock Price

4.2.1 Regression Analysis

Market Model (Equation 3.2) derives from a linear relationship between beta and expected return. In the sample, I choose NYSE index as the market return.

Table 4.1

Source	SS	df	MS	Number of obs =	661
Model	.020679535	1	.020679535	F(1, 659) =	56.62
Residual	.240694115	659	.000365241	Prob > F =	0.0000
Total	.26137365	660	.000396021	R-squared =	0.0791
				Adj R-squared =	0.0777
				Root MSE =	.01911

return	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
idxreturn	.7330951	.0974271	7.52	0.000	.54179 .9244001
_cons	-.0002921	.0007434	-0.39	0.694	-.0017519 .0011676

Table 4.1 represents the regression results of the Market Model. From the output, it indicates that α (cons), which is the intercept of market model, is -0.0002921 and β (idxreturn), which is the slope of market model, is 0.7330951. The value of β measures the sensitivity of the security to the market return. The larger the value of β , the more sensitive the security to the market return. The result shows change in these securities is sensitive to the market change.

R-squared is a broad application in linear regression. It measures whether the original data points match the linear regression. In other words, an R-squared value is to measure how well the final line fits the original data points. The higher R-squared value indicates stocks match the market model better, which means that the securities track the performance of the market index. In this paper, it refers to the US utility stocks following the pattern of the NYSE index. However, the results show R-squared is 0.0791 and adjusted R-squared is 0.0777. The value is relatively low. The movement of stocks in the sample does not track the performance of the NYSE index.

4.2.2 Average Abnormal Return (AAR) Results

There are three purposes to test for average abnormal returns. One is to test whether the market is efficient. The second one is to test whether M&A's can affect stock price. The last one is to test whether the value of US utility firms can be increased

after a M&A. The output of average abnormal return is shown in Table 4.2. I make use of the daily stock price list. The event window is 10 days, which is 5 days before M&A and 5 days after M&A.

Table 4.2

```

One-sample t test
-----
Variable | Obs      Mean      Std. Err.   Std. Dev.   [95% Conf. Interval]
-----+-----
ar       | 661     -.0003239   .000747     .0192052    -.0017906    .0011429

      mean = mean(ar)                                t = -0.4336
Ho: mean = 0                                         degrees of freedom = 660

      Ha: mean < 0                                     Ha: mean != 0                                     Ha: mean > 0
Pr(T < t) = 0.3324                                   Pr(|T| > |t|) = 0.6648                                   Pr(T > t) = 0.6676

```

Here, the T-test is used. A null hypothesis is stated: $H_0: AAR_t = 0$ and the alternative hypothesis is stated: $H_a: AAR_t \neq 0$. If the P-value is more than 0.05 ($P > 0.05$), we do not reject the null hypothesis. If the P-value is less than 0.05 ($P < 0.05$), we reject the null hypothesis. In the output, ar stands for average abnormal return (AAR). P- value is 0.6648, which is more than 0.05. Hence, we can conclude that the semi-strong market efficient hypothesis supported.

Table 4.3

Variable	Obs	Mean	Std. Dev.	Min	Max
aar2_1	661	.0003488	.0075742	-.009487	.0193757

Table 4.4

```
One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
aar2_1	661	.0003488	.0002946	.0075742	-.0002297	.0009273

mean = mean(aar2_1) t = 1.1840
 Ho: mean = 0 degrees of freedom = 660

Ha: mean < 0 Ha: mean != 0 Ha: mean > 0
 Pr(T < t) = 0.8816 Pr(|T| > |t|) = 0.2369 Pr(T > t) = 0.1184

The aar2_1 in both Table 4.3 and Table 4.4 stands for the difference between return (R_0) in event window and return (R_{-1}) in ex-event window. The P-value is 0.2369, which is bigger than 0.05. Therefore, we do not reject null hypothesis and make a conclusion that M&A do not have impact on stock prices.

Table 4.5

```
One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
aar3_1	661	.0003155	.0002017	.0051851	-.0000805	.0007115

mean = mean(aar3_1) t = 1.5642
 Ho: mean = 0 degrees of freedom = 660

Ha: mean < 0 Ha: mean != 0 Ha: mean > 0
 Pr(T < t) = 0.9409 Pr(|T| > |t|) = 0.1182 Pr(T > t) = 0.0591

Table 4.5 describes the output of difference between the return in the post-event window (R_{+1}) and return in the ex-event window (R_{-1}). The aar3_1 represents the difference between R_{+1} and R_{-1} . From the output, the result shows that the difference is 0.0003155. However, P-value is 0.1182. We cannot reject the null hypothesis, H_0 : mean=0. The results indicate that M&A's do not create value for US utility firms.

Chapter 5

Conclusion

The objective of this paper was to try to answer two questions. First, do M&A's have influence on stock prices and second, can a M&A create value for US utility firms? I made use of daily stock price and volume of US utility firms from period 2010 and 2011 to conduct the empirical research.

5.1 Conclusions

I obtained the results from STATA. It provided me with five conclusions. First, I run STATA to do the regression of the Market Model. According to the output, the securities chosen in the sample do not track the performance of the NYSE index. Second, based on the results from the average accumulative return (AAR), we can conclude that the market is efficient because we do not reject the null hypothesis, $H_0: AAR_t = 0$. Third, there is no abnormal return during the 10 days event window. Hence, M&A's do not affect stock prices. Fourth, no changes take place between the return in the ex-event window and return in the post-event window. Therefore, it is reasonable for us to conclude that M&A's cannot create value for US utility firms. Finally, the trading volume is relatively higher during the event window than that in the ex-event window.

5.2 Limitations and Recommendations

The conclusions show that M&A's do not have an impact on stock prices. M&A's cannot create firm's value, either. There are two reasons to explain this conclusion. First, a lot of factors can affect stock prices, not only the M&A. What's more, M&A's are not the most important factor to determine the stock prices. Hence, it is normal that there is no influence. Second, I chose US utility industry as the sample. The characteristics of this industry are its stability, and the volatility is relatively low. The results reflect this feature.

As I just chose US utility stocks on the NYSE, the sample is relatively small, which is also a reason that there is no statistically significant results. The sample is merely enough to meet the requirement to do the test. Perhaps, if we were to enlarge the sample and choose more stocks, output will be more favorable.

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APPENDIX A
COMPANY LIST

Announce Date	Acquirer Name	Payment Type	Acquirer Ticker
10-11-12	City of Nashua NH	Cash	270436Z US
10-7-2	Mitsui & Co Ltd	Cash	8031 JP
10-4-16	Qatari Diar Real Estate Investment Co	Undisclosed	911304Z QD
10-3-31	Aegean Marine Petroleum Net. Inc	Undisclosed	ANW US
10-8-23	Brookfield Infrastructure Partners LP	Stock	BIP US
10-6-2	Cantel Medical Corp	Cash	CMN US
10-1-11	Danaher Corp	Undisclosed	DHR US
10-1-13	DTE Energy Co	Undisclosed	DTE US
10-3-12	Emera Inc	Cash	EMA CN
10-2-11	FirstEnergy Corp	Stock	FE US
10-12-7	AGL Resources Inc	Cash & Stock	GAS US
10-4-11	GenOn Energy Inc	Stock	GEN US
10-11-16	MasTec Inc	Cash	MTZ US
10-10-18	Northeast Utilities	Stock	NU US
10-9-22	NorthWestern Corp	Cash	NWE US
10-2-9	Ormat Technologies Inc	Undisclosed	ORA US
10-12-30	PICO Holdings Inc	Undisclosed	PICO US
10-12-29	PAA Natural Gas Storage LP	Cash	PNG US
10-12-17	Pentair Inc	Undisclosed	PNR US
10-8-9	Regency Energy Partners LP	Cash	RGP US
10-4-26	SembCorp Industries Ltd	Cash	SCI SP

Announce Date	Acquirer Name	Payment Type	Acquirer Ticker
11-5-3	Applied Industrial Tech. Inc	Undisclosed	AIT US
11-6-20	Atlantic Power Corp	Cash & Stock	ATP CN
11-8-1	American Water Works Co Inc	Cash	AWK US
11-12-29	Brookfield Asset Mgt. Inc	Cash & Stock	BAM/A CN
11-11-3	CenterPoint Energy Inc	Undisclosed	CNP US
11-12-30	CPFL Energia SA	Cash	CPFE3 BZ
11-11-22	Dominion Resources Inc/VA	Cash	D US
11-3-2	DPL Inc	Undisclosed	DPL US
11-1-4	DCP Midstream Partners LP	Cash	DPM US
11-1-10	Duke Energy Corp	Stock	DUK US
11-8-16	Enbridge Inc	Cash	ENB CN
11-6-16	Energy Transfer Equity LP	Cash & Stock	ETE US
11-4-28	Exelon Corp	Stock	EXC US
11-10-12	General Electric Co	Cash	GE US
11-6-20	Heckmann Corp	Undisclosed	HEK US
11-1-24	World Fuel Services Corp	Undisclosed	INT US
11-1-4	Mueller Water Products Inc	Cash	MWA US
11-3-8	National Grid PLC	Undisclosed	NG/ LN
11-12-12	NGL Energy Partners LP	Cash	NGL US
11-1-31	Pampa Energia SA	Cash	PAMP AR
11-9-22	RPM International Inc	Undisclosed	RPM US
11-12-27	SJW Corp	Cash	SJW US
11-7-1	Tortoise Capital Resources Corp	Cash	TTO US
11-3-31	Vectren Corp	Undisclosed	VVC US
11-6-10	Zuari Industries Ltd	Stock	ZUAR IN