

**A Retrospective Empirical Analysis of
the Effect of Macroeconomic Events on
Merger and Acquisition Announcements**

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April 3, 2017

ABSTRACT

This study analysis the effect of macroeconomic events on the timing of merger and acquisition (M&A) announcements. The premise of this research is anecdotal evidence that companies, in coordination with their investment banking advisors, will look to announce a M&A on a day without a macroeconomic event. If such a relationship exists, it should be possible to predict ex-ante whether a M&A announcement will take place on particular days based on the macroeconomic calendar. To investigate this hypothesis, we analyzed M&A announcements on US companies over a 5 year period from 2010 to 2014. The results show that there is a statistically significant higher number of announcements on days without macroeconomic events but further research is required to construct a predictive model of this relationship.

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I. Introduction / Motivation

The study is a retrospective empirical analysis of the effect of macroeconomic events (“events”) on merger and acquisition announcements (“M&A” or “announcement”).

The hypothesis is that companies will look to announce M&As on days when there are no macroeconomic events. Companies and their investment banking advisors may choose such days for their announcement for various reasons: perhaps more favorable stock market conditions on those days, reduced volatility, improved liquidity; or perhaps for more intangible reasons such as public relations. The hypothesis stems from anecdotal discussions during the training of the summer interns of a major investment bank in June 2016. The discussions highlighted that the identification of a suitable day for announcing a M&A transaction can be complex and requires a review of the macroeconomic calendar. The reasons behind this practice are further discussed later in this paper through interviews with individuals in the industry.

If such a practice exists and is commonly used across the industry, it should be possible to predict ex-ante whether a particular day looking forward is expected to have one or more M&A announcements as a result of the absence of a macroeconomic event.

To establish whether a connection exists, macroeconomic events and M&A announcements for US companies over a 5-year timeframe were analyzed. At first, we will look at the statistical difference in the number of announcements on days with an event and those without. In the next section, we will look at the effect of the day of the week on announcements. Then, we will look at whether multiple macroeconomic events, the size of the transaction, or the involvement of a foreign company has an effect on the timing of the announcement. In the next section, we will look whether we can construct a predictor of M&A announcements using the

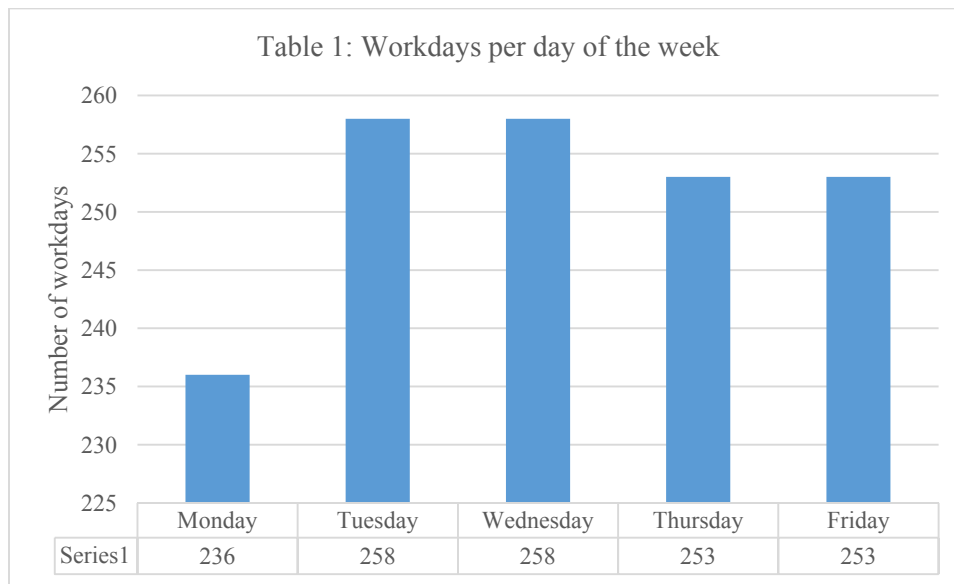
results of the previous analyses. Finally, we will discuss the perspective of two individuals working in the industry.

II. Data

II. 1 Timeframe

The analysis is done on all the workdays between 1/1/2010 and 12/31/2014 (inclusive) to have 5 calendar years of data.

A workday is determined as a day in which the S&P500 is open and a new closing price was published. Using the Bloomberg Terminal to download all the closing prices between 2010 and 2014, we established 1,258 workdays for the analysis. The number of workdays per day of the week is presented in Table 1 below.



National holidays have been excluded from the timeframe, which explains the lower number of Mondays compared to other days of the week. This is due to the Uniform Monday Holiday Act passed by the United States Congress in 1968, which changed five federal holidays (President's Day, Memorial Day, Labor Day, Columbus Day, and Veterans Day) from fixed dates to designated Mondays in the calendar, thus reducing the number of workday Mondays from our timeframe. Veterans Day was returned being fixed to November 11th in 1978.

II. 2 Macroeconomic events

The “Relevance Score” of Bloomberg Terminal’s economic calendar (function <ECO>) was used to select significant macroeconomic events. The Relevance Score is calculated based on the number of alerts that are set for the corresponding economic event relative to all alerts set in the selected region. In other words, the more Bloomberg Terminal users in a region flag a particular event, the higher the Relevance Score of that event relative to all other events in that region. As the study only covers US companies, the Relevance Score is calculated based on the US region, meaning that aggregate Bloomberg users in the US define what is a significant macroeconomic event.

US macroeconomic events for the period under review were downloaded resulting in 240 different types of macroeconomic events. For this study, we selected the 11 non-weekly events with a Relevance Score higher or equal than 90 resulting in 700 events. Those events led to 525 Event Days out of the 1,258 workdays (42%) of our timeframe. Those events have a Relevance Score ranging from 90 to 99.21 and the dates of all the events are known in advance. As a result, the analysis would not include unscheduled rate decisions for example.

We have removed weekly events because we assume that the publication of weekly macroeconomic data has less impact on the market as their results are more predictable. This assumption needs to be validated through further research.

The 11 macroeconomic events that we determined to be significant are summarized in Table 2 and their definitions are included in Appendix 1.

Table 2: Significant macroeconomic events

Event	Relevance Score	Frequency	Release day	Source
Change in Nonfarm Payrolls	99.206	Monthly	1st Friday of the Month	Investopedia
FOMC Rate Decision	97.619	8/year	Jan/Mar/Apr/Jun/Jul/Sep/Oct/Dec	Econoday
GDP Annualized	96.825	Quarterly	4th week of the month after quarter end	Econoday
ISM Manufacturing	96.032	Monthly	1st business day	Econoday
CPI MoM	95.238	Monthly	Mid-month	Econoday
Consumer Confidence Index	94.444	Monthly	Last week of the month	Econoday
U. of Mich. Sentiment	93.651	Monthly	Around the 10th	Investopedia
Durable Goods Orders	92.857	Monthly	Last week of the month	Econoday
Retail Sales Advance	92.064	Monthly	mid-month	Econoday
New Home Sales	91.270	Monthly	Last week of the month	Econoday
Markit US Manufacturing PMI	90.000	Monthly	1st business day	Markit

As the announcements of each macroeconomic events are independent from each other, some of the above events will occur on the same day. Table 3 below shows how many days have multiple relevant events, which is further discussed in section III 3.

Table 3: Events per day

Events per day	Count	%
0	733	58%
1	371	29%
2	136	11%
3	15	1%
4	3	0%
Grand Total	1258	100%

II. 3 Merger & Acquisition (“M&A”) announcements

M&A announcements were downloaded from SDC Platinum of Thomson Reuters. The criteria for selecting transactions were the following:

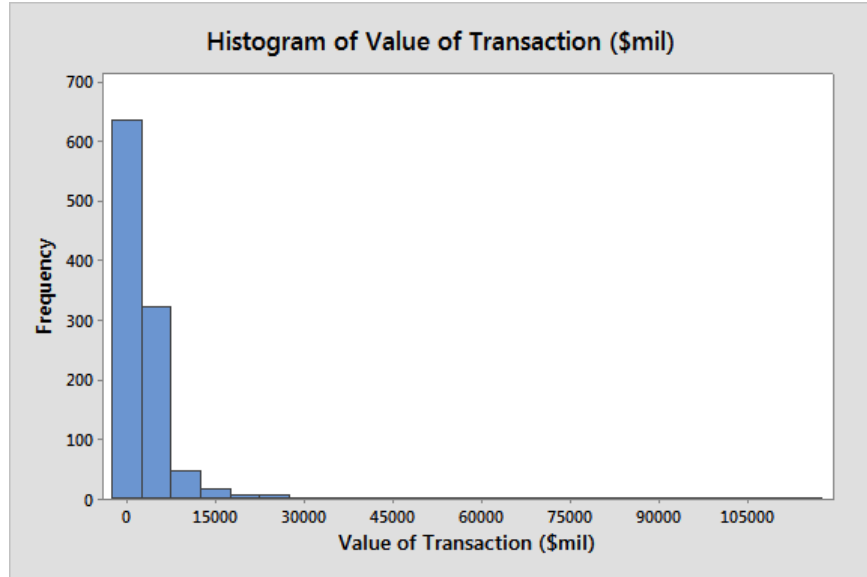
- Target or acquirer needs to be a US company
- Deal value must exist and be above \$ 1 billion

An assumption of this analysis is that the US macroeconomic calendar will be used to time a M&A announcement when a US company is involved either as acquirer, target, or both. This assumption should be validated by further research and may influence the results.

As a share repurchase is technically an acquisition of a company’s own stock, SDC Platinum includes share repurchases under M&As. However, for this analysis, we are exclusively looking at transactions between two separate companies and share repurchases have been removed from our data.

The above criteria resulted in 1,046 M&A announcements during the period under review. The average size of the transaction is \$ 3.80 billion and the median transaction size is \$ 1.99 billion. The histogram of transaction values is shown in Graph 1.

Graph 1: histogram of transaction sizes



735 or 70% of transactions included in this analysis have only United States companies (both acquirer and target are domiciled in the United States). Table 4 shows the split of announcements by foreign or US companies:

Table 4: M&A announcements by country domicile

		Target		
		US	Foreign	
Acquirer	US	735	145	880
	Foreign	166	NA	166
		901	145	1046

An analysis of the impact of foreign companies on either side of the transaction is done in section III 5.

III. Analysis

III. 1 M&A announcements vs. Macroeconomic events

The results of combining the workdays, the macroeconomic events, and the M&A announcements over the period, are summarized in Table 5.

Table 5: Summary table

	Workdays	Number of M&A	Average per day	Standard Deviation
Event	525	374	0.71	0.89
No Event	733	672	0.92	1.08
	1258	1046	0.83	1.01

Days with a macroeconomic event are defined as “Event” days and days without are defined “No Event”. The analysis is therefore binary in that a workday is either defined as with or without an event. We can therefore ask the question: is the number of M&A announcements on days without macroeconomic events statistically significantly higher than on days without macroeconomic events?

The null hypothesis is that there is no difference between the means of the two populations and the alternative hypothesis is that the mean is higher on days without an event:

$$H_0 : \mu_{Event} - \mu_{No Event} = 0$$
$$H_a : \mu_{Event} - \mu_{No Event} < 0$$

We can therefore construct a two-sample one-sided t-test to analyze the above hypothesis. The results from Minitab are summarized in Tables 6 and 7.

Table 6: Summary table of two samples

	N	Mean	Std. Deviation	Std. Error Mean
Event	522	0.712	0.891	0.039
No Event	733	0.92	1.08	0.04

Table 7: One sided two-sample t-test

	Two-Sample T-Test: M&A, Macro Event			T-Value	P-Value	DF
	Mean	95% confidence interval of the difference				
		Lower	Upper			
Difference = μ (Event) - μ (No event)	-0.2044	NA	-0.1127	-3.67	0.000	1231

The t-test is significant at a 0.001 level (the p-value is below 0.001), indicating a statistically significantly higher number of M&A announcements on days without macroeconomic events, which supports our overall hypothesis. We can reject the null hypothesis that there is no difference in the average number of M&A announcements between the two days.

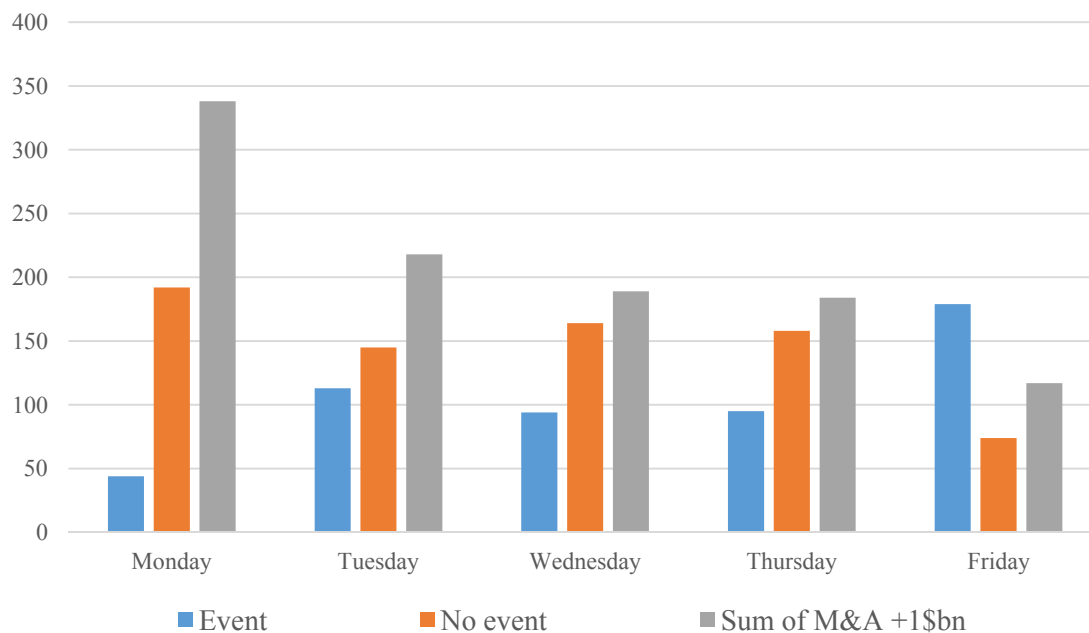
III. 2 Day of the week effect

Table 8 and Graph 2 have the distribution of Event days, No Event days and number of M&A announcements by day of the week.

Table 8: Events and M&A per weekday

Week day	Sum of M&A +1\$bn	Event	No event
Monday	338	44	192
Tuesday	218	113	145
Wednesday	189	94	164
Thursday	184	95	158
Friday	117	179	74
Grand Total	1046	525	733

Graph 2: Event Days and M&A announcements by week day



From the table and graph above, we can note that the number of M&A announcements is highest on Monday and lowest on Friday, with 32% and 11% of all announcements respectively. However, as discussed in section II 1, there are fewer Monday workdays in our sample due to the

large number of holidays occurring on the first day of the week. The hypothetical average number of M&A announcements per day is 0.83 (M&A announcements / Workdays = 1,046 / 1,258), which can be tested against the average announcements per day of our sample. We can construct a two-sided t-test to see whether the average number of M&A announcements is significantly different from the hypothesized average:

$$H_0 : \mu_{M\&A \text{ per weekday}} = 0.83$$

$$H_a : \mu_{M\&A \text{ per weekday}} \neq 0.83$$

The results of the tests are presented in table 9.

Table 9: Two-sided t-test M&A per weekday versus hypothesized average

	N	Mean	Std. Deviation	Std. Error Mean	95% lower bound	95% Upper bound	T-value	P-value
Mon $\mu = 0.83$ vs $\neq 0.83$	236	1.4322	1.2272	0.0799	1.2748	1.5896	7.54	0.000
Tue $\mu = 0.83$ vs $\neq 0.83$	258	0.8450	1.0131	0.0631	0.7208	0.9692	0.24	0.813
Wed $\mu = 0.83$ vs $\neq 0.83$	258	0.7326	0.8565	0.0533	0.6275	0.8376	-1.83	0.069
Thu $\mu = 0.83$ vs $\neq 0.83$	253	0.7273	0.9089	0.0571	0.6147	0.8398	-1.8	0.073
Fri $\mu = 0.83$ vs $\neq 0.83$	253	0.4625	0.7583	0.0477	0.3686	0.5563	-7.71	0.000

From the above results we can note the following:

- (1) We can reject the null hypothesis for Monday and Friday, with the true average number of M&A announcements being statically higher on Monday and lower on Friday (both P-values zero to the third decimal and with positive and negative T-values respectively).
- (2) The null hypothesis cannot be rejected for Tuesday that the true average is different from the hypothesized value.
- (3) The null hypothesis cannot be rejected at the 95% confidence level for both Wednesday and Thursday.

III. 3 Multiple macroeconomic events effect

As discussed in section II. 2 and noted in Table 3, there are certain days which have multiple macroeconomic events per day. Our hypothesis would lead us to assume that the number of M&A announcements would be lower on days with several events compared to those with only one event. Table 10 is an extension of Table 3 and looks at the average number of M&A announcements by number of events per day.

Table 10: M&A announcements by number of events per day

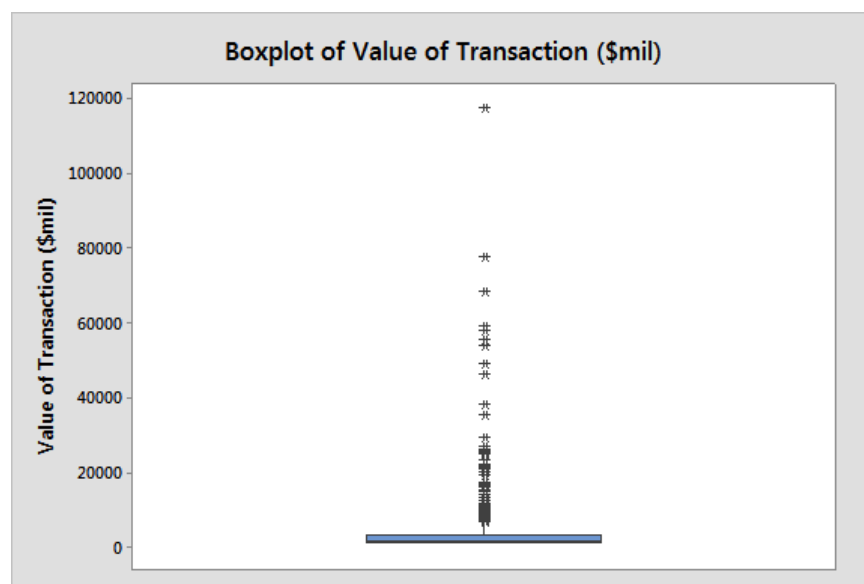
Events per day	Number of M&A +1\$bn	Number of Workdays	M&A per day
0	672	733	0.92
1	263	371	0.71
2	99	136	0.73
3	11	15	0.73
4	1	3	0.33

From the table above, we can note that the number of M&A announcements is higher on days with no macroeconomic events as discussed in section III 1. However, the average number of M&A announcements is relatively similar on days with a single macroeconomic event and days with multiple events. Days with 4 macroeconomic events have a much lower average number of M&A announcements, however the number of workdays with 4 events is too low to infer any results.

III. 4 Size of the transaction

As seen in the histogram in Graph 1, the frequency of transaction values is skewed to the right with the average transaction size nearly double the median transaction size. This is due to the presence of large M&A announcements, which creates a skewed fat tailed distribution. Graph 3 presents the distribution of transaction sizes as a boxplot.

Graph 3: Boxplot of transaction size



The announcements for the acquisition of AstraZeneca by Pfizer for \$ 117 billion in April 2014, the acquisition of Time Warner by 21st Century Fox for \$ 77.5 billion in July 2014, and the acquisition Allergan by Actavis for \$ 68.5 billion in November 2014 are the three largest announcements by deal value recorded during the period under review and have a large effect on the average transaction size.

The three transactions mentioned above were all announced on days with no macroeconomic event. The complexity of large transactions might cause corporations and their investment banking advisors to pay more attention to the timing of the announcement. We can look at the timing of M&A announcements that are below and above the median transaction

value to see whether the pattern noticed in section III 1 is reinforced when taking into consideration the size of the transaction. Table 11 shows the number M&A announcements above and below the median transaction size by Event and No Event days.

Table 11: M&A announcements by median size

	M&A announcement	
	Above median	Below median
Event	35%	37%
No event	65%	63%
	523	523

From the table above, we can see that transactions below and above the median transaction value are identically distributed on Event days and No Event days. We can therefore assume that the size of the transaction is not an important factor when determining whether a transaction will take place on an event day or not.

III. 5 Foreign companies

At least one of the companies involved in the transaction needed to be domiciled in the United States for the transaction to be included in this analysis. As highlighted in Table 4, most transactions during our timeframe had US companies on both sides of the transaction, with only 30% having either a foreign acquirer or a foreign target. 880 M&A announcements or 84% of our sample had a US acquirer.

The occurrence of a US macroeconomic event might have less significance for transactions involving a foreign entity. Table 12 shows the percentage of M&A announcements on Event and No Event days by cross-border category: only US acquirers, US only companies (both acquirer and target), and with a foreign counterpart (either acquirer or target).

Table 12: M&A announcements domestic and foreign

	M&A announcement		
	US Acquirer	US Only	With Foreign Co
Event	37%	36%	34%
No event	63%	64%	66%
	100%	100%	100%

As we can see from Table 14, the relative number of transactions between the three groups on Event days and No Event days are practically identical. We can therefore assume that the involvement of a foreign entity in an M&A announcement does not impact on the probability of the announcement occurring on a No Event day.

III. 6 Macroeconomic event as predictor of M&A announcement

Each working day of our analysis can be categorized into four categories: days with Event and M&A announcement, Event but no M&A announcement, No Event with M&A announcement, and No Event and no M&A announcement. The number of workdays in each category have been summarized in Table 13.

Table 13: Number of days by category

		Macro		
		Event	No Event	
M&A	Yes	250	403	653
	No	275	330	605
		525	733	1258

As we know in advance whether a macroeconomic event will take place on a particular day, we can now go one step further and see whether we can use that known occurrence as a predictor of M&A announcements. Looking at the occurrence of an M&A announcement as binary rather than continuous we can construct a binary logistic regression. Using Minitab, we have the regression results in Table 14.

Table 14: Regression results for M&A announcement

Constant	-0.0953 (0.0874)
Macro Event	0.000 -
No Macro Event	0.295 (0.115)
R-Squared	0.38%
N	1258

Standard errors are in parenthesis

We can note that the positive coefficient of the “No Macro Event” variable indicates that the likelihood of an M&A announcement increases on days with no macroeconomic event (t-value is 2.56). However, the low R² value indicates that there may be important variables missing.

The coefficients can be entered in the logistic regression equation to estimate the probability of an M&A Announcement occurring:

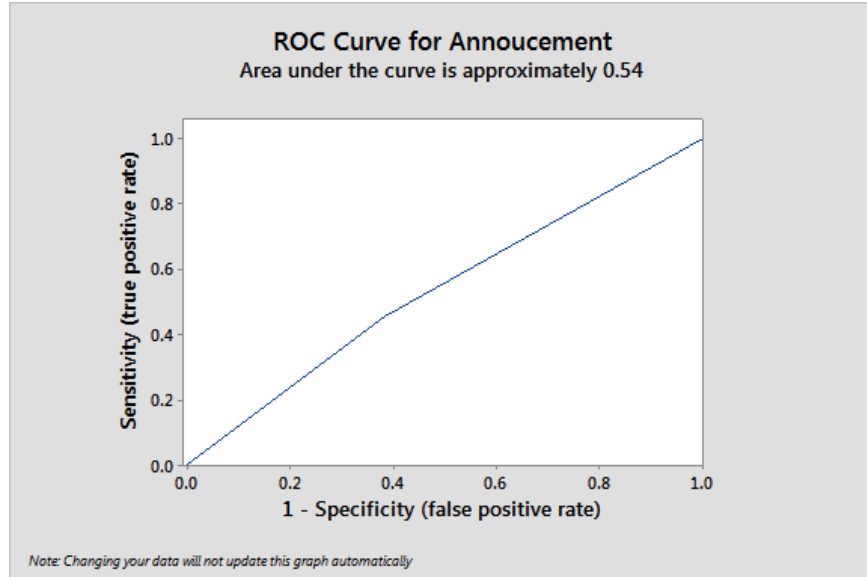
$$P(M\&A) = \frac{e^{(Y')}}{1 + e^{(Y')}}$$

where $Y' = -0.0953 + 0 * Macro\ Event + 0.295 * No\ Macro\ Event$

The above results in the probability of an M&A announcement when there is no macroeconomic event of 55% ($Y'=0.1997$) and 48% when there is a macroeconomic event ($Y'=-0.0953$).

According to D.W. Hosmer and S. Lemeshow (2000), the predictive power of a test can be determined by its sensitivity (ability to correctly identify days with M&A announcement) and specificity (ability to correctly identify days without M&A announcements), which are best summarized by a Receiver Operating Characteristic (ROC) curve. The ROC curve for our model was constructed using Minitab in Graph 4.

Graph 4: ROC curve event as predictor of announcement



The area under the curve is 0.54, which indicates that the predictive power of the test is low according to According to D.W. Hosmer and S. Lemeshow (2000), which is consistent with the R^2 value.

III. 7 Industry perspective

Having established that there is some evidence of increased number of M&A announcements on days without macroeconomic events, the next step is to identify the reason. The premise of the research is that there is a conscious decision by individuals involved in the transaction to avoid days with macroeconomic events when announcing their M&A. A director at one of the leading investment banks on Wall Street and a principal at the financial training company, Teaching The Street, offered the following perspectives and hypothesis:

(1) The presence of a macroeconomic event creates uncertainty which typically needs to be avoided when announcing a public deal.

As argued by Brenner, Pasquariella, Subrahmanyam (2009), uncertainty may also be present before the macroeconomic event and the event itself may provide a resolution of uncertainty.

The Chicago Board Options Exchange (CBOE) has the most widely used metric of volatility for the S&P500, the CBOE Volatility Index or VIX. Using the percentage change in VIX on each day for the period under review, we can look at whether the volatility increases on days with macroeconomic events compared to those without. Table 15 has the summary of the average percentage change in VIX over the period.

Table 15: Percentage change in VIX

Row Labels	Average of % change in VIX
Event	-0.23%
M&A	-0.04%
No ann	-0.41%
No event	0.61%
M&A	0.46%
No ann	0.79%
Grand Total	0.26%

The above results indicate that the relationship between macroeconomic events and volatility is not straightforward. We can see that the volatility, on average, increases on days with no macroeconomic event and decreases days with macroeconomic events. In addition, the lowest average percentage change in volatility is observed on days with an expected macroeconomic event and an M&A announcement. The VIX results above are indicative as they have not been tested for significance.

(2) The presence of M&A announcements on Friday can be linked to “go-shop” transactions. A go-shop period is “a provision that allows a public company that is being sold to seek competing offers even after it has already received a firm purchase offer”¹. In such a case, buyers have an interest in announcing a M&A deal on Fridays or before holidays, because other buyers are not around and the go-shop period comes with a lower risk of someone else actually interloping.

(3) Monday announcements are driven by the rationale that people involved in a deal do not want anything to happen over the weekend that could impact value. Therefore, in particular for public deals, people involved in the deal don’t want to announce on Friday post close which would leave two days of potential market moving events occurring.

(4) Companies look to have a headline.

¹ <http://www.investopedia.com/terms/g/go-shop-period.asp>

IV. Results

Throughout this paper we have looked at the effect of macroeconomic events on the timing of M&A announcements. For this we conducted a number of analysis introducing different variables and refining some of our initial assumptions and parameters.

Starting from a high level by looking at the number of M&A announcements on days with no macroeconomic events and days with, we concluded that our primary hypothesis that there is a significant statistical difference in the number of announcements between the two groups was supported by empirical observations.

Looking at macroeconomic events and M&A announcements by day of the week highlighted that Mondays have less events but statistically significantly more announcements and Fridays have more events but statistically significantly less announcements. The interviews with individuals in the industry gave us context for those results, as corporations will not want to announce an M&A preceding a weekend to avoid anything impacting value while markets are closed.

Certain days in our analysis have several macroeconomic events, which led us to question whether the presence of multiple events would reduce the number of M&A announcements. We found that the average number of M&A announcements was identical with 1, 2, or 3 macroeconomic events occurring.

The skewed fat-tailed distribution of transaction size prompted us to look at the effect of transaction size on the timing of the M&A announcement. Although 74% of the announcements with a transaction size above \$ 10 billion were done on a day with no macroeconomic event, the results were not conclusive when looking at the median transaction size of our sample.

As we are only looking at US macroeconomic events, the presence of a foreign acquirer or target in the transaction might have diminished the probability that the announcement would take place on an event day. However, we found that the proportion of announcements on event days was identical with or without a foreign counterpart.

The construction of a prediction of an announcement using a binary logistic regression, provided us with a regression model but the predictive powers were low according to the general rules for Areas Under the Curve (AUC) of D.W. Hosmer and S. Lemeshow (2000). In addition, the R^2 of our model was too low for our regressions to be meaningful.

Finally, we interviewed two individuals who work in the industry, an investment banker and a financial service trainer. Both hypothesized that the practice takes place in order to benefit from lower volatility on days with no macroeconomic event. However, looking at the average percentage change in the VIX index, this hypothesis was not supported by empirical evidence and, on average, volatility was somewhat higher on days with no events.

Conclusion

Based on the analyses that we conducted throughout this paper, the hypothesis that we put forward at the beginning, that companies are more likely to announce M&As on days when there are no macroeconomic events is strongly supported by empirical evidence. While we were able to successfully demonstrate that the number of announcements is statistically higher on days with no macroeconomic events, the variability of the results and the low predictive power of our regression model suggests that we cannot predict with great confidence ex-ante whether an announcement will take place on a particular day based on the presence of a macroeconomic event. However, taken collectively we can say that the likelihood of an M&A announcement on days with less macroeconomic events is higher than on days with more macroeconomic events. We can make this prediction with a rather high confidence level given our results in section III 1.

While the results do support the initial hypothesis, they are dependent on the correct definition of a significant macroeconomic event, which we have defined using the Relevance Score defined by Bloomberg Terminal users in the United States. The assumption is that the Relevance Score is a good proxy for what companies and investment bankers consider relevant. The impact of macroeconomic events on securities market has been researched extensively as well as different processes for identifying significant macroeconomic events (Brenner, Pasquariella, Subrahmanyam (2009); Nikkinen, Omran, Sahlstrom, Aijo (2006); Kim, McKenzie, Faff (2004)). The definition of a significant macroeconomic event can be quite subjective and can also change over time. In our research, we have assumed that macroeconomic events that are significant today, were also significant during our entire timeframe. Creating a

dynamic model of significance over the timeframe may have yielded a more predictive model, which could be further researched.

Finally, the large number of parameters that are taken into consideration when preparing a merger or an acquisition, would suggest that there are a number of factors that are reviewed before deciding the announcement date. The statistical difference that we noticed may suggest that macroeconomic events are a factor but one of lower importance to others. Further research with a more comprehensive review of the decision making process of the announcement date as well as using more advanced statistical tools may result in a more predictive model, which could be used as a trading strategy.

Appendix

Event definition

Change in Nonfarm payroll: Nonfarm payroll is a monthly report generated and reported by the U.S. Bureau of Labor Statistics intended to represent the total number of paid U.S. workers of any business. (Investopedia)

FOMC Rate Decision: The Federal Open Market Committee (FOMC) is the policy-making arm of the Federal Reserve. It determines short-term interest rates in the U.S. when it decides the overnight rate that banks pay each other for borrowing reserves when a bank has a shortfall in required reserves. (Econoday)

GDP: Gross Domestic Product represents the total value of the country's production during the period and consists of the purchases of domestically-produced goods and services by individuals, businesses, foreigners and government entities. (Econoday)

ISM Manufacturing: The manufacturing composite index from the Institute For Supply Management is a diffusion index calculated from five of the eleven sub-components of a monthly survey of purchasing managers at roughly 300 manufacturing firms nationwide. (Econoday)

CPI: The Consumer Price Index is a measure of the change in the average price level of a fixed basket of goods and services purchased by consumers. That is the index shows the change in price levels since the index base period, currently 1982-84 = 100. Monthly changes in the CPI represent the rate of inflation. (Econoday)

Consumer Confidence Index: The Conference Board compiles a survey of consumer attitudes on the economy. The headline Consumer Confidence Index is based on consumers' perceptions

of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income. (Econoday)

University of Michigan Consumer Sentiment Index: A survey of consumer confidence conducted by the University of Michigan. The Michigan Consumer Sentiment Index (MCSI) uses telephone surveys to gather information on consumer expectations regarding the overall economy. (Investopedia)

Durable Goods Orders: Durable goods orders reflect the new orders placed with domestic manufacturers for immediate and future delivery of factory hard goods. (Econoday)

Retail Sales Advance: Retail sales measure the total receipts at stores that sell merchandise and related services to final consumers. Sales are by retail and food services stores. Data are collected from the Monthly Retail Trade Survey conducted by the U.S. Bureau of the Census. (Econoday)

New Home Sales: New home sales measure the number of newly constructed homes with a committed sale during the month. (Econoday)

Markit US Manufacturing PMI: Markit's total U.S. Manufacturing PMI survey panel comprises over 600 companies. (Markit Economics)

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Data

Workdays: Bloomberg Excel download, function BDH, SPX Index, 1/1/10, 12/31/14

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