

The Value of Systemic Un-importance: The Case of MetLife¹

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Abstract

We use an event study approach to estimate the burden of the financial regulations associated with Systemically Important Financial Institution (SIFI) designation. On March 30, 2016, the U.S. District Court determined that MetLife's SIFI designation was arbitrary and capricious because the Financial Stability Oversight Council (FSOC) failed to weigh the economic cost of the financial regulation on MetLife against the benefits of increased financial stability. We find significant positive abnormal returns for MetLife and AIG on the date of the ruling. We estimate that the lifting of the SIFI designation created \$1.4 billion in corporate wealth for MetLife, suggesting that MetLife would be 3.4% more profitable as a non-SIFI. These estimated costs of financial regulation are less than the \$8 billion stipulated by MetLife in its complaint. We also find significant abnormal returns to SIFI institutions on the day following the U.S. Presidential election.

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I. Introduction

The Dodd-Frank Act of 2010 empowered the Financial Stability Oversight Council (FSOC) to designate a firm as a systemically important financial institution (SIFI) if the firm has the potential to pose a threat to the financial stability of the United States. Such firms are subject to stricter oversight by the Federal Reserve, are required to undergo stress tests, face higher capital requirements and are required to develop “living wills” to facilitate an orderly dissolution of the firm in the event of bankruptcy. Since the Act became law, SIFI designation was applied to four non-financial firms: MetLife, AIG, Prudential and General Electric. On March 30, 2016, the U.S. District Court in Washington D.C. rescinded MetLife’s SIFI status, thereby lifting the regulatory burden on the firm. This paper uses an event study to evaluate the impact of the District Court ruling on the market valuation of MetLife. We find that based on the market’s reaction to the ruling, the burden of financial regulation is \$1.4 billion in MetLife corporate wealth, or 3.4 percent of the firm’s market capitalization of \$41.5 billion.

The District Court ruling on MetLife provides a unique opportunity to measure the cost of SIFI designation. Most assessments of the cost of financial regulation are based on event studies at the time the regulation is put in place (see, for example, Kleinow, J. et al, 2014, on the impact of SIFI designation on banks). There are two potential problems with these estimates. First, market participants are typically aware of the regulation in advance of the imposition of the policy itself, making it difficult to identify a clean window for the event study. Indeed, in their analysis of the effect of SIFI designation on financial firms, Kleinow, et. al (2014) find changes in returns in advance of the actual policy change and only weak negative returns in the event window, suggesting that the effect of the regulation was already reflected in stock prices. The second challenge facing event studies of financial regulation is that it is unclear precisely how a new regulation will affect the firm, resulting in noisy estimates of the impact on firm value. The MetLife case avoids both of these issues. The MetLife ruling was largely a surprise to the market, and we find no items in the press or abnormal returns prior to the announcement of the ruling that suggests that the content of the court decision was anticipated by markets. This gives us a well-identified window for isolating the effect of SIFI designation on firm value. And because regulations were lifted (and not imposed) on the firm, market participants could price that adjustment: they had information both about the Dodd-Frank Act and how MetLife operated prior to being designated a SIFI. Our analysis of returns suggests that the market converged to a consensus view of the impact of the ruling on MetLife by the next trading day.

We examine two event windows and study the impact of the legal rulings on MetLife as well as for other non-SIFI financial institutions from the same S&P financial subsector. The first event window is

March 30, 2016, the date the judgment was announced. The second event date is one week later, April 7, 2016, when the judge's full opinion was released. We study both because it is possible that the full opinion clarified the extent to which the MetLife ruling had implications for the SIFI designation of other firms. We use data at the minute frequency, and adjust our statistical tests to reflect time-variation in the distribution of intra-day returns. In addition to our analysis of firm returns, we compare portfolios of SIFI and non-SIFI firms.

Our analysis yields the following results. First, we find that the court ruling had a large, positive effect on the valuation of MetLife, supporting the view that the regulation imposed a measurable burden on the firm. The ruling was also interpreted by the market as positive news for AIG, with cumulated abnormal returns of about one-third of those for MetLife. Second, when the 17 largest insurance firms are grouped into SIFI and non-SIFI portfolios, abnormal returns on the SIFI portfolio are positive and significant, and we find no gain to non-SIFIs. This confirms that the event study isolates the impact specific to the lifting of the SIFI regulations on MetLife, and potentially on the other SIFI insurers, and not as news for the insurance industry as a whole. Third, we examine a second event around the release date of the full opinion, when the markets learned that the judge's ruling did not rest on an argument that the SIFI designation was inappropriate for MetLife. Rather, the judge's view was that FSOC failed in the procedure for designating MetLife as a SIFI, leaving the door open for the company to be designated as systemically important at a later date. Returns around this date are weakly negative for MetLife, consistent with the interpretation that the ruling was not a clear victory for the insurance firm.

Throughout 2016, then-presidential candidate Donald J. Trump made clear his disdain of the Dodd-Frank Act, arguing that the regulations harmed the U.S. economy and promised to "dismantle it."² We examine the abnormal returns of SIFIs (financial and non-financial) following the election. We find that markets viewed the outcome of the election as good news for large financial institutions. Non-financial SIFIs experienced an increase in abnormal returns of 2.9 percent, while the increase in financial SIFIs (or GSIBs) was of the order of 3.3 percent. The return on the portfolio of non-SIFI firms (insurance companies that are not designated as SIFIs) was 0.4 percent.

This paper contributes to the literature that studies the wealth effect of SIFI designations. As discussed in the literature, it is unclear a priori whether SIFI designation should increase or decrease firm valuation. On the one hand, SIFI designation can be interpreted as a signal that the company is more likely to be bailed out in case of default due to its systemic importance; this may result in equity gains from lower expected default probabilities. On the other hand, SIFI designation can also be seen as a burden to the company due to the costs of fulfilling additional regulations and the restrictions imposed

² Reuters (2016).

on the business. In the case of banks, Kleinow et al. (2014) finds both positive and negative abnormal returns on equity pricing after SIFI designation, noting fewer stock price reactions of significance than expected. For the insurance market, Dewenter and Riddick (2018) find that stock prices rise on average 14% for the designated firms, suggesting that investors consider the benefits of SIFI designation to outweigh its compliance costs. Nonetheless, Dokic (2017) documents the attempts of insurance companies to remove their SIFI designation, a behavior suggestive of a negative wealth effect from receiving this label. Our analysis attempts to shed some light on these discrepancies.

II. MetLife's SIFI Designation and Subsequent Court Decisions

On December 18, 2014, FSOC designated MetLife a nonbank SIFI under Dodd-Frank Section 113. FSOC determined that “material financial distress at MetLife could lead to an impairment of financial intermediation or of financial market functioning that would be sufficiently severe to inflict significant damage on the broader economy[M]aterial financial distress at MetLife could pose a threat to U.S. financial stability.”³ FSOC’s determination of systemic risk hinged on three channels of transmission of risk from MetLife to the macroeconomy. The first source of transmission was that MetLife’s counterparties were argued to be sufficiently exposed to the company such that distress at the firm level could destabilize the broader market. The second consideration was liquidation of MetLife’s assets in the event of distress. Were the firm to sell off assets too quickly, it could cause a fall in market prices and disrupt trade. The third source of transmission was the critical function of MetLife as an insurance provider. FSOC determined that the first two channels were the dominant sources of concern; as for the third, FSOC considered that MetLife had sufficient competitors so that its role as an insurance provider could likely be met by other large corporations.

Designation as a SIFI imposed a number of regulations on the firm in addition to those facing a typical, large insurance company. First, MetLife would be subject to supervision by the Federal Reserve Board and would undergo stress tests to affirm its resilience in the face of adverse conditions. Second, MetLife could face higher capital requirements to increase its resilience. And third, the firm would be required to develop a living will, outlining its process for orderly liquidation of its assets in the event of insolvency. At the time of the SIFI designation, MetLife was (and continues to be) the largest U.S. insurance company in terms of financial assets and was the fourth non-financial firm to be designated a SIFI after AIG, Prudential and General Electric.

Less than a month after the SIFI designation, MetLife filed a claim against FSOC arguing that the

³ Financial Stability Oversight Council (2014)

designation of SIFI status was “arbitrary and capricious.”⁴ MetLife’s most forceful claims were that FSOC failed to follow its own regulations in making the SIFI designation and that FSOC focused on the benefits of increased regulation of the company (by reducing its threat to financial stability) without taking into account the economic costs to MetLife.⁵ The company estimated these costs at upwards of \$8 billion, largely in the form of pass-through of compliance costs to consumers.

At 10:35 am on March 30, 2016, U.S. District Court Judge U.S. District Court Judge Rosemary Collyer ruled in MetLife’s favor. In our event study, the initial ruling is designated as *Event 1* in our analysis and we will examine minute returns around the time of this ruling to evaluate the impact of the news on the market. The documents released to the public at that time indicated that the judge concurred with regard to three counts of MetLife’s claim, but the details of the judge’s order remained sealed. Therefore, while the judgment clearly lifted the SIFI designation from MetLife, it remained unclear how broadly the judge’s ruling could be interpreted and its implications for other firms. Because the judgment could imply an increased probability of removing SIFI regulations from other insurers, we conduct our event study for MetLife as well as for AIG and Prudential.⁶

The judge’s full opinion was released on April 7, 2016 at 10:47 am and clarified the basis of the ruling. The judge’s ruling did not rest on an argument that the SIFI designation was inappropriate for MetLife. Rather, the opinion stated that FSOC made critical departures from the process for determining SIFI status and, importantly for our study, FSOC “purposefully omitted any consideration of the cost of designation to MetLife. [...] FSOC assumed the upside benefits of designations (even without specific standards from the Federal Reserve) but not the downside costs of its decision.”⁷ We label the release date and time of the judge’s full opinion as *Event 2* and examine the potential impact of the full opinion on the returns of MetLife, as well as AIG and Prudential.

The court ruling was a surprise to the market. A search of news regarding MetLife in the days preceding the judge’s ruling yields no information about the ruling (indicating a leak) and, moreover, there was a fivefold increase in trading on March 30th relative to the 29th. As further corroboration of the surprise to market participants, Figure 1 shows results from Google Trends for searches involving the terms "MetLife SIFI", "AIG SIFI", "Prudential SIFI", and "General Electric SIFI" over the period February 15, 2016 to May 15, 2016. The data is plotted daily and is normalized relative to the largest

⁴ United States District Court for the District of Columbia (2016).

⁵ See Dokic (2017) for a full discussion of the nonbank SIFI designation and the legal arguments for appeal of SIFI status.

⁶ We drop General Electric Capital from our analysis as it is not traded as a separate entity from General Electric. General Electric has broader operations outside of the insurance industry making it difficult to isolate the impact of SIFI designation on its value as an insurance provider.

⁷ United States District Court for the District of Columbia (2016).

frequency in the period (the number of “hits” on March 30th). Before March 30th there was no indication of abnormal behavior in the use of searches involving those terms. The second spike observed in the graph (at about 30) corresponds to April 7th. If the news had not been a surprise, we would expect to see some abnormal searching behavior prior to March 30th.

Figure 2 shows daily stock prices for MetLife from July 1, 2014 through October 13, 2017. The vertical lines show the date that the company was designated a SIFI in January 2014 and the two subsequent event dates that are the focus of our study. MetLife’s stock price generally declined from mid-2015 to early 2016, when the SIFI designation was removed, increasing thereafter. Of course, prices are volatile and swings in MetLife’s return could reflect changes in the overall market, changes in the insurance market, or other shocks to the firm in particular. We now turn to a formal event study to assess whether returns around these specific event windows are indeed statistically significant and what they reveal about the market’s assessment of the court ruling on MetLife firm value.

III. Empirical methodology

We conduct an event study using intra-day data to determine whether the stock prices of SIFI insurance companies, and MetLife in particular, react to the release of court decisions regarding SIFI designation. The abnormal return is the return on the stock relative to its expected return, $E(R_{i,t})$:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

The expected return is based on the one-factor market model, where the market beta is estimated over a period preceding the event. To estimate beta, we use minute returns over the 60 trading days prior to the first event (December 21, 2015 to March 14, 2016). The pre-event estimation window ends 10-days prior to the first event to prevent any information leakages from entering the estimation window. The expected return is then,

$$E(R_{i,t}) = \alpha_i + \beta_i R_{M,t} \quad (2)$$

The cumulated abnormal return (CAR) is obtained by summing abnormal returns from the time of the news release at t_1 to the end of the CAR window, t_2 :

$$CAR_i[t_1, t_2] = \sum_{t=t_1}^{t_2} AR_{i,t} \quad (3)$$

We calculate the cumulative abnormal returns up through the time when abnormal returns cease to be significantly different from zero at the 1 percent level for 15 or 60 consecutive minutes. In most cases,

abnormal returns cease to be significantly different from zero well before the end of the trading day. In one case (MetLife following the first announcement) returns continue to be significantly different from zero into the next trading day. Finally, we calculate the change in firm value by taking firm capitalization just prior to the event and cumulating returns through the end of the CAR window.

We are using intraday data and need to take into account the fact that volatility changes in a systematic way over the course of a day. To adjust for this, we compare abnormal returns in the event window at a given time of day to the distribution of minute returns in the pre-event window at the same time of day (i.e. minute time of day is matched between before and after the event). This is important because returns tend to be noisier at the beginning of the day, and therefore the standard error band for determining statistical significance will tend to be wider at the open of trading than at other times of the day.

We date the beginning of each event based on Bloomberg Professional® news. For Event 1, Bloomberg Professional® news sent its first notification about the judge's ruling on March 30, 2016 at 10:35 A.M. We see an uptick in MetLife returns at 10:34 am, suggesting that market participants may have received the news of the decision just before it was posted to the news service. Therefore, we set the beginning of the event window to 10:34 am. On April 7, we see the first news report and the uptick in returns at 10:47 am.

IV. Results for Events 1 and 2

Event 1: SIFI designation lifted (March 30, 2016 10:34 am)

Figure 3 shows abnormal returns for MetLife around the first event window. The dark bars indicate significance at the 1 percent level (relative the distribution of abnormal returns in the pre-event window); shaded bars indicate significance at the 5 percent level. We see that returns are significant and positive for the first 5 minutes of trading, peaking at an abnormal minute-return of 1.5 percent. Over the course of the next few minutes, some of the gains are taken away, though there is a mix of positive and negative abnormal returns as the market absorbs the implications of the court decision. When the cutoff of the window is set at 60 consecutive minutes of no abnormal returns, row 1 of Table 1 (Panel A) shows that the cumulative abnormal return for MetLife had reached 3.38 percent. The increase in the market capitalization of MetLife rose over this interval by \$1.4 billion.

Markets reacted positively to the court decision in their assessment of AIG, although the magnitude of the effect is smaller (see Table 1). For AIG the CAR at the end of the 60-minute endogenous window yields a return of 1.21%, and an increase in firm value of \$0.74 billion. The impact on Prudential is negative for the 60-minute window but positive for the fifteen minute and end of day

windows. In the weeks preceding the ruling on MetLife, AIG had been under pressure from Carl Icahn, one its major investors, to divest its operations in order to shed its SIFI status. The corporate board resisted, arguing instead that the diversification benefits of its array of activities more than compensated for the costs of meeting the requirements as a SIFI. The MetLife ruling was likely taken as a signal to its shareholders that they could have their cake and eat it, too: the SIFI status could be shed without further divestitures.⁸

Event 2: Judge's ruling clarified (April 7, 2016 10:47 am)

Panel B of Table 1 shows the impact on firm value after the release of the judge's full opinion. The CARs for all three major insurers are small and negative, with the largest negative returns for MetLife. One interpretation of these finding is that the market took back some of the gains when investors learned that the judge's ruling did not rest on a finding that the SIFI designation was inappropriate for MetLife. Rather, the ruling was based on FSOC's procedural failure in the designation process, leaving the door open for MetLife to be re-designated as a SIFI at some point in the future.

V. SIFI and non-SIFI portfolios

Table 1 (Panel B) groups the 17 largest insurers into market-capitalization-weighted SIFI and non-SIFI portfolios. CARs for event 1 are significant for the SIFI portfolio of 1.6 to 1.9 percent, while the CARs for the non SIFI portfolio are substantially smaller at less than 0.5 percent. Similar to the results in part IV, returns to both portfolios have small negative abnormal returns after Event 2.

VI. Election of President Trump: The end of Dodd Frank?

Throughout his campaign, presidential candidate Trump made clear his desire to roll back Dodd Frank regulations. To assess the impact of the election on the returns of firms affected by those regulations, Table 2 reports abnormal returns for three sets of firms the day following the election: SIFI insurance companies (namely MetLife, AIG and Prudential), non-SIFI insurance companies, and SIFI banks. The returns are one-day abnormal return. The pre-event estimate window is the 60 days prior to the election, from September 8 to November 8, 2016. The abnormal return on the portfolio of non-SIFI firms is positive but not statistically different from zero. The abnormal returns to both portfolios of SIFIs –financial and non-financial firms– are large and statistically significant. The increase in market capitalization for the two SIFI portfolios together is approximately \$37 billion.

⁸ See Gray (2016) and Reuters Staff (2016).

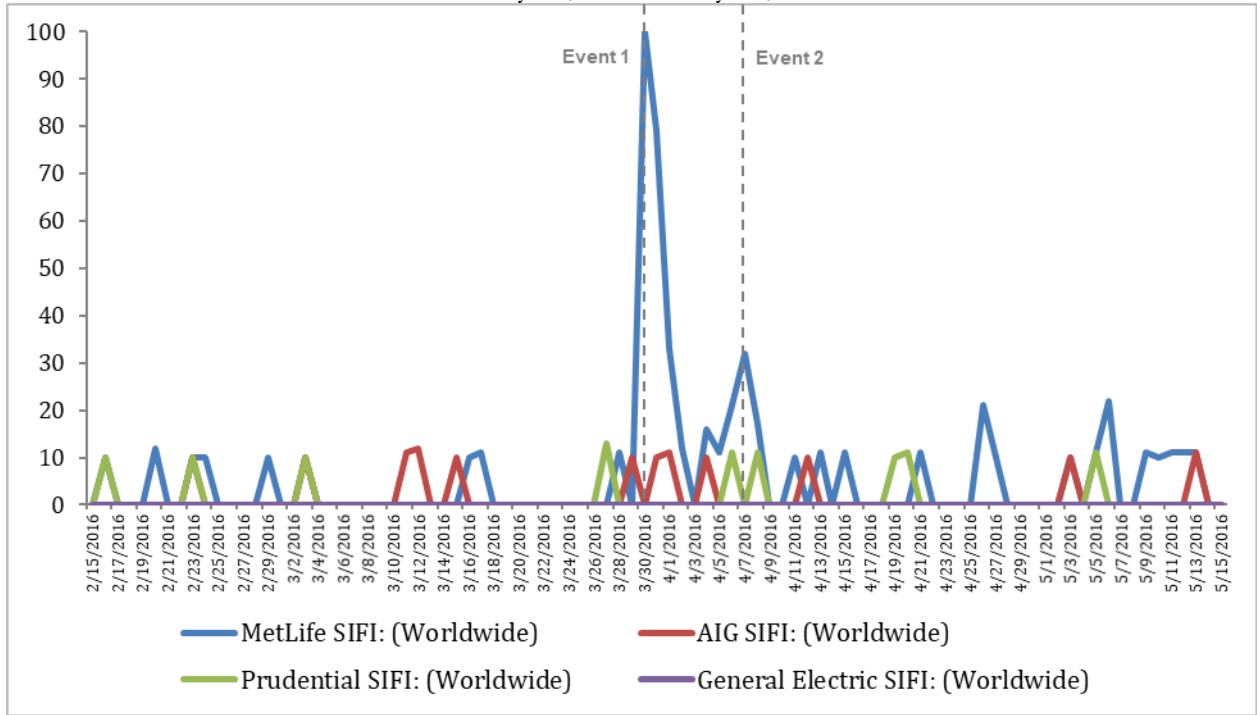
VI. Conclusion

This paper uses an event study methodology to assess the burden of financial regulations associated with SIFI designation. The MetLife ruling in March 2016 provides a unique opportunity to isolate the market reaction to the lifting of SIFI status. We find that the ruling increased MetLife's corporate wealth by \$1.4 billion and AIG's by \$0.74 billion. We also find that returns to SIFI firms – financial and non-financial– increased on the day following the election of President Trump, possibly anticipating future rollback of Dodd-Frank regulations.

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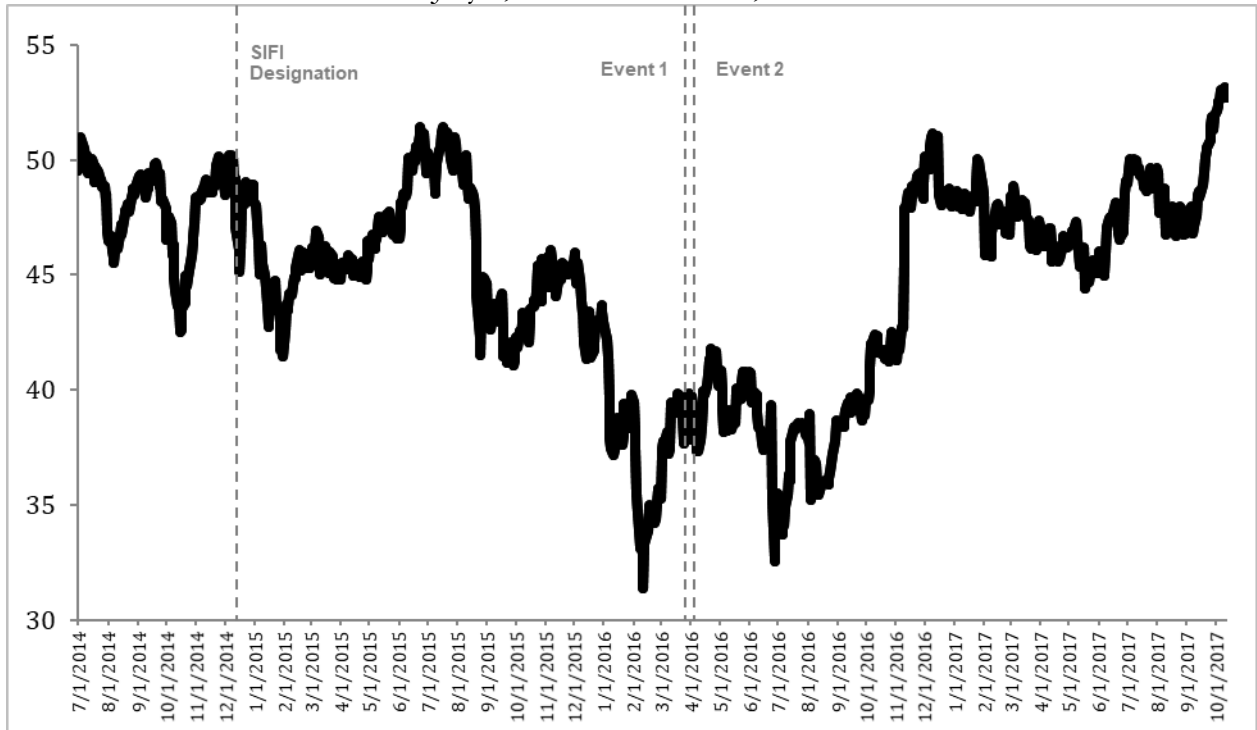
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Figure 1: Google Search Volume
February 15, 2016 – May 15, 2016



Source: Google Trends.

Figure 2: MetLife Share Price
July 1, 2014 – October 13, 2017



Source: Bloomberg.

Figure 3: Abnormal Returns for MetLife after Event 1
(Standard quantile two-tailed test, matched window)

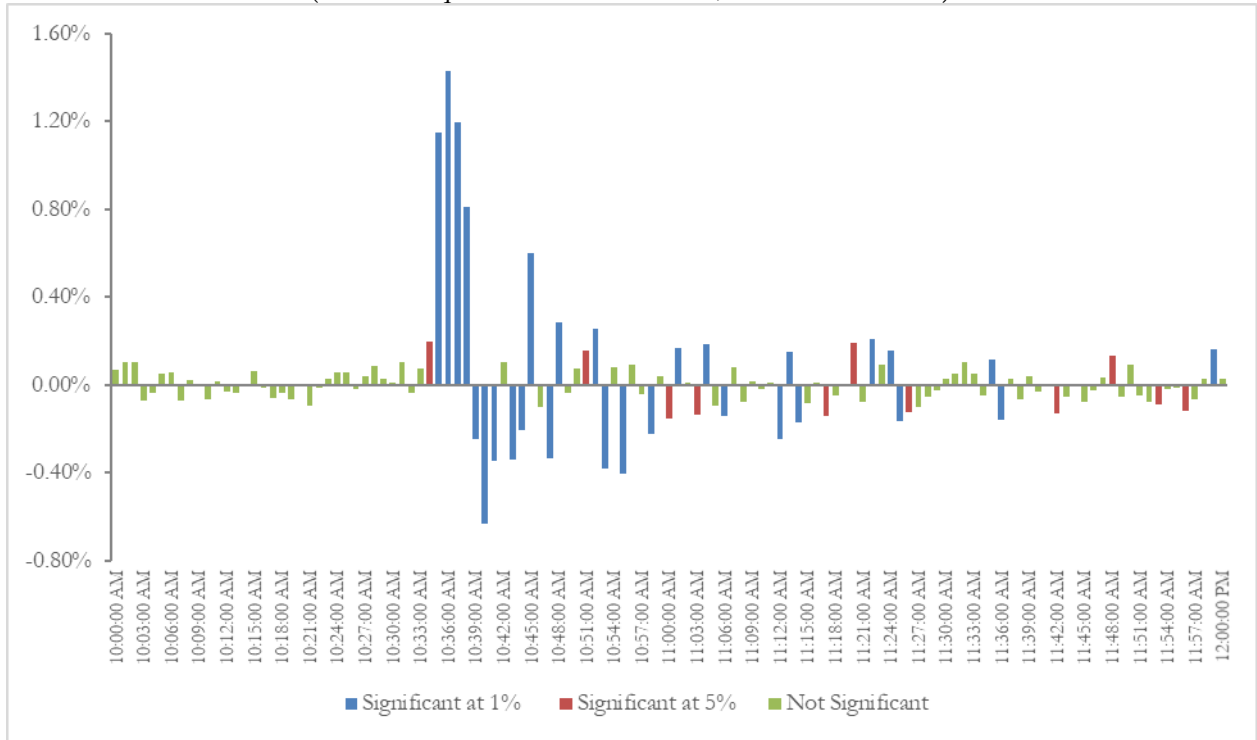
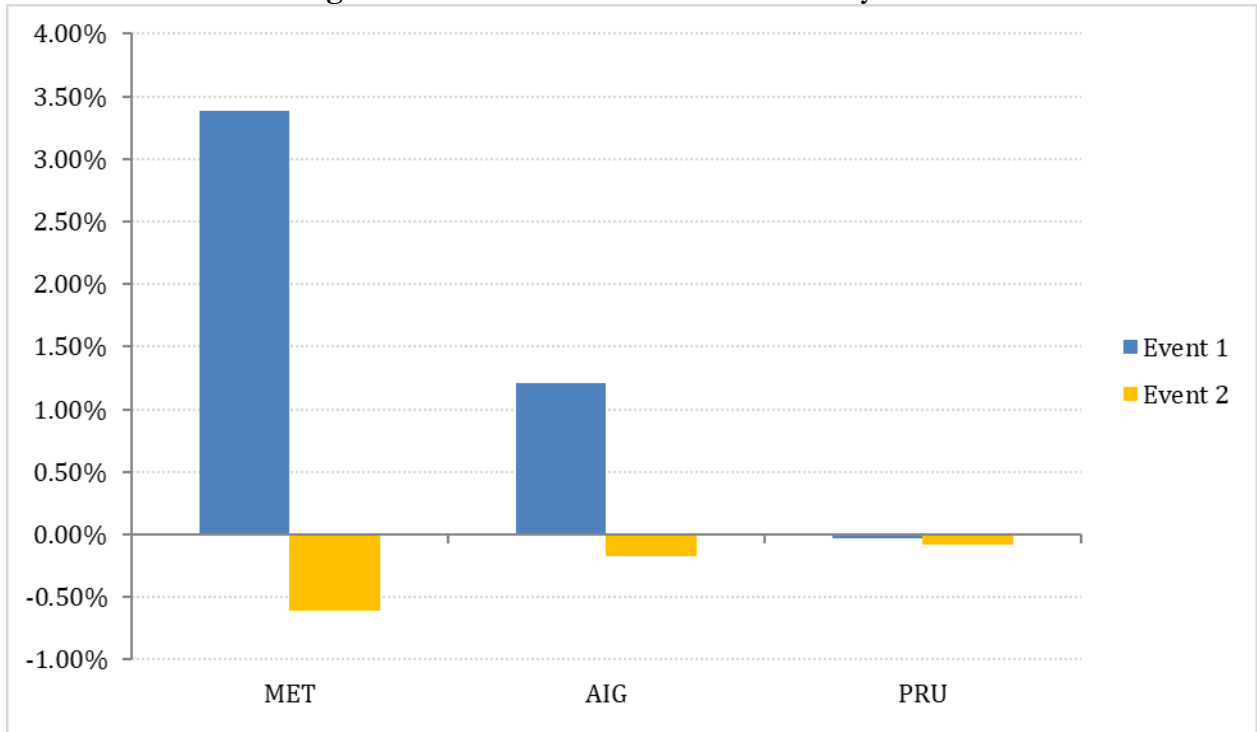


Figure 4: Cumulated Abnormal Returns by Event



Notes: Event 1 denotes March 30, 2016, while Event 2 represents April 7, 2016. Reported CARs correspond to the case where the end of the event window is set after no significant abnormal return is observed for 60 consecutive minutes.

Table 1: Cumulated Abnormal Returns by Event^a

A. MetLife, AIG and Prudential				
		MetLife	AIG	Prudential
Event 1	Endogenous Window (15 Minutes) ^b	2.61%	0.60%	1.38%
	Endogenous Window (60 Minutes) ^c	3.38%	1.21%	-0.03%
	End of Day	3.61%	1.37%	0.49%
	Change in Market Capitalization ^c	\$1.42	\$0.74	-\$0.02
Event 2	Endogenous Window (15 Minutes) ^b	-0.25%	-0.05%	-0.21%
	Endogenous Window (60 Minutes) ^c	-0.61%	-0.17%	-0.08%
	End of Day	-0.55%	-0.19%	-0.54%
	Change in Market Capitalization ^c	-\$0.25	-\$0.11	-\$0.03
B. SIFI vs. Non-SIFI Portfolios				
		SIFI	Non-SIFI	
Event 1	Endogenous Window (15 Minutes) ^b	1.79%	0.06%	
	Endogenous Window (60 Minutes) ^c	1.63%	0.39%	
	End of Day	1.86%	0.10%	
Event 2	Endogenous Window (15 Minutes) ^b	-0.18%	0.01%	
	Endogenous Window (60 Minutes) ^c	-0.24%	-0.14%	
	End of Day	-0.42%	-0.18%	

Notes:

(a) Event 1 denotes March 30, 2016, while Event 2 represents April 7, 2016.

(b) End of event window is set after no significant abnormal return is observed for 15 consecutive minutes.

(c) End of event window is set after no significant abnormal return is observed for 60 consecutive minutes.

Table 2: Cumulated Abnormal Returns after Presidential Election

A. Insurance Companies				
	Company	Significance	CAR	Market Capitalization Gain (billions USD)
SIFI	MET	***	4.99%	\$2.34
	AIG		0.78%	\$0.48
	PRU	***	3.56%	\$1.36
	<i>Portfolio</i>	**	2.86%	\$4.18
Non-SIFI	AFL		1.01%	\$0.29
	AIZ		1.37%	\$0.06
	ALL		0.12%	\$0.02
	CB		-0.65%	(\$0.38)
	CINF		-0.33%	(\$0.04)
	L		0.17%	\$0.02
	LNC	***	6.60%	\$0.79
	TMK	***	2.01%	\$0.16
	HIG		0.98%	\$0.17
	TRV	**	-1.90%	(\$0.58)
	UNM	***	5.85%	\$0.50
	XL		1.45%	\$0.05
	PFG		0.70%	\$0.11
	PGR		-0.55%	(\$0.10)
<i>Portfolio</i>		0.43%	\$1.07	
B. Banks				
	Company	Significance	CAR	Market Capitalization Gain (billions USD)
	BAC	***	3.76%	\$6.45
	BK		1.93%	\$0.89
	C		1.24%	\$1.77
	GS	***	4.09%	\$2.96
	JPM	***	3.05%	\$7.65
	MS	***	4.73%	\$3.02
	STT		2.45%	\$0.68
	WFC	***	4.31%	\$9.85
	<i>Portfolio</i>	***	3.32%	\$33.27

Notes: CAR values indicate one-day abnormal return.

** Statistically significant at 5% level.

*** Statistically significant at 1% level.

