DOL Fiduciary Rule and ETF Performance

Xiaoli Wang
Marist College

On April 10, 2016, the U.S. Department of Labor (DoL) Employees Benefits Security Administration finalized a rule to address conflicts of interest for investment advice on individual retirement accounts (IRAs), which is commonly known as the "fiduciary rule". It is widely expected that since the DOL rule requires financial advisors to act in their clients' best interests and demands greater clarity on the high costs of active management in retirement accounts, this will prompt advisers to embrace lower cost, passive investment strategies as the preferred portfolio building blocks. ETF industry, as one of the low – cost, index-like investment vehicles is expected to significantly benefit from the rule. In this paper, we empirically test whether the ETF price market reacts positively to the announcement of the DOL rule using the event study method. Our study will then offer significant insights regarding the ETF market reaction to the financial regulations.

Keywords: Dol Fiduciary Rule, ETF, Event Study

INTRODUCTION

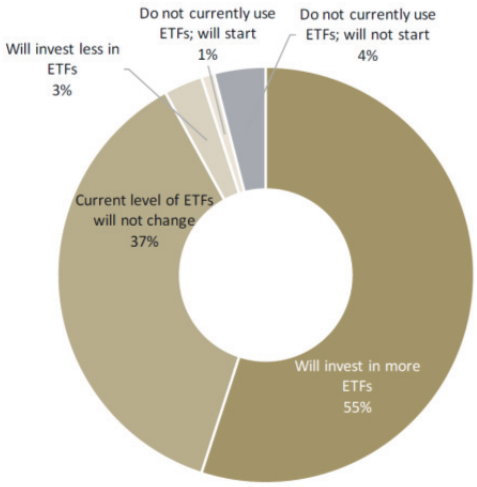
On April 10, 2016, the Department of Labor (DOL) finalized its Conflict of Interest Rule (DOL Rule) which re-defines the term fiduciary for the Employee Retirement Income Security Act of 1974, (ERISA) and the Internal Revenue Code of 1986. Under the final rule, virtually all retail selling and advisory activity involving participants in 401(k) plans, other employer-sponsored retirement plans subject to ERISA, and IRAs, will give rise to fiduciary status, for purposes of ERISA and the Code, on the part of the individual advisor and, in many cases, his or her firm.(ETF Trends, BNY Mellon Report, 2016) DOL indicates that its intention in re-defining fiduciary status is not necessarily to outlaw common compensation and fee practices in the retail advisor space; instead, the intention is to condition the availability of prohibited transaction exemption relief for such practices on compliance with a best interest standard of conduct enforceable against advisors and their firms by ERISA plans, plan participants and IRA holders. It is widely expected that since the DOL rule requires advisors to act in their clients' best interests and demand greater clarity on the high costs of active management in retirement accounts, this will prompt advisers to embrace lower cost, passive investment strategies as the preferred portfolio building blocks. ETF industry, as one of the low – cost, index-like investment vehicles are well expected to significantly benefit from the rule.

Specifically, it is argued that the fiduciary standard benefits ETF industry from the following three aspects: 1. Motivate advisers and institutions to move assets from more expensive active investments to less expensive passive investments, which favor ETFs ; 2. Motivate plan sponsors to find a way to offer

ETFs and 3 Add impetus to institutions' use of ETFs. (ETF trends, BNY Mellon Report). To help understand the impact of the DOL ruling on advisors' use of ETFs, BNY Mellon, in conjunction with ETF Trends, conducted a survey of 170 advisors. The results of the study confirm that the DOL Rule will have a strong impact on advisors' use of ETFs: with over half (55%) reporting that their investments in ETFs will increase because of the DOL Rule. Advisors in this study currently have 23% of their assets under management (AUM) in ETFs, and they expect that an additional 15% of their AUM will be transitioned from other products to ETFs in the next two years, resulting in 38% of their assets in ETFs.

Advisors also expect their product mix to change considerably over the next two years. On the rise will be actively managed ETFs (72% will increase usage a lot or a little), passively managed ETFs (67%) and separately managed accounts (54%). Products on the decline will be mutual funds (45% will decrease usage a lot or a little), unit investment trusts (37%) and annuities (34%).

FIGURE 1
IMPACT OF DOI RULE ON ADVISOR'S USE OF ETF PRODUCTS IN NEXT 1-2 YEARS



Source: ETF trends and BNY Mellon

In this paper, we empirically test the above the hypothesis, i.e. whether the ETF industry reacts positively to the announcement of the DOL rule using the event study methodology. Our research will contribute to the literature by offering significant insights regarding the ETF market reaction to the financial regulations.

LITERATURE REVIEW

Since the pioneering papers of Ball and Brown (1968) and Fama, Fisher, Jensen and Roll (FFJR) (1969), in which they adopted a revolutionary methodology to investigate the stock price reaction to earning announcements and stock split respectively, event study has become a very popular tool to test the impact of various events on variables. In the finance area, Event Study has become a standard methodology of measuring security price reaction to some announcement or events, including corporate specific events or macro-economic events. Kothari and Warner (2005) report that over the period 1974–2000, five major finance journals have published 565 articles containing event study results.

In the corporate finance field, events study has been used widely to test the stock reaction to various corporate specific events, including earnings announcement (Ball and Brown 1968), stock split (Fama, Fisher, Jensen and Roll, 1969), the announcement and completion of a takeover bid/divestiture (Agrawal and Mandelker, 1990; Lys and Vincent, 1995; Gregory, 1997; Bruner, 1999); the announcement of Initial public offering (Ritter, 1991; Loughran and Ritter, 1995; Espenlaub et al., 2001) & Seasoned equity

offering (Loughran and Ritter, 1995; Carlson et al., 2006) , appointment of a new CEO (Defond et al., 2005) or the change of top executive (Bonnier and Bruner, 1989; Dahya et al., 1998) etc.

In the macro-economic area, events study is usually adopted to examine the impact of a particular macro event on relevant firms. For example Schipper and Thompson (1983) and Schumann (1988) use event study to investigate the impact of a new legislature, Small et al. (2007) study the firms' reaction to Sarbanes Oxley Act, Baek et al. (2004) research on financial crisis ; and Homan (2006) study the The "9/11" terrorist attack in New York (Homan, 2006).

In this paper, we adopt the event study methodology to investigate the ETF price reaction to the DOL fiduciary Rule announcement. To our knowledge, we are the first to use event study methodology to study ETF price reactions.

DATA AND METHODOLOGY

Our ETF data are obtained from Yahoo finance. We downloaded the daily closing price as well as the trading volume for various ETFs from Jan 1st, 2016 to Dec 31st2016. The detailed list of the selected ETF is provided in Table 1.

TABLE 1
LIST OF ETF AND INDEX

Variable	ETF ticker	Description
XLU	XLU	Utility Sector SPDR Fund (ETF)
XLK	XLK	Information Technology Sector SPDR Fund (ETF)
XLB	XLB	Materials Sector SPDR Fund (ETF)
XLI	XLI	Industrials Sector SPDR Fund (ETF)
XLV	HLV	Healthcare Sector SPDR Fund (ETF)
XLP	XLP	Consumer Staples Sector SPDR Fund (ETF)
XLY	XLY	Consumer Discretionary Sector SPDR Fund (ETF)
XLE	XLE	Energy Select Sector SPDR Fund (ETF)
XLF	XLF	Financial Select Sector SPDR Fund (ETF)
IWM	IWM	iShares Russell 2000 Index (ETF)
IWB	IWB	iShares Russell 1000 Index (ETF)
QQQ	QQQ	PowerShares QQQ Trust, Series 1 (ETF)
IVV	IVV	iShares S&P 500 Index (ETF)
VOO	VOO	Vanguard 500 Index ETF Fund
SPY	SPY	SPDR S&P 500 ETF Trust
SP500idx		S&P 500 Index

This table shows the list of ETF used in the study and its ticker and descriptions. We have selected S&P500 ETF and sector ETFs.

We then use event study methodology to investigate the impact of DOF fiduciary rule on the pricing of ETFs. We use the common parameter values in our event study. The details are provided in table 2.

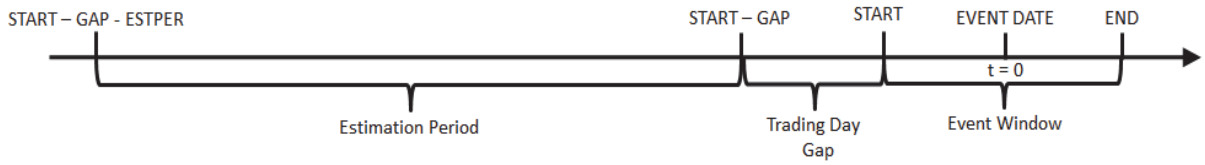
TABLE 2
LIST OF PARAMETERS USED IN THE EVENT STUDY

Assume event date is 0 and all the number of days are in terms of trading days			
Variables names	Description	Value	
			Date
Event Date	The date when the rule is announced	0	4/6/2016
Estperiod	the length of the estimation period in terms of trading days	150	
Start	The start day relative to the event date in term of trading days	-10	3/22/2016
End	The end day relative to the event date in term of trading days	10	4/20/2016
Evtwinow	Event Window	[-10,10]	
Gap	The Gap period between the estimation period and the event window	15	
Estwinow	The estimation window	[-175, -25]	7/27/2015-03/01/2016
Eststart	the first day for estimation period		20150727
Estend	the last day for the estimation period		20160301
Evt			20160406
Evtstart			20160322
Evtend			20160420

This table shows the detailed information of our event study methodology

Figure 1 provide a detailed time line for our analysis.

FIGURE 2
DETAILED TIME LINE FOR THE EVENT STUDY



Since we use trading days in our analysis, we first remove the non-trading days from our data, including weekend, holidays etc. We use the market model in the estimation period as well as for the calculation of abnormal return during event window, in which the total return of S&P500 index is used as a proxy for the market return. We believe that the market model is the best in our event study as we are dealing with ETF, which itself is a basket of stocks.
The abnormal return (AR) is calculated as

$$AR_{jt} = R_{jt} - (\hat{\alpha}_j + \hat{\beta}_j * R_{mt})$$

where j refers to the number j ETF and t refers to the time. R_{mt} is the market return at time t, $\hat{\alpha}_j$and $\hat{\beta}_j$are the estimates of intercept and coefficient from the estimation period.

We test whether each individual ETF as well as the cross-sectional average ETFs have abnormal returns during various event windows. A positive significant abnormal return test suggests a positive price reaction to the event and vice versa. We define the cross section average abnormal return (AAR) for each date as:

$$AAR_t = \frac{1}{n}\sum_{j=1}^{n} AR_{jt}$$

The cumulative abnormal return of each ETF during the window (T1, T2) is calculated as:

$$CAR_j = \sum_{t=T_1}^{T_2} AR_{jt}$$

Then the cumulative average abnormal return (CAAR) is defined as

$$CAAR = \sum_{t=T_1}^{T_2} AAR_t$$

For robustness check, we varied the event windows to test the CAR and CAAR significance.

Last but not least, we calculate the buy -and -hold return as follows and test whether there is a significant difference between the real buy-and-hold return and the expected buy-and-hold return. A significant difference indicate a possible market reaction to the news.

$$BHAR_{jt} = \prod_{t=T_1}^{T_2}(1 + R_{jt}) - \prod_{t=T_1}^{T_2}(1 + R_{expected})$$

EMPIRICAL RESULTS

In this section, we show the empirical results. Table 3 shows the ETF return descriptive statistics for both estimation window and event window.

TABLE 3
DESCRIPTIVE STATISTICS OF ETF DAILY RETURNS

Estimation Window

	XLU	XLK	XLB	XLI	HLV	XLP	XLY	XLE	XLF	IWM	IWB	QQQ	IVV	VOO	SPY
Average	0.08	0.01	-0.01	0.02	-0.05	0.04	-0.01	-0.09	-0.07	-0.08	-0.01	-0.02	-0.02	-0.02	-0.02
S.t. dev	1.10	1.40	1.54	1.25	1.40	1.01	1.30	2.08	1.45	1.33	1.27	1.47	1.25	1.25	1.24
Median	0.19	0.03	-0.05	-0.02	-0.08	0.02	0.09	-0.23	-0.08	-0.16	-0.03	0.01	-0.05	-0.04	-0.05
Min	-3.75	-3.94	-4.19	-3.56	-4.27	-3.48	-3.99	-5.37	-4.27	-3.90	-4.10	-4.37	-4.17	-4.08	-4.21
Max	2.53	5.04	3.6	3.12	4.22	2.95	3.80	4.95	4.22	3.28	3.89	5.04	3.93	3.97	3.84

Event Window

Real Return Statistics

	XLU	XLK	XLB	XLI	HLV	XLP	XLY	XLE	XLF	IWM	IWB	QQQ	IVV	VOO	SPY
Average	-0.06%	0.07%	0.15%	0.04%	0.28%	0.00%	0.11%	0.24%	0.18	0.20	0.12	0.13	0.10	0.13	0.13
S.t. dev	0.88%	0.71%	0.97%	0.62%	0.94%	0.68%	0.69%	1.33%	0.94	1.06	0.65	0.82	0.68	0.64	0.63
Median	-0.04%	0.00%	0.44%	0.09%	0.06%	0.02%	0.13%	0.19%	0.31%	0.15	0.00	0.01	0.06	0.07	0.06
Min	-2.50%	-1.44%	-1.45%	-1.13%	-1.30%	-1.13%	-1.13%	-2.19%	-1.88%	-1.85	-1.16	-1.44	-1.21	-1.18	-1.20
Max	1.48%	1.56%	2.14%	1.49%	2.69%	1.06%	1.41%	2.98%	2.27%	2.78	1.27	1.64	1.08	1.09	1.09

Expected Return Statistics

	XLU	XLK	XLB	XLI	HLV	XLP	XLY	XLE	XLF	IWM	IWB	QQQ	IVV	VOO	SPY
Average	0.15	0.17	0.14	0.16	0.09	0.14	0.13	0.10	0.08	0.06	0.13	0.14	0.13	0.13	0.13
S.t. dev	0.31	0.68	0.65	0.60	0.60	0.45	0.61	0.82	0.68	0.61	0.63	0.71	0.63	0.63	0.62
Median	0.11	0.10	0.07	0.09	0.03	0.09	0.07	0.02	0.01	-0.01	0.07	0.07	0.06	0.06	0.06
Min	-0.50	-1.25	-1.23	-1.10	-1.18	-0.80	-1.15	-1.62	-1.35	-1.23	-1.19	-1.34	-1.19	-1.20	-1.19
Max	0.60	1.18	1.11	1.04	0.99	0.81	1.04	1.32	1.10	0.96	1.07	1.19	1.06	1.07	1.06

Table 3 shows the descriptive statistics of ETF daily returns in both estimation window and event window. For event window (-10, +10), we demonstrate the statistics of both real returns and expected returns.

Table 4 shows the result of the ETF abnormal return (AR) significance test.

TABLE 4
ABNORMAL RETURN (AR) SIGNIFICANCE TEST

Relative Date	Date	XLU	XLK	XLB	XLI	HLV	XLP	XLY	XLE	XLF	IWM	IWB	QQQ	IVV	VOO	SPY
-10	20160322	0.684	0.847	0.208	0.208	0.127	0.227	0.837	0.769	0.740	0.963	0.377	0.392	0.697	0.607	0.634
-9	20160323	0.291	0.844	0.483	0.845	0.931	0.379	0.836	0.320	0.988	0.038	0.503	0.804	0.000**	0.901	0.566
-8	20160324	0.830	0.489	0.976	0.482	0.978	0.766	0.756	0.652	0.285	0.479	0.845	0.896	0.591	0.420	0.786
-7	20160328	0.599	0.378	0.672	0.890	0.671	0.358	0.426	0.674	0.547	0.820	0.767	0.645	0.995	0.907	0.950
-6	20160329	0.298	0.155	0.658	0.588	0.642	0.910	0.777	0.632	0.141	0.001**	0.099	0.193	0.262	0.203	0.489
-5	20160330	0.553	0.847	0.979	0.512	0.602	0.541	0.686	0.806	0.762	0.524	0.967	0.976	0.673	0.595	0.951
-4	20160331	0.513	0.955	0.446	0.845	0.907	0.366	0.887	0.836	0.924	0.335	0.714	0.874	0.513	0.406	0.381
-3	20160401	0.986	0.918	0.733	0.676	0.446	0.256	0.646	0.108	0.626	0.838	0.100*	0.463	0.930	0.936	0.442
-2	20160404	0.701	0.852	0.243	0.040**	0.035**	0.658	0.311	0.840	0.861	0.405	0.958	0.949	0.800	0.960	0.827
-1	20160405	0.112	0.820	0.621	0.469	0.688	0.998	0.796	0.591	0.601	0.875	0.712	0.714	0.591	0.942	0.923
0	20160406	0.428	0.612	0.960	0.193	0.020**	0.966	0.839	0.522	0.261	0.767	0.499	0.330	0.728	0.640	0.508
1	20160407	0.617	0.647	0.798	0.752	0.902	0.565	0.960	0.430	0.298	0.820	0.892	0.832	0.752	0.731	0.854
2	20160408	0.735	0.391	0.676	0.853	0.477	0.544	0.353	0.195	0.831	0.742	0.303	0.388	0.863	0.741	0.761
3	20160411	0.676	0.964	0.392	0.545	0.514	0.236	0.798	0.997	0.133	0.980	0.477	0.881	0.770	0.916	0.572
4	20160412	0.881	0.316	0.663	0.371	0.899	0.793	0.674	0.178	0.609	0.728	0.347	0.570	0.889	0.874	0.450
5	20160413	0.195	0.791	0.937	0.243	0.994	0.002**	0.392	0.546	0.015**	0.028**	0.499	0.767	0.843	0.717	0.995
6	20160414	0.811	0.837	0.968	0.775	0.925	0.278	0.942	0.840	0.623	0.883	0.837	0.963	0.764	0.465	0.703
7	20160415	0.574	0.428	0.516	0.645	0.944	0.182	0.456	0.373	0.698	0.469	0.697	0.741	0.217	0.690	0.704
8	20160418	0.982	0.423	0.777	0.173	0.654	0.931	0.548	0.516	0.882	0.750	0.749	0.641	0.249	0.257	0.436
9	20160419	0.934	0.020**	0.033**	0.370	0.908	0.488	0.071**	0.210	0.054**	0.772	0.018**	0.037**	0.803	0.735	0.994
10	20160420	0.005***	0.841	0.644	0.515	0.499	0.011**	0.944	0.517	0.143	0.809	0.639	0.974	0.867	0.960	0.835

*, **, *** represents significance level at 10%, 5% and 1% respectively

Table 4 shows the results of Abnormal Return (AR) test of ETFs returns on each day during the event window. We use the market model in our estimation and abnormal return is calculated as 〖AR〗_jt=R_jt-(α^_j+β^_j*R_mt), where total return of S&P500 index is used as the market return. The significant abnormal return is highlighted and *, **, *** represents significance level at 10%, 5% and 1% respectively.

As we can see that, most of the AR significance tests are not significant except a few and most of the significance concentrate on day -3 and +9 and +10. The cumulative abnormal return (CAR) test also shows that none of the ETFs have significant CAR during the test window as shown in table 5.

TABLE 5
CUMULATIVE ABNORMAL RETURN (CAR) SIGNIFICANCE TEST

Descriptions Days		XLU	XLK	XLB	XLI	HLV	XLP	XLY_ CD	XLE	XLF	IWM	IWB	QQQ	IVV	VOO	SPY
+5	5	0.77	0.32	0.58	0.58	0.58	0.13	0.77	0.29	0.20	0.31	0.24	0.55	0.84	0.87	0.78
-5 to +5	11	0.37	0.45	0.93	0.50	0.46	0.38	0.67	0.56	0.47	0.57	0.82	0.86	0.78	0.68	0.93
-10 to +5	16	0.64	0.78	0.71	0.27	0.36	0.51	0.89	0.92	0.93	0.34	0.60	0.62	0.09	0.90	0.99
-10 to +10	21	0.37	0.34	0.93	0.30	0.30	0.29	0.83	0.65	0.44	0.32	0.89	0.88	0.10	0.86	0.97
-5 to + 10	16	0.22	0.19	0.59	0.52	0.37	0.21	0.64	0.39	0.21	0.51	0.414	0.60	0.68	0.67	0.99

*, **, *** represents significance level at 10%, 5% and 1% respectively

Table 5 shows the results of Cumulative Abnormal Return (CAR) test of ETFs returns on selected event windows. We use the market model in our estimation and abnormal return is calculated as 〖AR〗_jt=R_jt-(α^_j+β^_j*R_mt), where total return of S&P500 index is used as the market return. The CAR is then calculated as the sum of the AR during the window. We then perform the significance test and *, **, *** represents significance level at 10%, 5% and 1% respectively.

Table 6 and Table 7 shows the result of the average abnormal return (AAR) and cumulative average abnormal return (CAAR) significance test. Still, we see no significance for any of the AARs or CAARs. What is even more interesting is that we see that CAARs during majority of event window is even negative, not positive.

TABLE 6
SIGNIFICANT TEST OF AAR

	AAR	S.D	T value	P value
-10	-0.001	0.005	-0.179	0.861
-9	-0.002	0.006	-0.281	0.783
-8	0.000	0.003	0.173	0.865
-7	0.000	0.003	-0.090	0.930
-6	0.002	0.007	0.319	0.754
-5	-0.001	0.002	-0.347	0.734
-4	0.000	0.003	0.027	0.979
-3	0.000	0.006	-0.024	0.981
-2	-0.001	0.006	-0.220	0.829
-1	0.000	0.005	-0.026	0.980
0	0.001	0.006	0.142	0.889
1	0.000	0.004	0.064	0.950
2	0.001	0.005	0.134	0.895
3	0.000	0.004	-0.006	0.995
4	0.001	0.005	0.130	0.899
5	0.000	0.008	-0.034	0.973
6	0.000	0.002	-0.125	0.902
7	0.001	0.004	0.128	0.900
8	0.000	0.003	0.098	0.923
9	0.001	0.008	0.077	0.940
10	-0.002	0.008	-0.185	0.856

Table 6 shows the result of average abnormal return (AAR) significance test. AAR is defined as the average of the abnormal return on a given day: $AAR_t = \frac{1}{n}\sum_{j=1}^{n} AR_{jt}$.

TABLE 7
SIGNIFICANT TEST OF CAAR

Event Window	Days	CAAR return	Stdev	T statistics	P value
5.000	5.000	0.027%	0.000	0.626	0.9998
-5 to +5	11	-0.001%	0.001	-0.013	0.999994
-10 to +5	16	-0.002%	0.001	-0.017	0.999988
-10 to +10	21	-0.002%	0.001	-0.027	0.999981
-5 to + 10	16	-0.002%	0.001	-0.030	0.999984

Table 7 shows the result of cumulative average abnormal return (AAR) significance test and cumulative average abnormal return (CAAR) test. CAAR is defined as the cumulative average abnormal return of the ETFs during various event window. $CAAR = \sum_{t=T_1}^{T_2} AAR_t$.

Table 8 shows the buy and hold actual return and expected return of each ETF and the difference between the two. A significant return difference indicate a possible market reaction to the event. However, as we can see from table 8, there are no significant return difference for each of the ETFs and the average return across over ETFs do not seem to show significance.

TABLE 8
TEST OF BHAR

CVAR	CEstret	CRealRET	DiffBHRET
XLU_UTL	1.031	0.987	0.044
XLK_TEC	1.036	1.014	0.021
XLB_MAT	1.029	1.032	-0.003
XLI_IND	1.033	1.008	0.025
HLV_HEL	1.018	1.061	-0.043
XLP_CS	1.030	1.001	0.029
XLY_CD	1.028	1.023	0.005
XLE_ENR	1.021	1.051	-0.030
XLF_FIN	1.017	1.037	-0.020
IWM_R2K	1.011	1.042	-0.030
IVW_R1K	1.027	1.026	0.002
QQQ_NASDAQ	1.030	1.026	0.004
IVV_SP500	1.027	1.020	0.006
VOO_SP500	1.027	1.026	0.000
SPY_SP500	1.026	1.027	0.000
		Mean	0.001
		Stdev	0.024
		T Statistics	0.029
		P value	0.977

Table 8 shows the buy and hold actual return and expected return of each ETF and the difference between the two. Then a T test is performed to investigate the significance of the return difference. A significant return difference indicate a possible market reaction to the event. BHAR is defined as: $BHAR_{jt} = \prod_{t=T_1}^{T_2}(1 + R_{jt}) - \prod_{t=T_1}^{T_2}(1 + R_{expected})$.

Table 8 shows the buy and hold actual return and expected return of each ETF and the difference between the two. Then a T test is performed to investigate the significance of the return difference. A significant return difference indicate a possible market reaction to the event. BHAR is defined as: $BHAR_{jt} = \prod_{t=T_1}^{T_2}(1 + R_{jt}) - \prod_{t=T_1}^{T_2}(1 + R_{expected})$. All of the tests indicate the selected ETFs do not seem to have abnormal returns during the event window. This implies that there is no ETF market reaction to announcement of the labor department Fiduciary Rule. One of the possible reasons might be that the news of the possible Fiduciary rule has been around in the market for a while and the information is already digested in the market. Another possible reason is that the ETF usually include a basket of securities and the impacts of the news are so diversified and thus are not significant enough to be reflected in the ETF performance.

CONCLUSIONS

In this paper, we empirically test the ETF market reaction to the labor department Fiduciary Rule using event study. We found that the selective ETFs do not have significant abnormal return around the event window. This implies no market reaction to the announcement of the labor department Fiduciary Rule from the ETF markets. One of the possible reasons might be that the news of the Fiduciary rule has been around in the market for a while and the information is already digested. Another possible reason is that the ETF usually include a basket of securities and the impacts of the news are so diversified and thus are not significant enough to be reflected in the ETF performance. However, this only shows that from the price perspective, the market reaction to the news is not significant enough to be reflected in the return, this does not exclude the possibility that the there is more demands for ETF after the DOL fiduciary rule. One way to test this is to investigate whether there is significance change of trading volume, fund flow or buy orders of ETF with the announcement of the news.

REFERENCES

Agrawal, A., & Mandelker, G. N. (1990). Large Shareholders and the Monitoring of Managers: The Case of Antitakeover Charter Amendments. *Journal of Financial & Quantitative Analysis*, 25, 143-161.

Accelerating Growth: The Department of Labor Conflict of Interest Rule and its impact on the ETF Industry. (n.d.). BNY Mellon 2016 Report.

Baek, J. S., Kang, J. K., & Suhpark, K. (2004). Corporate governance and firm value: evidence from the Korean financial crisis. *Journal of Financial Economics*, 71, 265-313.

Ball, R., & Brown, P. (1968). An Empirical Evaluation of Accounting Income Numbers. *Journal of Accounting Research*, 6, 159-178

Bonnier, K.A., & Bruner, R. F. (1989). An Analysis of Stock Price Reaction to Management Change in Distressed Firms. *Journal of Accounting and Economics*, 11, 95-106.

Bruner, R. F. (1999). An analysis of value destruction and recovery in the alliance and proposed merger of Volvo and Renault. *Journal of Financial Economics*, 51, 1999, 125-166.

Carlson, M., Fisher, A., & Giammarino, R. O. N. (2006). Corporate Investment and Asset Price Dynamics: Implications for SEO Event Studies and Long- Run Performance. *Journal of Finance*, 61, 1009-1034.

Corrado, C. J. (2011). Event studies: A methodology review. *Accounting and Finance*, 51, 207–234.

Dahya A. J., Lonie, A.A., & Power, D.M. (1998). Ownership Structure, Firm Performance and Top Executive Change: An Analysis of UK Firms. *Journal of Business Finance & Accounting*, 25, 1089-1118.

Defond, M.L., Hann, R. N., & Hu, X. (2005). Does the Market Value Financial Expertise on Audit Committees of Boards of Directors? *Journal of Accounting Research*, 43, 153-193.

Espenlaub, S., Goergen, M., & Khurshed, A. (2001). IPO Lock-in Agreements in the UK. *Journal of Business Finance & Accounting*, 28, 1235-1278.

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustments of stock prices to new information. *International Economic Review,* 10(1), 1–21.

Gregary, A. (1997). An Examination of the Long Run Performance of UK Acquiring Firms. *Journal of Business Finance & Accounting*, 24, 971-1002.

Homan, A. C. (2006). The Impact of 9/11 on Financial Risk, Volatility and Returns of Marine Firms. *Maritime Economics & Logistics*, 8, 387-401.

Kothari, S. P., & Warner, J. B. (2005). Econometrics of event studies, in: B. Eckbo Espen, ed., *Handbook of Corporate Finance: Empirical Corporate Finance (Handbook in Finance Series, Elsevier, North-Holland)*, 3–36.

Lys, T. & Vincent L. (1995). Analysis of Value Destruction in AT&T's Acquisition of NCR. *Journal of Financial Economics*, 39, 353-378.

Loughran, T., & Ritter, J. R. (1995). The New Issues Puzzle. *Journal of Finance*, 50(1), 23-51.
Mcwilliams, A., & Siegel, D. (1997). Event Studies in Management Research: Theoretical and Empirical Issues. *Academy of Management Journal*, 40(3), 626-657.
Ritter, J.R. (1991). The Long-run performance of initial public offerings. *The Journal of Finance*, 46(1), 3-27.
Schipper, K., & Thompson, R. E. X. (1983). The Impact of Merger- Related Regulations on the Shareholders of Acquiring Firms. *Journal of Accounting Research*, 21, 184-221.
Schumann, L. (1988). State Regulation of Takeovers and Shareholder Wealth: The Case of New York's 1985 Takeover Statutes. *The Rand Journal of Economics*, 19, 557-567.
Small, K., Ionici, O., & Zhu, H. (2007). Size Does Matter: An Examination of the Economic Impact of Sarbanes-Oxley. *Review of Business*, 27, 47-55.