McDonald's and Press Release Events

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Abstract

McDonald's is an American institution. Their income and stock performance reflects the performance of the overall United States equity market. As a result, conclusions about performance market deviations are easier to make. When McDonald's has a large one-day move in returns and the market does not, we can conclude an activity of McDonald's has caused the performance change.

We compare the top 20 one-day returns (gains), the bottom one-day returns (losses) with the issuing of non-financial press releases. During the five-year period of February 6, 2013 through February 6, 2018, there were 79 different non-financial press releases. The press releases were then coded into one of four categories: "Charity", "Marketing", "New Country" and "Staff." We found 19 (24%) of the press releases resulted in either a top 20 one-day gain or a bottom one-day loss within one month of the issuance of the press release.

Key Words: McDonald's; Returns; Press Release;

Introduction

McDonald's is a franchise hamburger firm. Their source of revenues comes from three areas: rent payments from franchise owners, franchise fees and revenue from company owned locations (Kaufmann, Lafontaine 1994). The largest source of income is from rental fees. As a result, McDonald's income is fairly steady (Stamm 2017). A marketing campaign then should generate positive increases in income to franchise owners as opposed to McDonalds corporate directly. Changes to the stock price as a result of the marketing campaign will then be a result of perceived value by the market place (Lane, Jacoboson 1995).

Data

Financial data was pulled from Yahoo!Finance (Myllymaki 2002). The stock prices used were from the adjusted stock price which takes into consideration the effect of stock splits, dividends, etc. Press release data was pulled directly from McDonald's website.

McDonald's Performance

To determine the impact of any marketing campaign on stock performance, we found the top 20 daily returns for the 5-year time period of February 6, 2013 – February 6, 2018. We also evaluated the 20 worst performing days during the time period. Each of these 20 events also evaluated the Twitter data from one and two days prior to the event of top performance or bottom performance.

Graph 1 demonstrates the cumulative returns in daily stock price for the five-year period of McDonalds and the SP500 as represented by the SPY. Table 1 describes the descriptive statistics of the daily stock price of both assets. The cumulative returns graph demonstrates McDonald's stock performance being strongly tied to the performance of the overall economy. The two cumulative prices move in tandem with each other.

Table 2 demonstrates the descriptive statistics of the returns for both McDonald's and the overall market. The average returns for both are close to 0. McDonald's has a slightly higher standard deviation indicating the dispersion of returns is larger than the market. In line with this observation is the kurtosis of McDonald's which is larger than the market. McDonald's returns have a higher probability of occurring in the tail of the distribution as compared with the market. This also explains why the maximum and minimum are larger for McDonald's.
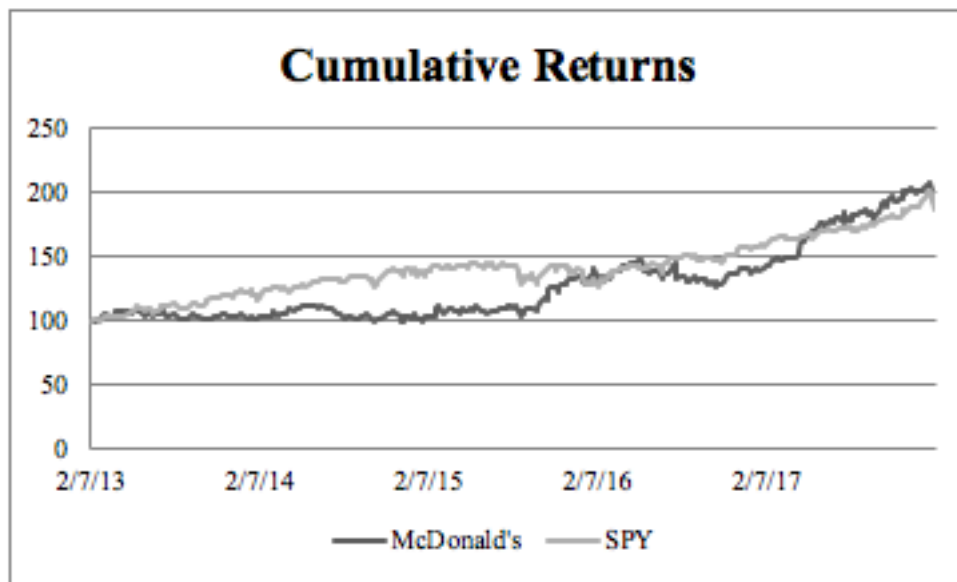
Graph 1: Cumulative Returns

Stock Price Descriptive Statistics		
	MCD	**SPY**
Average	107.0602	196.7230
Standard Deviation	26.5384	32.4464
Skew	1.1089	0.3802
Kurtosis	0.1265	-0.2564
Minimum	80.0651	134.7845
Maximum	178.3600	286.5800

Table 1: Stock Price Descriptive Statistics

Daily Returns Descriptive Statistics

	MCD	SPY
Average	0.0006	0.0005
Standard Deviation	0.0093	0.0076
Skew	0.5105	-0.5910
Kurtosis	7.8218	3.5324
Minimum	-0.0457	-0.0427
Maximum	0.0781	0.0390

Table 2: McDonald's Stock Price Returns Descriptive Statistics

Table 3 describes the top 20 day returns and bottom 20 day returns for McDonald's. The table also displays the corresponding returns for the S&P500. Some of the largest one day moves for McDonalds's (10/22/15, 4/25/17) don't correspond to single large one day moves in the overall market. Similarly, the largest one day losses in McDonald's stock (7/26/16) does not translate to a large one-day loss in the overall market. However, other large one-day losses do translate to large one-day losses in the market (3/6/15, 6/20/13, 1/7/16, 8/21/15, 2/5/18, and 8/24/15). Typically, equity assets move down together (Barberis, Huang, Santos 2001).

Top 20 / Bottom 20 Daily Returns McDonald's

Date	McDonald's Returns	SPY Returns	Top / Bottom
10/22/15	7.8105%	1.6509%	Top
4/25/17	5.4157%	0.5802%	Top
1/29/15	4.9337%	0.9201%	Top
7/25/17	4.6451%	0.2428%	Top
8/26/15	4.2290%	3.9019%	Top
2/25/15	3.8013%	-0.0850%	Top
3/11/14	3.6915%	-0.4955%	Top
12/17/14	3.2491%	1.9415%	Top
11/14/16	3.1371%	0.0785%	Top
4/22/15	3.0826%	0.4902%	Top
10/21/16	2.9935%	0.0467%	Top
9/2/15	2.7124%	1.8803%	Top
5/19/15	2.6776%	-0.0328%	Top
12/4/15	2.4480%	1.9315%	Top
8/27/15	2.2653%	2.2751%	Top
9/11/15	2.2424%	0.4534%	Top
9/28/17	2.2085%	0.1199%	Top
12/18/14	2.1801%	2.4428%	Top
7/19/16	2.1575%	-0.1017%	Top
9/10/14	2.0752%	0.3755%	Top
6/12/17	-2.0071%	-0.0205%	Bottom
3/6/15	-2.0180%	-1.4164%	Bottom
2/3/16	-2.0211%	0.5977%	Bottom
6/20/13	-2.0655%	-2.5090%	Bottom
4/21/16	-2.1704%	-0.5393%	Bottom
5/29/13	-2.1869%	-0.6516%	Bottom
5/20/16	-2.2030%	0.6297%	Bottom
1/7/16	-2.3414%	-2.4284%	Bottom
4/27/15	-2.3569%	-0.4166%	Bottom
12/15/14	-2.4125%	-0.6893%	Bottom
6/27/16	-2.6641%	-1.8072%	Bottom
8/21/15	-2.6717%	-3.1772%	Bottom
7/22/13	-2.7194%	0.1949%	Bottom
1/30/18	-3.0209%	-1.0310%	Bottom
9/12/17	-3.2722%	0.3365%	Bottom
2/5/18	-3.3193%	-4.2722%	Bottom
12/8/14	-3.9175%	-0.6705%	Bottom
2/5/16	-4.4572%	-1.9234%	Bottom
8/24/15	-4.4850%	-4.1744%	Bottom
7/26/16	-4.5691%	0.0462%	Bottom

Table 3: Top 20 / Bottom 20 Daily Returns McDonalds

Press Release

During the five-year period McDonald's released 79 press releases. The press releases were coded into four categories: Staff, Marketing, New Country or Charity (Mittermayer 2004). A "Staff" press release includes changes to upper management and the board. For example, a "Staff" press release would be: "McDonald's Names Steve Easterbrook Global Chief Brand Officer" on 4/12/13. A "New Country" press release describes McDonald's initiatives in expanding into new foreign markets. For example, a "New Country" press release would be: "McDonald's Announces Developmental Licenses for Vietnam" on 7/15/13. A "Charity" press release describes charitable contributions or charitable campaigns. For example, a "Charity" press release would be: "McDonald's and Ronald McDonald House Charities Donate to Philippines Disaster Relief Efforts" on 11/13/13.

The last category of "Marketing" describes various marketing campaigns McDonald's has launched during the five-year period. An example of "Marketing" would be: "McDonald's Invites Fans to Send #CheersToSochi During Sochi 2014 Olympic Winter Games" on 1/21/14.

The total 79 press releases are summarized in table 4. The largest category of press releases is "Marketing" with 41, representing 51.9% of all of press releases. "Staff" changes represented 24.1% with a total of 19 announcements. "New Country" had a total of 11 announcements representing 13.9% of press releases. Finally, "Charity" had the fewest number of announcements with 8, representing 10.1% of all releases.

Code	Count
Charity	8
Marketing	41
New Country	11
Staff	19
	79

Table 4: Press Release Code Count

Impact of Press Release on Top 20 / Bottom 20 Returns

Tables 5 – 8 demonstrate the impact of the press releases of each of the four categories with regards to both the top 20 and bottom 20 daily returns. A press release was evaluated if a top 20 or bottom 20 daily return occurred within one month of the press release.

Table 5 demonstrates all of the "Charity" press releases which resulted in a top 20 / bottom 20 daily return event. Only one event occurred which produced an event. The press release was on 7/19/16 which was: "McDonald's Donates $500,000 in Hispanic Student Scholarships."

Date	Code	MCD Return	SPY Return	Top / Bottom	Lagged
7/19/16	Charity				
7/19/16		2.16%	-0.10%	Top	0 days
7/26/16		-4.57%	0.05%	Bottom	7 days

Table 5: Charity Table

Table 6 displays the "Marketing" press releases. Of the 41 events, 10 resulted in a top 20 or bottom 20 one-day return event. 5 out of the 10 events (9/9/14, 4/21/15, 5/2/15, 9/9/15 and 9/27/15) produced a top 20 one-day return event. There were 7 one-day bottom 20 events; 2 events occurred from the 1/16/18 announcement: "By 2025, all of McDonald's Packaging to Come from Renewable, Recycled or Certified Sources; Goal to Have Recycling Available in All Restaurants." This announcement resulted in two one-day bottom daily returns on 1/20/18 and 2/5/18.

Date	Code	MCD Return	SPY Return	Top / Bottom	Lagged
9/9/14	Marketing				
9/10/14		2.0752%	0.3755%	Top	1 day
3/4/15	Marketing				
3/6/15		-2.0180%	-1.4164%	Bottom	2 days
4/21/15	Marketing				
4/22/15		3.0826%	0.4902%	Top	1 day
4/27/15		-2.3569%	-0.4166%	Bottom	6 days
5/2/15	Marketing				
5/19/15		2.6776%	-0.0328%	Top	17 days
9/9/15	Marketing				
9/11/15		2.2424%	0.4534%	Top	2 days
5/20/16	Marketing				
5/20/16		-2.2030%	0.6297%	Bottom	0 days
6/17/16	Marketing				
6/27/16		-2.6641%	-1.8072%	Bottom	10 days
9/6/17	Marketing				
9/12/17		-3.2722%	0.3365%	Bottom	6 days
9/27/17	Marketing				
9/28/17		2.2085%	0.1199%	Top	1 day
1/16/18	Marketing				
1/30/18		-3.0209%	-1.0310%	Bottom	14 days
2/5/18		-3.3193%	-1.9234%	Bottom	20 days

Table 6: Marketing Table

"New Country" press releases resulted in a one-day return event 36.3% of the sample resulting in 4 bottom one-day events and one top-day event on 7/25/17: "McDonald's McDelivery Expands to 4,200 Restaurants in 13 Countries with UberEATS." Table 7 displays the descriptive data of the events.

Date	Code	MCD Return	SPY Return	Top / Bottom	Lagged
7/15/13	New Country				
7/22/13		-2.7194%	0.1949%	Bottom	7 days
1/25/16	New Country				
2/3/16		-2.0211%	0.5977%	Bottom	9 days
2/5/16		-4.4572%	-1.9234%	Bottom	11 days
6/1/17	New Country				
6/12/17		-2.0071%	-0.0205%	Bottom	11 days
7/25/17	New Country				
7/25/17		4.6451%	0.2428%	Top	0 days

Table 7: New Country Table

Staffing changes within the Board of Directors and Executive Management resulted in both press releases and either top 20 one-day gain or bottom 20 one-day losses. 50% of announcements resulted in an event. The four announcements occurred on 12/5/14, 1/28/15, 8/4/15 and 4/6/16. Two of the events generated four price movements with two top 20 bottom moves and two top 20 up moves. The event on 12/5/14 was: "McDonald's Europe Chief People Officer David Fairhurst Appointed Senior Vice President, International HR & Strategy." The event on 8/4/15 was: "Lloyd Dean and John Mulligan Elected to McDonald's Board of Directors."

Date	Code	MCD Return	SPY Return	Top / Bottom	Lagged
12/5/14	Staff				
12/8/14		-3.9175%	-0.6705%	Bottom	3 days
12/15/14		-2.4125%	-0.6893%	Bottom	10 days
12/17/14		3.2491%	1.9415%	Top	12 days
12/18/14		2.1801%	2.4428%	Top	13 days
1/28/15	Staff				
1/29/15		4.9337%	0.9201%	Top	1 day
8/4/15	Staff				
8/21/15		-2.6717%	-3.1772%	Bottom	17 days
8/24/15		-4.4850%	-4.1744%	Bottom	20 days
8/26/15		4.2290%	3.9019%	Top	22 days
8/27/15		2.2653%	2.2751%	Top	23 days
4/6/16	Staff				
4/21/16		-2.1704%	-0.5393%	Bottom	15 days

Table 9: Staff Table

Conclusions

Using non-financial press releases as our event to determine whether McDonald's would have a significant one-day stock gain or loss as defined as a top 20 or bottom 20 daily return we find 24% of the press releases had an impact. The "Staff" press releases had the largest impact which resulted in 50% of the announcements being associated with a one-day return move. The least impactful press release was "Charity" which only had one event out of the total of 8 events during the five-year time period. The one event in "Charity" was only 12.5% of the events. The largest section in "Marketing" produced a total 41 events which had 10 events producing a top 20 or bottom 20 one-day gain or loss. This section reflected the overall press releases with 24% of the events generating the one-day gains or losses.

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