Buying the Dip

Did Your Portfolio Holding Go on Sale?

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'Buy the Dip' ("BTD"), the concept of buying shares after a steep decline in stock price or market index , is both a Wall Street maxim, and a widely used investment strategy. Investors pursuing a BTD strategy are essentially buying shares at a "discounted" price, with the opportunity to reap a large pay-off if the price drop is temporary and the stock subsequently rebounds. BTD strategies are especially popular during bull markets, when a market rally can be punctuated by multiple pullbacks in equity prices as stock prices march upwards. Is buying the dip a profitable trading strategy or just an empty platitude? How can investors utilize additional information to confirm and enhance their 'Buy the Dip' decisions?

In this report, we examine the stock performance of the 'Buy the Dip' (BTD) strategy within the Russell 1000 Index from January 2002 through October 2017. We also explore how a BTD strategy can be improved by overlaying three other classes of stock selection signals: institutional ownership level, stock price trend, and company fundamentals. We find:

- **A strategy of investing in securities that fell more than 10% relative to the broader market index, during a single day, significantly outperforms the index between 2002 and 2017 in the subsequent periods**. The dipped securities yield cumulative excess returns over 1-day[1] (0.47%) to 240-days (28%) between 2002 and 2016, all significant at the one percent level.

- **Though many large sell-offs may result from earnings disappointments and guidance changes, these events do not seem to impact a BTD strategy –** the 'Buy the Dip' strategy is still profitable when we exclude events surrounding earnings or guidance announcements from our analysis.

- **A group of stock selection signals help to improve the overall performance of the BTD strategy.**
  - **Institutional Ownership (IO):** IO level has a significant impact on the BTD strategy over long-term holding horizons. The top 50% of BTD securities based on institutional holding level yield a 240-day cumulative excess return and hit ratio of 37.5% and 56%, respectively, vs. 28.8% and 53% for the BTD alone.
  - **Price Trend:** Stock price trend analysis should not be ignored. When overlaid with the 4-week to 52-week price oscillator, the top 50% of BTD securities by price trend outperform the BTD strategy alone by 21%, 240 days after the dip event (significant at the 1% level).
  - **Valuation:** Company fundamentals also play a critical role in evaluating the BTD strategy. The cheapest 50% of BTD securities based on the valuation style indicator in Alpha Factor Library[2] see improved cumulative returns and hit rates versus BTD alone.

[1] When holding periods are measured in 'day(s)', it stands for trading day(s).
[2] Alpha Factor Library is S&P Global Market Intelligence's web/feed based alpha signals.

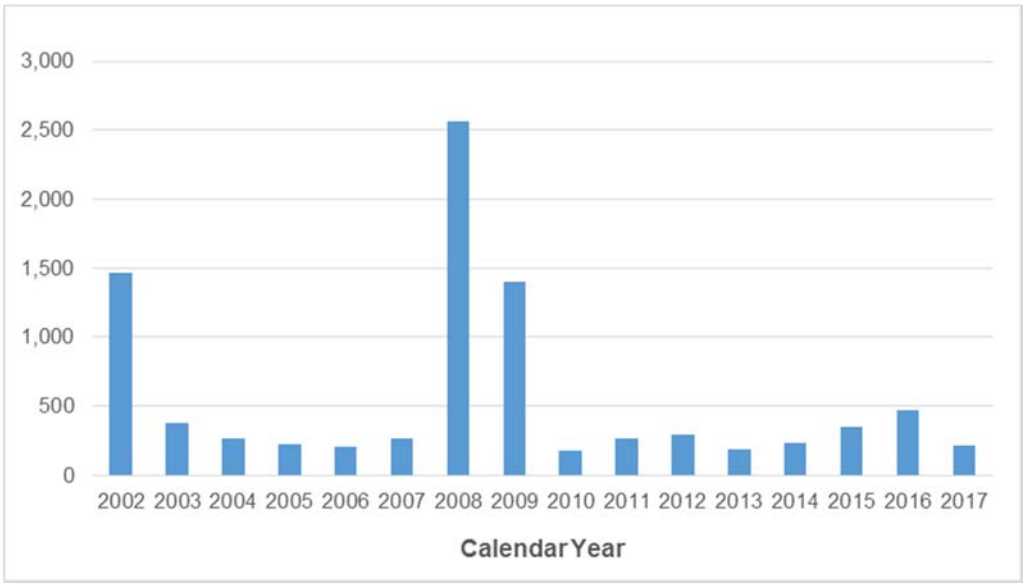
1. Introduction

BTD can be considered a reversal strategy. An extensive body of academic and practitioner research has demonstrated the effectiveness of short-term reversal strategies across global capital markets. A strategy that buys recent losers and sells recent winners based on prior one-month returns generates statistically significant profits (Jegadeesh and Titman, 1993). Antoniou et al. (2003) documented the reversal strategy using weekly price observations. Research by Bremer and Sweeney (1991) found that large negative daily returns are subsequently followed on average by larger than expected positive returns.

Chordia et al. (2014) and Lee et al. (2015) examine the profitability of a short-term reversal strategy and find that strategy profits are significantly lower in the post- versus pre-millennium period. They claim that three major developments in the U.S. stock markets (transition of minimum tick sizes, introduction of SEC Rule 605, and the explosion of hedge funds during the post-millennium period) underlie the results of their tests. We start our research in 2002, given the significant change in market microstructure that took place in this year.

Figure 1 shows the number of instances per year that securities in the Russell 1000 underperformed the broad market index on a single day by more than 10%. The number of events peaked during the global financial crisis.

Figure 1. Number of Events with Stock Price Declined more than 10% vs. the Russell 1000 Index: Russell 1000 (2002 – 2017) – Annual



Source: S&P Global Market Intelligence Quantamental Research. Data as of April 15, 2018.

2. Sample and Methodology

We restrict our investment universe to the Russell 1000 Index, utilizing an event study framework. The event threshold is defined as an individual stock that underperforms the Russell 1000 Index by at least 10% (a '10% dip') on a given day. This results in a sample size of 8,690 events from 2002 to 2017.

All forward excess returns are calculated as the difference between individual security total return (adjusted for dividends and cash distributions) and the Russell 1000 Index total return. The forward excess returns are winsorized at three standard deviations and capped at 300%. All forward returns are calculated based on the closing price on the day when the event occurred. The cut-off for our analysis is November 2016, so that 1-year forward returns can be determined.

3. Does a Buy the Dip Strategy Work?

Stocks within the Russell 1000 on average experience reversal following a large, one day sell-off. Table 1 summarizes the average excess returns with associated hit rates[3] for all events (10% dip) between 2002 and 2016, for holding periods of one day up to one year.

Table 1. Forward Excess Returns for BTD (10%): Russell 1000 (2002 – 2016)

All Events (N = 8,690)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.47%***	0.78%***	1.37%***	1.94%***	2.58%***	3.72%***	4.84%***	6.67%***	8.63%***	14.15%***	21.40%***	28.01%***
Hit Rate	51.5%***	51.5%***	52.3%***	52.0%***	51.3%**	50.4%	49.4%	48.5%	49.2%	50.7%	51.1%**	52.1%***

*** 1% level of significance; ** 5% level of significance; * 10% level of significance

Source: S&P Global Market Intelligence Quantamental Research. All returns and indices are unmanaged, statistical composites and their returns do not include payment of any sales charges or fees an investor would pay to purchase the securities they represent. Such costs would lower performance. It is not possible to invest directly in an index. Past performance is not a guarantee of future results. Data as of 04/15/2018.

The strategy generates a positive cumulative excess return of 0.47% on the first day, and the return continues trending up until the 240th business day (28%), with all returns significant at the 1% level. We also examine the BTD strategy after excluding the period of global financial crisis (2008 and 2009), and we observe a similar trend for cumulative excess returns. The only difference is that the excess returns (excluding the events in 2008 and 2009) are not significant until three days after the event ("fwd3D"); and none of the holding period hit rates are significant.

3.1 BTD and Earnings/Guidance Momentum

A number of research studies have looked into whether earnings momentum and price momentum (of which BTD is one type) are related. The conclusions are mixed – with some studies showing that price momentum is captured by the systematic component of earnings momentum (Chordia and Shivakumar, 2005). Others (Chan, Jegadeesh, and Lakonishok, 1996) find evidence of a delayed reaction of stock prices to past earnings. Burch and Swaminathan (2003) also point out that institutions engage in momentum trading in response to past price movement, but not with respect to past earnings news.

In this section, we disentangle Earnings Announcement Return (EAR) and Guidance Announcement Return (GAR) effects from the BTD strategy. According to Gregoire and Martineau (2017), eighty percent of the price response to after-hours earnings surprises occurs upon arrival of the first regular-hour trades, and is generally fully priced in shortly after the market opens around 10 a.m. Li and Oyeniyi (2016) also show that a company's stock price reacts strongly in the period immediately following the guidance announcement.

[3] When holding periods are measured in 'day(s)', it stands for trading day(s).

We exclude the BTD events on both earnings or guidance announcement date and one day after the report date. If the BTD strategy is still profitable after this exclusion, it suggests investors can utilize this strategy for non-earnings/guidance related news that impact stock prices materially. We summarize the performance of the BTD strategy excluding EAR or GAR in Table 2.

Table 2. Forward Excess Returns for BTD (10%) excluding EAR or GAR: Russell 1000 (2002 – 2016)

All BTD Events exclude 'EAR' (N = 7,334)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.62%***	1.01%***	1.68%***	2.35%***	3.06%***	4.27%***	5.52%***	7.36%***	9.37%***	15.71%***	23.78%***	31.10%***
Hit Rate	52.4%**	52.2%**	52.9%**	52.9%**	52.0%**	51.0%	49.7%	48.4%	48.9%	50.8%	51.4%**	52.8%**
All BTD Events exclude 'GAR' (N = 8,235)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.50%***	0.83%***	1.42%***	2.01%***	2.70%***	3.89%***	5.03%***	6.89%***	8.86%***	14.72%***	22.21%***	29.22%***
Hit Rate	51.5%**	51.7%***	52.3%***	52.0%***	51.3%**	50.5%	49.4%	48.4%	48.9%	50.6%	51.0%*	52.2%***
All BTD Events (N = 8,690)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.47%***	0.78%***	1.37%***	1.94%***	2.58%***	3.72%***	4.84%***	6.67%***	8.63%***	14.15%***	21.40%***	28.01%***
Hit Rate	51.5%***	51.5%***	52.3%***	52.0%***	51.3%**	50.4%	49.4%	48.5%	49.2%	50.7%	51.1%**	52.1%***

*** 1% level of significance; ** 5% level of significance; * 10% level of significance

Source: S&P Global Market Intelligence Quantamental Research. All returns and indices are unmanaged, statistical composites and their returns do not include payment of any sales charges or fees an investor would pay to purchase the securities they represent. Such costs would lower performance. It is not possible to invest directly in an index. Past performance is not a guarantee of future results. Data as of 04/15/2018.

Table 2 details the excess returns with hit rates for all BTD events (highlighted in grey), and the profitability of the strategy excluding the impact of EAR (top panel) or GAR (middle panel). **Results show that the profitability of the BTD strategy is not driven by either EAR or GAR,** evinced by comparable returns and hit rates when earnings and guidance event dates are excluded.

4. Improving the BTD Strategy

Can a Buy the Dip strategy be improved by combining it with other investment signals? In this section, we look at three types of signals that can help to improve the success of the BTD strategy.

4.1 Institutional Ownership

An extensive body of literature documents that institutions have significant impact on future stock performance[4]. In Ning et al. (2016), we show that institutional ownership level is positively related to future stock returns. Therefore, we hypothesize that securities with higher IO levels in the dipped basket should outperform dipped securities with lower ownership.

To examine our hypothesis, we rank the securities in the 10% dip basket on their IO level and divide the basket into two – the first basket is all available events ('all BTD with IO'), and the second one contains 50% of events with highest stock-level IO ('Top half BTD with highest

[4] See Vivian Ning et al. (2016); Lichtenberg and Pushner (1994); Sasaki and Yonezawa (2000); Gompers and Metrick (2001); Ovtcharova (2003); Jiambalvo (2002); Cai and Fang (2003); Chen, Hong, and Stein (2002); Dimitrov and Gatchev (2010).

IO'). Table 3 compares the holding period returns and hit rates for the top half basket (based on IO level rankings – top panel of the table) with the entire basket (all securities with IO – middle panel of the table).

Table 3. Forward Excess Returns for BTD (10%) with Different 'IO' Level: Russell 1000 (2004 – 2016)

All BTD with IO (N = 6,469)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.66%***	0.99%***	1.66%***	2.25%***	2.95%***	3.90%***	5.09%***	7.79%***	9.88%***	16.20%***	22.78%***	28.76%***
Hit Rate	52.0%***	52.0%***	52.9%***	52.9%***	51.5%**	50.1%	49.4%	49.5%	50.0%	51.7%***	51.9%***	52.9%***
Top Half BTD with Highest IO (N = 3,310)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.59%***	0.86%***	1.28%***	1.95%***	3.03%***	3.34%***	4.48%***	7.56%***	10.92%***	18.92%***	29.37%***	37.47%***
Hit Rate	51.4%	52.4%***	52.6%***	53.1%***	51.5%*	48.7%	48.5%	49.1%	50.2%	52.6%***	54.8%***	55.8%***
Return Difference between Top Half BTD with Highest IO & All BTD with IO												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Difference of Avg RTN	-0.07%	-0.13%	-0.38%	-0.30%	0.08%	-0.57%	-0.61%	-0.23%	1.05%	2.72%*	6.59%***	8.71%***

*** 1% level of significance; ** 5% level of significance; * 10% level of significance

Source: S&P Global Market Intelligence Quantamental Research. All returns and indices are unmanaged, statistical composites and their returns do not include payment of any sales charges or fees an investor would pay to purchase the securities they represent. Such costs would lower performance. It is not possible to invest directly in an index. Past performance is not a guarantee of future results. Data as of 04/15/2018.

Although stocks in the top 50% IO ranked basket outperform the entire basket, it is worth noting that the basket with highest 'IO' level only outperform the entire basket over longer holding periods. The return difference between the two baskets increase as we increase the return estimation window, with differences significant at the 1% level for 180 and 240 holding period days. **Over the long term, the dipped securities with higher ownership outperform the dipped universe.**

4.2 Stock Price Trend

In this section, we look at whether technical indicators can improve the BTD strategy. Unlike fundamental analysis, technical analysis focuses on price trends and patterns. For this analysis, we examine the 4-week to 52-week Price Oscillator ('4To52WPrcOsc'), which is defined as the ratio of the 4 week exponential moving average of weekly closing price to the 52 week exponential moving average. A higher value of this ratio indicates a more attractive buying opportunity.

As in previous sections, we form two baskets based on both 'BTD' and '4To52WPrcOsc' – 'Top half BTD with highest 4To52WPrcOsc' (top 50% highest ranked names in dipped basket) and 'all BTD with 4To52WPrcOsc' (all dipped events with '4To52WPrcOsc' data). The performance of these two groups is summarized in Table 4.

Table 4. Forward Excess Returns for BTD (10%) with Different Level of 4To52WPrcOsc: Russell 1000 (2002 – 2016)

All BTD with 4To52WPrcOsc (N = 8,407)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.49%***	0.80%***	1.40%***	1.95%***	2.61%***	3.80%***	4.97%***	6.96%***	8.91%***	14.49%***	21.71%***	28.40%***
Hit Rate	51.8%***	51.6%***	52.5%***	52.1%***	51.4%**	50.6%	49.7%	48.8%	49.4%	50.9%*	51.4%**	52.4%***
Top Half BTD with Highest 4To52WPrcOsc (N = 4,293)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.56%***	0.98%***	1.78%***	2.66%***	4.03%***	6.15%***	8.17%***	11.43%***	15.05%***	24.20%***	37.69%***	49.33%***
Hit Rate	50.9%	50.8%	51.8%**	51.9%**	51.2%	50.4%	50.6%	48.5%	50.9%	53.5%***	55.0%***	57.1%***
Return Difference between Top Half BTD with Highest 4To52WPrcOsc & All BTD with 4To52WPrcOsc												
Difference of Avg RTN	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
	0.08%	0.19%	0.37%	0.71%*	1.42%***	2.35%***	3.20%***	4.47%***	6.14%***	9.71%***	15.98%***	20.94%***

*** 1% level of significance; ** 5% level of significance; * 10% level of significance

Source: S&P Global Market Intelligence Quantamental Research. All returns and indices are unmanaged, statistical composites and their returns do not include payment of any sales charges or fees an investor would pay to purchase the securities they represent. Such costs would lower performance. It is not possible to invest directly in an index. Past performance is not a guarantee of future results. Data as of 04/15/2018.

The excess return difference between the two baskets is positive across various holding periods, significant at the 1% level 10 days after the event date. **'Top half BTD with highest 4To52WPrcOsc' outperform the entire BTD basket by 21% 240 days after the event date; the hit rate also increase from 52% to 57%.** The insignificant return differences for the shorter holding periods could be due to the lagging nature of this signal.

4.3 Company Fundamentals

A pullback in stocks may provide an attractive buying opportunity, but not all opportunities are created equal. In this section, we explore one of the key aspects in any investment process, including BTD – stock valuation analysis. There are numerous methods used to evaluate a stock's valuation. We use S&P Global Market Intelligence's Alpha Factor Library (AFL) to rank the relative 'expensiveness' of the BTD stocks in this research. We only present one valuation metric as a use case in the paper - AFL's Valuation style indicator ('AFL-VI'). 'AFL-VI' is a combination of the following valuation signals: Book to Price, Free Cash Flow to Price, EBITDA to Enterprise Value, Earnings to Price, Dividends to Price, and Sales to Enterprise Value.

Similar to previous sections, we form two baskets by dividing stocks that have dipped based on the stocks' 'AFL-VI' ranks – top half dipped events based on 'AFL-VI' rankings ('Top half BTD with highest AFL- VI' rank) and entire dipped events with 'AFL- VI' data ('all BTD with AFL- VI').

Over the long term, companies with a cheaper valuation significantly outperform.
Table 5 summarizes the excess returns with their hit rates for above two baskets across various holding periods. 'Top half BTD with highest AFL- VI' yields excess return of 36.6% 240 days after the event date, versus 28.1% from 'all BTD with AFL- VI' for the same holding period. The return difference between the two baskets become positive and statistically significant 30 days after the event. The initial underperformance (1 to 20 days after the events) could be due to the deviation of stock price from its fundamentals caused by panic selling.

Table 5. Forward Excess Returns for BTD (10%) with AFL-Valuation Indicator: Russell 1000 (2002 – 2016)

All BTD with AFL-VI (N = 8,687)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.48%***	0.80%***	1.40%***	1.95%***	2.59%***	3.75%***	4.91%***	6.76%***	8.69%***	14.25%***	21.45%***	28.06%***
Hit Rate	51.5%***	51.6%***	52.4%***	52.0%***	51.3%**	50.4%	50.5%	48.6%	48.8%	50.7%	51.2%**	52.1%***
Top Half BTD with Highest AFL-VI (N = 4,437)												
	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
Avg Return	0.31%**	0.71%***	1.31%***	1.83%***	2.74%***	4.59%***	6.26%***	8.77%***	11.53%***	19.51%***	28.86%***	36.65%***
Hit Rate	50.7%	50.7%	52.3%***	52.5%***	52.2%***	51.6%**	51.6%**	51.6%**	51.9%**	53.9%***	55.2%***	56.3%***
Return Difference between Top Half BTD with Highest AFL-VI & All BTD with AFL-VI												
Difference of Avg RTN	fwd 1D	fwd 2D	fwd 3D	fwd 5D	fwd 10D	fwd 20D	fwd 30D	fwd 60D	fwd 90D	fwd 120D	fwd 180D	fwd 240D
	-0.17%	-0.09%	-0.08%	-0.12%	0.15%	0.83%	1.35%**	2.02%**	2.85%**	5.26%***	7.42%***	8.60%***

*** 1% level of significance; ** 5% level of significance; * 10% level of significance

Source: S&P Global Market Intelligence Quantamental Research. All returns and indices are unmanaged, statistical composites and their returns do not include payment of any sales charges or fees an investor would pay to purchase the securities they represent. Such costs would lower performance. It is not possible to invest directly in an index. Past performance is not a guarantee of future results. Data as of 04/15/2018.

5. Data

This research leveraged the S&P Global Estimates database to identify earnings and guidance announcements. S&P Global Estimates data provides information on announcement date, the upper and lower bound of a guidance range or the point value of a company's guidance, and whether the guidance is for a future quarter or fiscal year, among other data points. Guidance announcements are collected from press releases, transcripts from earnings conference calls, company websites and regulatory filings. The database also contains analyst estimates on a daily basis, allowing us to compare the guidance announced by the management to analyst consensus on any given day.

We also used the S&P Global Ownership database for this study. This data covers over 55,000 public and private companies comprised of more than 25,000 institutional investment firms and 44,000 mutual funds. The data history is available beginning 2004 for most data items. In the U.S, ownership information is sourced from Form 13F.

6. Conclusion

'Buy the Dip' is a popular investment strategy that our research shows has worked well over the past decade. A sharp decline in stock price can signal an investment opportunity if investors can accurately identify which dip to buy and when to buy it. It is important to note that no one indicator can ever constitute a solid investment decision on its own, and BTD is no exception to this rule. In this paper, we examine several factors that may be used to improve the profitability of the BTD strategy. Our empirical analysis shows that institutional ownership level, stock price trend, and company valuation can all contribute to the overall success of the BTD strategy.

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Our Recent Research

March 2018: In the Money: What Really Motivates Executive Performance?
Beginning with the 2018 proxy season, U.S. companies are required to report the ratio of CEO pay to median worker pay. According to The Wall Street Journal1, CEO pay ratios so far have ranged from just 32 times to over 900 times the average worker's salary.

This S&P Global Market Intelligence report, explores which types of compensation motivate top executives to boost shareholder returns, and the fundamental characteristics of companies in which executives are motivated to boost stock performance.

February 2018: The Art of (no) Deal: Identifying the Drivers of Cancelled M&A Deals
Terminated deals impact capital market participants in various ways. Predicting deals that are likely to be canceled is of interest to both M&A advisers and equity investors. This report identifies several drivers of cancelled deals, including size, deal proportionality, perceived price discount, CEO age, and regulatory risk, and concludes with a model built from four of these drivers.

January 2018: U.S Stock Selection Model Performance Review
Starting with the U.S. Election in November 2016, the S&P 500 Index has registered 14 consecutive months of positive returns. Only once has the S&P 500 had a longer run of positive returns since 1959. Coincident with strong equity returns, U.S. stocks began to trade on the basis of their own idiosyncratic factors, as opposed to sector or common factor risk. All 4 of our U.S strategy models returned positive long-only returns in 2017. This report reviews the performance of all 4 models during the year.

September 2017: Natural Language Processing - Part I: Primer
Given the growing interest in NLP among investors, we are publishing this primer to demystify many aspects of NLP and provide three illustrations, with accompanying Python code, of how NLP can be used to quantify the sentiment of earnings calls. The paper is laid out into four sections:

- **What is NLP:** We demystify common NLP terms and provide an overview of general steps in NLP.
- **Why is NLP Important:** Forty zettabytes (10^21 bytes) of data are projected to be on the internet by 2020, out of which more than eighty percent of the data are unstructured in nature, requiring NLP to process and understand
- **How can NLP help me:** We derive insights from earnings call transcripts measuring industry-level trends or language complexity.
- **Where do I start:** Code for each use is enclosed, enabling users to replicate the sentiment analysis

July 2017: Natural Language Processing Literature Survey
In client conversations, Natural Language Processing (NLP) and the analysis of unstructured data is a topic of regular conversation. S&P Global Market Intelligence offers several unstructured datasets garnering market attention. The first is earnings call transcripts, with unique speaker id's to identify who is speaking on the call. The second data set is the text content in the 10-K. In advance of a publication of Quantamental primer on NLP next month which will take readers through the process of handling unstructured data and generating sentiment scores, we offer this literature survey. What follows are ten papers that the team has identified as being of particular interest to investors on this topic.

June 2017: Research Brief: Four Important Things to Know About Banks in a Rising Rate Environment
With the Fed signaling further rate hikes ahead, bank investors may want to know which investment strategies have worked best in a rising rate environment historically. This paper leverages our empirical work on the SNL Bank fundamental data to aid investors in selecting bank stocks as rates rise.

April 2017: Banking on Alpha: Uncovering Investing Signals Using SNL Bank Data
This study leverages S&P Global Market Intelligence's SNL Financial data to answer three questions of importance to bank investors: 1. Which widely-used investment strategies have historically been profitable? 2. Which lesser-known strategies deserve wider attention? 3. How do these strategies perform across varying macro environments: rising vs. falling interest rates and above- vs. below-average financial stress?

March 2017: Capital Market Implications of Spinoffs
Spinoff activities have picked up in recent years. In 2015, more than $250 billion worth of spinoff transactions were closed globally - the highest level in the last 20 years. This report analyzes the short- and long-term performance of spun-off entities and their parent companies in the U.S. and international markets. We also examine a related but distinct corporate restructuring activity – equity carve-outs, which separate a subsidiary through a public offering.

January 2017: U.S. Stock Selection Model Performance Review 2016
2016 proved to be a challenging year for active investing. Against a backdrop of a sharp selloff in equities at the beginning of the year and political uncertainty over the course of the year, valuation was the only fundamental investing style that delivered positive excess returns. In this report, we review the performance of S&P Global Market Intelligence's four U.S. stock selection models in 2016.

November 2016: Electrify Stock Returns in U.S. Utilities

October 2016: **A League of their Own: Batting for Returns in the REIT Industry - Part 2**

September 2016: A League of their Own: Batting for Returns in the REIT Industry - Part 1

August 2016: Mergers & Acquisitions: The Good, the Bad and the Ugly (and how to tell them apart)

July 2016: Preparing for a Slide in Oil Prices -- History May Be Your Guide

June 2016: Social Media and Stock Returns: Is There Value in Cyberspace?

April 2016: An IQ Test for the "Smart Money" – Is the Reputation of Institutional Investors Warranted?

March 2016: Stock-Level Liquidity – Alpha or Risk? - Stocks with Rising Liquidity Outperform Globally

February 2016: U.S. Stock Selection Model Performance Review - The most effective investment strategies in 2015

January 2016: What Does Earnings Guidance Tell Us? – Listen When Management Announces Good News

December 2015: Equity Market Pulse – Quarterly Equity Market Insights Issue 6

November 2015: Late to File - The Costs of Delayed 10-Q and 10-K Company Filings

October 2015: Global Country Allocation Strategies

September 2015: Equity Market Pulse – Quarterly Equity Market Insights Issue 5

September 2015: Research Brief: Building Smart Beta Portfolios

September 2015: Research Brief – Airline Industry Factors

August 2015: Point-In-Time vs. Lagged Fundamentals – This time i(t')s different?

August 2015: Introducing S&P Capital IQ Stock Selection Model for the Japanese Market

July 2015: Research Brief – Liquidity Fragility

June 2015: Equity Market Pulse – Quarterly Equity Market Insights Issue 4

May 2015: Investing in a World with Increasing Investor Activism

April 2015: Drilling for Alpha in the Oil and Gas Industry – Insights from Industry Specific Data & Company Financials

March 2015: Equity Market Pulse – Quarterly Equity Market Insights Issue 3

February 2015: U.S. Stock Selection Model Performance Review - The most effective investment strategies in 2014

January 2015: Research Brief: Global Pension Plans - Are Fully Funded Plans a Relic of the Past?

January 2015: Profitability: Growth-Like Strategy, Value-Like Returns - Profiting from Companies with Large Economic Moats

November 2014: Equity Market Pulse – Quarterly Equity Market Insights Issue 2

October 2014: Lenders Lead, Owners Follow - The Relationship between Credit Indicators and Equity Returns

August 2014: Equity Market Pulse – Quarterly Equity Market Insights Issue 1

July 2014: Factor Insight: Reducing the Downside of a Trend Following Strategy

May 2014: Introducing S&P Capital IQ's Fundamental China A-Share Equity Risk Model

April 2014: Riding the Coattails of Activist Investors Yields Short and Long Term Outperformance

March 2014: Insights from Academic Literature: Corporate Character, Trading Insights, & New Data Sources

February 2014: Obtaining an Edge in Emerging Markets

February 2014: U.S Stock Selection Model Performance Review

January 2014: Buying Outperformance: Do share repurchase announcements lead to higher returns?

October 2013: Informative Insider Trading - The Hidden Profits in Corporate Insider Filings

September 2013: Beggar Thy Neighbor – Research Brief: Exploring Pension Plans

August 2013: Introducing S&P Capital IQ Global Stock Selection Models for Developed Markets: The Foundations of Outperformance
July 2013: Inspirational Papers on Innovative Topics: Asset Allocation, Insider Trading & Event Studies

June 2013: Supply Chain Interactions Part 2: Companies – Connected Company Returns Examined as Event Signals

June 2013: Behind the Asset Growth Anomaly – Over-promising but Under-delivering

April 2013: Complicated Firms Made Easy - Using Industry Pure-Plays to Forecast Conglomerate Returns.

March 2013: Risk Models That Work When You Need Them - Short Term Risk Model Enhancements

March 2013: Follow the Smart Money - Riding the Coattails of Activist Investors

February 2013: Stock Selection Model Performance Review: Assessing the Drivers of Performance in 2012

January 2013: Research Brief: Exploiting the January Effect Examining Variations in Trend Following Strategies

December 2012: Do CEO and CFO Departures Matter? - The Signal Content of CEO and CFO Turnover

November 2012: 11 Industries, 70 Alpha Signals -The Value of Industry-Specific Metrics

October 2012: Introducing S&P Capital IQ's Fundamental Canada Equity Risk Models

September 2012: Factor Insight: Earnings Announcement Return – Is A Return Based Surprise Superior to an Earnings Based Surprise?

August 2012: Supply Chain Interactions Part 1: Industries Profiting from Lead-Lag Industry Relationships

July 2012: Releasing S&P Capital IQ's Regional and Updated Global & US Equity Risk Models

June 2012: Riding Industry Momentum – Enhancing the Residual Reversal Factor

May 2012: The Oil & Gas Industry - Drilling for Alpha Using Global Point-in-Time Industry Data

May 2012: Case Study: S&P Capital IQ – The Platform for Investment Decisions

March 2012: Exploring Alpha from the Securities Lending Market – New Alpha Stemming from Improved Data

January 2012: S&P Capital IQ Stock Selection Model Review – Understanding the Drivers of Performance in 2011

January 2012: Intelligent Estimates – A Superior Model of Earnings Surprise

December 2011: Factor Insight – Residual Reversal

November 2011: Research Brief: Return Correlation and Dispersion – All or Nothing
October 2011: The Banking Industry

September 2011: Methods in Dynamic Weighting

September 2011: Research Brief: Return Correlation and Dispersion

July 2011: Research Brief - A Topical Digest of Investment Strategy Insights

June 2011: A Retail Industry Strategy: Does Industry Specific Data tell a different story?

May 2011: Introducing S&P Capital IQ's Global Fundamental Equity Risk Models

May 2011: Topical Papers That Caught Our Interest

April 2011: Can Dividend Policy Changes Yield Alpha?

April 2011: CQA Spring 2011 Conference Notes

March 2011: How Much Alpha is in Preliminary Data?

February 2011: Industry Insights – Biotechnology: FDA Approval Catalyst Strategy

January 2011: US Stock Selection Models Introduction

January 2011: Variations on Minimum Variance

January 2011: Interesting and Influential Papers We Read in 2010

November 2010: Is your Bank Under Stress? Introducing our Dynamic Bank Model

October 2010: Getting the Most from Point-in-Time Data

October 2010: Another Brick in the Wall: The Historic Failure of Price Momentum

July 2010: Introducing S&P Capital IQ's Fundamental US Equity Risk Model