Riding the Coattails of Activist Investors

Yields Short- and Long-Term Outperformance

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On August 13, 2013, Apple's stock price rose 4.75% on high volume after Carl Icahn, a renowned activist investor, tweeted that his firm had accumulated a large position in the company. In the ensuing 6 months, the stock rose an additional 9.33% as Icahn demanded that the company add another $50 billion to its existing stock buyback plan. Icahn backed off from this demand on February 10, 2014, but not before Apple's stock price had risen to $528.99 from $461.88 where it was before he embarked on the campaign. By then, the company had already aggressively repurchased its stock, including $14 billion in a two-week stretch.[1] As high-profiled campaigns have occurred with greater frequency and resulted in more successes, the AUM for investor activist funds has tripled to $95 billion in 2013, 3 times the amount in 2008.

AUM of Activist Hedge Funds [$ billions]
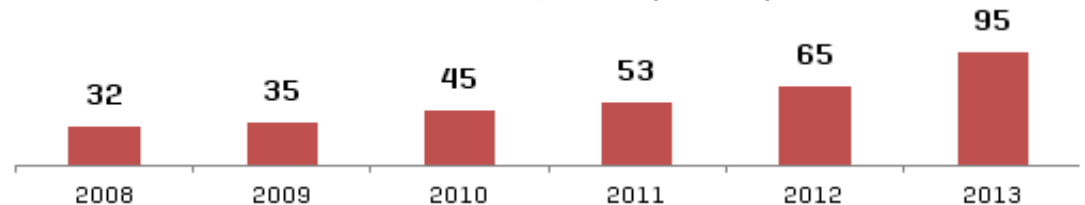
Source: Hedge Fund Research

Following the warm reception of our first paper on the topic 'Follow the Smart Money – Riding the Coattails of Activist Investors' published in March 2013, we are updating the paper to include 2013 results. Our results indicate:

- One month after the commencement of activism, a strategy of holding a portfolio of targets outperformed the market by 3.9%. After controlling for other common risk factors, the outperformance was 3.0%.[2]
- Twelve months after the disclosure of activist involvement, a strategy of holding a portfolio of targets produced an annualized outperformance of 11.7% after controlling for common risk factors.[3]
- We found no evidence that taking positions in targets that are pre-disclosed in Form 13Fs prior to commencement of activism increases outperformance.[4]
- Pre-activism, targets tended to be (i) small market capitalization (ii) slow-growing (iii) firms with low dividend payout and (iv) firms that were generally financially sound.
- Post-activism, targets had (i) higher leverage (ii) lower cash holding (iii) higher dividend payout and (iv) no improvement to their financial operations.

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[1] http://www.reuters.com/article/2014/02/07/us-apple-repurchase-idUSBREA1606820140207
[2] In addition to the market factor, size, value, momentum and industry style factors have been found to be drivers of future returns. See "Common Risk Factors in the Returns on Bonds and Stocks" by Fama and French 1993
[3] See "On Persistence in Mutual Fund Performance" by Carhart 1997
[4] Investment managers who have $100MM+ in AUM must file Form 13F within 45 days of every calendar quarter end

Smart Money and Activism Investing

With a significant equity stake in a company, activist investors engaged in various strategies, including (but not limited to) proxy fights, public campaigns, litigation and negotiations with the hopes of influencing the company's future direction such as returning excess cash, lowering the cost of capital, and/or improving operating efficiency.

Successful activist investors are best known for their deep industry knowledge, thorough fundamental analysis, and tough negotiation tactics. They are frequently referred to as sophisticated fundamental investors or "smart money". Their ability to move the market is evident as exemplified by high profile activists such as Carl Icahn's involvement with Apple. Apple's shares soared after the public disclosure of Icahn's stake, even before he had a chance to discuss the nature of his campaign.

We base our investment hypothesis on the following two assumptions: (i) In the short-horizon, public disclosure of activism will generally positively impact stock prices reflecting the potential value-adding changes; and (ii) In the long-horizon, a successful outcome of activists' campaigns may provide additional excess returns to shareholders reflecting the realized value-adding changes.

1. Activism and Returns

We explore the impact of activism on targets' short- and long-horizon returns. Short-horizon is defined as one month or less. Long-horizon is defined as longer than one month.

This study defined the commencement of investor activism as the filing date of the Schedule 13D form, a mandatory SEC filing that an investor must file within ten days after taking a stake equal to or larger than five percent in any publicly traded share class of a listed company with the intention of influencing the company's future direction.

1.1 Short-Horizon Return Analyses

We conducted an event study to analyze short-horizon returns.[5] The event date (t0), signifying the commencement of activism, is based on Schedule 13D filing date. Excess returns for target firms were calculated using the following two asset pricing models:

- Market Return Approach: Raw returns of targeted firms are adjusted by the return of the Russell 3000 index, which we use as a proxy for the market
- Fama-French Three Factors and Industry (FF3 + Industry) Approach:[6] In addition to adjusting for the market return, we also adjusted the raw returns of targeted firms by the

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[5] An event study examines the behaviors of stock returns around corporate events. See "The Adjustment of Stock Prices to New Information" by Fama et al. 1969

[6] Fama-French three factors are the market, size and value factors that Fama and French have showed to be important drivers of future stock returns. See "Common Risk Factors in the Returns on Bonds and Stocks" by Fama and French 1993.

returns of targets' risk-matched peers along size, value and industry (GICS level 3) risk dimensions

Excess returns are calculated using both models over the following three event windows: (i) event window [t-23, t+23], which is from 23 trading days prior to, through 23 trading days after the event date (ii) post-event window [t0, t+23], which is from event date to 23 trading days after (iii) lagged window [t+2, t+23], which is from 2 trading days post-event date to 23 trading days post-event date.

Our analyses indicate that positive excess returns were realized by going long the targeted firms during our examination period 2003 – 2013 (see Figure 1).[7] A majority of the excess returns were realized after an activist action is revealed (i.e. filing of Schedule 13D). The average market-adjusted return was 7.2% during the entire event window [t-23, t+23], of which 3.9% occurred during the post-event window [t0, t+23] (see Figure 1). In Figure 1, the green dotted line denotes the event date. The red enclosed box to the right of the event date plots the cumulative market-adjusted returns during the post-event window [t+1, t+23]. The red enclosed box to the left of the event date displays the cumulative market-adjusted returns ten trading days prior to the event date [t-10, t-1]. We tend to attribute the increase in returns during this window to the last minute accumulation by activists prior to their filing of Schedule 13D and to information leakage whether unintentionally or otherwise of the impending activism. See Exhibit 1 for tabular results.

Figure 1: Cumulative Returns of Targets in Event Window (Trading Days)
Russell 3000 Index, 2003 – 2013
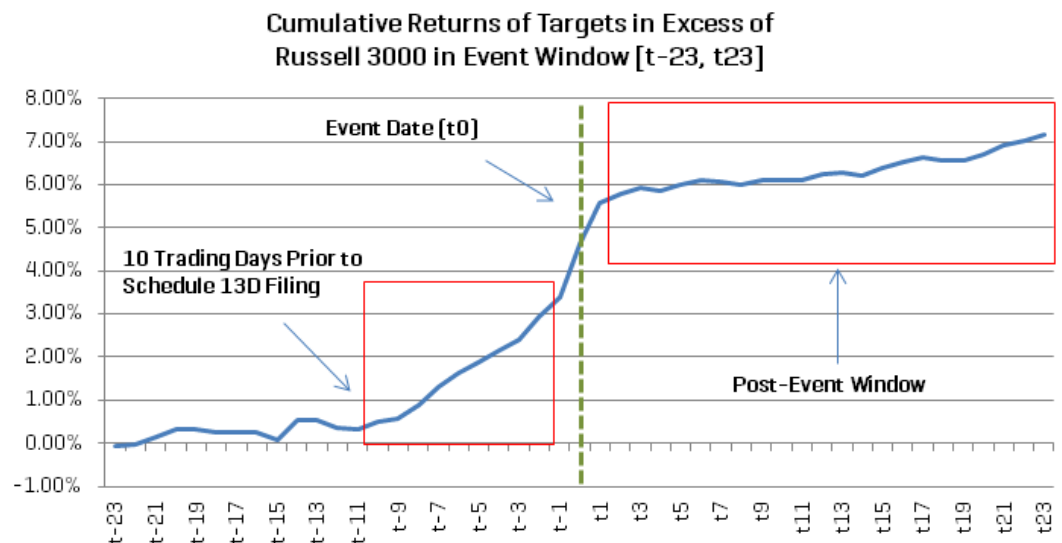
Source: S&P Capital IQ Quantamental Research
Past performance is not a guarantee of future results

To simulate the most conservative cost basis that investors are able to enter their positions in the targets, the closing price one trading day after the Schedule 13D filing is used as the beginning

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[7] Market-adjusted return is in excess of Russell 3000 index

price in the returns calculation in the window [t+2, t+23]. The average market-adjusted return during this period was 1.6% with significance at the 5% level. After controlling for market, value, size, and industry risk characteristics, we saw positive average and median excess returns in the targets at the 5% significance level for windows [t-23, t+23] and [t0, t+23]. See Exhibit 1 for tabular results. The hit ratios and counts are for average market-adjusted return analyses.

Exhibit 1: Short-Horizon [1 Month] Returns Analysis
Russell 3000 Index, 2003 – 2013

Window [Trading Days]	col1 Average Market Adjusted Returns of Targets	col2 Median Market Adjusted Returns of Targets	col3 Average Difference in Returns Between Targets and Risk-Matched Firms	col4 Median Difference in Returns Between Targets and Risk-Matched Firms	col5 Hit Ratio	col6 Count
[t-23, t+23]	7.2% ***	5.4% ***	6.3% ***	3.6% ***	60.2% **	801
[t0, t+23]	3.9% ***	2.2% ***	3.0% ***	1.3% ***	57.7% ***	801
[t+2, t+23]	1.6% **	0.5% **	0.7%	0.1%	50.0%	801

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively
Source: S&P Capital IQ Quantamental Research
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1.2 Long-Horizon Return Analyses

1.2.1 Calendar-Time
The Calendar-Time method, also known as Jensen's alpha, is used to assess long-horizon returns.[8] In the following analyses, we examine a portfolio of firms targeted by activists over variable look-back [formation] periods and examine the monthly holding period excess returns. For instance, at month t for the 6 months look-back window, the portfolio includes constituents that have had a Schedule 13D filing within the past 6 months of month t. Again, we control the returns of the targets along the market, size, value and momentum dimensions.

The average monthly excess returns ranged from 0.66% to 1.47% with significance at the 5% level [Exhibit 2]. We did not observe evidence of mean-reversion in the excess returns. In Exhibit 2, the sensitivities of the market risk premium [col2] were close to one suggesting that the returns of the targets move no more or less extreme than the returns of the market.[9] The sensitivities of value risk premium [col3] in general were not significant at the 10% level.[10] From a risk-based perspective, the lack of statistical significance signified that the targets were not in financial distress or inexpensive in relation to their peers. The positive sign on the sensitivities of the size risk premium [col4] indicated that the returns of the targets increase when small market capitalization firms outperform large market capitalization ones.[11] The sensitivities on the price

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[8] Jensen's alpha is used to determine excess returns over expected returns from an empirical asset pricing model. See "The Performance of Mutual Funds in the Period 1945 – 1964" by M. C. Jensen 1968
[9] Market risk premium is the monthly Russell 3000 returns in excess of 1-month Treasury bill
[10] Value risk premium is the monthly quintile spread sorted in descending order according to book-to-market ratio
[11] Size risk premium is the monthly quintile spread sorted in ascending order according to natural log of market capitalization

momentum risk premium (see col5) were negative suggesting that the returns of the targets decreased when high momentum firms outperform low momentum firms in the past 12 months (see Exhibit 2).[12] The monthly hit ratio (see col6) is the percent of months where the excess returns of the portfolio after adjusting for the aforementioned four common risk factors are positive. The average monthly constituents in the portfolio of targets range from 20 for the 3 months look-back horizon to 148 for the 24 months look-back horizon.

Exhibit 2: Long-Horizon Returns Analysis – Calendar Time
Russell 3000 Index, 2003 – 2013

Horizon (Months)	col1 Average Monthly Excess Returns	col2 Sensitivity to Market Risk Premium	col3 Sensitivity to Value Risk Premium	col4 Sensitivity to Size Risk Premium	col5 Sensitivity to Price Momentum Risk Premium	col6 Monthly Hit Ratio	col7 Average Monthly Count
3	1.47% ***	1.04 ***	0.44 **	0.26 *	-0.07	63.6% ***	20
6	0.98% ***	1.12 ***	0.16	0.25 **	-0.16 **	65.2% ***	39
12	0.97% ***	1.08 ***	0.10	0.41 ***	-0.05*	67.4% ***	77
18	0.74% ***	1.10 ***	0.10	0.43 ***	0.03	66.7% ***	114
24	0.66% ***	1.12 ***	0.09	0.45 ***	0.00	68.9% ***	148

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively
Source: S&P Capital IQ Quantamental Research
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1.2.2 Buy-And-Hold Abnormal Returns (BHAR)

BHAR simulates what a typical investor may realize by holding a portfolio of targets for an extended period of time after the commencement of activism. We examine a portfolio of targets that have had Schedule 13D filings and hold the portfolio for different durations. First, we examine the holding period returns of targets in excess of Russell 3000. The average market-adjusted holding period excess returns (see col1 in Exhibit 3) ranged from 4.2% at the 3 months holding horizon to 17.0% at the 36 months holding horizon.

The average holding period returns generally increase as a function of the portfolio holding duration. We do not observe evidence of mean-reversion. We also examine the average holding period returns of the targets to be in excess of the targets' risk-matched peers. Specifically, we formed one portfolio that goes long on the targets and another portfolio that goes short on the targets' risk-matched peers where the risk matching is done on size, value and industry risk characteristics. The average difference in returns (col3 in Exhibit 3) between the two portfolios ranged from 3.9% to 23.3% with significance at the 1% level. Starting with the 12 months holding horizon, the median market-adjusted returns (col2 in Exhibit 3) started to become statistically insignificant but the average market-adjusted returns (col1 in Exhibit 3) were still positive. This suggests that a small subset of the targets generates large excess returns. The hit ratios and counts are for average market-adjusted return analyses.

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[12] Momentum risk premium is the monthly quintile spread sorted in descending order according to returns 12-month ago to 1-month ago

Exhibit 3: Long-Horizon Returns Analysis – BHAR
Russell 3000 Index, 2003 – 2013

	col1	col2	col3	col4	col5	col6
Holding Duration (Months)	Average Market Adjusted Returns of Targets	Median Market Adjusted Returns of Targets	Average difference in returns between targets and their comparables	Median difference in returns between targets and their comparables	Hit Ratio	Count
3	4.2% ***	1.4% **	3.9% ***	0.9% **	53.6% *	679
6	6.0% ***	2.5% **	4.6% ***	0.9%	53.8% *	595
12	8.1% ***	1.5%	7.9% ***	-0.3	51.1%	507
24	10.7% ***	0.8%	15.7% ***	1.0%	51.6%	378
36	17.0% ***	-1.5%	23.3% ***	7.1% **	48.4%	277

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively
Source: S&P Capital IQ Quantamental Research
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1.3 Using 13F to Complement 13D

Often, activists accumulate positions in the targets prior to Schedule 13D disclosure. To examine the impact of pre-disclosed positions of the targets on their subsequent returns, we analyzed holdings information of the targets in Form 13F in the most recent calendar quarter filed at least 45 days prior to the Schedule 13D filing. Form 13F is a SEC mandated form that institutional asset managers who have $100MM+ AUM are required to file within 45 days of every calendar quarter end. To correct for the potential look-ahead bias, a forty-five day lag is applied to the quarter end date to serve as a proxy for Form 13F's filing date.

Next, we examine market-adjusted returns in the following windows (i) the period between the filing of Form 13F and 1-month post the filing of Schedule 13D, [13F, 13D + 1Mth] (ii) the period between the filing of form 13F and 10 calendar days (the 10 days are used to separate out the return effects from the last-minute accumulation by investors before they have to file the Schedule 13D) before the filing of Schedule 13D, [13F, 13D-10] (iii) the period between the filing of Schedule 13D and one month thereafter, [13D, 13D + 1Mth]. In other words, we decompose the largest window [13F, 13D + 1Mth] into two sub-windows, [13F, 13D-10] and [13D, 13D + 1Mth].

Our results indicated that the majority of the excess return was realized after the Schedule 13D filing. The average market-adjusted return during the window [13F, 13D + 1Mth] was 7.89%. The average market-adjusted return post the filing of Schedule 13D was 4.13% with significance at the 1% level (see Exhibit 4). In fact, the average excess return between the filing of Form 13F and 10 days prior to the filing of Schedule 13D [13F, 13D-10] was 1.87% but it was not statistically significant at the 10% level. This suggests that the commencement of activism, as signaled by the Schedule 13D filing, may have been the catalyst for the excess return in the larger window [13F, 13D + 1Mth]. If this were not the case, we would have expected to see excess return with statistical significance during the sub-window [13F, 13D-10].

Exhibit 4: Positions Pre-Disclosed in Form 13F

Russell 3000 Index, 2004 – 2013

Event Windows (Trading Days)	col1 Average Market Adjusted Returns of Targets	col2 Hit Ratio	col3 Count
[13F, 13D+1Mth]	7.89% ***	61.2% ***	258
[13F, 13D-10]	1.87%	55.3% *	258
[13D, 13D+1Mth]	4.13% ***	57.1% **	258

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively

Source: S&P Capital IQ Quantamental Research

Past performance is not a guarantee of future results

One may argue that since Form 13F needs to be filed within 45 days of a calendar quarter end. An investor could file anytime within that time frame. Moreover, the insignificant result in the window [13F, 13D-10] may be attributed to the fact that the excess return occurred within the 45-day window. Again, we believe that in order for activists to maintain anonymity and thus mitigate the free riding cost, they generally wait until the very last minute to reveal 'their hand' and file at the end of the 45-day window. Hence, the date after applying the 45-day lag in our opinion acts as a good date proxy when the information in the Form 13F becomes available in the public domain.

1.4 Time-Variant Nature of Activism Returns

It is also natural to ask whether the activism returns have changed over time. Our sample data spans the 2003 – 2013 time period. We split the period into two sub-periods 2003 – 2007 and 2008 – 2013. Next, we apply our short- and long-horizon return analyses from section 1 to the sub-periods.

For the short-horizon return analyses, we compared the averages, medians, and volatilities of the excess returns in the sub-periods. Our results indicated that positive average and median excess returns existed at the 5% significance level for the considered event window [t-23, t+23] and the post-event window [t0, t+23] in both sub-periods (see Exhibit 5a).

Exhibit 5a: Short-Horizon Returns Analysis through Time

Russell 3000 Index, 2003 – 2013

Window (Trading Days)	Col1 Average	col2 Median	col3 Volatility	col4 Count of Targets	col5 Average	col6 Median	col7 Volatility	col8 Count of Targets
	Market-Adjusted Returns of Targets During 2003 - 2007				Market-Adjusted Returns of Targets during 2008 - 2013			
[t-23,t+23]	6.1% ***	4.4 % **	25.9%	291	7.9% ***	5.5% ***	27.0%	510
[t0, t+23]	2.0% ***	1.2% ***	12.9%	291	5.1% ***	3.1% ***	17.0%	510
[t+2, t+23]	0.2%	0.1%	11.0%	291	2.5% ***	1.1% **	14.3%	510

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively

Source: S&P Capital IQ Quantamental Research

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The average and median excess returns in the first sub-period were generally smaller than those in the latter sub-period (see Exhibit 5a and 5b).

Exhibit 5b: Difference in Average, Median and Volatility of Returns
Between Sub-Periods 2003-2007 and 2008 – 2013
Russell 3000 Index, 2003 – 2013

	col1	col2	col3
Event Window [Trading Days]	Difference in Average Returns between Two Periods	Difference in Median Returns between Two Periods	Difference in Volatility of Returns between Two Periods
[t-23,t+23]	Not Significant at 10% level	Not Significant at 10% level	Not Significant at 10% level
[t0, t+23]	Significant at 1% level	Significant at 5% level	Significant at 1% level
[t+2, t+23]	Significant at 5% level	Not Significant at 10% level	Significant at 1% level

Source: S&P Capital IQ Quantamental Research
Past performance is not a guarantee of future results

For the long-horizon return analyses, we use the Calendar-Time method to examine the average monthly excess returns between the two sub-periods. Similar to the results from the analysis of the entire period 2003 – 2013 (Section 1.2.1 above), positive average monthly excess returns existed at the 10% significance level for all horizons in both sub-periods (see Exhibit 6). The average monthly excess returns in the earlier sub-period were larger. The difference in returns ranged from 46bps to 71bps. These differences, however, were not statistically significant at the 5% level.

Exhibit 6: Long-Horizon Returns Analysis through Time
Russell 3000 Index, 2003 – 2013

	col1	col2	col3
Horizon [Months]	Average Monthly Excess Returns 2003 - 2007	Average Monthly Excess Returns 2008 – 2013	Difference in Average Monthly Excess Returns 2003-2007 vs. 2008 - 2013
3	1.76% ***	1.13% **	0.63%
6	1.15% **	0.69% **	0.46%
12	1.38% ***	0.67% **	0.71% *
18	1.00% ***	0.53% *	0.46%

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively
Source: S&P Capital IQ Quantamental Research
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1.5 Summary
The results tended to indicate both short- and long-horizon positive excess returns with significance at the 5% significance level after controlling for market, size, value, momentum, and industry risk characteristics. There was no evidence suggesting mean-reversion in the excess returns. Using Form 13F to complement Schedule 13D, the study found that ensuing excess returns occur only after the filing of Schedule 13D. Lastly, the results did not suggest that excess

returns have significantly diminished or changed between the sub-periods 2003 – 2007 and 2008 – 2013.

2. Pre-Activism Characteristics of Targets

We explored the pre-activism characteristics of the targets by comparing to those of the targets' peers. The targets' peers were matched along the industry, size, and value risk dimensions. For each target, a group of the target's peers within the same industry level [GICS level 3] is identified. The industry-matched firms are further filtered on 3 x 3 two-way sorts on book-to-market, a proxy for value, and market capitalization, a proxy for size. The median of the characteristics of the risk-matched firms is used to compare against the target's median characteristic.

2.1 Size
The targets tended to be small-capitalization firms. For the size characteristic, the matching occurred along value and industry dimensions only. The average [median] size of the targets was $1,890MM [$674MM] whereas average [median] size of the risk-matched firms was $3,632MM [$1,615MM]. The median figures are shown in the left column chart of Figure 2. The average and median differences between the targets and the risk-matched firms were statistically significant at the 1% level [see Exhibit 7]. This is in accordance with intuition since accumulating 5%+ shares of large capitalization firms would mean committing a substantial portion of an activist's total AUM and subjecting the portfolio to large idiosyncratic risk.

Figure 2: Pre-Activism Characteristics of Targets
Russell 3000 Index, 2003 – 2013
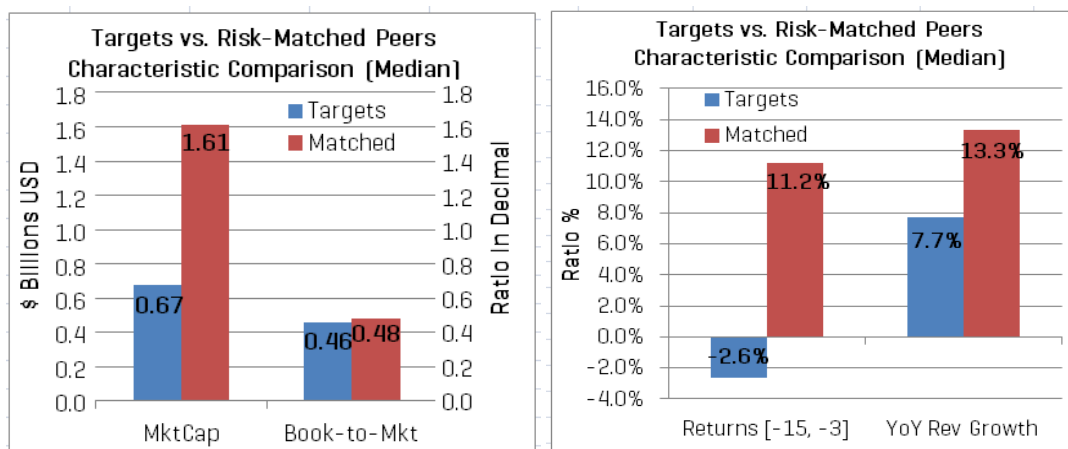
Source: S&P Capital IQ Quantamental Research
Past performance is not a guarantee of future results

2.2 Valuation
The targets are no more or less financially distressed than their peers. For the book-to-market characteristic, the risk-matching occurred along size and industry dimensions only. The average [median] book-to-market ratio of the targets was 0.54 [0.46] whereas the average [median] book-to-market ratio of risk-matched firms was 0.54 [0.48]. The average and median

differences between the targets and the matched firms were virtually zero. This suggests from a risk-based perspective that the targets were no more or less financially distressed then their peers [see Exhibit 7].

2.3 Momentum

The returns of the targets underperformed relative to the returns of the risk-matched firms between the period 15 months prior to and 3 months prior to [-15, -3] the filing of the Schedule 13D. The median figures are shown in the right column chart of Figure 2. See Exhibit 7 for tabular results of the average and median differences between the characteristics of the targets and their peers.

2.4 Growth

The targets grew slower in terms of year-over-year [YoY] revenue change. The average [median] YoY revenue growth for the targets was 14.5% [7.7%] whereas the average [median] YoY revenue growth for the risk-matched firms was 18.2% [13.4%]. The median figures are shown in the right column chart of Figure 2. The average and median differences were statistically significant at the 5% level [see Exhibit 7].

Figure 3: Pre-Activism Characteristics of Targets
Russell 3000 Index, 2003 – 2013
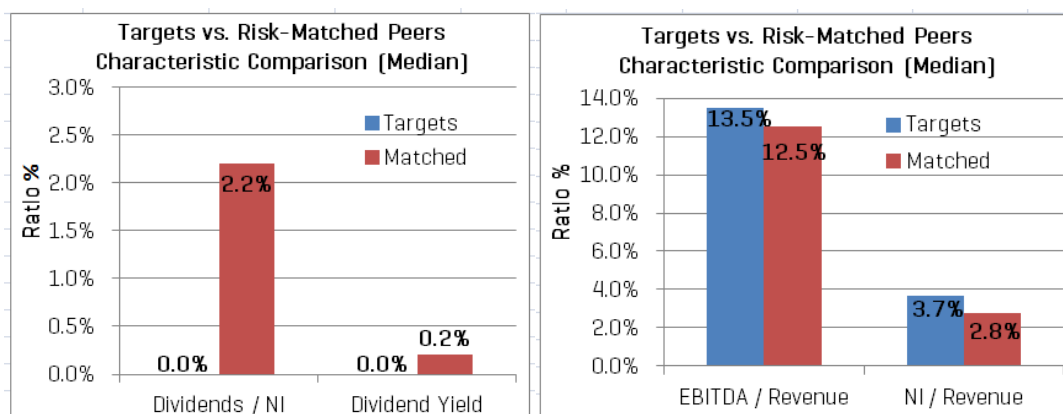
Source: S&P Capital IQ Quantamental Research
Past performance is not a guarantee of future results

2.5 Dividend Yield and Payout

The targets had lower payout ratio and dividend yield. The average [median] payout ratio for the targets was 11.0% [0.0%] whereas the average [median] payout ratio for the risk-matched firms was 14.2% [2.2%]. Dividend yield revealed the same story. The average [median] dividend yield was 0.9% [0.0%] whereas the average [median] dividend yield for risk-matched firms was 1.0% [0.2%]. The median figures are shown in the right column chart of Figure 3. With the exception of the average difference of dividend yield (p-value 0.11), the average and median differences for both measures were statistically significant at the 10% level. The results suggest that the targets were not returning money to their shareholders at the same level as their peers were. See Exhibit 7 for tabular results of the average and median differences in the two characteristics between the targets and their peers.

2.6 Margins and Efficiency

The targets' margins and operating efficiencies are not meaningfully different from their peers'. The average differences of the gross profit and net income margins of the two samples were not significant at the 10% level, but the median differences were. The median figures are shown in the right column chart of Figure 3. Similarly, measures of efficiencies – (i) cash flow to one-year lagged assets and (ii) EBITDA to one-year lagged assets were not statistically different between the targets and their risk-matched peers at the 10% significance level. The implication is that the targets are relatively financially sound. See Exhibit 7 for tabular results of the average and median differences in characteristics between the targets and their peers.

Exhibit 7: Pre-Activism Characteristics of Targets
Russell 3000 Index, 2003 – 2013

		col1	col2	col3	col4	col5
		Targets		Targets vs. Risk-Matched Firms		
Category	Measure	Average Characteristic	Median Characteristic	Difference in Average Characteristics of Targets and Risk-Matched Firms	Difference in Median Characteristics of Targets and Risk-Matched Firms	Count
Size	MktCap [$MM]	1889.8	674.1	-1742.3 ***	-941.3 ***	804
Value	Book-to-Mkt	0.54	0.46	0.00	-0.02 **	801
Mom	rets [-15, -3]	6.1%	-2.6%	-9.3% ***	-13.8% ***	813
Growth	YoY Revenue Growth	14.5%	7.7%	-3.7% **	-5.6% ***	777
Efficiency	$(NI + D\&A)_t / Assets_{t-1}$	4.7%	6.6%	0.4%	0.4%	767
	Cash / Assets	19.6%	11.5%	-1.2%	-2.9% ***	786
	$EBITDA_t / Assets_{t-1}$	11.4%	12.2%	0.8%	-0.1%	741
Margins	EBITDA / Revenue	-1.6%	13.5%	6.9%	1.0% ***	758
	NI / Revenue	-14.2%	3.7%	8.9%	0.9% ***	788
Capital Structure	Assets / Equity	2.90	2.04	0.20	-14.5 ***	782
	Debt / (Debt + Equity)	33.5%	29.3%	2.8% **	-0.8%	795
Yield and Payout	Dividends / NI	11.0%	0.0%	-3.2% *	-2.2% ***	793
	Dividend Yield	0.9%	0.0%	-0.1%	-0.2% ***	795

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively
Source: S&P Capital IQ Quantamental Research
Past performance is not a guarantee of future results

2.7 Summary

The results generally indicated that the targets of activism during the sample period of analyses were small-capitalization, slow-growing and underperforming companies with low dividend yields and payouts in relation to their peers with comparable risk attributes. The firms, however, did not suffer from low margins nor were they in financial distress in relation to their peers.

3. Post-Activism Characteristics of Targets

The next logical question to examine is the impact of activism on targets' financial characteristics. All financial measures used are adjusted for industry medians to account for industry changes between pre- and post-activism. The pre-activism measures use metrics 12 months prior to the event date and the post-activism measures use metrics 24 months after the event date. The results suggest that the targets' financial health did not improve post-activism up to two years afterwards. The results (see Figure 4) do appear to indicate that the targets had higher financial

leverage, increased dividend yield, and lower cash holding (perhaps to finance the increase in the dividend yield). The results suggested that activists may be able to unlock value by prompting management to return additional cash to shareholders and to lower their cost of capital via additional leverage to match the levels of targets' risk-matched peers. See Exhibit 8 for tabular results of the average and median differences in the targets' characteristics pre- and post-activism.

Figure 4: Characteristics of Targets Pre- vs. Post-Activism
Russell 3000 Index, 2003 – 2013
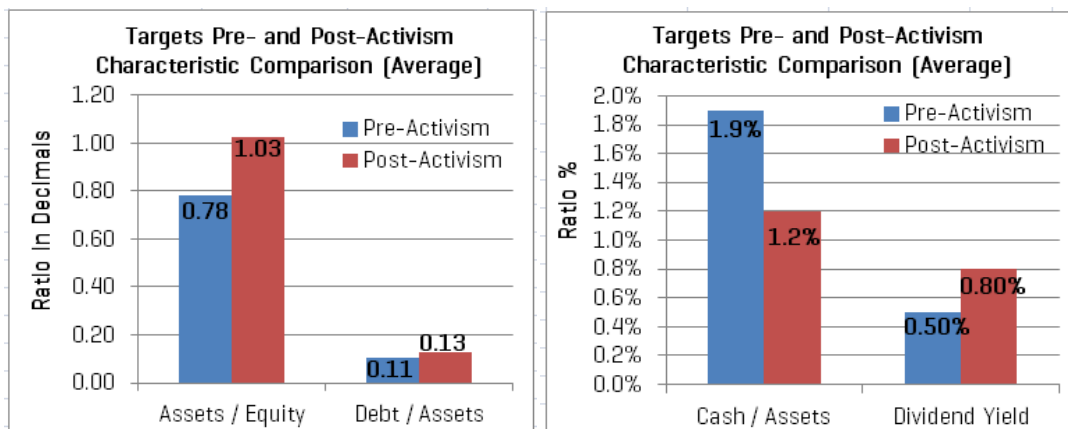
Source: S&P Capital IQ Quantamental Research
Past performance is not a guarantee of future results

Exhibit 8: Post-Activism Characteristics of Targets
Russell 3000 Index, 2003 – 2013

		col1	col2	col3	col4	col5	col6	col7
		Pre-Activism		Post-Activism		Post-Activism vs. Pre-activism		
Category	Measure	Average Characteristic of Targets	Median Characteristic of Targets	Average Characteristic of Targets	Median Characteristic of Targets	Average Difference in Characteristics of Targets	Median Difference in Characteristics of Targets	Count
Size	MktCap ($MM)	2003.7	285.7	1657.2	66.1	-346.5	-157.0 ***	380
Value	Book-to-Mkt	0.07	0.02	0.21	0.05	0.14 ***	0.06 **	375
Growth	YoY Revenue Growth	4.3%	-1.5%	-1.0%	-4.4%	-5.3% **	-3.7% ***	368
Efficiency	$[NI + D\&A]_t / Assets_{t-1}$	0.4%	0.1%	-1.9%	-0.8%	-2.3% **	-1.2% ***	368
	Cash / Assets	1.9%	-0.4%	1.2%	-0.6%	-0.6%	-0.2%	376
	$EBITDA_t / Assets_{t-1}$	2.3%	0.7%	-0.2%	-0.8%	-2.5% ***	-1.9% ***	351
Margins	EBITDA / Revenue	-13.7%	1.4%	-0.1%	-0.2%	13.6%	-2.1% ***	364
	NI / Revenue	-14.5%	0.3%	-9.3%	-1.1%	5.2%	-1.7% ***	382
Capital Structure	Assets / Equity	0.78	0.12	1.03	0.21	0.24	0.05	368
	Debt / (Debt + Equity)	10.7%	5.0%	12.6%	8.3%	1.9%	0.1%	376
Yield and Payout	Dividends / NI	7.4%	0.0%	8.8%	0.0%	1.4%	0.0%	376
	Dividend Yield	0.5%	0.0%	0.8%	0.0%	0.3% *	0.0%	372

***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively
Source: S&P Capital IQ Quantamental Research
Past performance is not a guarantee of future results

4. Data

This study uses Schedule 13D filing dates as commencement of investor activism. The Schedule 13D filings that are used in this study are associated with S&P Capital IQ's investor activism data set, which is a forthcoming new component of S&P Capital IQ's Transactions package. The investor activism data set collection team starts with all available Schedule 13Ds. Then, they manually identify and collect investors who have ever engaged in at least one of the nine S&P Capital IQ identified tactic types and at least one of the twelve objective types (see Exhibit 9) from Schedule 13Ds, proxy filings, press releases and so forth. Then, Schedule 13D filings are filtered down to only those that are filed by the aforementioned subset of investors. Next, the remaining Schedule 13D filings are filtered on Russell 3000 index. If a company has multiple filings, the first instance of the filings is included. All together 874 Schedule 13D filings are included in the study. Both tactic and objective lists are still being finalized and the collection team is currently amending the data points to the investor activism data set, which will be forthcoming to Xpressfeed. The holdings data from Form 13F are from S&P Capital IQ Ownership data package and are available in Xpressfeed. The holdings data starts in 2004.

Exhibit 9: List of Tactic Types

Tactic Types	Objective Types
Non-confrontational communication and engagement	Engage Management
Non-confrontational request for board representation	Corp. Gov.- Other Matters
Shareholder proposals	Corp. Gov. - Board Matters
Vote No/Withhold Votes (Just Vote No)	Corp. Gov.- Voting Matters
Threat to launch proxy fight	Corp. Gov. - Takeover Defence Matters
Proxy Fight/Contest	Corp. Gov. - Executive Compensation Related matters
Threat to launch legal suits	M&A Related Matters
Legal proceeding	Strategic Matters
Takeover Bid	Financial Related Matters
	Meeting Matters
	Legal Matters
	Financing/Bankruptcy/Reorganization

Source: S&P Capital IQ Investor Activism Data Collection Team

The financial measures are based on S&P Capital IQ's point-in-time (PIT) data. Total returns are from S&P Capital IQ's market data. The market, value, size, and momentum factor spreads used in section 1.2.1 Calendar-Time method are from S&P Capital IQ's Alpha Factor Library (AFL), which contains 450+ stock selection signals with associated metrics such as information coefficients and factor spreads. All factor performance is downloadable by time period, regime, country, and sector dimensions.

5. Conclusion

The results from this study generally indicated that positive excess returns could be associated with taking equity positions in firms that have been targeted by activists even after controlling for market, size, value, momentum, and industry risk characteristics both in the short- and long-horizon. The excess returns were mostly attributed to activism, after examining pre-disclosed positions of targets in the Form 13Fs prior to the Schedule 13D filings. In the sub-period 2008 – 2013, excess returns from activism did not diminish or change significantly vis-à-vis those from 2003 – 2007.

Our findings suggest that activists target firms were typically small-capitalization, slow-growing, underperforming companies with low payouts and dividend yields but were <u>not</u> in financial distress. We did not see evidence that targets' financials improved up to 24 months post-activist involvement. The targets' financial leverage and payout, however, did seem to increase suggesting that the activists are unlocking value by prompting management to return additional cash to shareholders or to lower their cost of capital via additional leverage to match the level of targets' risk-matched peers.

Appendix

Figure 5: Number of Schedule 13D Filings by GICS Level I
Russell 3000 Index, 2003 – 2013
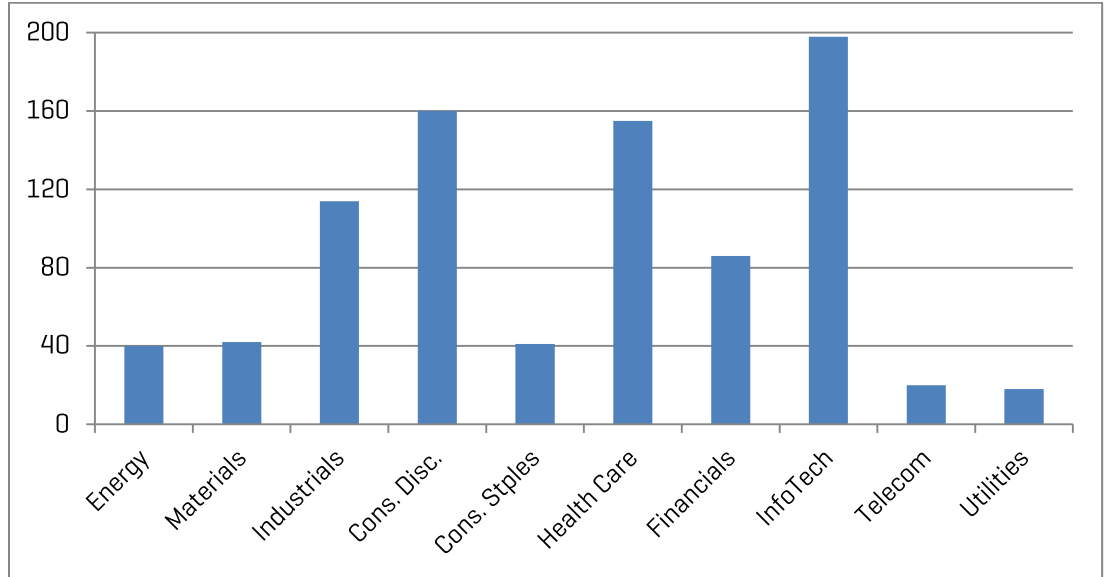
Source: S&P Capital IQ Quantamental Research

Figure 6: Number of Schedule 13D Filings by Year
Russell 3000 Index, 2003 – 2013
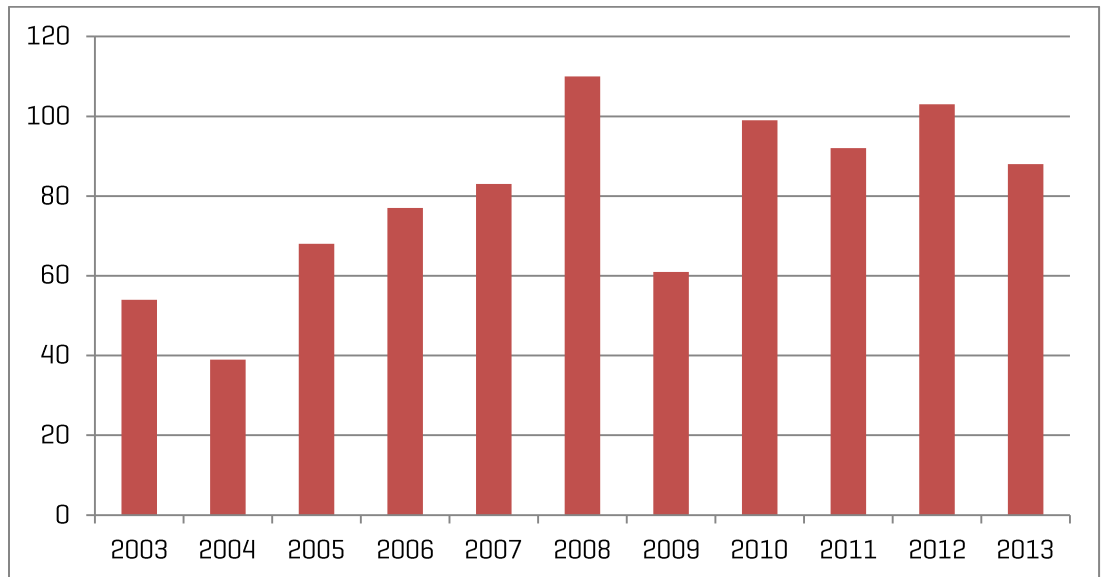
Source: S&P Capital IQ Quantamental Research

Figure 7: Annualized Average Monthly Excess Returns by Year
After Controlling for Market, Size, Value and Price Momentum
Russell 3000 Index, 2003 – 2013
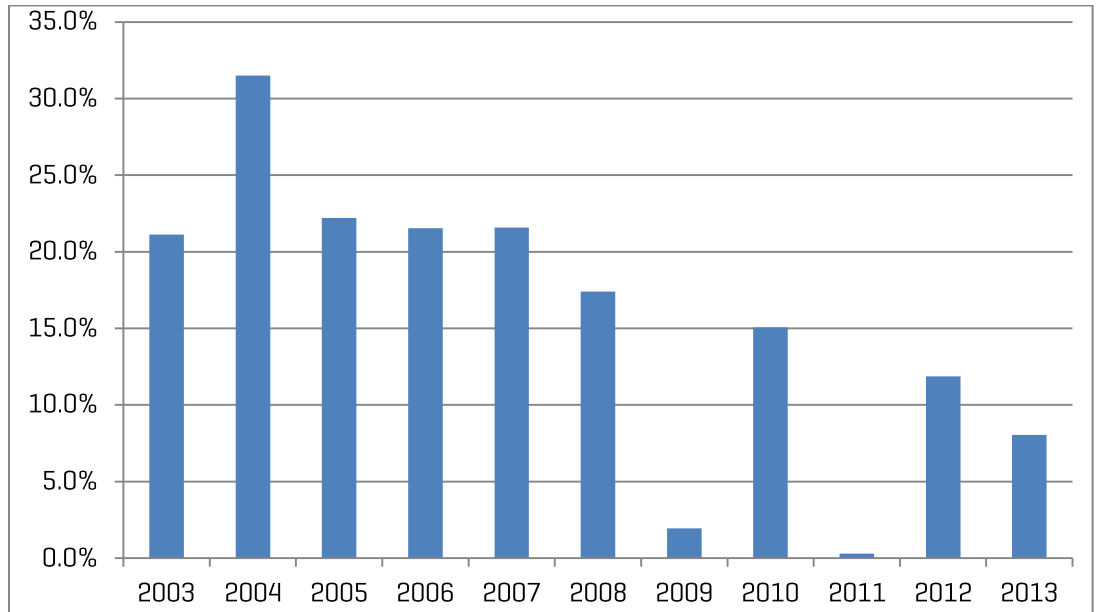
Source: S&P Capital IQ Quantamental Research

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Our Recent Research

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

As part of our research process, we make a concerted effort to stay abreast of interesting white papers. Academic research papers are a rich source for new ideas and fine tuning of areas for future work. Often they provide a launch pad for debate and exploration for our team. Our readers agree, as we regularly receive positive feedback on our academic research highlights.

In this piece we have assembled a number of interesting articles that we believe will be of broad interest to our clients, and all investment professionals – Corporate Character, Trading Insights & New Data Sources. For each article we provide a link to the article, the abstract, and a brief discussion of the article highlights and how it will be useful to fellow practitioners. It is our hope that these papers help you generate differentiated thinking, and to better serve your clients.

February 2014: Obtaining an Edge in Emerging Markets

Following the introduction of our global stock selection models for developed markets (DM) in August 2013, we launch our stock selection model for emerging markets (EM) and report the following:

- The Model generated a top quintile average monthly excess return of 0.90% within the S&P BMI Emerging Market Index (Jan 2002 – Sept 2013).
- The Model's performance is robust across regions and sectors.
- We do not observe performance degradation within mid to large cap stocks.
- Model's top quintile average monthly excess return is identical in growth and value environments (0.80%), and positive in periods of elevated volatility (0.53%).
- A simulated portfolio generated an annualized excess return of 10.5% after accounting for transactions costs.

February 2014: U.S Stock Selection Model Performance Review

The performance of S&P Capital IQ's four U.S. stock selection models since their launch in January 2011 has been strong, and 2013 was no exception. Key differentiators, such as distinct formulations for large and small cap stocks, bank-specific factors, sector-neutrality to target stock-specific alpha, and the combination of sub-components representing different investment themes have enabled the models to outperform across disparate market environment

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

We examine the returns surrounding buyback announcements to test whether, and when, buyback programs signal subsequent outperformance and shareholder value. We find:

- Buyback announcements precede excess returns in the US. Stocks on average outperformed the equally weighted Russell 3000 by 0.60% over one month, and by 1.38% over one year periods following buyback announcements.
- Outperformance is greatest among small caps or larger magnitude buybacks as a % of shares outstanding.

- Reported insider trading and buyback announcement signals are complementary.
- In Europe, some post-buyback outperformance over 12 months, but no significant excess return after one month.

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

In this report, we investigate the impact of the public disclosure of insider trading on equity prices, using both an event study framework and a portfolio formation approach. Leveraging S&P Capital IQ's Ownership database, we explore several practical methods of identifying "informative" insider trades, and how to construct a portfolio of stocks using recent "informed" insider transactions. We document the following results:

- Consistent with existing literature, insider trades are predictive of future stock returns.
- Outside investors can earn economically significant excess returns by trading on "informative" insider trading signals.
- Mimicking the net purchase actions of CEOs yielded an excess return of 1.27% over the next one week.
- A trading strategy based on the three characteristics: opportunistic, intensive and directional change, yielded 0.36% weekly excess returns after transaction costs.

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

Pension underfunding is a worldwide problem. There has been an unending wave of news stories about cities and states across the United States suffering from defined benefit pension funding shortfalls, but these issues extend far beyond the public sector and beyond the United States as well.

In this brief we leverage S&P Capital IQ datasets to examine:

- Companies with the strongest and weakest pension funding status globally.
- Companies with the most optimistic return and discount rate assumptions globally.
- The relationship between projected and realized pension portfolio returns.
- The historical global trends in funding status, portfolio returns, and discount rates.

August 2013: Introducing S&P Capital IQ Global Stock Selection Models for Developed Markets: The Foundations of Outperformance

In this report, we explore the efficacy of different stock selection strategies globally and use this information to develop a suite of robust global stock selection models targeting Canada and the developed markets of Europe and Asia Pacific. Our global models were developed using S&P Capital IQ's industry leading Global Point-in-Time data, as well as the Alpha Factor Library, our web-based global factor research platform. We find that each of our Global Stock Selection Models for Developed Markets yield significant long-short spread returns and information coefficients at the 1% level. This performance is also robust providing similar statistical significance after controlling for Market Cap and Beta exposures.

July 2013: Inspirational Papers on Innovative Topics: Asset Allocation, Insider Trading & Event Studies

Inspiration drives innovation. The writings of Plutarch inspired Shakespeare, Galapagos finches inspired Darwin, and the German Autobahn inspired Eisenhower, but what inspires investment researchers to develop the next innovations for investors? When we get a new investment idea, we seek out literature on that topic to inspire us to bring the idea to fruition. This literature can help to

further develop our own thoughts, polish up and expand on our priors, and avoid the pitfalls experienced by earlier researchers. Inspiration from academia enhances our ability to provide innovative solutions for our clients.

June 2013: Supply Chain Interactions Part 2: Companies – Connected Company Returns Examined as Event Signals
Leveraging Compustat customer segment data, we investigate the impact of news for customers and subsequent stock returns for their suppliers, over the time period May 2000 through April 2011 and find that:

- Shares of suppliers with major customer relationships reacted to positive and negative earnings surprise of their customers with a statistically significant 0.93% to 1.97% abnormal spread in the 5 to 60 trading days following the surprise.
- A monthly rebalanced backtest of long-short supplier portfolios based on customer momentum would have resulted in a statistically significant 0.81% average monthly return, or 0.70% after controlling for common risk factor exposures.
- The customer momentum signal historically performs best in cyclical sectors such as Materials and Consumer Discretionary.

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

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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