

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

### Authors

Richard Tortoriello  
Quantamental Research  
(212) 438-9506  
[richard.tortoriello@spglobal.com](mailto:richard.tortoriello@spglobal.com)

Temí Oyeniyi, CFA  
Quantamental Research  
(312) 233-7151  
[toyeniyi@spglobal.com](mailto:toyeniyi@spglobal.com)

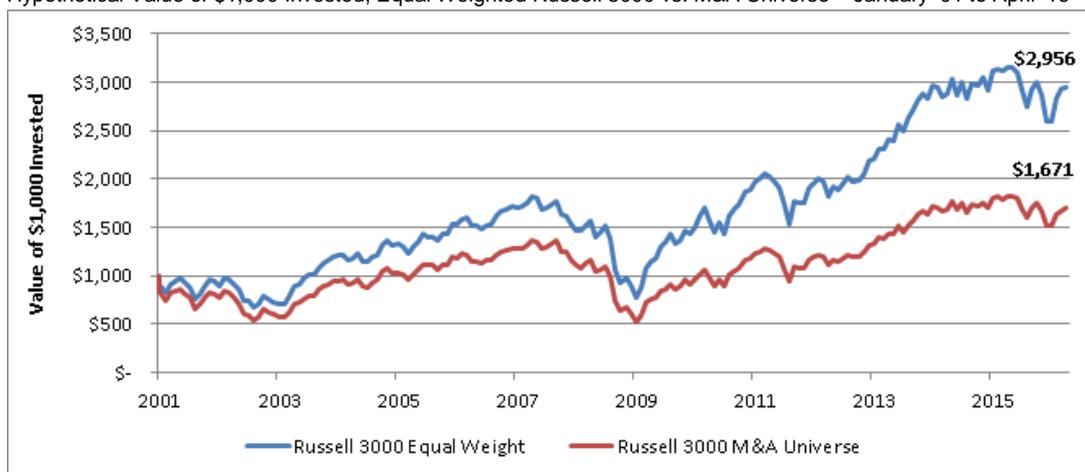
David Pope, CFA  
Managing Director of  
Quantamental Research  
(617) 530-8112  
[dpope@spglobal.com](mailto:dpope@spglobal.com)

Paul Fruin, CFA  
Quantamental Research  
(617) 530-8208  
[paul.fruin@spglobal.com](mailto:paul.fruin@spglobal.com)

Ruben Falk  
Investment Management Segment  
(212) 438 0648  
[rfalk@spglobal.com](mailto:rfalk@spglobal.com)

Year-to-date through July, over \$800 billion of merger-and-acquisition (M&A) activity has been announced in the U.S. Should acquiring-company shareholders expect to benefit? In this study we show that, among Russell 3000 firms with acquisitions greater than 5% of acquirer enterprise value, post-M&A acquirer returns have underperformed peers in general. A number of deal-related and fundamental attributes can be used to separate the 'good' from the 'bad' (and, sometimes, the really ugly).

Hypothetical Value of \$1,000 Invested, Equal Weighted Russell 3000 vs. M&A Universe – January '01 to April '16



Source: S&P Global Market Intelligence Quantamental Research. For all exhibits, 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. As of August 18, 2016.

- Despite the often-heard claim of M&A synergies, acquirers lag industry peers on a variety of fundamental metrics for an extended period following an acquisition. Profit margins, earnings growth, and return on capital all decline relative to peers, while interest expense rises, as debt soars, and other “special charges” increase.
- Stock deals significantly underperform cash deals. Acquirers using the highest percentage of stock underperform industry peers by 3.3% one year post-close and by 8.1% after three years. Also, acquirers with the highest one-year cumulative M&A spending<sup>1</sup> underperform by 2.0% one year post-close and by 9.3% after three years.
- Acquirers that grow quickly pre-acquisition often underperform post-acquisition. Acquirers with the highest pre-acquisition asset growth, underperform by 5.8% one year post-close and by 13.3% after three years, while those with the highest pre-acquisition increase in shares outstanding also underperform significantly.
- Finally, we show that excess cash on the balance sheet is detrimental for M&A, possibly due to a lack of discipline in deploying that cash. Acquirers with the highest level of pre-acquisition cash & equivalents relative to assets underperform peers by 8.6% over one year and 10.1% over three years.
- We look at M&A factors and returns using both an event study and a regression approach and conclude with a simple multi-factor strategy for differentiating good from bad deals in the aggregate.

<sup>1</sup> Relative to company size as measured by deal value as a percentage of enterprise value or market cap (see Section 5, Methodology and Database Characteristics, for more detail).

## 1. Introduction

The academic literature on M&A is vast but comes to few definitive conclusions. Although nearly all studies agree that M&A creates value for target-company shareholders, studies on post-M&A results for acquirers have no such unanimity.

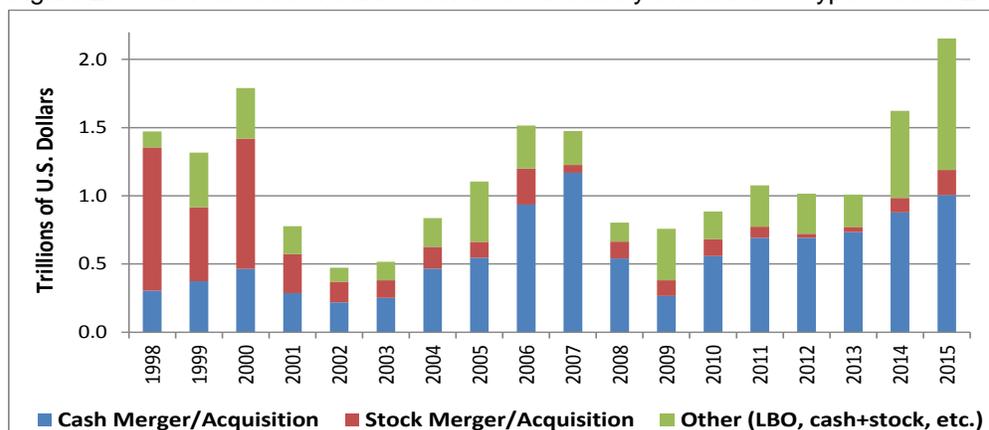
This disparity is due to a simple truth: target company shareholders almost always receive a takeover premium. However, post-M&A acquirer returns depend on fundamental performance, which is affected by many factors, including deal size, due diligence adequacy, corporate culture, deal structure, valuation, funding sources, and management experience. Although post-close M&A research results are mixed, we'd cite a few relevant studies:

- Agrawal et al (1992) find stockholders of acquiring firms suffer a statistically significant loss of about 10% over the five-year post-merger period.
- Rau and Vermaelen (1998) show that stock mergers underperform while cash/tender offers outperform in the three years following an acquisition.
- Jensen and Ruback (1983) remark: "These post-outcome negative abnormal returns [in the year following a merger] are unsettling because they are inconsistent with market efficiency and suggest that stock price changes during takeovers overestimate . . . future efficiency gains."
- Lang et al (1991) find that acquirers with excess cash flow tend to overbid for targets, while Jensen (1986) suggests a tendency toward empire building among cash-rich firms.
- Mortal and Schill (2015) show that the poor post-deal returns for stock acquisitions are explained by return effects associated with larger asset growth rates for stock versus cash deals.

Our findings confirm many of the results cited above and, in addition, suggest that *pre-acquisition* growth rates in assets and shares outstanding are associated with post-M&A acquirer returns. **We also show that poor post-acquisition stock performance directly reflects deteriorating post-acquisition fundamentals in terms of profitability, return on capital, and earnings growth.**

Figure 2 shows U.S. and Canada completed M&A activity by gross transaction value over the past 18 years. Note that 2015 represented a new peak in terms of transaction values and that with the exception of 1998 to 2000 most transactions have been cash transactions, although stock transactions have picked up in value as of late.

Figure 2. Total Transaction Value U.S. and Canada by Transaction Type 1998 to 2015



Source: S&P Global Market Intelligence Quantamental Research. Data as of August 18, 2016.

## 2. What Causes Acquirer Post-Acquisition Underperformance?

Acquisitions may be pursued for a variety of reasons: to revive stagnant revenue growth, enter a new market, gain new products/technologies/talent, reduce competition, etc. However, a key premise of any acquisition is that “the whole will be greater than the sum of the parts.”<sup>2</sup> While acquiring-company management almost universally tout expected “synergies” and efficiency gains, our research shows that, on average, such synergies either do not exist or are only realized over an extended time horizon (i.e., well over three years).

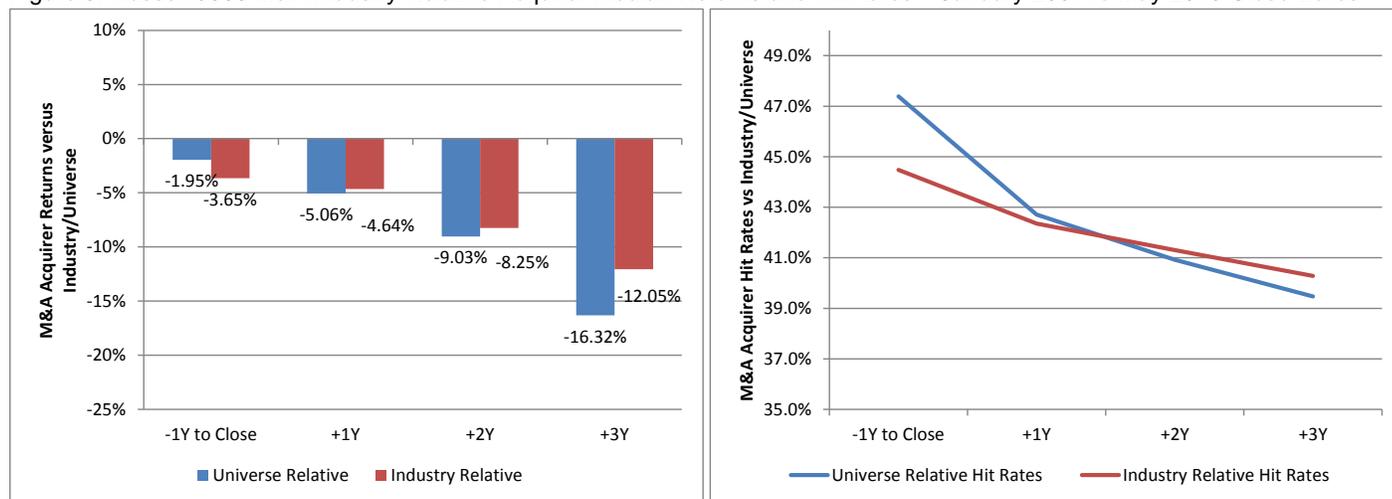
Within the Russell 3000, M&A transactions can be summed up quite neatly: **in aggregate, acquirers tend to underperform peers for an extended period following a significantly-sized acquisition** (section 2.1). We see the underlying cause for this underperformance in deterioration in post-acquisition fundamentals. Section 2.2 shows that a number of key fundamental ratios weaken following significant M&A activity.

### 2.1 Acquirer Pre- and Post-Acquisition Returns

Figure 3 shows M&A industry- and universe-relative<sup>3</sup> acquirer returns for the Russell 3000 that closed between 2001 and 2013, measured from one year pre-close to three years post-close. **Median returns are consistently negative, signaling universe/industry underperformance, and hit rates<sup>4</sup> are low and downward trending.** (Although we present statistics going out three years, underperformance continues for at least five years.)

Note that by the third year following an acquisition only about 40% of acquirers have outperformed their industry- or universe-relative benchmarks. Pre-close market caps are in line with industry means and post-close market caps only modestly higher, so market cap effects (the so-called “size effect”) on performance are likely minimal. *All returns and hit rates are significant at the one percent level.*

Figure 3. Russell 3000 M&A Industry Relative Acquirer Median Returns and Hit Rates – January 2001 to May 2013 Close Dates



Source: S&P Global Market Intelligence Quantamental Research. For all exhibits, 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 August 18, 2016.

<sup>2</sup> *Mergers & Acquisitions: From A to Z*, Sherman, Andrew J., 2011, AMACOM.

<sup>3</sup> For industry relative returns we subtract the industry average return from the acquirer’s stock return, using the GICS Industry Group classification (GICS level II, which is just below the GICS Sector level).

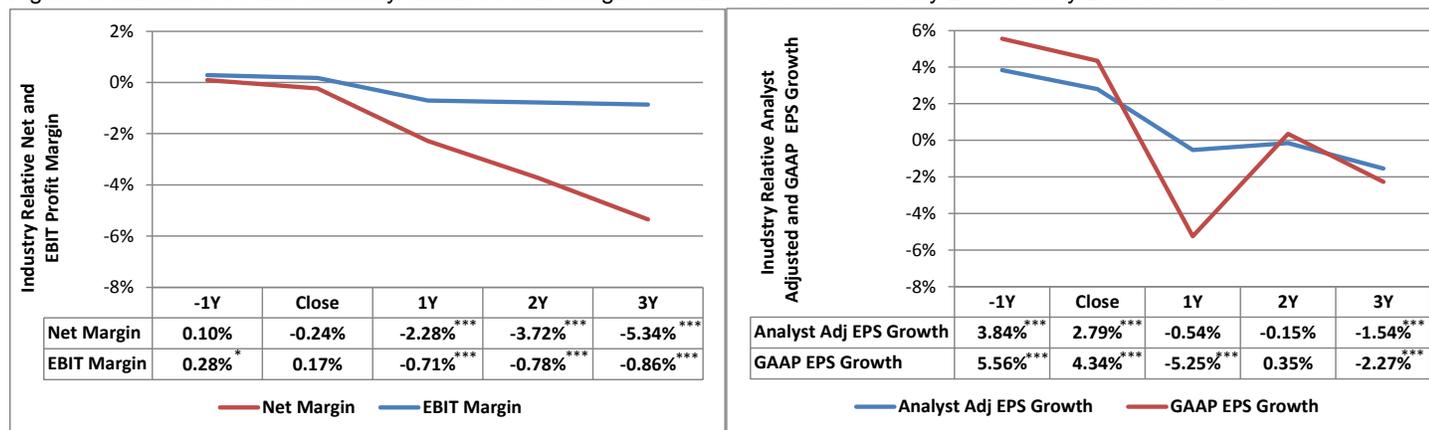
<sup>4</sup> Hit rates show the percentage of M&A acquirer returns that outperform their industry or the Russell 3000 benchmark for any given time period.

## 2.2 Acquirer Pre- and Post-acquisition Fundamentals

Despite the oft-heard claim of potential M&A synergies, acquirers lag peers on a variety of metrics for an extended period following an acquisition. The graphs in this section display the industry-relative median values for the Russell 3000 M&A universe with close dates from 2001 to 2013.

Figure 4 shows that profit margins (left chart) fall below the industry median following an acquisition. Net margins deteriorate more than operating (EBIT) margins, due to an increase in below-the-operating-line items (interest expense and “special charges”). As a result, earnings per share growth (right chart) declines. **From the perspective of the average acquisition, M&A tends to be dilutive to earnings growth over an extended period.**

Figure 4. Russell 3000 M&A Industry Relative Profit Margins and EPS Growth – January 2001 to May 2013 Close Dates

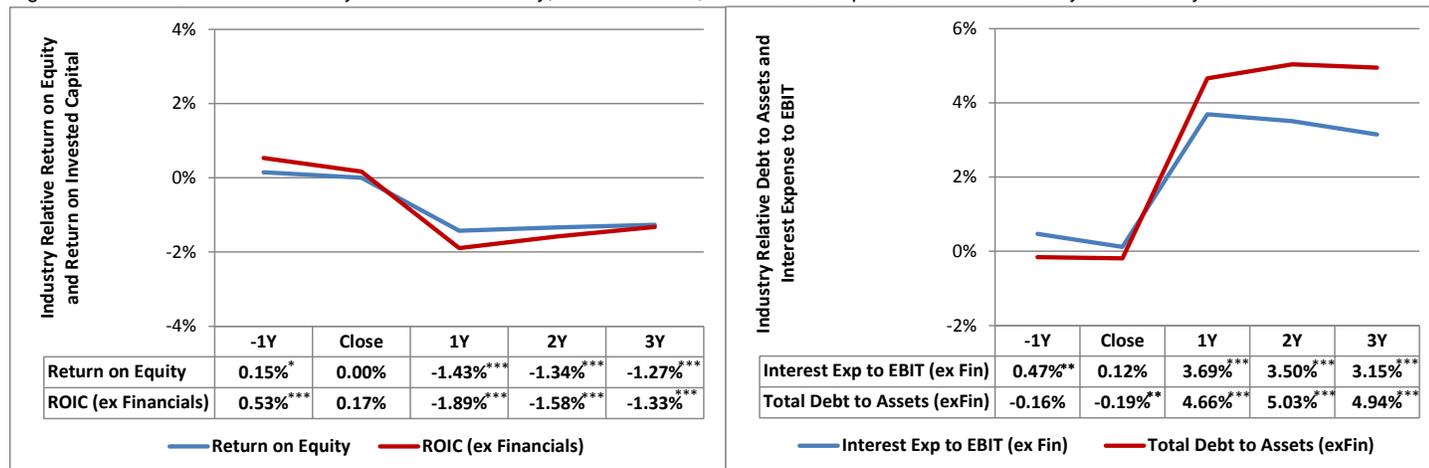


\*\*\* significant at the 1% level, \*\* significant at the 5% level, \* significant at the 10% level.

Source: S&P Global Market Intelligence Quantamental Research. Data as of August 18, 2016.

Figure 5 shows that return on equity and return on invested capital (ROIC) both decline relative to industry peers following a significant acquisition (left chart). This is partly a result of increased interest expense and other charges and, in the case of ROIC, partly due to a large rise in debt relative to peers (right chart).

Figure 5. Russell 3000 M&A Industry Relative Profitability, Debt to Assets, and Interest Expense to EBIT – January 2001 to May 2013 Close Dates



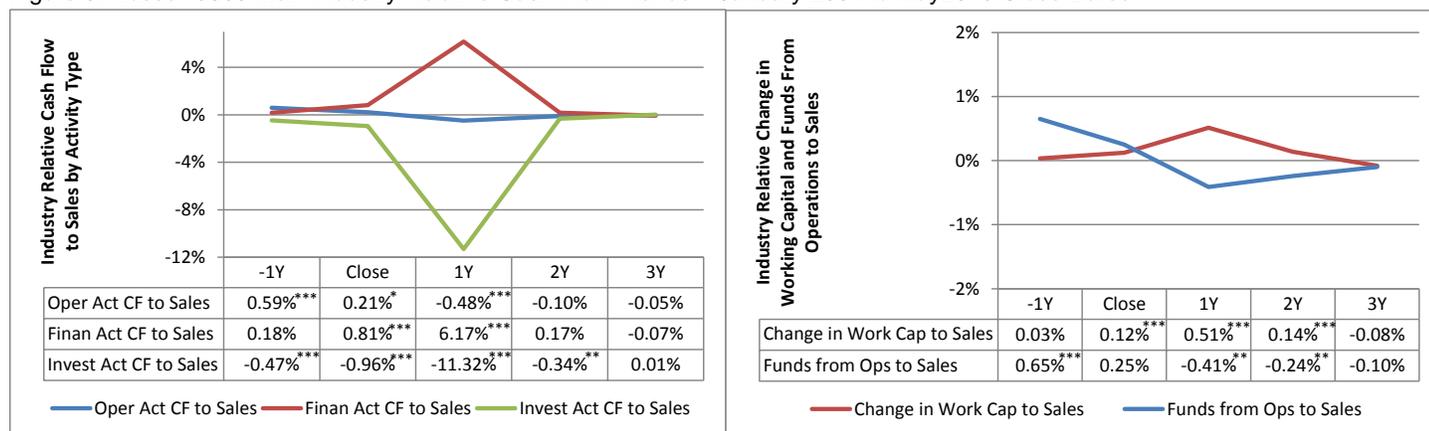
\*\*\* significant at the 1% level, \*\* significant at the 5% level, \* significant at the 10% level.

Source: S&P Global Market Intelligence Quantamental Research. Data as of August 18, 2016.

Figure 6 shows the interplay of cash flow from financing, investing, and operating activities (left chart) following an acquisition. In the first year following an acquisition, while finance-related cash flow jumps, due to new debt and share issuance, investing cash flow drops, due to the cash cost of acquisitions. Operating cash flow is relatively unaffected, but dips slightly relative to peers.

The right chart shows that funds from operations (all operating cash flow activity, except changes in working capital) declines slightly relative to peers following an acquisition, while at the same time working capital needs rise modestly. In sum, post-acquisition operating cash flows also weaken, but not as badly as earnings.

Figure 6. Russell 3000 M&A Industry Relative Cash Flow Trends – January 2001 to May 2013 Close Dates



\*\*\* significant at the 1% level, \*\* significant at the 5% level, \* significant at the 10% level.

Source: S&P Global Market Intelligence Quantamental Research. Data as of August 18, 2016.

### 3. Factor Identification

We reviewed a variety of deal-related factors using an event-study format, including target premium paid, deal valuation, post-announcement price drift, cross-border vs. domestic M&A, relative and absolute deal value, and consideration type. **The only deal-related factors that showed significant predictive power were relative deal value and % stock/cash consideration.** The larger the deal size relative to the acquirer and the more stock consideration paid, the greater the subsequent underperformance.

We also reviewed a variety of non-deal related fundamental factors based upon the event studies shown in Section 2. We found that the most significant non-deal factors with regard to post-M&A returns relate to growth (see Mortal and Schill, 2015), cash availability (see Lang et al, 1991), and profitability. We note that non-deal factor performance may relate more to the general factor performance than to performance specific to M&A.

#### 3.1 Factor Identification – Regression Analysis

We applied regression analysis to isolate factors, both deal-related and generic, that have a strong statistical relationship to M&A returns. The seven factors that pass this test, on a univariate basis, are shown in Table 1. We regress one-year forward stock returns minus equal weighted one-year returns for the Russell 3000 against raw factor values for each acquirer measured as of the close of each acquisition.

**Multiple regressions, shown at bottom of Table 1, reveal four factors (green shading) that are statistically related to M&A returns:** % stock consideration, trailing 12-month (TTM) asset growth, one-year change in shares outstanding, and cash and equivalents to assets. In the next section we'll include these factors in a simple multi-factor model.

Table 1. Panel Regression: 1-Year Forward Returns vs. Various Factors – January 2001 to May 2013

	Intercept	Deal Value %	% Stock Consid	Asset Growth	1Yr Chg Shrs	Cash to Assets	Cash ROIC	ROA	Adj R <sup>2</sup>	Observations
1-Year Forward Return - Stock minus Market	-3.14%*** (-6.6)	-1.34%* (-2.2)							0.07%	7,324
	-1.80%*** (-3.7)		-11.58%*** (-8.2)						0.92%	7,324
	-2.82%*** (-6.2)			-3.76%*** (-5.9)					0.47%	7,324
	-3.17%*** (-7.0)				-3.58%*** (-4.1)				0.23%	7,324
	-3.37%*** (-7.6)					-8.82%*** (-3.2)			0.14%	7,324
	-3.61%*** (-8.2)						12.23%*** (3.5)		0.17%	7,324
	-3.57%*** (-8.1)							10.03%** (2.2)	0.06%	7,324
	-1.16%** (-2.3)		-10.48%*** (-7.4)	-2.63%*** (-3.9)	-1.96%** (-2.2)	-6.17%** (-2.2)	5.89%* (1.7)		1.42%	7,324
	-1.05%** (-2.1)		-10.75%*** (-7.6)	-2.71%*** (-4.0)	-2.05%** (-2.2)	-6.61%** (-2.4)			1.39%	7,324
	-1.00%* (-1.9)	-0.51% (-0.8)	-10.47%*** (-7.3)	-2.56%*** (-3.8)	-2.02%** (-2.2)	-6.36%** (-2.3)	7.46%* (1.8)	-4.60% (-0.8)	1.37%	7,324

\*\*\* significant at the 1% level, \*\* significant at the 5% level, \* significant at the 10% level.

Source: S&P Global Market Intelligence Quantamental Research. Data as of August 18, 2016.

### 3.2 Factor Identification – Event Study Returns

Table 2 applies an event-study format to the four factors that passed our regression analysis test, plus % deal value. (We add relative deal value because, despite its weakness in regression testing, we find that in portfolio tests it both adds alpha and helps to differentiate the % stock consideration values, which tend to be binary in nature – either 0% stock or 100%.) Each factor is sorted into quintiles, and industry-group relative returns are calculated for each quintile one-year and three-years post-acquisition close.

Factor returns that are significant at the one percent level are shaded green. Note that, with the exception of one-year change in shares, all of the alpha generated by these factors (at least using an event study format – portfolio study results differ) is on the short side. Also note the extended time horizon (three years) over which these factors generate negative alpha, based only on measurement of factor values at the time of the acquisition.

Table 2. Russell 3000 M&A Event Study Returns (1- and 3-Year) by Top and Bottom Quintile for Deal-Related and Fundamental Factors – January 2001 to April 2013 Close Dates

Deal-Related or Fundamental Factor		Industry-Relative Returns		Hit Rates	
		1-Year	3-Year	1-Year	3-Year
% Deal Value 365D Sum (Low to High)	Top Quintile (Q1)	0.18%	1.28%	50.56%	51.55%
	Bottom Quintile (Q5)	-1.99%***	-9.29%***	46.16%***	41.71%***
% Stock Consideration (Low to High)	Top Quintile (Q1)	1.74%	-0.85%	52.44%	48.12%
	Bottom Quintile (Q5)	-3.29%***	-8.06%***	44.03%***	43.36%***
Asset Growth TTM (Low to High)	Top Quintile (Q1)	-1.42%*	-1.31%	46.99%*	48.30%
	Bottom Quintile (Q5)	-5.79%***	-13.28%***	42.41%***	40.83%***
1 Year Change in Shares (Low to High)	Top Quintile (Q1)	0.32%	4.13%***	50.68%	54.43%
	Bottom Quintile (Q5)	-4.85%***	-12.14%***	41.94%***	39.94%
Cash to Assets (Low to High)	Top Quintile (Q1)	-0.56%*	-0.72%	48.49%*	48.97%
	Bottom Quintile (Q5)	8.61%***	10.09%***	40.17%***	43.52%***

\*\*\* significant at the 1% level, \*\* significant at the 5% level, \* significant at the 10% level.

Source: S&P Global Market Intelligence Quantamental Research. For all exhibits, 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 August 18, 2016.

#### 4. Five-Factor Model – Portfolio Study

In this section, we combine the four factors identified in section 3.1 above – % stock consideration, TTM asset growth, one-year change in shares outstanding, and cash and equivalents to total assets – along with % deal value, into a simple five-factor model. All factors in the model are equal-weighted, with one exception: as our strongest overall and deal-related factor, we double-weight % stock consideration.

The methodology used is described in detail in section five, Methodology and Database Characteristics. Put simply here, we use a 365 day lookback window, form portfolios monthly, and calculate one-month forward returns for each portfolio on an industry-relative basis.

Table 3 shows that hit rates for the top quintile (of the non-Fama-French-adjusted portfolios) are near 71% (significant at the 1% level), while those for the bottom quintiles are near 40% (significant at the 5% level). Turnover rates are low, averaging 40% for the top quintiles and 32% for the bottom quintiles. Company-level hit rates are 51% and 48% for the top and bottom quintiles, respectively.

Top and bottom quintile returns are statistically significant, even after adjusting for Fama French factors, with strong performance after accounting for risk on the short side. Annualized excess returns are 7.41% for the top quintile and -5.22% for the bottom quintile (12.63% long minus short).

Table 3. Russell 3000 M&A Universe: Multi-Factor Models – January 2001 to April 2016 Close Dates

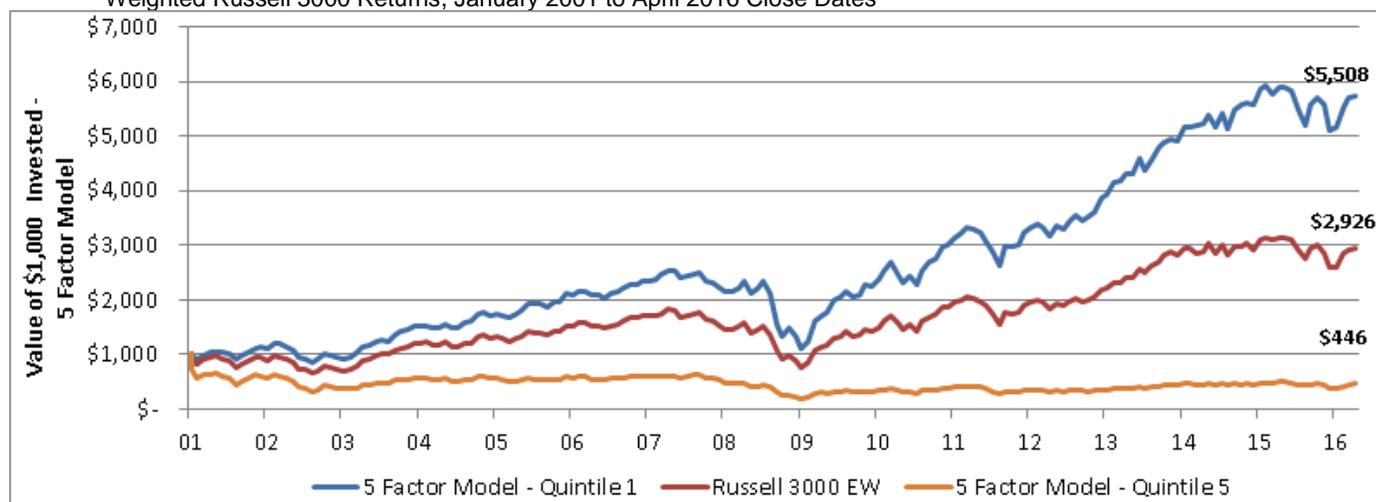
5 Factor M&A Model	Q1	Q2	Q3	Q4	Q5	L-S
<b>Monthly Quintile Excess Returns</b>	0.62%***	0.25%***	0.02%	-0.15%	-0.43%**	1.05%***
<b>T-Statistics</b>	4.90	2.74	0.17	-0.98	-2.27	4.51
<b>Monthly Hit Rates</b>	70.65%***	59.24%**	51.63%	45.11%	40.22%***	63.59%***
<b>Average Number of Stocks</b>	78	77	77	77	77	
<b>Fama French Adjusted Monthly Returns</b>	0.27%**	-0.07%	-0.31%***	-0.44%***	-0.78%***	1.05%***
<b>T-Statistics</b>	2.34	-0.75	-3.09	-3.57	-4.89	4.58
<b>Monthly Hit Rates</b>	62.50%***	50.54%	44.02%	39.67%***	36.96%***	61.96%***
<b>Average Number of Stocks</b>	78	77	77	77	77	

\*\*\* significant at the 1% level, \*\* significant at the 5% level, \* significant at the 10% level.

Source: S&P Global Market Intelligence Quantamental Research. For all exhibits, 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 August 18, 2016.

Figure 7 shows the value of \$1,000 invested over the past 15 ½ years for the top and bottom quintiles of our model versus the equal-weighted Russell 3000. Note that the top quintile portfolios had a large draw-down during the 2007-2008 financial crisis, but has recovered well since that period. The bottom quintile, however, has had minimal upward momentum over the entire time frame, reinforcing our view that M&A models are best implemented as “sell short or avoid” strategies.

Figure 7: Value of \$1,000 Invested Russell 3000 5 Factor Model, Top and Bottom Quintiles – Unadjusted Returns vs. Equal-Weighted Russell 3000 Returns, January 2001 to April 2016 Close Dates



Source: S&P Global Market Intelligence Quantamental Research. For all exhibits, 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 August 18, 2016.

After accounting for risk (Fama French) factors, the strongest M&A returns are on the short-sale side of the model. Do the bottom-quintile portfolios have enough liquidity to be shorted? We use market cap as our proxy for liquidity. Table 4 shows the average and median market caps, measured one day prior to acquisition close, for each quintile of our model, over the January 2001 to May 2016 time frame. We note that the median market cap for the bottom quintile is over one billion dollars, so we believe there is some evidence that the strategy is shortable.

Table 4. Multifactor Model – Average and Median Quintile Market Caps January 2001 – May 2016

Quintile:	Q1	Q2	Q3	Q4	Q5
Average Market Cap USD	7,183	5,417	3,795	5,889	7,686
Median Market Cap USD	1,848	1,166	1,070	923	1,129

Source: S&P Global Market Intelligence Quantamental Research. Data as of August 18, 2016.

## 5. Methodology and Database Characteristics

We begin with the S&P Global Market Intelligence Transactions database in Xpressfeed™ for the Russell 3000. Our U.S. M&A data is robust beginning in 2001, with over 15,000 transactions that have deal values within the January 2001 to April 2013 period. (There are also about 8,000 likely small deals for which terms were not disclosed.) The April 2013 end date allows a full three years of forward returns for all transactions, where available.

We then narrow the Russell 3000 M&A universe to transactions with a total cumulative acquirer-relative deal value over the past 365 days greater than 5%. This is calculated 1) as gross deal value as a percent of acquirer enterprise value (for non-financials that have a positive enterprise value [EV]) or 2) as total consideration to shareholders as a percent of acquirer market cap (for financials and companies without a positive EV). The 5% threshold results in a universe of over 9,000 unique transactions over the 2001 to 2013 period.

All factors and returns use an industry-relative approach, unless noted otherwise. Median factor values / returns for an acquiring company's GICS Industry Group<sup>5</sup> are subtracted from the acquirer's factor values / returns to arrive at an industry-adjusted value.

**We use three research formats, an event study format, a regression analysis, and a multi-factor portfolio backtest.** For the event study, returns and fundamental characteristics (net profit margin, ROE, etc.) are aggregated and the median value taken, so that the end result is the universe-wide median of the industry-median-relative values. The time horizon used extends to three years following the close.

The regression analysis begins with a panel of data that has as its left column (or dependent variable range) the one-year forward return of each acquirer in our universe, beginning from the close date, minus the one-year forward return of the market, defined as the equal-weighted Russell 3000. The right column (or independent variable range) contains the raw values for each investment factor (e.g., % deal value, asset growth), with all non-deal related factors measured on an industry-relative basis. In the case of multiple analyses the dependent variables are multiple columns of raw factor values.

For the portfolio backtest format, monthly portfolios of M&A acquirers are formed using a 365 day lookback window (e.g., all closed transactions with a cumulative deal value greater than 5% over the past year) and returns are calculated for the forward month.

All non-deal related factors are adjusted for the industry group median, and all factors for a given portfolio are then percentile-ranked, with the percentile values for each factor finally added together. If a stock is missing one or more factors, it is excluded from the portfolio. In order to use all available data, we calculate model performance over the January 2001 to April 2016 time frame, resulting in 184 separate portfolios.

Although we restrict ourselves to U.S. transactions in this study, the S&P Global Markets Intelligence Transactions database in Xpressfeed contains over 600,000 global M&A transactions going back to 1998 for the U.S., 2001 for Europe, Africa, Australia and New Zealand, and 2005 for Asia and LATAM. The database contains detailed data on a large variety of transaction- and consideration-related features, including tracking changes in consideration packages offered over time.

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<sup>5</sup> Industry Group represents level two of the Global Industry Classification Standard, just below Sector and above Industry and Subindustry levels.

## Conclusion

On the whole, significant merger and acquisitions activity results in long-term underperformance for acquirers. Empirical evidence shows that this underperformance is a rational response to weakening fundamentals. Post-acquisition profit margins, earnings growth, and return on capital all decline, on average, resulting from large increases in debt, interest expense, and “special charges,” without offsetting increases in cash flow or income generation. **In other words, when it comes to M&A – management promises to the contrary – the whole is often less than the sum of the parts.**

However, in the aggregate it is possible to differentiate between good and bad M&A transactions, based on a few deal- and fundamental-based characteristics. In our view, stock-based acquisitions underperform in part due to inflated stock being used as currency near stock market tops with relatively little discipline enforced by lenders. Large deals, or a string of moderately-sized deals within a short period of each other, likely underperform for many of the same reasons (stock deals tend to be large) and because large-scale merger integration can cause corporate indigestion.

Fundamental factors can also help separate the value-creating from the value-destroying. High pre-acquisition asset growth and growth in shares outstanding is a long-term negative for acquirers. High pre-acquisition cash balances, which may encourage ill-timed or otherwise poorly-thought-out deals, also bode negatively for post-deal stock performance.

Using these few simple factors together in a multi-factor model has historically worked well in separating the M&A acquirers to avoid (or sell) from those to keep (or go long).

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## Our Recent Research

### 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?](#)

This review of social media literature represents a selection of articles we found particularly pragmatic and/or interesting. Although we have not done research in the area of social media, we are always on the hunt for interesting insights, and offer these papers for your thoughtful consideration.

### April 2016: [An IQ Test for the “Smart Money” – Is the Reputation of Institutional Investors Warranted?](#)

This report explores four classes of stock selection signals associated with institutional ownership ('IO'): Ownership Level, Ownership Breadth, Change in Ownership Level and Ownership Dynamics. It then segments these signals by classes of institutions: Hedge Funds, Mutual Funds, Pension Funds, Banks and Insurance Companies. The study confirms many of the findings from earlier work – not only in the U.S., but also in a much broader geographic scope – that Institutional Ownership may have an impact on stock prices. The analysis then builds upon existing literature by further exploring the benefit of blending 'IO' signals with traditional fundamental based stock selection signals.

### March 2016: [Stock-Level Liquidity – Alpha or Risk? - Stocks with Rising Liquidity Outperform Globally](#)

Most investors do not associate stock-level liquidity as a stock selection signal, but as a measure of how easily a trade can be executed without incurring a large transaction cost or adverse price impact. Inspired by recent literature, such as Bali, Peng, Shen and Tang (2012), we show globally that a strategy of buying stocks with the highest one-year change in stock-level turnover has historically outperformed the market and has outperformed strategies of buying stocks with strong price momentum, attractive valuation, or high quality. One-year change in stock-level turnover has a low correlation (i.e., <0.15) with commonly used stock selection signals. When it is combined with these signals, the composites have yielded higher excess returns and information ratios (IR) than the standalone raw signals.

### February 2016: [U.S. Stock Selection Model Performance Review - The most effective investment strategies in 2015](#)

Since the launch of the four S&P Capital IQ® U.S. stock selection models in January 2011, **the performance of all four models (Growth Benchmark Model, Value Benchmark Model, Quality Model, and Price Momentum Model) has been positive each year.** The models' key differentiators – a distinct formulation for large cap versus small cap stocks, incorporation of industry specific information for the financial sector, sector neutrality to target stock specific alpha, and factor diversity – enabled the models to outperform across disparate market environments. In this report, we assess the underlying drivers of each model's performance in 2015 and since inception (2011), and provide full model performance history from January 1987.

### January 2016: [What Does Earnings Guidance Tell Us? – Listen When Management Announces Good News](#)

This study examines stock price movements surrounding earnings per share (EPS) guidance announcements for U.S. companies between January 2003 and February 2015 using S&P Capital IQ's Estimates database. Companies that experienced positive guidance news, i.e. those that announced optimistic guidance (guidance that is higher than consensus estimates) or revised their guidance upward, yielded positive excess returns. We focus on guidance that is not issued concurrent with earnings releases in order to have a clear understanding of the market impact of guidance disclosures. We also explore practical ways in which investors may benefit from annual and quarterly guidance information.

### December 2015: [Equity Market Pulse – Quarterly Equity Market Insights Issue 6](#)

With commodity prices plunging, global economic trends diverging, and market volatility rising, analyst estimates for 2016 have been revised sharply lower. Yet estimates remain strong in particular regions and sectors, and valuations have moderated. This issue of Equity Market Pulse uses bottom-up trends in estimates and global risk-return and investment strategy performance metrics to address these questions:

- Which global regions and economic sectors have the strongest 2016 growth expectations?
- Where have 12-month estimate revision trends held up the best and worst?
- With investors focusing on the new year, which regions offer the most value?

**November 2015:** [Late to File - The Costs of Delayed 10-Q and 10-K Company Filings](#)

The U.S. Securities & Exchange Commission (“SEC”) requires companies to submit quarterly (10-Q) and annual (10-K) financial statements in a timely manner. Companies that cannot file within the statutory period are required to file form 12b-25 with the SEC. In this report we examine the relationship between late filings (form 12b-25s) and subsequent market returns, as well as whether late filings signal deeper fundamental problems within the company. Our results, within the Russell 3000 universe (February 1994 – June 2015), indicate that abnormal returns of late filers is negative prior to and post form 12b-25 filing. Late filers are also typically companies with poor fundamental characteristics relative to peers; investors may want to consider avoiding or short-selling these firms. This report is a continuation of our work in the area of event driven investing, a class of strategies that originate from company specific events.

**October 2015:** [Global Country Allocation Strategies](#)

In this report, we investigate the efficacy of fundamental, macroeconomic and sentiment-based strategies for country selection across global equity markets. Using point-in-time fundamental and macroeconomic data, we constructed signals at the country level, grouped into five themes: valuation, quality, sentiment, volatility and macro. We examined their performance between January 1999 and November 2014 for the developed and emerging markets in the S&P Global Broad Market Indices. Our major findings include:

- Valuation is a common driver of performance in both developed and emerging markets.
- In addition to valuation, we found macro and sentiment based indicators to be effective country selection signals in developed markets.
- We found currency depreciation to be important when emerging market countries were separated into exporting and importing nations.

**September 2015:** [Equity Market Pulse – Quarterly Equity Market Insights Issue 5](#)

The Q3 issue of Equity Market Pulse spotlights potential opportunities in Asia, attractive growth and valuations in developed Europe and Japan, and risks associated with rising volatility and elevated 2016 global EPS estimate levels.

**September 2015:** [Research Brief: Building Smart Beta Portfolios](#)

Why is smart beta important? We believe that smart beta is continuing to gain momentum among a variety of constituencies, including ETF providers, asset managers and asset owners. Many asset managers are making smart beta part of their investment processes. European and Canadian public pension funds have been increasingly relying on internalized smart beta, with the largest U.S. pension funds and endowments also adopting the approach. The purpose of this brief is to aid asset managers and owners in building their own “internal” smart beta processes with a focus on portfolio construction and optimization, including how to manage liquidity and turnover constraints and avoid unintended factor bets.

**September 2015:** [Research Brief – Airline Industry Factors](#)

This brief examines S&P Capital IQ’s industry-specific factors for the global airline industry. The seven airline industry factors contained in S&P Capital IQ’s Alpha Factor Library consist of ratios widely used by airline industry analysts. The factors address airline profitability in terms of growth, capacity utilization, and operating efficiency. By applying the factors to regime analysis, we find:

- During periods of low fuel price increases industry growth factors are most effective.
- During periods of high fuel price growth, efficiency factors stand out.
- During periods of high revenue passenger growth our studies show that both growth and fuel efficiency factors performed well.

**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](#)

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