In the Money: What Really Motivates Executive Performance?

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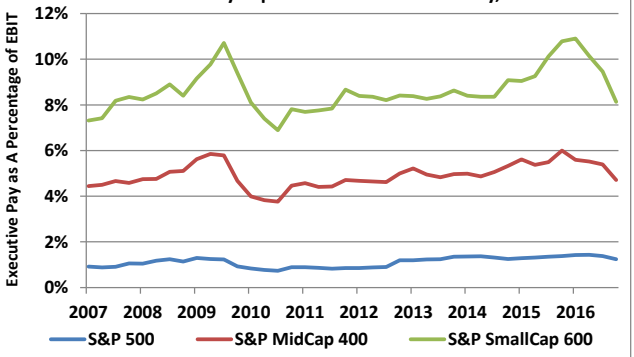
CEO compensation has soared over the past four decades, aided by consultants, compensation committees, the CEOs themselves, and an extended bull market (1982-1999). "Pay for performance" has become dogma and large equity grants *de rigueur*. But there is a cost to such largesse. Figure 1 shows that realized pay[1] for a company's top five executives can approach 6%-11% of earnings before interest and taxes (EBIT), on the index level, for small and mid-cap firms. What types of compensation motivate top executives to boost shareholder returns? And what are the fundamental characteristics of companies in which executives are motivated to boost stock performance?

Figure 1: Percentage of EBIT (cash comp added back) Accounted for by Top 5 Executives Realized Pay, 2007-16



Source: S&P Global Market Intelligence Quantamental Research.

- Despite wide acceptance of executive pay-for-performance, **we find no evidence that high levels of total incentive compensation (performance-based cash plus stock and stock option awards) result in higher-than-average shareholder returns.**
- We do find evidence that **large stock option holdings by CEOs lead to higher-than-average shareholder returns.** Large holdings imply both that the CEO is paid in options (incentive compensation) and that the CEO chooses to retain exercisable options. At the end of 2016, S&P 1500 named executives held $31.4 billion of in-the-money stock options, of which nearly 80% were exercisable.
- Large stock option holdings **provide a powerful motivator** for CEOs to increase shareholder returns, as option value is *leveraged* to stock-price appreciation. They also **signal CEO confidence** in a company's outlook: the willingness to accept the risk of a stock price decline in exchange for tax deferral.[2]
- **Option holdings appear to motivate executive cash deployment decisions:** Companies of large option holders repurchase more shares and issue more debt than industry peers, and engage in less merger & acquisition activity. Share repurchases boost earnings per share growth, while M&A is often value destroying.
- **Executive confidence, as signaled by large stock option holdings, also appears warranted:** Companies where CEOs hold large options positions have higher long-term sales, earnings per share, and cash flow growth rates than industry peers, as well as better profit margin improvement. Companies where CEO option holdings are low have below-average readings on these metrics.

[1] Realized pay = cash compensation + options exercised + restricted shares vested.
[2] The spread between an option's exercise price and the current stock price is taxable upon exercise.

1. How We Got Here - A Brief History of Executive Compensation

The timeline below provides a sketch of how median large-company CEO pay rose from about 20 times that of the average worker in the 1960s to an estimated 300 times currently, and highlights some of the major regulations likely to affect future compensation.

- **1960s:** CEOs of major U.S. corporations earn about 20 times the salary of the average worker (1965).[3] Mostly comprised of salary and short-term bonus, CEO pay is based on "internal equity," or fairness of pay distribution *within* the company.[4]
- **1970s:** CEO pay estimated to be 20 to 30 times the average worker's salary. A new industry called "executive compensation consulting" develops. Consultants become evangelists for "external equity," or fairness versus peers.
- **1980s:** Rise of compensation consultants and "benchmarking" (see Section 1.1 below). CEOs hire the consultants. Median CEO pay rises 50% versus the 1970s.[5]
- **1990s:** IRS Section 162(m) (1993): pay above $1 million can be deducted only if it is performance-based. **CEO pay rises by 16% annually from 1991-2001,**[6] driven in part by stock option values. Industry observers estimate that CEO pay reaches almost 400 times the salary of the average worker by 2000.[7]
- **2000s: FAS123R (effective 2005) requires all U.S. firms to expense stock options.** Use of restricted stock rises, especially after the 2008 bear market renders many options worthless. **2006: SEC significantly increases executive compensation disclosure rules**, in response to options backdating and other scandals.
- **2010s:** Median S&P 500 CEO pay rises 30% in 2010, after falling in 2008-2009.
  - 2011: Dodd-Frank Act adds annual shareholder vote on executive pay.
  - 2015 pay ratio rule: U.S. public companies must disclose ratio of CEO total compensation to median annual pay of all employees (**effective in 2018**).
  - 2017 tax bill: all executive pay above a $1 million is non-deductible (reverses IRS Section 162(m)).

1.1 Benchmarking and the Ratcheting Up of Executive Pay

CEO pay is determined through a process that involves the compensation committee (independent directors), human resource specialists, and in most cases, compensation consultants, who are hired by the compensation committee. The process begins by identifying a peer group, which can be determined by size as well as by industry. Some studies have suggested that peer groups have a bias toward highly-paid CEOs.[8]

Once a peer group has been identified, the committee determines a "benchmark" to use in deciding how to pay the CEO relative to the peer group. In an article in *The Atlantic*, Steven Clifford, who sat on compensation committees for 20 years, notes "every board that I have ever sat on or researched benchmarked itself at the 50th, 75th, or 90th percentile." This makes sense if the goal of the compensation committee is to retain an outstanding CEO.

[3] Michel and Schieder, 2016 , calculated for the top 350 U.S. firms by sales.
[4] Clifford, 2017.
[5] Dorff, 2014.
[6] Murphy, 2012.
[7] Michel and Schieder, 2016.
[8] For example, see: Faulkender and Yang, 2010.

The result has been a steady "ratcheting up" of top executive pay. Choosing above-average benchmarks, or benchmarking against peer groups skewed toward highly-paid CEOs, means peer group pay is continuously rising, as more-highly-paid CEOs enter the ranks.

2. What Motivates Executives to Boost Shareholder Returns?

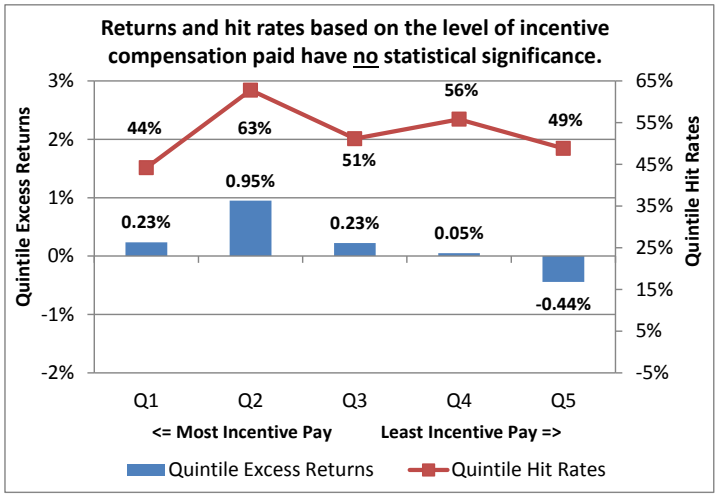
The first question we sought to answer is: *What types of compensation motivate top executives to boost shareholder returns?* We looked at compensation in a variety of ways, from the amount of cash received to the percentage of incentive compensation paid. In general, neither the *type* nor the *amount* of compensation showed any correlation with shareholder returns.

2.1 Does Incentive Compensation Matter?

Total incentive compensation – performance-based cash plus stock and stock option awards – for S&P 500 CEOs has averaged 77% of total compensation over the past 10 years. Total CEO incentive compensation paid over this period was nearly $44 billion. Does the amount of incentive compensation paid make a difference for shareholders? Research suggests that the answer is no.

Market and size adjusted excess returns[9] and hit rates[10] for backtest portfolios sorted by total incentive compensation as a percentage of total comp for the S&P 500 (Figure 2) show no statistical significance. This means that **none of the quintile excess returns can be proven to be statistically different than zero.** Also, none of the quintile hit rates can be proven to be different than 50% (a "neutral" hit rate, which means that the portfolios for a quintile outperform only half of the time). Similar tests for the S&P 400 and S&P 600 show no conclusive results.

Figure 2. CEO Total Incentive Compensation to Total Compensation – Market and Size Adjusted Annualized Excess Returns and Hit Rates, S&P 500, June 2007-Dec 2017



*** = 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 February 15, 2018. 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.

[9] Excess returns are returns above or below the benchmark return. In this case excess returns are adjusted for that portion of return due to market cap ("size"), to avoid market-cap bias.

[10] Hit rate is the percentage of times a portfolio outperforms the benchmark.

2.2 Why Are Stock Option Holdings Related to Returns?

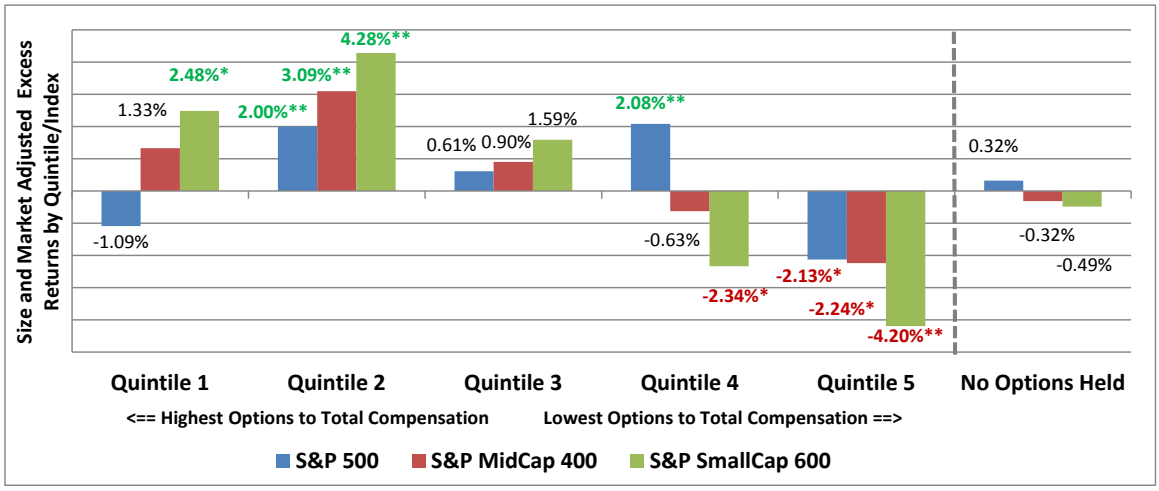
CEO holdings of stock options form the one component of executive compensation that our research found to have any significance relative to shareholder returns. Why should option holdings, in themselves, be related to higher future stock prices?

First, **options represent a leveraged bet on share price**. If a CEO holds 100,000 options with a $50 strike price and the current share price is $51, the position is worth $100,000, but at $60 (an 18% price increase) it's worth $1,000,000 (a 900% value increase). **Executives who have the means to influence financial results and share price are highly motivated to do so.** It's also interesting to note that large holdings of restricted shares, which lack the leverage feature of options, are not related to future returns (see Appendix A).

Second, **retaining exercisable stock options[11] is discretionary, signaling confidence in that the executive believes that the stock price will go up.** CEOs who expect the stock price to decline would likely exercise the options and sell the acquired shares.[12] However, for CEOs who are confident in their company/stock, holding options confers a tax benefit, as the spread between the stock price and the exercise price is not taxable until exercise. As of the end of 2016, S&P 1500 named executives held $31.4 billion of unexercised in-the-money options, of which $24.9 billion, or 79%, were exercisable.

CEOs with the **next-to-largest** portfolios of options relative to total compensation (Figure 3, quintile 2) significantly outperformed their peers. In addition, CEOs who hold only a small number of options relative to their total pay (quintile 5) significantly underperform. This "options effect" is most noticeable in small cap (S&P 600) issues, where quintile 1 outperforms by 2.5%, quintile 2 by 4.3%, and quintile 5 underperforms by 4.2%. **Note that a lack of option compensation in itself (far right bin – no options held) is not related to excess returns.**

Figure 3. CEO Options Held to Total Compensation – Market and Size Adjusted Annualized Excess Returns, 2007-2017



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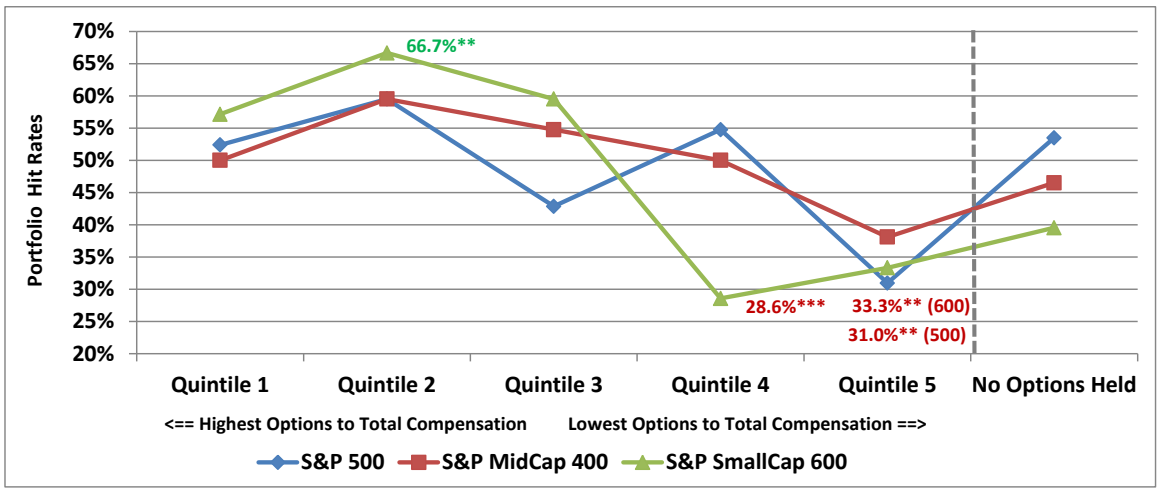
[11] This study looks at total option holdings, including exercisable, unexercisable (not yet vested by date), and unearned (not yet vested due to performance thresholds) options. Only in-the-money options are included.
[12] Because of the large tax consequences of exercising options with sizable spreads, executives commonly sell shares immediately on exercise to cover the tax bill.

Hit rates, or the percentage of monthly periods a portfolio outperforms, for the different indices (Figure 4) are statistically significant[13] for the S&P 600: the 2nd quintile outperforms 67% of the time[14], while the 4th quintile outperforms by only 29% and the 5th quintile by 33%. The bottom quintile for the S&P 500 also shows significant underperformance. **The bottom (fifth) quintile represents companies that pay options but whose CEOs may lack confidence in their stock's ability to increase.**

Figure 4. CEO Options Held to Total Compensation – Portfolio Hit Rates 2007-2017



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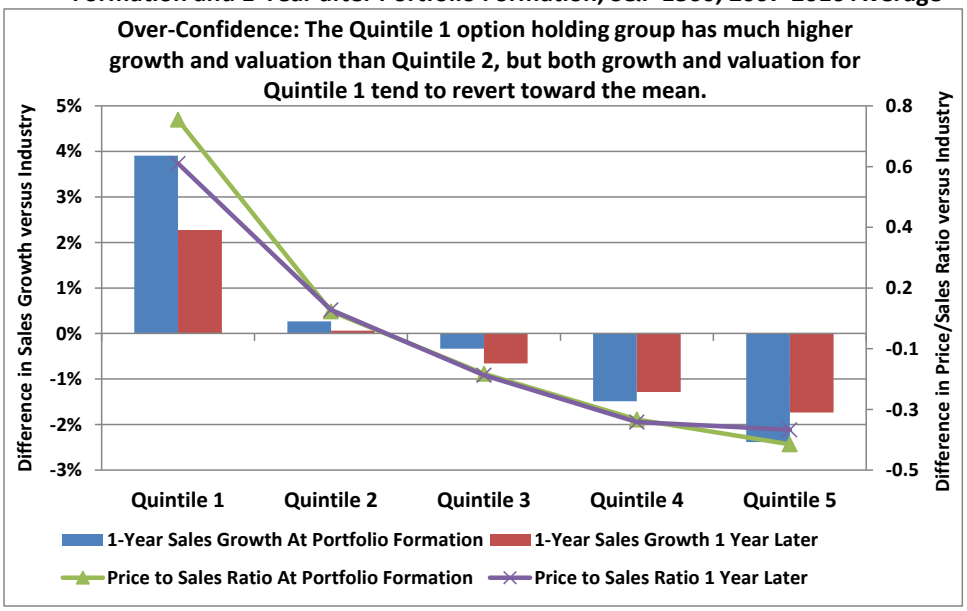
[13] I.e., statistically different from 50%, which would be considered a "neutral" hit rate.
[14] Hit rates give an idea about the consistency of outperformance/underperformance over time.

The data in Figures 3 and 4 beg the question of **why quintile 2 (second highest options holders) outperforms quintile 1 (highest option holders)?** Figure 5 may provide the answer. Sales growth for quintile 1 is about 4% above industry peers at portfolio formation, but declines by almost half, to 2.3% higher-than-peers, one year later. Valuations, in terms of price to sales, follow a similar pattern. Thus, CEOs who hold the most options (quintile 1) may have overestimated their companies' room for improvement, while CEOs who hold the next-to-highest amount (quintile 2) have companies with more headroom for further growth/stock price appreciation.

Figure 5. 1-Year Sales Growth and Price to Sales Ratios, Difference versus Industry, at Portfolio Formation and 1-Year after Portfolio Formation, S&P 1500, 2007-2016 Average



Source: S&P Global Market Intelligence Quantamental Research, Compustat. Data as of February 15, 2018.
Ratios *exclude* financial stocks.

Industry-adjusted returns for high-option holding companies are also significant, indicating that concentrations in particular industries aren't driving returns. Table 1 shows industry group (GICS level two) relative returns for the three indices. The second quintile (high options held) has statistical significance across the indices, while the fifth quintile (least options held) has significance only for small caps, after industry effects are excluded.

Table 1. CEO Options Held to Total Comp – Industry Group Adjusted Annualized Excess Returns, 2007-2017

	Q1	Q2	Q3	Q4	Q5
S&P 500	-2.07%**	1.84%**	0.24%	1.69%*	-1.43%
S&P 400	0.40%	2.24%**	0.02%	-0.67%	-0.83%
S&P 600	0.97%	3.10%**	0.66%	-1.13%	-2.82%**

*** = 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 February 15, 2018. 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.

3. Characteristics of High and Low Option Holdings Companies

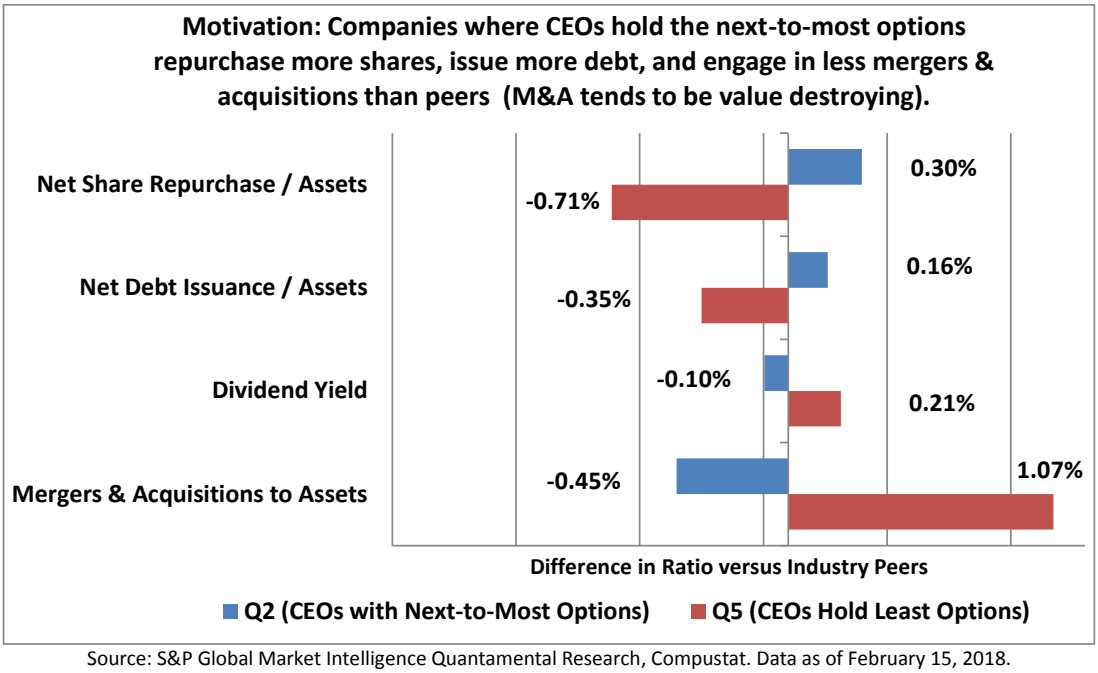
We also sought to answer the question: *What are the fundamental characteristics of firms where executives are motivated to boost stock performance*? In this section, **we compare fundamental characteristics of companies where CEOs have the next-to-highest option holdings, relative to total pay (quintile 2, Section 2.2[15]), with CEOs who have the lowest option holdings (quintile 5, section 2.2)** to answer this question.

Note that there is a wide gap between the two groups: the median options-held-to-total-compensation ratios for the CEOs in the second quintile were 206%[16] versus just 19% for the bottom quintile.

Figure 6 shows that companies where CEOs hold large options positions repurchase more shares and issue more debt than industry peers. These companies also have slightly lower dividend yields and engage in less merger & acquisition activity (M&A tends to be value destroying). **Note:** All relationships shown are significantly different between the two option holdings groups at the 1% level.

Note that while option holders do not receive dividends paid, they *do* receive any share price appreciation resulting from stock repurchases. All other things equal, cash used for share repurchases has a positive effect on earnings per share growth, which can help drive stock appreciation. Increased dividends, on the other hand, may actually reduce stock price (stocks typically decline on the ex-dividend date).

Figure 6. Corporate Cash Deployment by CEO Option Holding Group – Difference in Ratio versus Industry Peers, S&P 1500, 2007-2016 Average



Source: S&P Global Market Intelligence Quantamental Research, Compustat. Data as of February 15, 2018.
All ratios except dividend yield *exclude* financial stocks.

[15] The second quintile from the previous section represents the 60th to 79th percentile by CEO options held to total compensation, where 100 equals the *highest* percentile.
[16] Average quintile values for the S&P 1500 for 2007-2016.

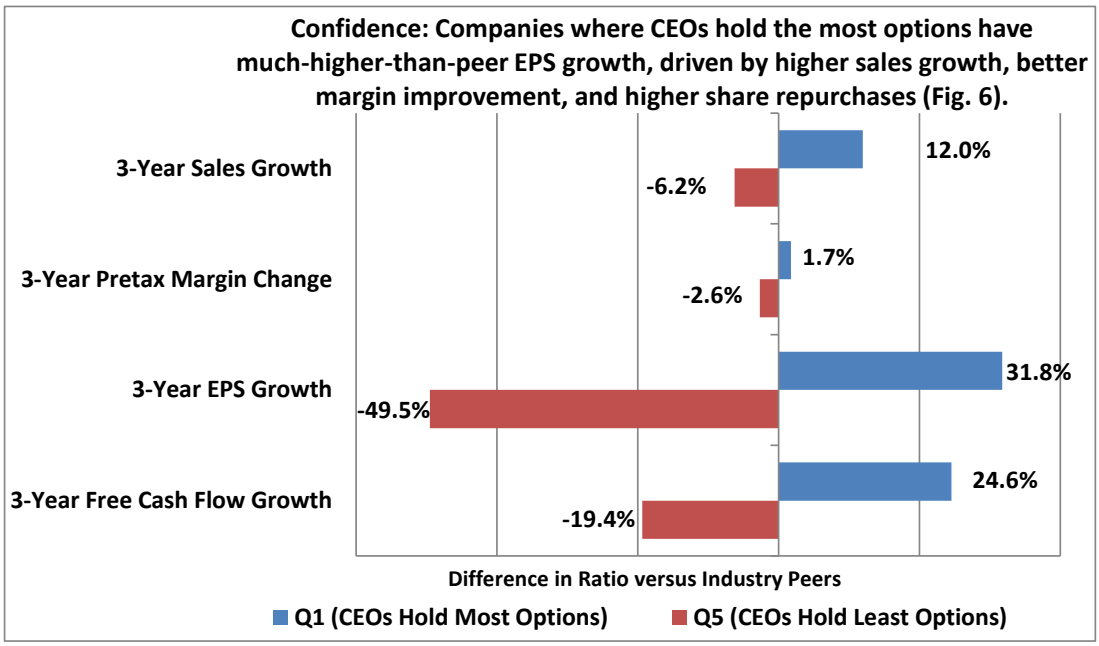
Figure 6 also shows that for companies of high-option-holders, **debt issuance partially offsets increased share repurchases, suggesting repurchases are being funded with debt.** This means more cash is available to grow the company – also a positive for shareholders, as long as good growth opportunities exist.

However, there is another plausible explanation for these metrics: companies where executives hold large numbers of options are simply growing faster than peers. In this case, **high option holdings signals executive confidence that good earnings growth, and hence share price appreciation, will continue.**

Data backs up this view. Figure 7 shows that **three-year growth rates for sales, earnings per share (EPS), and free cash flow are higher-than-industry-average for companies where executives hold large option positions** and lower-than-industry-average for companies where executives hold small positions.

Companies where CEOs hold large amounts of options have 3-year fully diluted EPS growth that is 21% higher than peers, driven by slightly higher sales growth and pretax margin improvement, as well as higher share repurchases, as shown in Figure 6. **Companies where CEOs hold few options show 50% lower 3-year EPS growth than peers.** This data supports the case that the level of CEO option holdings reflects the level of confidence that CEOs have in their own companies' long-term growth prospects.

Figure 7. Long-Term Growth & Profitability Ratios by CEO Option Holding Groups – Difference in Ratio versus Industry Peers, S&P 1500, 2007-2016 Average



Source: S&P Global Market Intelligence Quantamental Research, Compustat. Data as of February 15, 2018.
All ratios except 5-year EBIT growth *include* financial stocks.

4. Data

This research is based primarily on the S&P Global Professionals data set, which highlights over 4.5 million professionals with current and prior board/company affiliations worldwide. Data history begins in 1992. Data includes biographies, standardized job functions, titles, education, compensation, options holdings, and full committee memberships.

The Professionals package contains over 40 different compensation types, including all components of short and long-term compensation, as well as specific detail on option and restricted share grants and holdings.

It also includes data from the S&P Global Transactions data set, which contains full detail on mergers and acquisitions globally, beginning in 2001 for U.S. companies.

5. Conclusion

We find no evidence that incentive compensation (as defined as performance-based cash, plus stock and option awards) makes a difference, in the aggregate, in terms of improved shareholder results.[17] However, we do find evidence of potential value for investors in executive compensation data. Specifically, companies where CEOs hold large amounts of exercisable and unexercisable options outperform, while companies where CEOs hold small option positions underperform. What is important here is not just the *form* of the compensation but also the executive's *behavior:* retaining versus exercising the options.

We see two possible explanations for this phenomenon: 1. since stock options are leveraged to share price appreciation, **CEOs with large options positions are highly motivated to increase the stock price**; 2. large positions of exercisable options **act as a signaling mechanism that CEOs have confidence in future corporate growth**, while small positions signal that CEOs are skeptical about future growth. In this sense, options holdings may provide insight into insiders' views of their own firms.

Both explanations are supported by examination of fundamental data: Companies where CEOs have large option positions repurchase more shares and issue more debt than industry peers, suggesting cash conservation in order to fund corporate growth. Cash used for stock repurchases benefits option holders directly, by raising EPS growth rates, while cash used for dividends does not confer such a clear-cut benefit.

Companies where CEOs hold large option positions also have much higher long-term earnings growth rates than peers, driven by higher sales growth and margin improvement, as well as share repurchases. Conversely, companies where executives hold small option positions, have significantly lower sales growth, margin improvement, and EPS growth than industry peers.

[17] Academic research on this subject is decidedly mixed.

Appendix A – Stock Ownership Not Related to Returns

The level of stock ownership, which does not have the same leverage characteristics as option holdings, is not related to future returns. Table 2 shows backtest results for CEO total stock ownership (insider shares held + unvested/unearned restricted shares) to total compensation. Table 3 shows backtest results for CEO total restricted shares held to total compensation. Companies where the CEO has the highest level of stock holdings are in quintile 1 and companies where the CEO has the lowest level of stock holdings are in quintile 5. Results of neither test have any real statistical significance.

Table 2. CEO Total Stock Ownership to Total Compensation, Excess Returns versus each Index 2006-2017

	Q1	Q2	Q3	Q4	Q5
S&P 500	1.48%	-1.89%**	0.11%	0.28%	1.03%
hit rates	*55.8%*	*34.9%**	*51.2%*	*51.2%*	*46.5%*
S&P 400	0.40%	2.24%	0.02%	-0.67%	-0.83%
hit rates	*51.2%*	*53.5%*	*55.8%*	*58.1%*	*34.9%**
S&P 600	-0.29%	0.01%	1.34%	-0.71%	-1.45%
hit rates	*58.1%*	*53.5%*	*62.8%*	*53.5%*	*41.9%*

*** = 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 February 15, 2018. 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.

Table 3. CEO Unearned/Unvested Restricted Stock to Total Compensation, Excess Returns, 2006-2017

	Q1	Q2	Q3	Q4	Q5
S&P 500	-0.67%	-1.19%	0.53%	-0.35%	2.11%
hit rates	*53.5%*	*39.5%*	*53.5%*	*44.2%*	*58.1%*
S&P 400	0.17%	-0.90%	-1.30%	1.15%	-1.03%
hit rates	*51.2%*	*48.8%*	*46.5%*	*60.5%*	*46.5%*
S&P 600	0.04%	1.49%	-1.38%	-0.90%	0.22%
hit rates	*51.2%*	*53.5%*	*53.5%*	*39.5%*	*41.9%*

*** = significant at the 1% level; ** = significant at the 5% level; * = significant at the 10% level

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Our Recent Research

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