



# Pay-for-Performance Mechanics

ISS' Quantitative and Qualitative Approach (U.S.)

*(Updated with regard to shareholder meetings held on or after Feb. 1, 2017)*

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## I. BACKGROUND

Following the implementation of mandated advisory shareholder votes on executive compensation under the Dodd-Frank Act of 2010, investors have regular opportunities to opine on executive pay programs. Investor feedback on the issue of pay-for-performance has indicated a preference for a focus on long-term alignment, board decision-making, and pay relative both to market peers and company performance. As a result, ISS' approach to evaluating pay-for-performance comprises an initial quantitative assessment and, as appropriate, an in-depth qualitative review to determine either the likely cause of a perceived long-term disconnect between pay and performance, or factors that mitigate the initial assessment.

The initial quantitative screens are designed to identify outlier companies that have demonstrated significant misalignment between CEO pay and company performance over time. The screens measure alignment on both a relative and absolute basis, and over multiple time horizons. The screening process applies to constituents of the Russell 3000E Index, a collection of the largest 3,500 (approximate) equity securities traded on U.S. stock exchanges.

ISS reviews the Compensation Discussion and Analysis (CD&A) section of all companies' proxy statements and highlights noteworthy issues to investors regardless of the quantitative concern level. This qualitative evaluation, as well as any in-depth qualitative evaluation subsequent to the quantitative screens, is the most important part of the analysis and subsequent vote recommendation. Responsiveness following a low say-on-pay vote or the identification of problematic incentive designs, such as multi-year guaranteed payments, discretionary pay components, inappropriate perquisites (including tax gross-ups), or lack of rigorous goals, are generally addressed in the qualitative analysis and may result in a negative recommendation despite a "low" quantitative concern. For more detail, see [ISS' Executive Compensation FAQs](#).

Following an elevated concern level under the quantitative screens, a subsequent in-depth qualitative assessment is designed to uncover mitigating factors or potential contributors to the perceived misalignment. Beginning with meetings on or after Feb. 1, 2017, the qualitative assessment will also include a review of the company's performance against other financial metrics besides TSR, relative to the same peer group used in the quantitative screens.

## II. QUANTITATIVE EVALUATION OF PAY-FOR-PERFORMANCE ALIGNMENT

Broadly speaking, ISS had three main goals in developing the pay-for-performance methodology:

- › **Measure alignment over multiple time horizons.** Business cycles and compensation plans' performance cycles span multiple years. An assessment of alignment between shareholders and executives should accordingly see pay across timeframes that approach the length of performance and business cycles.
- › **Use multiple measures to assess alignment.** The pay-for-performance evaluations are based on multiple measures, each of which assesses a company's pay-for-performance alignment from a distinct perspective.
- › **Provide robust and standardized information about pay-for-performance concerns to investors and issuers.** The evaluation is designed to quantify the degree of alignment between pay and performance, and provide results that can be compared between companies and across multiple years.

ISS' quantitative pay-for-performance screen uses three measures of alignment between executive pay and company performance: two *relative* measures where a company's CEO pay magnitude and the degree of pay-for-performance alignment are evaluated in reference to a group of comparable companies, and one *absolute* measure, where alignment is evaluated independently of other companies' performance. The three measures, which are discussed in greater detail below, are:

- › **Relative Degree of Alignment (RDA)**. This relative measure compares the percentile ranks of a company's CEO pay and TSR performance, relative to an ISS-developed comparison group, over the prior two-year or three-year period.
- › **Multiple of Median (MOM)**. This relative measure expresses the prior year's CEO pay as a multiple of the median CEO pay of its comparison group for the most recently available annual period.
- › **Pay-TSR Alignment (PTA)**. This absolute measure compares the trends of the CEO's annual pay and the change in the value of an investment in the company over the prior five-year period.

The following table summarizes the measurement periods, and inputs, for each measure:

Measure	Absolute or Relative	Scope	Inputs
<b>RDA</b>	Relative	3 years	CEO Pay & TSR
<b>MOM</b>	Relative	1 year	CEO Pay
<b>PTA</b>	Absolute	5 years	CEO Pay & TSR

## What We Measure

**Executive Pay.** Per SEC disclosure requirements, each annual meeting proxy statement includes an array of pay data, with a three-year look-back, for the five highest-paid executives including the CEO and CFO. The centerpiece of these disclosures is the Summary Compensation Table, which enumerates the key elements found in typical top executive compensation packages, including cash, indirect pay, and equity grants:

- › Salary
- › Bonus
- › Nonequity Incentive Plan Compensation
- › Stock Awards (grant date value)
- › Stock Option Awards (grant date value)
- › Annual Change in Pension Value/Nonqualified Deferred Compensation Earnings (above market rate)
- › All Other Compensation

Other tables provide, among other details, summaries of equity- and nonequity-based grants in the last fiscal year, unexercised/unvested equity-based awards, and the realized gains of vested and exercised grants. However, the Summary Compensation Table presents the most comprehensive picture of each named executive officer's total planned and earned compensation for the year – specifically, the pay and pay opportunities that the compensation committee and board determined they ought to receive. It is those decisions that investors generally wish to monitor and evaluate, since their aim is to ensure that executives will be paid fairly, but not overpaid, for the performance they ultimately deliver and sustain. ISS focuses on the CEO's pay because that

package sets the "compensation pace" at most companies; also the compensation committee and board are most directly involved in and accountable for the decisions that generate the CEO's pay.

In evaluating pay and performance alignment, ISS' quantitative analysis focuses on CEO Total Compensation primarily as reflected in the Summary Compensation Table, although ISS utilizes a standard set of assumptions to value equity-based grants. All elements, including the Annual Change in Pension/Deferred Compensation Interest (not generally considered "direct" pay) are taken into account, since companies that do not provide components such as supplemental pensions and nonqualified deferral plans may compensate executives by making larger equity grants; thus, all elements are considered to help ensure equitable comparisons.

**Company Performance.** There are numerous ways to measure corporate performance, and key metrics may vary considerably from industry to industry and from company to company depending on the particular business strategy at any given time. Investors expect that incentive plan metrics will stem from that strategy and be designed to motivate the behavior and executive decisions that will lead to its successful execution. However, one key measure for investors in the context of a long-term pay-for-performance evaluation is total shareholder return (TSR).

ISS does not advocate that companies use TSR (or any particular metric) as the metric utilized in incentive pay programs. On the contrary, shareholders may prefer that incentive awards be tied to the company's short- and long-term business goals. If the business strategy is sound and well-executed, the expectation is that it will create value for shareowners over time, as reflected in long-term total shareholder returns. For this reason, TSR, which is objective and transparent, is the primary metric ISS utilizes in evaluating pay and performance alignment. TSR is the only metric currently used in ISS' quantitative pay-for-performance alignment screens, although various financial and operational metrics are considered in the qualitative review of company practices and compensation decisions.

## Measures of Relative Alignment

### Relative Degree of Alignment (RDA)

This relative measure seeks to determine if the pay opportunity delivered to the CEO is commensurate with the performance achieved by shareholders, relative to a comparable group of companies (for more information on ISS' process for selecting peers, see ISS' [U.S. Peer Selection FAQ](#)). RDA compares the percentile ranks of a company's CEO pay and TSR performance, relative to a comparison group of 12-24 companies selected by ISS on the basis of size, industry, market capitalization, and other factors, generally measured over a three-year period. An abbreviated two-year measurement period will be used in cases where three complete years of pay or TSR data is not available; in these instances a two-year measurement period will be used for both pay and performance. Beginning with meetings on or after Feb. 1, 2017, RDA will no longer be measured on a one-year basis, in an effort to increase the focus on long-term alignment. Prior to this change, RDA would use a single year of pay and TSR data in limited circumstances when more data was not available.

To determine this measure, the subject company's percentile ranks are calculated for three-year average pay and for annualized three-year TSR performance. The Relative Degree of Alignment is equal to the difference between the ranks: the performance rank minus the pay rank. The table below illustrates how the factors combine to determine the final measure – in this case, the relative degree of alignment is -27.

	Performance	Pay	Difference
<b>3-year percentile rank</b>	32	59	-27

Values for the Relative Degree of Alignment measure range between -100 and +100, with -100 representing high pay for low performance (i.e., 100<sup>th</sup> percentile pay combined with 0<sup>th</sup> percentile performance), zero representing a high degree of alignment (the pay rank is equal to the performance rank), and positive values representing high performance for low pay. Information on back testing is available in ISS' white paper titled [Evaluating Pay for Performance Alignment](#). Three-year average pay for the subject company and each peer company is based on the most recently disclosed three years of pay data available in the ExecComp Analytics database for that company.

Because of the sensitivity of TSR to overall market performance, annualized TSR performance for all companies (subject company and comparison companies) will be measured for the same period: that is, the three-year period ending on the last day of the month closest to the fiscal-year end of the subject company. To illustrate: if a company's fiscal year ends on November 29, 2016, then all TSRs will be measured from December 1, 2013 through November 30, 2016.

### Multiple of Median (MOM)

This relative measure identifies instances where CEO pay magnitude is significantly higher than amounts typical for its comparison group, independent of company performance.

Calculating is straightforward: the company's one-year CEO pay is divided by the median pay for the comparison group. (For more information on ISS' process for selecting peers, see ISS' [U.S. Peer Selection FAQ](#).)

Values can therefore range from zero (if the subject company paid its CEO nothing) to any positive value, with no upper limit. A MOM value of 1.00 indicates that CEO pay in the last fiscal year is equivalent to the peer median.

## Measure of Absolute Alignment

### Pay-TSR Alignment (PTA)

This absolute measure is intended to identify whether shareholders' and executives' experiences, in terms of shareholder returns and granted pay, have followed the same long-term trend. PTA is not designed to measure the sensitivity of CEO pay to performance – whether pay and performance go up and down together on a year-over-year basis. Rather, it is a long-term measure of directional alignment.

At a high level, the measure is calculated as the difference between the slopes of weighted linear regressions for pay and for shareholder returns over a five-year period. This difference indicates the degree to which CEO pay has changed more or less rapidly than shareholder returns over that period.

The regressions that calculate Pay and TSR trends are weighted least-squares regressions of Pay and TSR against the independent (x) variable time. Because the timing of the measurements for pay and for TSR is different, however, the regressions are handled differently. The indexed TSR values represent "fence posts" -- fiscal year-end markers -- that connect the "fence rails" of pay delivered between those markers.

- For the pay regression, five values are measured, at times (years) 1, 2, 3, 4, and 5. The dependent (y) values for the pay regression are the total CEO compensation values for the five most recent fiscal years.
- For the TSR regression, six values are measured, at times (years) 0, 1, 2, 3, 4, and 5. The dependent (y) values for the TSR regression are determined by hypothetically “investing” \$100 in the company on the day five years prior to the most recent fiscal year end, and measuring the value of that \$100 investment on each of the subsequent five year fiscal year end dates, for a total of six indexed TSR values.

The following table traces a hypothetical company’s Pay and Indexed TSR values for the five-year period in question. The TSR % change column indicates the percentage return over the one-year period in question, for reference.

Year (X)	Pay	Indexed TSR	TSR % change
2011 (0)	-	100	-
2012 (1)	1,231	109	9.0%
2013 (2)	2,553	118	8.3%
2014 (3)	1,821	91	-22.9%
2015 (4)	1,789	99	8.8%
2016 (5)	2,226	104	5.1%

The regressions are weighted to place slightly more emphasis on recent experience. Because there are a different number of data points for the two regressions, pay and TSR each have their own weights calculated. The weights are constructed such that the geometric mean of the weights is equal to 1, and that the weight for a pay period is equal to the geometric mean of the weights for the TSR periods that “fencepost” it (e.g., the weight for pay period 2 is equal to the geometric mean of the weight for TSR periods 1 and 2). Finally, the weight for any period is equal to the weight for the next period times a decay factor (set to .85 for the ISS model), yielding weights as follows:

	Period 0	Period 1	Period 2	Period 3	Period 4	Period 5
Indexed TSR weights	0.6661	0.7837	0.9220	1.0847	1.2761	1.5012
Pay weights	n/a	0.7225	0.8500	1.0000	1.1765	1.3841

The indexed TSR calculation depends on a continuous series of TSR data. If TSR data for only the first period is missing, PTA will be calculated on the basis of 4 years of data, otherwise PTA will not be calculated. If pay data are missing for any one period, then that period carries zero weight for both pay and TSR in the calculation.

The slope of the weighted least-squares regression is calculated as follows, if  $P_i$  represents the pay or performance value for period  $i$ ,  $W_i$  represents the corresponding weight for period  $i$ , and  $X_i$  is simply  $i$ :

$$slope = \frac{\sum W_i \sum W_i X_i P_i - \sum W_i X_i \sum W_i P_i}{\sum W_i \sum W_i X_i X_i - \sum W_i X_i \sum W_i X_i}$$

In order that the two slopes are comparable to one another, each must be normalized by dividing by their respective weighted-average values:

$$\text{norm. factor} = \frac{\sum W_i P_i}{\sum W_i}$$

The normalized slopes are therefore analogous to a 5-year “trend rate” for pay and performance, weighted to reflect recent history. The final Pay-TSR Alignment measure is simply equal to the difference: performance slope minus the pay slope. Potential values for PTA are theoretically unbounded, but in practice they range from just over -100 percent to just over 100 percent.

## Quantitative Screening Methodology and ISS Policy

These three measures provide raw material for ISS’ initial quantitative evaluation of pay-for-performance alignment. ISS has developed a framework to determine whether the measures indicate the presence or absence of a pay-for-performance disconnect.

The philosophy of the framework is that if a pay-for-performance measure for a company lies within a range of typical values, then it has demonstrated some evidence of pay-for-performance alignment. If the company’s measure is an outlier beyond that range, however, this indicates that a disconnect may exist.

The evaluative approach thus begins by identifying companies that are significant outliers in each measure. The approach is based on empirical observation of the distribution of the measures within the back-testing universe, and on the relative strength of the relationship of each measure to voting outcomes. Additionally, the methodology, where possible, avoids arbitrary threshold effects by using a continuous scoring approach. As a result, scores are additive – concerns raised for multiple measures can accumulate to provide evidence for a pay-for-performance disconnect.

The table below shows the levels for each measure that indicate where a company would be considered to have a misalignment between pay and performance triggering a Medium or High concern. A High concern for any individual factor will result in an overall High concern level for the quantitative component of the pay-for-performance evaluation, and multiple Medium concern levels would also result in an overall High quantitative concern. The current thresholds, effective as of Feb. 1, 2015 meetings, were established based on back testing conducted in 2014. The thresholds are regularly reviewed and periodically updated. Information on back testing is available in ISS’ white paper titled [Evaluating Pay for Performance Alignment](#).

Measure	Medium Concern Threshold	High Concern Threshold
Relative Degree of Alignment	-40	-50
Multiple of Median	2.33x	3.33x
Pay-TSR Alignment	-20%	-35%



### III. QUALITATIVE REVIEW

An important step when pay and performance appear disconnected is to assess how various pay elements may be working to encourage, or to undermine, long-term value creation and alignment with shareholder interests. It is the outcome of this qualitative analysis that determines the vote recommendation for the say-on-pay proposal (or, in some cases, for the election of directors when there is no say-on-pay proposal on the ballot).

#### What We Assess

This second step in the pay-for-performance evaluation reviews the full picture of compensation decisions and practices at the company and may include consideration of some or all of the following factors (note: this is not a comprehensive list of all factors that may be reviewed in the qualitative analysis):

**Strength of performance-based compensation and rigor of performance goals.** This key consideration includes a review of the ratio of performance- to time-based equity awards as well as the overall ratio of performance-based compensation to fixed compensation, focusing particularly on the compensation committee's most recent decision-making (which reflects its current direction).

A company that exhibits significant misalignment of pay opportunities and performance over time would be expected to strongly emphasize performance-based compensation (though not by simply increasing the size of the pay package in order to make it more performance-based). ISS will review both recent cash awards paid and long-term award opportunities intended to drive future performance, to evaluate their design and performance criteria. Time-based awards (including standard stock options and time-vesting stock awards) that are not granted based on the attainment of pre-set goals are not considered strongly performance-based in this context. Shareholders would also expect such a company to fully disclose performance metrics and goals, which should be reasonably challenging in the context of its past performance and goals, guidance the company has provided to analysts, etc. If goals were set lower compared to the prior year's goals or actual performance levels, the company should explain the reason for this and how that was considered in setting corresponding pay opportunities. ISS may also review goals from prior award cycles and the level at which those awards were earned or forfeited. Use of a single metric, or very similar metrics, in either or both of the short- and long-term incentive programs may indicate duplicative awards or suggest inappropriate focus on one aspect of business results at the expense of others. If the company uses non-GAAP metrics, adjustments should be clearly disclosed (along with compelling rationale if such adjustments are nonstandard and/or reflect factors within the control of management).

**Financial/operational performance.** In addition to TSR, ISS considers a company's absolute and relative financial and operational metric results (on a GAAP basis). Beginning with annual meetings held on and after Feb. 1, 2017, ISS will also incorporate a relative financial performance assessment in research reports for all companies subject to the quantitative screens. This assessment examines the CEO's relative pay rank vs. the company's long-term relative financial/operational performance, which may be used to inform the qualitative review. For additional information on the new relative financial performance measure, see the subsection below titled [Relative Pay and Financial Performance Assessment](#) (and also see ISS' U.S. Executive Compensation Policies FAQs).

**Realized and realizable pay.** As noted above, the value of pay opportunities that depend on future stock prices and/or achievement of performance goals may not ultimately be delivered, and many investors believe that this should be a consideration in a pay-for-performance analysis. ISS has generally considered amounts of "realized"

equity and performance grants, as appropriate, in the qualitative analysis. ISS also utilizes a defined calculation of "realizable pay" that may be considered in the qualitative review of S&P 1500 companies. The fact that realizable pay is lower than grant-date pay will not necessarily obviate other strong indications that a company's compensation programs are not sufficiently tied to performance objectives designed to enhance shareholder value over time. However, in the absence of such indications, realizable pay that demonstrates a pay-for-performance philosophy will be a positive consideration. For information on how ISS calculates realizable pay and how it is evaluated in a qualitative review, see the U.S. Executive Compensation Policies FAQs.

**Peer group pay benchmarking practices.** ISS closely examines a company's disclosed pay benchmarking approach to determine whether it is a contributing factor to a pay-for-performance misalignment. For example, a preponderance of self-selected peers that are larger than the subject company may drive up compensation without regard to performance. Above-median pay benchmarking may have the same effect.

**Executive transitions.** In cases of executive transitions, ISS will consider compensation arrangements for both outgoing and incoming executives. Severance and termination-related equity award treatment as well as sign-on awards will be closely evaluated. The nature of the employment termination (i.e. voluntary, involuntary, retirement, etc.) and any apparent windfalls (or pay-for-failure risk) will also be considered. Further, while shareholders may welcome a new CEO in light of lagging performance, they may nevertheless be concerned when a board has been forced to pay dearly for outside talent but has failed to appropriately link the new CEO's pay to expected performance improvement.

**Special circumstances.** ISS will also review unusual situations as a part of the qualitative analysis, such as a company's responsiveness to receiving low support for the say-on-pay proposal in prior years or when a company is determined to have a history of poor pay practices. The qualitative analysis will consider any other special circumstances, such as unusual equity grant practices (e.g., bi- or triennial awards), the effects of grant timing, special one-time grants, etc. Given the limitations in disclosure and in order to provide a consistent comparison across all companies, the quantitative screen relies on information disclosed in the proxy pay tables for the year in review. However, if an elevated concern is raised, ISS will consider any special grant practices in the qualitative review, if this information is clearly disclosed. We note, however, that such circumstances do not automatically invalidate other aspects of the analysis, including the quantitative results, since that methodology's long-term orientation is designed to smooth the impact of timing anomalies. Though the quantitative screen looks at CEO pay, any special or unusual grants made to other NEOs will also be reviewed. Companies should provide robust disclosure on the rationale and other relevant considerations for such circumstances.

## Relative Pay and Financial Performance Assessment (New for 2017)

Though reviewing a company's performance against financial metrics other than TSR has always been a part of the qualitative assessment, starting in early 2017, a new standardized comparison of the subject company's CEO pay and financial performance ranking relative to its ISS-defined peer group will be added to research reports for all companies in the Russell 3000E Index. This assessment is intended to inform the qualitative analysis where the initial quantitative screen indicates a misalignment between pay and performance. ISS is exploring integrating this assessment into the quantitative screen in future years.

The relative pay and financial performance evaluation compares the company's reported financial and operational performance versus the ISS peer group across up to six financial metrics and TSR:

- › Return on invested capital (ROIC)
- › Return on assets (ROA)
- › Return on equity (ROE)
- › EBITDA growth
- › Cash flow (from operations) growth
- › Revenue growth
- › Total shareholder return (TSR)

The relative ranking of these metrics varies by four-digit GICS industry group and not all industries will use all metrics. Performance is measured across a 3-year or a 2-year period (depending on trading history and data availability), and the subject company is ranked against its ISS-selected peers across each of the applicable metrics. Performance is measured using the 12 most recent trailing quarters (16 for growth metrics) as of ISS' quarterly data download from Compustat, so performance used in this evaluation may be different than annual performance metrics shown elsewhere in the report. The assessment uses reported, rather than adjusted, performance results, in order to provide for a reasonable comparison across all companies. The metric performance ranks are then combined into a weighted average performance rank. The weightings are also based on the subject company's industry and were developed using a back-tested analysis of historical financial results and shareholder support for say-on-pay proposals (more detail in [Appendix A](#)).

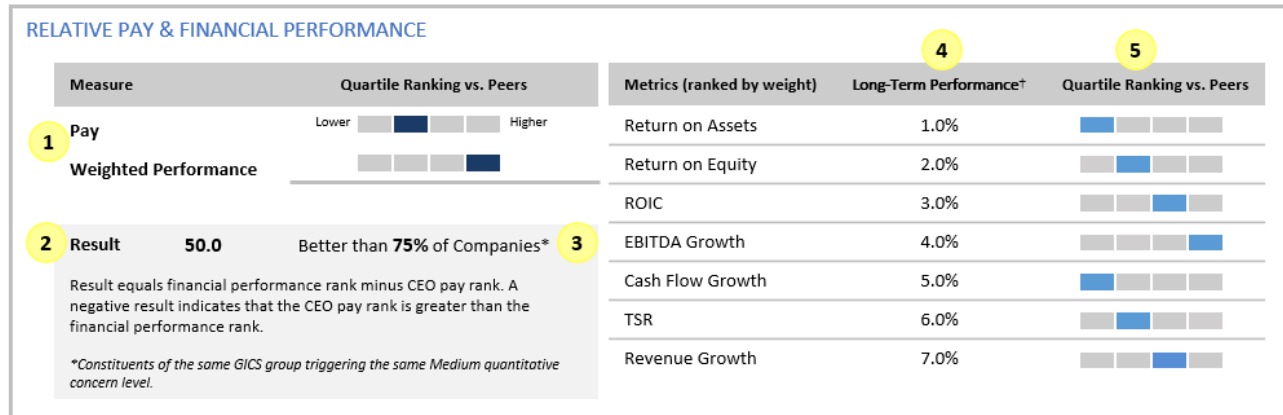
The weighted average performance rank is compared to the subject company's CEO pay rank, in a similar fashion to the existing Relative Degree of Alignment (RDA) test, creating a relative financial performance result. This may range from -100 to +100, with -100 representing the high pay for low performance (as in the RDA score). A negative result indicates that the CEO pay rank is greater than the weighted average financial performance rank, and a positive score means that the CEO pay rank is below the weighted average financial performance rank.

Finally, the relative financial performance result is compared to a historical universe of companies that are in the subject company's GICS industry group and that have received the same quantitative concern level in the existing quantitative pay-for-performance screen. The assessment also displays the percentage of companies the subject company performed "better than," based on a comparison to other companies within the industry.

## Report Display

The relative pay and financial performance assessment appears below the ISS peer group analysis. A description and sample of the fields displayed are included below:

### Sample of Relative Pay & Financial Performance Assessment



1. Visual representation of the subject company's CEO pay rank and weighted average performance rank
2. Relative Financial Performance Result, which equals the financial weighted average performance rank minus the CEO pay rank
3. Comparison of the result versus companies in the same industry with the same quantitative concern level
4. Performance value for each metric (3-year or 2-year scope), with the metrics sorted by order of importance (i.e., weighting) applicable to subject company's GICS industry group
5. Visual representation of the subject company's performance rank for each metric as compared to the ISS peer group

## IV. LOOKING FORWARD

ISS' quantitative methodology combines two analytical perspectives – pay and performance relative to a comparison group of companies, and pay relative to absolute shareholder returns – to detect significant long-term disconnects. The comparison groups are based on a transparent methodology that reasonably accounts for company size, market cap, and general industry categorization -- not for the purpose of benchmarking pay (or picking stocks) but to evaluate whether pay is generally commensurate with market peers and performance. More information on ISS' peer group selection process can be found in [ISS' FAQs on peer groups](#).

The qualitative overlay ultimately determines whether pay-and-performance disconnects are being addressed with appropriately performance-based pay opportunities. The introduction of the relative pay and financial performance evaluation using metrics in addition to TSR in 2017 will assist further in determining if appropriate linkages exist between NEO pay and company performance. While shareholders are not interested in micro-managing executive pay programs, they certainly have a stake in ensuring that compensation programs are effectively driving value creation.

ISS' robust, transparent, pay-for-performance methodology seeks to facilitate investor evaluations of this critical aspect of corporate governance and shareholder value. This methodology evolves with investor expectations, and feedback from all market participants is both welcome and appreciated. To provide feedback on the subject of ISS' pay-for-performance quantitative and/or qualitative review process, please email us at [globalresearch@issgovernance.com](mailto:globalresearch@issgovernance.com).

## V. APPENDIX

### Appendix A: Development and Back Testing for the Relative Pay and Financial Performance Assessment

Various metrics were back tested by measuring the correlation of financial performance to say-on-pay voting results over multiple years. This approach was used to measure the importance that investors assign to the financial performance of each company when making say-on-pay voting decisions. The back-test results helped determine the seven metrics used in the relative financial test, and the significance and weight of each metric within industry groups.

Overall, each of the metrics used in the relative financial assessment, including TSR, is significantly related to say-on-pay vote results. Though TSR is also included in the quantitative screen, the relative financial performance assessment is meant to provide a broader financial performance assessment of the company, of which TSR is a component. The back testing results of each metric vary by industry, and thus the weightings applied vary by industry as well.

In addition to the back testing, the metric weightings were developed to align with shareholder-expressed preferences from the ISS Policy Survey and feedback received in engagements and roundtable discussions. Certain industries exclude metrics that were deemed not applicable for the particular business type and showed little to no correlation to say-on-pay vote results. Subjective adjustments were made to account for these situations; for example, given the primary revenue driver in financial services is often interest income, EBITDA growth was assigned a weighting of zero for all industry groups in the financial sector (GICS 40).

In the end, after taking into account correlations and industry-specific adjustments, capital productivity metrics (ROIC, ROA, and ROE) account for, on average across all industries, nearly 60% of the overall metric. And while TSR is a metric that is also included in the RDA test, the relative financial assessment is more heavily weighted towards financial measures so that TSR accounts for, on average, less than 15% of the overall metric.

#### Regression Results for MSOP Support and Performance Metrics – All Industries

Metric	t-stat
ROIC	13.04
ROA	12.94
ROE	12.97
Revenue Growth	4.22
EBITDA Growth	10.98
Cash Flow Growth	9.20
TSR	21.43

## Relative Ranking of Performance Metrics – All Industries

As described earlier, not all metrics are used for all industries. The metrics used in this assessment and weights by industry will be regularly evaluated. Metrics that are not currently used for a particular industry are denoted by a “--” in the table below. Metrics with a tied ranking within a particular industry are denoted with “(T)”.

GICS	TSR	ROE	ROA	ROIC	Cash Flow from Ops*	Revenue Growth*	EBITDA Growth*
1010 - Energy	1	4	3	2	6 (T)	6 (T)	5
1510 - Materials	5	2	1	7	3 (T)	6	3 (T)
2010 - Capital Goods	6	3	2	1	5	7	4
2020 - Commercial & Professional Services	6	2	3	1	4	7	5
2030 - Transportation	2 (T)	4	2 (T)	1	6	7	5
2510 - Automobiles & Components	3 (T)	5	2	1	3 (T)	7	6
2520 - Consumer Durables & Apparel	1	4	3	2	5 (T)	7	5 (T)
2530 - Consumer Services	2	5	4	3	6	7	1
2540 - Media	5	3	2	1	4	7	6
2550 - Retailing	5 (T)	1	3	2	5 (T)	7	4
3010 - Food & Staples Retailing	7	2 (T)	1	2 (T)	5	6	4
3020 - Food, Beverage & Tobacco	7	2 (T)	1	2 (T)	5	6	4
3030 - Household & Personal Products	7	2 (T)	1	2 (T)	5	6	4
3510 - Health Care Equipment & Services	7	4	3	2	5	6	1
3520 - Pharmaceuticals, Biotechnology & Life Sciences	6	4	3	1	5	7	2
4010 - Banks	1	3 (T)	2	3 (T)	--	--	--
4020 - Diversified Financials	1	3 (T)	3 (T)	2	--	--	--
4030 - Insurance	4	5	2	1	3	6	--
4040 - Former 4-digit code: see 6010 below							
4510 - Software & Services	6	3	2	1	5	7	4
4520 - Technology Hardware & Equipment	1	4 (T)	2 (T)	2 (T)	6	7	4 (T)
4530 - Semiconductors & Semiconductor Equipment	5	3	2	1	4	6	--
5010 - Telecommunication Services	5	2	1	3	6	7	4
5510 - Utilities	5 (T)	3	2	1	5 (T)	7	4
6010 - Real Estate (back tested using 4040 vote results)	4	3	2	1	5	6	--

\*Note: in the case of material merger or spinoff activity during the financial assessment measurement period, the analysis will exclude revenue growth, EBITDA growth, and cash flow growth for the quarterly periods impacted by the corporate action. One or all of these metrics will still be used if sufficient data exists following the merger or spinoff activity so that ISS can calculate a minimum 2-year measurement period (through the calculation date), excluding the impacted quarters. However, if a metric is excluded from the assessment, the original weight that was assigned to the excluded metric will be redistributed proportionately to the remaining valid metrics. Capital productivity measures (ROIC, ROA, and ROE) and TSR will not be excluded in these situations, as these metrics are generally more consistent and should reflect the impact of the corporate action.

## Metric Definitions

Metrics are generally calculated over a three-year period. When a company only has two years of data, the relative financial performance assessment will use two years of data (but in no event will the measurement be less than two years). ISS uses Compustat as the source for financial and TSR data. Metric definitions are below, along with the formula ISS uses for each calculation:

### Return on Invested Capital (ROIC)

- Description: 3-Year Average Return on Invested Capital
- Calculation:  $(ROIC[0Y] + ROIC[-1Y] + ROIC[-2Y]) / 3$

### Return on Assets (ROA)

- Description: 3-Year Average Return on Assets
- Calculation:  $(ROA[0Y] + ROA[-1Y] + ROA[-2Y]) / 3$

### Return on Equity (ROE)

- Description: 3-Year Average Return on Equity
- Calculation:  $(ROE[0Y] + ROE[-1Y] + ROE[-2Y]) / 3$

### Revenue Growth

- Description: Annualized percentage growth in revenue over a 3-year period
- Calculation:  $(Revenue[0Y]/Revenue[-3Y])^{(1/3)} - 1$

### EBITDA Growth

- Description: Percent change in EBITDA over a 3-year period
- Calculation:  $(EBITDA[0Y] - EBITDA[-3Y])/ABS(EBITDA[-3Y])$

### Cash Flow Growth

- Description: Percent change in operating cash flow (ONCF) over a 3-year period
- Calculation:  $(OANCF[0Y] - OANCF[-3Y])/ABS(OANCF[-3Y])$

### Total Shareholder Return (TSR)

- Same TSR as used in the Pay-for-Performance Quantitative Relative Degree of Alignment (RDA) test

## Metric Measurement Periods

Financial metrics are generally measured over a three-year period (unless the subject company has only two years of data). For a three-year period, the metrics are calculated over the trailing 12 quarters (or 16 quarters for growth metrics) as of the applicable Quarterly Data Download (QDD) for each company, using quarterly financial data.

ISS downloads the financial model inputs for all companies four times per year. Downloads occur on the dates below, with the QDD used for a given analysis depending on the shareholder meeting date for the company as shown:

Shareholder Meeting Date Range		Data Download Date
From	To	
March 1	May 31	<b>December 1</b>
June 1	August 31	<b>March 1</b>
September 1	November 30	<b>June 1</b>
December 1	February 29	<b>September 1</b>