THE ISS PAY FOR PERFORMANCE MODEL

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Institutional Shareholder Services (ISS) announced a new approach to evaluating pay for performance in late 2011. This paper explains the new approach, highlights four significant weaknesses of the new approach and explains how ISS could substantially improve its Pay for Performance Model, now and in the future. Without making any change in the data it collects, ISS could improve its assessment of pay for performance by: (1) adopting more meaningful measures of the three basic dimensions of pay for performance – pay leverage, pay alignment and pay premium at industry average performance, (2) defining reasonable trade-offs between leverage, alignment and cost, (3) changing its peer group selection methodology so it’s selecting labor market peers, not companies that fall in the same sector but don’t compete for the same talent, and (4) giving examples of simple compensation programs that provide perfect pay for performance. In the future, ISS could provide more value to investors by using “mark to market” pay to calculate better measures of pay leverage and alignment and by using stock ownership and mark to market pay to calculate a more comprehensive measure of the CEO’s shareholder value incentive (“wealth leverage”).

How ISS Evaluates Pay for Performance

ISS has a quantitative evaluation of pay for performance alignment based on three measures: Relative Degree of Alignment (RDA), Multiple of Median (MOM) and Pay-TSR Alignment (PTA). RDA and MOM are relative pay measures and require the selection of a set of peer companies. RDA is the difference between the CEO’s average performance percentile and his or her average pay percentile, based on data for the last year and the last three years. The average percentiles are a 40% / 60% weighted average of the one and three year percentiles. The performance percentile is calculated from total shareholder return (TSR) and the pay percentile is calculated from the total compensation reported in the Summary Compensation Table (SCT), adjusted to incorporate a common set of assumptions for valuing option grants. MOM is the CEO’s total compensation for the most recent year, expressed as a multiple of the peer group median total compensation for the year. PTA is the difference between a 5 year shareholder wealth growth rate and a five year CEO pay growth rate, both estimated from regressions using time as the independent variable.

For each of the three measures, ISS sets a level that triggers “Medium Concern” and a level that triggers “High Concern”. For RDA, a negative difference between performance and pay percentile of -30 or more triggers Medium Concern and a negative difference of -50 or more triggers High Concern. For MOM, a multiple of 2.33 or more triggers Medium Concern and a multiple of 3.33 or more triggers High Concern. For PTA, a negative growth rate differential of -30% or more triggers Medium Concern and a negative differential of -45% or more triggers High Concern. Overall, a company is rated High Concern if it has one High Concern rating or multiple Medium Concern ratings and it is rated Medium Concern if it has one Medium Concern rating.

The peer group is selected by ISS based on industry, company size and company market equity value. Potential peers are similarly sized companies in the same GICS\(^2\) sector, using revenue as the size measure for non-financial companies and assets for financial companies. A company qualifies as a potential peer if its size is between 50% and 200% of the subject company’s size and its market equity value is between 20% and 500% of the subject company’s market value. ISS starts with the subject company’s GICS industry (also called its “six digit GICS category”) and selects the potential peers closest in size to the subject company, “where possible alternating between companies larger and smaller than the subject company so as to maintain the subject at or near the median of the chosen comparator group.”\(^3\) As long as alternating peers can be found in the GICS industry, the number of peers will increased to a maximum of 24.\(^4\) If alternating peers cannot be found, the peer group is limited to 14 companies. If there are less than 14 peers in the industry, the process is repeated with the GICS industry group, but the peer group is limited to 14 companies regardless of the number of alternating peers. If there are less than 14 peers in the industry group, the process is repeated with the GICS sector, but again the peer group is limited to 14 companies regardless of the number of alternating peers.

For Smithfield Foods, this peer group selection methodology leads to the selection of 14 companies in the Smithfield’s GICS sector, Consumer Staples, sector 30.\(^5\) Smithfield has $12.2 billion in 2010 revenue and the 14 companies range in revenue size from $5.7 to $25.2 billion. Eight of the 14 companies are Food Products companies: Campbell Soup, ConAgra Foods, Dean Foods, HJ Heinz, Hershey, Hormel Foods, Pilgrim’s Pride and Sara Lee. Two companies are in Beverages (Beam, Coca-Cola Enterprises), two are in Food & Staples Retailing (BJ’s Wholesale Club, Rite Aid), and one each is in Tobacco (Reynolds American) and Personal Products (Avon Products). The median 2010 CEO compensation of the peer group is $11.1 million.

In 2010, Smithfield had CEO compensation of $20.5 million and a one year shareholder return of +26%.\(^6\) For the three years 2008-2010, Smithfield’s had average CEO compensation of $11.2 million and a three year shareholder return of -18%. Smithfield’s pay percentiles are 87 for 2010 and 60 for 2008-2010, while its TSR percentiles are 47 for 2010 and 27 for 2008-2010.\(^7\) With a 40%/60% weighting of 2010 and

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\(^2\) GICS is the Global Industry Classification Standard developed by Standard & Poor’s and Morgan Stanley International. A company’s GICS code is an 8 digit number where the first two digits denote the sector, the first four the industry group, the first six the industry and the full eight, the sub-industry. There are 10 sectors, 24 industry groups, 70 industries and 164 sub-industries.

\(^3\) Evaluating Pay for Performance Alignment, p. 14.

\(^4\) This methodology implies that the number of peer companies will be an even number between 14 and 24, i.e., 14, 16, 18, 20, 22 or 24.

\(^5\) It is important to emphasize that that this is our calculation of the peer group based on the methodology disclosed by ISS, not ISS’ actual peer group calculation. We limit the peer companies to those in Standard & Poor’s Execucomp database, roughly the S&P 1500 companies, while ISS uses the Russell 3000 plus additional companies.

\(^6\) The total compensation reported in the Summary Compensation Table for CEO C. Larry Pope is $20.228 million. Our total compensation is $20.464 million because our valuation of Pope’s option grant, based on standard assumptions applied to all companies, is $0.891 million vs. $0.565 million reported in the proxy. Our standard assumptions include an expected option term of 6 years and expected volatility equal to the historical volatility for the 60 months ending at the prior fiscal year end.

\(^7\) “Because of the sensitivity of TSR to overall market performance”, ISS calculates one and three year returns for each peer company for the one and three years ending on the subject company’s fiscal year end month (Evaluating
2008-2010, Smithfield’s average pay percentile is 71, while its average TSR percentile is 35. The difference between the TSR percentile and the pay percentile, -36, is Smithfield’s RDA, or Relative Degree of Alignment. This RDA triggers Medium Concern.

Smithfield’s MOM, or Multiple of Median, is 1.85 (= $20.5 million/$11.1 million). This does not trigger Medium or High Concern. Smithfield’s PTA is -47%, the difference between a shareholder wealth growth rate of -8% and a pay growth rate of +39%. This triggers High Concern. Since Smithfield has a Medium Concern and a High Concern, it would receive an overall rating of High Concern.

The Three ISS Measures Correspond to the Three Basic Dimensions of Pay for Performance

Pay sensitivity to performance has two dimensions: (1) the correlation, or alignment, of pay and performance and (2) pay leverage, or the ratio of percent change in pay to percent change in performance. But these two measures don’t provide a complete measure of pay for performance because most investors would say that there is no pay for performance if pay for poor performance is far above market (even if correlation and leverage are high). A more complete pay for performance measure requires three dimensions: alignment, leverage and the pay premium at industry average performance. It’s easy to visualize these three dimensions if we plot relative pay against relative performance.

Charts 1 & 2

Chart 1 plots relative pay and relative performance for 2006-2010 for Smithfield Foods using log measures of relative pay and relative performance and also shows the regression trendline. Chart 2

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Pay for Performance Alignment, p. 7). We use returns for each company’s own fiscal year, but adjust for market and industry performance by calculating the TSR percentile from fiscal year returns adjusted for industry performance.

8 See O’Byrne, Stephen, Assessing Pay for Performance, Conference Board Director Notes DN-V3N19 (October 2011)

9 The dashed line in the left panel is the regression trendline. It’s important to use logarithms because log changes, unlike simple percentage changes, are additive. The average percentage change going from 100 to 50 and back to 100 is +25% [= (-50% + 100%)/2] even though the cumulative percentage change is 0%. Analysis using simple percentage changes would imply that 100-50-100 is better performance than 100-100-100.
shows the same data as a time series. “SCT Pay” is Summary Compensation Table pay, adjusted to incorporate a common set of assumptions for valuing option grants.

Our relative pay measure is the natural logarithm of relative pay, i.e., \( \ln(\text{CEO compensation/peer group median CEO compensation}) \). For 2010, this is \( \ln(\$20.5 \text{ million}/\$11.1 \text{ million}) \), or .61. Our relative performance measure is the natural logarithm of relative shareholder wealth, measured from the start of 2006. Relative shareholder wealth is the ratio of ending shareholder wealth to shareholder wealth assuming the median peer company return. It can also be expressed as 1 + relative TSR. For example, for 2006, Smithfield’s log relative wealth is -.01, based on its relative one year shareholder wealth ratio of .99. For 2008, Smithfield’s log relative wealth is -.76, based on its relative three year shareholder wealth of .46. For 2010, Smithfield’s log relative wealth is -.40, based on its relative five year shareholder wealth ratio of 0.67.

The slope of the trendline, 0.95, is pay leverage, which measures the CEO’s incentive to increase shareholder value. It’s the ratio of change in log relative pay to change in log relative performance, but for small changes, it’s very close to the ratio of percent change in relative pay to percent change in relative performance. Smithfield’s CEO pay leverage of 0.95 means that a 1% increase in relative shareholder wealth increases relative pay 0.95%, on average.\(^{10}\) The intercept of the trendline, -0.07, is the pay premium at peer company average performance. Since this is expressed in logs, we need to take the anti-log to calculate Smithfield’s percentage pay premium at peer company average performance, \( \exp(-0.07) - 1 = -7\% \). The correlation, 0.35, measures the alignment, or consistency, of pay and performance. The squared correlation, 12% for Smithfield, is the percentage of the variation in relative pay that’s explained by relative performance.

We measure the sensitivity of annual pay to cumulative performance because the leverage of annual grant date pay to cumulative performance is a key driver of the leverage of cumulative mark to market pay to cumulative performance. We’ll show below how a simple compensation program of annual performance share grants can provide perfect alignment of cumulative mark to market pay and cumulative performance, with a 0% pay premium at peer average performance and any desired pay leverage (e.g., 0.5, 1.0, etc.). A key element of that program is targeting and maintaining the leverage of annual pay to cumulative performance.

With this analysis as a benchmark, we get can develop a better understanding of the three ISS measures. We’ll show that the underlying premise of the Relative Degree of Alignment (RDA), i.e., that a company’s pay percentile should equal its performance percentile, implies a pay leverage target, and hence, RDA is an effort to measure deviation from a target pay leverage. The Multiple of Median (MOM) is clearly a relative cost measure, albeit one that does not adjust for performance. The objective of Pay-TSRA Alignment (PTA) is to measure whether pay and TSR are “directionally aligned”.\(^{11}\) Since correlation

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\(^{10}\) The regression trendline is \( \ln(\text{pay}) = -0.07 + 0.95 \times \ln(\text{relative shareholder wealth}) \). This implies that pay = \( \exp(-0.07) \times \text{relative shareholder wealth}^{0.95} = 0.93 \times \text{relative shareholder wealth}^{0.95} \). Increasing relative shareholder wealth by 10% increases pay by a factor of 1.1\(^{0.95} = 1.095 \), i.e., by 9.5%.

\(^{11}\) Hewitt and Bowie, Evaluating Pay for Performance, p. 7.
measures the degree to which two measures move in the same direction, without regard to the absolute magnitude of each measure, it's fair to assess PTA as an effort to estimate correlation.

The RDA Principle (“pay percentile = performance percentile”) Implies Very High Pay Leverage

We can calculate the pay leverage implied by RDA if we look at two percentiles, e.g., the 50th percentile and the 60th percentile, and calculate the change in relative pay and the change in relative performance as we move from the lower to the higher percentile. Using data for 1996-2011, a total of 15,860 three year periods, we find that three year average CEO pay is 100.1% of the peer group median at the 50th percentile and 114.6% of the peer group median at the 60th percentile, while the relative shareholder wealth ratio is .994 at the 50th percentile and 1.099 at the 60th percentile. If pay and performance percentiles remain equal, a move from the 50th to the 60th percentile will increase pay by 14.5% and relative shareholder wealth by 10.6%. This implies pay leverage of 14.5%/10.6% = 1.37. Similar calculations show that pay leverage is 1.08 between the 20th and 30th percentiles and 1.32 between the 80th and 90th percentiles. By contrast, the median company pay leverage across all 15,860 five year periods is only 0.37, less than a third of pay leverage implied by “pay percentile = performance percentile”.

RDA and PTA Are Poor Proxies for Leverage and Alignment

When we analyze the correlation between RDA and the three dimensions of pay for performance, using the pay leverage regressions for 15,860 five year periods, we find that RDA has correlations of -.02 with pay leverage, -.01 with pay alignment and -.45 with the pay premium at peer company average performance. This implies that RDA is not a meaningful measure of leverage or alignment, and simply adds additional weight to compensation cost as an ISS concern.

Pay-TSR Alignment (PTA) is poorly correlated with all three dimensions of pay for performance. Using the same sample of 15,860 pay leverage regressions, PTA has correlations of .02 with pay leverage, .02 with pay alignment and .10 with the pay premium at peer company average performance. The Multiple of Median (MOM) has a correlation of 0.46 with the pay premium at peer company average performance. The correlation with the pay premium at peer company average performance would be higher if the MOM were not based on just one year of data. If the MOM were calculated using three years of data, it would have a correlation of 0.59 with the pay premium at peer company average performance.

From this analysis, we can see that the three ISS measures are really cost, a proxy for cost and a third measure that is not correlated with any dimension of pay for performance.

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14.5% = (114.6%/100.1%)-1. 10.6% = (1.099/.994)-1.
Four Easy Ways ISS Can Improve Its Pay for Performance Model

1. **Adopt More Meaningful Measures of Leverage, Alignment and Cost**

   The slope, correlation and intercept from a regression of relative pay on relative performance provide much more meaningful measures of leverage, alignment and cost than RDA, PTA and MOM.

2. **Define Reasonable Trade-Offs Between Leverage, Alignment and Cost**

   ISS’s RDA measure incorporates a simple trade-off: one additional performance percentile justifies one additional pay percentile, but ISS does not recognize any trade-offs between RDA, MOM and PTA. Medium or serious concern on one measure is not offset by a positive value on another measure. It would be ideal if ISS could quantify the impact of leverage, alignment and cost on shareholder wealth and use that research to identify value enhancing trade-offs, but that could take several years. In the interim, ISS could use the distributions of leverage, alignment and cost to establish reasonable trade-offs. A weakness of the RDA approach is that the trade-off between additional pay and additional shareholder wealth changes as we go from one percentile to another. We propose that ISS use the inner quartile ranges for leverage, alignment and cost to establish trade-offs that are fixed, and hence, easier to incorporate in compensation program design.

   75th percentile pay leverage, based on 15,860 five year periods ending in 1996-2011, is 1.06 and 25th percentile pay leverage is -.28, so the inner quartile range is 1.34 (= 1.06 - -.28). We propose that ISS use half of the inner-quartile range as its metric to make trade-offs between leverage, alignment and cost. This standardized quartile is .67 for leverage, .41 for alignment and .42 for the pay premium at peer average performance. By simply counting up the “inner quartiles from average” across the three dimensions of leverage, alignment and cost, ISS can have a single summary measure of pay for performance that reflects consistent trade-offs between leverage, alignment and cost. This measure can be used to encourage all companies to improve their pay for performance, as well as to identify companies of high and medium concern. The table below shows the calculations for Disney and Fedex.

<table>
<thead>
<tr>
<th>Company</th>
<th>Quartiles from Average</th>
<th>Quartiles to Average</th>
<th>Median Pay Leverage</th>
<th>Half Of Leverage Quartiles From Average</th>
<th>Pay Pay Quartile From Pay Leverage</th>
<th>Half Of Alignment Quartiles From Alignment Pay</th>
<th>Pay Premium From Alignment Pay</th>
<th>Half Of Premium Quartiles From Premium Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISNEY (WALT)</td>
<td>-0.1</td>
<td>-0.89</td>
<td>0.37</td>
<td>0.67</td>
<td>-1.9</td>
<td>-0.36</td>
<td>0.28</td>
<td>0.41</td>
</tr>
<tr>
<td>FEDEXCORP</td>
<td>3.4</td>
<td>2.12</td>
<td>0.37</td>
<td>0.67</td>
<td>2.6</td>
<td>0.98</td>
<td>0.28</td>
<td>0.41</td>
</tr>
<tr>
<td>A+B+C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. **Adjust for Company Size Differences to Create Better Peer Groups**

   Smithfield Foods’s industry, Food Products (302020), has 22 companies in S&P’s Execucomp database, ranging in revenue size from Hain Celestial Group, with $917 million in revenue, to Archer-Daniels-Midland, with $61.7 billion in sales, but ISS would only use eight of these companies because the others fall outside its size parameters. As an accident of size, ISS includes companies that don’t compete with Smithfield Foods for talent, e.g., Rite Aid, and aren’t affected by the same economic factors. Using companies from the Consumer Staples sector outside the Food Products industry makes the calculated
pay premium at peer company average performance a poorer proxy for Smithfield’s true competitive position and calculated relative performance a poorer proxy for management’s contribution to shareholder value.

A statistical model of CEO pay in the Consumer Staples sector over the years 1996-2011 shows that there are significant pay differences across the six industries in the sector. On average, companies in the Food & Staples Retailing industry pay 59% less than Food Products companies, companies in the Household Products industry pay 8% more, companies in the Tobacco industry pay 17% more, companies in the Beverages industry pay 18% more and companies in the Personal Products industry pay 22% more.

ISS could eliminate the bias created by using companies outside Smithfield Foods’s industry by using all the companies in the Food Products industry, but adjusting each peer company’s pay for the size difference between the company and Smithfield Foods. A statistical model of CEO pay in the Food Products industry group shows that, on average, a doubling in company revenue size is associated with a 39% increase in CEO total compensation. This relationship implies that size difference between Archer-Daniels-Midland and Smithfield Foods is normally associated with a pay premium of 114%. Dividing actual 2010 CEO compensation at Archer-Daniels-Midland, $11.9 million, by 2.14 gives size adjusted CEO compensation of $5.6 million. Similarly, the size difference between Smithfield and Hain Celestial Group is normally associated with a pay premium of 238%. Multiplying actual 2010 CEO compensation at Hain Celestial Group, $4.6 million, by 3.38 gives size adjusted CEO compensation of $15.5 million. The median size adjusted CEO compensation of the 22 Food Products companies is $10.4 million. This is a more meaningful estimate of competitive pay than the median pay of similarly size companies that don’t compete for the same talent.

4. Give Examples of Simple Compensation Programs That Provide Perfect Pay for Performance

ISS has an explicit pay for performance model, but it doesn’t give examples of compensation programs that would achieve a perfect score in its model. Providing examples of compensation programs with perfect ratings is important because it makes it much easier for companies and investors to evaluate the reasonableness of the pay for performance model and for companies to adapt their compensation programs to achieve greater pay for performance.

If ISS were to adopt a pay for performance model based on leverage, alignment and cost calculated from a regression of relative pay on relative performance, it could easily present an example of a simple compensation program that achieves perfect alignment, a 0% pay premium at peer company average performance and any target level of leverage.

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13 The statistical model relates the natural logarithm of CEO pay to the natural logarithm of company revenue size. The coefficient of log revenue is 0.470. Taking the anti-log of the regression equation implies that CEO pay = constant x revenue$^{0.470}$. This implies that a doubling in revenue increases CEO pay by 39% since $2^{0.470} = 1.385$ and that the difference between Archer-Daniels-Midland revenue, $61.7 billion, and Smithfield Foods’s revenue, $12.2 billion, is normally associated with a pay premium of 114% since $(61.7/2.2)^{0.470} = 2.14$. 

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The simple pay program provides an annual grant of performance stock at the end of each year and has two critical features: (1) the target opportunity, or grant date value of the stock, is based on market compensation adjusted for relative performance since the start of the five year period, and (2) the stock vesting multiple is tied inversely to peer group performance since the date of grant. We’ll start with the assumption that target pay leverage is 1.0. Target compensation is equal to market compensation x [(1 + cumulative relative TSR)] and grant shares are calculated by dividing target compensation by the year end stock price. The vesting multiple at the end of year 5 is equal to 1/(1 + post-grant peer group TSR). Since the post-grant stock value can be expressed as grant value x (1 + TSRR) = grant value x (1 + relative TSR) x (1 + peer group TSR), the vesting post-grant stock value is equal to grant value x (1 + relative TSR) when the vesting multiple is 1/(1 + peer group TSR). While vesting occurs at the end of year 5, we use the peer group TSR at the end of each year to estimate the vesting multiple and use this projected vesting multiple to calculate mark to market compensation at the end of each year.

Chart 3 shows Smithfield Foods’s actual CEO pay (this is the same as Chart 1), while Chart 4 shows the perfect pay for performance program for SCT (Summary Compensation Table) Pay.

Charts 3 & 4

Chart 8 below shows that the simple pay program also provides perfect pay for performance for cumulative mark to market pay: perfect alignment, a 0% pay premium at peer company average performance and pay leverage of 1.0. The four tables in the Appendix show the supporting calculations for the perfect pay for performance program. Table 1 shows the calculation of target compensation and grant shares. Table 2 shows the calculation of vesting multiples. Table 3 shows leverage, alignment and pay premium at average performance for grant date pay. Table 4 shows leverage, alignment and pay premium at average performance for mark to market pay. The tables make the simplifying assumptions that market compensation is constant for all four years and that market compensation for mark to

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14 The program also works when the annual grant is at the start of each year.

15 Vesting post-grant stock value = grant value x (1 + TSRR) x vesting multiple = grant value x (1 + relative TSRR) x (1 + peer group TSRR) x 1/(1 + peer group TSRR) = grant value x (1 + relative TSRR).
market pay is equal to market compensation for grant date pay. For both grant date pay and mark to market pay, leverage is 1.00, alignment is 1.00 and pay premium at average performance is 0%. With slightly more complicated formulas for target compensation and vesting multiples, we can change the illustration to provide any desired level of leverage, while still maintaining alignment of 1.00 and a 0% pay premium at average performance.

ISS could also use this simple pay program to show the implications of alternative pay practices. For example, many companies set target compensation equal to market compensation regardless of past performance. Across a sample of 15,860 five year periods, this reduces median mark to market pay leverage from 1.00 to 0.64. Most companies also provide a substantial portion of target compensation in the form of non-performance pay, such as base salary. If non-performance pay is equal to 50% of target compensation and target compensation is equal to market compensation regardless of past performance, median pay leverage drops to 0.33. If we relax the assumption that market compensation is fixed and annually adjust market compensation for changes in peer group median pay, median pay leverage drops to 0.31.

**Two Additional Ways ISS Can Improve Its Pay for Performance Model**

With more effort, ISS can improve its Pay for Performance Model in two additional ways. First, it can use “mark to market” pay data to calculate pay leverage, pay alignment and pay premium at peer company average performance. Second, it can also take account of stock ownership to compute wealth leverage and wealth alignment.

1. **Calculate Leverage, Alignment and Cost Using “Mark to Market” Pay**

Changes in the value of unvested equity compensation contribute to top management’s incentive to increase shareholder value but are not captured in the “grant date” compensation values used by ISS. An alternative pay calculation that does capture changes in the value of unvested equity compensation is “mark to market” pay. Mark to market pay for a period is equal to the sum of the cash compensation earned during the period plus the ending value of the equity compensation awarded during the period. The ending value of equity compensation reflects both the ending stock price and the estimated vesting percentage for performance share awards. The target values of long-term incentive cash awards are also adjusted to reflect the estimated vesting percentage.

Once mark to market pay is calculated for a subject company and each of its peer companies, we can calculate median mark to market pay for the peer group and then use median mark to market pay to calculate relative mark to market pay, i.e., subject company mark to market pay divided by peer group median mark to market pay. We can then calculate leverage, alignment and pay premium at peer

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16 If we assume that market compensation for mark to market pay is constant, but greater than market compensation for grant date pay, mark to market pay leverage and pay alignment will still be 1.0, but the mark to market pay premium at peer company average performance will be negative.

17 If “target leverage” is desired leverage, target compensation = market compensation × (1 + cumulative relative TSR) / target leverage and vesting multiple = (1 + post grant TSR) / target leverage - 1 × (1/(1 + post grant peer TSR)) / target leverage.

18 O’Byrne, Stephen, Assessing Pay for Performance, Conference Board Director Notes DN-V3N19 (October 2011)
company average performance by regressing the natural log of relative mark to market pay on the natural log of relative shareholder wealth. Chart 5 plots relative mark to market (MtM) pay and performance for 2006-2010 for Smithfield Foods using log measures of relative pay and relative performance and also shows the regression trendline. Chart 6 shows the same data as a time series.

Charts 5 & 6

When we use mark to market pay, median pay leverage increases from 0.37 to 0.69 and median pay alignment increases from 0.28 to 0.67. In addition, the percentage of company-years with negative alignment drops from 34% to 17%. This provides more meaningful data for assessing pay for performance.

Mark to market pay shows that top management incentives are much stronger than grant date pay leverage would suggest. However, mark to market pay does not show that relative performance explains all, or even most, of the variation in relative pay. Relative performance explains more than half of the variation in relative mark to market pay in 47% of 15,860 five year periods and more than three quarters of the variation in 27% of the periods.

Chart 8 shows that the simple pay program also achieves perfect pay for performance in terms of mark to market pay. Chart 7 (which is the same as Chart 5) shows, for comparison, Smithfield’s actual mark to market pay leverage.

Charts 7 & 8
2. Take Account of Stock Ownership

Pay leverage based on market to mark pay gives a more meaningful picture of top management incentives than the grant date pay used by ISS. But market to market pay leverage is still an incomplete picture of top management incentive strength because it fails to take account of vested stock ownership. Relative mark to market pay can be expanded to relative wealth by adding (1) the value of year zero stock and option holdings and (2) the present value of expected future pay to the numerator and adding (1) the ending value of year zero stock and option holdings assuming the peer group median return and (2) the present value of expected future market pay to the denominator.

Conclusion

The ISS Pay for Performance Model is properly focused on the three basic dimensions of pay for performance – leverage, alignment and relative cost – but it fails to provide meaningful measures of leverage, alignment and cost. A simple regression trendline relating relative pay to relative performance gives us more meaningful measures of the three basic dimensions. The slope of the line is pay leverage, the intercept is the pay premium at peer company average performance, or relative cost, and the correlation of relative pay and relative performance is alignment. We have used the same data ISS collects to calculate slope, intercept and correlation for almost 16,000 five year periods and used these measures to assess the ISS measures of Relative Degree of Alignment (RDA), Multiple of Median (MOM) and Pay-TSR Alignment (PTA)

ISS’s Relative Degree of Alignment (RDA) is based on the norm that “pay percentile = performance percentile”. This norm implies a pay leverage target that is three times greater than actual pay leverage, but ISS does not explain why all companies should have the same pay leverage nor why average pay leverage should be three times greater than it is now. ISS’ RDA measure, a weighted average of [performance percentile – pay percentile] for one and three year periods, has close to zero correlation with individual company pay leverage. It does, however, have a significant correlation with relative cost, so it really provides a second measure of cost rather a meaningful measure of leverage. ISS’s Pay-TSR Alignment uses the difference of two regression slopes to measure whether pay and performance are “directionally aligned”. This difference has zero correlation with individual company alignment. ISS’s cost measure, Multiple of Median (MOM), uses just one year of data and doesn’t adjust for performance. It has a correlation of only 0.46 with the pay premium at peer company average performance.

ISS can make four easy changes to greatly improve its Pay for Performance Model. First, calculate leverage, alignment and relative cost from a regression of relative pay on relative performance using the five years of data it already collects. Second, define reasonable trade-offs between leverage, alignment and cost. Third, change its peer group analysis to statistically adjust pay for differences in company size. This will ensure that peer groups include labor market competitors, not companies that fall in the same broad industry sector but don’t compete for the same talent. Fourth, give examples of simple compensation programs that provide perfect pay for performance. Examples will make it much easier
for companies and investors to understand the pay for performance model and for companies to adapt their compensation programs to achieve greater pay for performance.

With more effort over the long term, ISS can significantly improve its Pay for Performance Model by using “mark to market” pay to measure pay leverage and by using mark to market and stock ownership to calculate wealth leverage.

**Appendix: Illustration of Perfect Pay for Performance**

**Table 1: Calculation of Target Compensation and Stock Grant Shares**

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Compensation ($000)</th>
<th>Company Stock Price</th>
<th>Company Wealth Ratio</th>
<th>Peer Group Wealth Ratio</th>
<th>Target Compensation ($000)</th>
<th>Stock Grant Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>26.90</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td>7,844</td>
<td>256.6</td>
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<tr>
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<td>7,959</td>
<td>30.57</td>
<td>1.14</td>
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<tr>
<td>2007</td>
<td>7,959</td>
<td>28.68</td>
<td>1.07</td>
<td>1.06</td>
<td>7,844</td>
<td>256.6</td>
</tr>
<tr>
<td>2008</td>
<td>7,959</td>
<td>8.64</td>
<td>0.32</td>
<td>0.69</td>
<td>3,718</td>
<td>430.3</td>
</tr>
<tr>
<td>2009</td>
<td>7,959</td>
<td>18.74</td>
<td>0.70</td>
<td>1.01</td>
<td>5,497</td>
<td>293.3</td>
</tr>
<tr>
<td>2010</td>
<td>7,959</td>
<td>23.56</td>
<td>0.88</td>
<td>1.31</td>
<td>5,331</td>
<td>226.3</td>
</tr>
</tbody>
</table>

Target total compensation = market total compensation x company relative wealth ratio

**Table 2: Calculation of Vesting Multiples**

<table>
<thead>
<tr>
<th>Year</th>
<th>Stock Grant Shares (000s)</th>
<th>Projected Vesting Multiple 2006</th>
<th>Projected Vesting Multiple 2007</th>
<th>Projected Vesting Multiple 2008</th>
<th>Projected Vesting Multiple 2009</th>
<th>Projected Vesting Multiple 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>256.6</td>
<td>1.00</td>
<td>1.08</td>
<td>1.68</td>
<td>1.14</td>
<td>0.88</td>
</tr>
<tr>
<td>2007</td>
<td>278.4</td>
<td>1.00</td>
<td>1.55</td>
<td>1.05</td>
<td>0.81</td>
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<tr>
<td>2008</td>
<td>430.3</td>
<td>1.00</td>
<td>0.68</td>
<td>0.53</td>
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<tr>
<td>2009</td>
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<td></td>
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<tr>
<td>2010</td>
<td>226.3</td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

Stock Price 30.57 28.68 8.64 18.74 23.56
Stock Value 7,844 15,968 11,154 21,988 26,656

Projected vesting multiple = 1 / (1 + peer group return)
### Table 3: Leverage and Alignment of Annual Grant Date Pay

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Compensation ($000)</th>
<th>Total Compensation ($000)</th>
<th>Company Relative Wealth Ratio</th>
<th>Ln Relative Pay</th>
<th>Ln Relative Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>7,959</td>
<td>7,844</td>
<td>0.99</td>
<td>-0.015</td>
<td>-0.015</td>
</tr>
<tr>
<td>2006</td>
<td>7,959</td>
<td>7,844</td>
<td>0.99</td>
<td>-0.015</td>
<td>-0.015</td>
</tr>
<tr>
<td>2007</td>
<td>7,959</td>
<td>7,984</td>
<td>1.00</td>
<td>0.003</td>
<td>0.003</td>
</tr>
<tr>
<td>2008</td>
<td>7,959</td>
<td>3,718</td>
<td>0.47</td>
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<td>-0.761</td>
</tr>
<tr>
<td>2009</td>
<td>7,959</td>
<td>5,497</td>
<td>0.69</td>
<td>-0.370</td>
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<tr>
<td>2010</td>
<td>7,959</td>
<td>5,331</td>
<td>0.67</td>
<td>-0.401</td>
<td>-0.401</td>
</tr>
</tbody>
</table>

Grant Date Pay Leverage 1.000
Grant Date Pay Alignment 1.000
Grant Date Premium at 0.000

**Peer Group Average Performance**

### Table 4: Leverage and Alignment of Cumulative Mark to Market Pay

<table>
<thead>
<tr>
<th>Year</th>
<th>Cumulative Market Compensation ($000)</th>
<th>Cumulative Stock Value ($000)</th>
<th>Company Relative Wealth Ratio</th>
<th>Ln Relative Mark to Market Pay</th>
<th>Ln Relative Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>7,959</td>
<td>7,844</td>
<td>0.99</td>
<td>-0.015</td>
<td>-0.015</td>
</tr>
<tr>
<td>2006</td>
<td>15,918</td>
<td>15,968</td>
<td>1.00</td>
<td>0.003</td>
<td>0.003</td>
</tr>
<tr>
<td>2007</td>
<td>23,877</td>
<td>21,988</td>
<td>0.69</td>
<td>-0.370</td>
<td>-0.370</td>
</tr>
<tr>
<td>2008</td>
<td>31,836</td>
<td>26,656</td>
<td>0.67</td>
<td>-0.401</td>
<td>-0.401</td>
</tr>
<tr>
<td>2010</td>
<td>39,795</td>
<td>26,656</td>
<td>0.67</td>
<td>-0.401</td>
<td>-0.401</td>
</tr>
</tbody>
</table>

Mark to Market Pay Leverage 1.000
Mark to Mark Pay Alignment 1.000
Mark to Market Premium at 0.000

**Peer Group Average Performance**