

Methodology

ERI's Executive Compensation Assessor®

ERI Economic Research Institute was founded over 30 years ago to provide compensation applications for private and public organizations. ERI's applications are available to management, analysts and consultants and are now widely used by client organizations. Subscribers include corporate compensation, relocation, human resources, and other professionals, as well as independent consultants and counselors, and US and Canadian public sector administrators (including military, law enforcement, city/county, state/provincial, and federal government pay administrators).

ERI compiles the most robust salary, cost-of-living, and executive compensation survey data available, with current market data for more than 1,000 industry sectors. The majority of the Fortune 500 and thousands of other small and medium sized organizations rely on ERI data and analytics for compensation and salary planning, relocations, disability determinations, board presentations, and setting branch office salary structures in the United States, Canada, and worldwide.

ERI is a leader in the collection and analysis of compensation, occupation, and cost-of-living data. All data are employer-provided and come from a variety of sources. Survey data are collected through internally conducted salary surveys and the purchase of salary surveys from survey vendors. Additional data are gathered through the digitization of Proxy and 10-K data and Freedom of Information Requests in the US. Compensation data are compiled in terms of mean and median salaries for jobs of similar duties, responsibilities, skills, and functions through an extensive job matching process. ERI produces surveys and application analyses by which managers, advisors, and Boards of Directors may make recommendations and/or decisions. ERI does not provide fee-for-service consulting; our sole focus is providing valid and reliable information to our subscribers.

Overview

Subscribers to ERI's **Executive Compensation Assessor® & Survey (XA)**, include publicly-traded and privately-held corporations, forensic accountants, various United States government agencies, accountants, attorneys, and other professionals. ERI has been a provider of executive data since 1986 and its databases have grown to include over 14,000 publicly traded corporations in the US and Canada, as well as all presently reporting UK and Euro publicly-traded companies (~1,200), plus available executive compensation survey data. Data for Canada is provided in information circulars, while data from UK and European organizations is provided in annual reports, all manually and digitally extracted. XA offers subscribers the largest available database of executive salary, incentive and benefit data for for-profit organizations. Its companion product, ERI's **Nonprofit Comparables Assessor**, is also the largest database for nonprofit organizations. Together, they allow subscribers to analyze and review source documents on over 20 million job incumbents.

Additional applications of executive compensation analyses occur in areas relating to corporate valuations (where owner/manager compensation affects stock value), estate planning, appraisals (S2000), charitable gifts (S170), buy/sells (S2073), ESOP feasibility studies, reasonable compensation, accumulated earnings, dissolution proceedings and other litigation, and insurance funding.

XA provides subscribers with the ability to analyze precise valuations of market pay. This application product is the only source of its kind that analyzes data compiled from all publicly available executive compensation surveys and all available US SEC DEF 14A "proxy" statements. (Annual reports and information circulars for the UK/Europe and Canada, respectively.) XA application assists with the assessment of an organization's executive compensation competitiveness, customized by geographic area, industry, organizational size and date.

This program was initially created in 1988 at the request of the U.S. National Appraisal Services Office for assessment of the reasonableness of owner/manager compensation. In recent years tax authorities have refocused its interest regarding over/under-compensation within privately-held corporations because:

- Owner compensation reduces corporation profits.
- Owner under-compensation affects payroll tax contributions.

For publicly-traded corporation operating in the U.S. (and affecting corporations world-wide), the Year 2002

saw the advent and impact of the Sarbanes-Oxley Act in the United States, where the annual documentation of the rationale for the level of salary and incentive paid an executive team, utilizing comparable organization data that can quickly and easily be attached to Compensation Committee Minutes, became advisable. Sourcing this data to a research firm like ERI should provide some additional protection because ERI does not provide services as defined in the Act (Title II - Sec. 201) including:

- accounting or auditing
- financial design or systems
- appraisal or valuation
- actuarial services
- internal audit
- outsourcing
- management consulting
- human resources consulting
- group insurance consulting
- life insurance agency
- insurance brokerage
- securities brokerage
- advisor
- legal services

US Intermediate Sanctions for nonprofits is covered in the Methodology for the **Nonprofit Comparables Assessor** but is noted here as worthwhile reading for those in the private sector. These new 2004 regulations include provisions for fines for those involved in the planning and oversight process, even if not recipients, and go beyond Sarbanes-Oxley in scope and concept. Additional recommended reading includes the issues involved with stockholders denying approval of GlaxoSmithKline's executive compensation practices in early 2003. Many believe the UK has set a precedent that will be world-wide in application.

Methodology

There is no magic behind the methodology of **XA**. XA analyses begin by utilizing a simple combination of weighted averages. Assume that ERI has collected two surveys that report average and median pay (and ranges) for the job of Chief Human Resources Officer in small companies of the same size. If one survey reports \$50,000 in pay based on 100 survey incumbents and the second reports \$40,000 based on 10 survey incumbents, the overall weighted average is thus $[(50,000 \times 100) + (40,000 \times 10)] / (100 + 10) = \$49,090.90$. This is a recombined weighted average.

Executive compensation surveys, however, are most often expressed in the form of regression equations, which allow results to be compared according to the size of an organization within an industry grouping. In this case, each point on the trend line can be considered to be an estimated weighted average for each size dimension. Historically, ERI has combined these equations (weighting each survey by its sample size) utilizing case weights and polynomial combinations. Standard errors, as reported, are also combined and modeled into an overall average standard error.

The XA methodology was greatly enriched in 1994 when US management compensation practices became part of the public domain and in 2002 when UK management compensation practices became part of the public domain (via the Internet), allowing programs to mechanically read executive data points. With the advent of the ability to download salary and incentive data for over 14,000 public companies via the SEC's database (10,000 active SEC companies with 4,000 additional companies on file that no longer report) or available Annual Reports, it became possible to add this data (in separately derived equations as if the SEC were a survey unto itself) to XA's equations. The SEC's 14,000 public companies' proxies are at least 10 times the number of participants found in any other existing executive compensation survey. The breadth of this data greatly affects the results available.

Sample Frame Size

XA represents the end result of ERI's analyses of three primary sources of executive compensation data: (1) third-party salary surveys, (2) DEF 14A SEC filings and (3) annual reports and information circulars (for the UK/Europe and Canada respectively). Therefore, XA represents the most robust database available. Via XA, the total population of publicly-traded corporations is instantly available for comparison purposes (e.g., the number of corporations reporting salaries and incentives for Chief Executive Officers numbers over 9,400

from studied proxies beginning in 1994.) Thus, the Sample Frame Size for executive jobs includes an actual count of identifiable individuals by industry (this count includes only publicly-traded stock). UK/Europe corporations number almost 1,000 each, while Canada has over 1,400 companies reporting executive compensation data.

As mentioned above, **ERI's** polynomial regression analyses methodology involves averaging reported salary survey data that includes pre-weighted average salary data. XA's calculations cut regression lines through survey data, with each line always passing through the Survey Mean of the x and y axis generating a line of least squares (the line of central average tendency). XA's sample frame size contains data contributed directly to ERI by employers of executives and executives themselves. These results are compared to and blended with SEC data (in the US) as well as surveys published by private industry. Thus, ERI's survey population sample size (in the US) is always SEC data plus collected published surveys; averages are proportionately weighted by "n." Again, the "# of companies" shown on XA's Survey and Proxy Analyses chart solely represent those publicly-traded corporations that are factored into a particular analysis as selected by the user. Specific values from other surveys cannot be shown due to copyright restrictions. XA application provides the added value of the consolidation of all other available data into a single database. Data extracts of actual proxies can be reviewed within the program itself, permitting direct independent verification of our variance statistics which are based solely on those publicly-traded corporation that are factored into the particular analysis as chosen by the user.

Interactive Graph

Via the "**Survey & Proxy Analyses**" graph feature of XA, users can analyze specific executive jobs that exist for the industry and corporate revenue selected. Each dot represents the compensation paid from a publicly-traded corporation for the job selected. It is important to note that should few dots appear on the graph, ERI may nonetheless have compiled a significant amount of compensation data for that particular regression analysis from private surveys sources, despite there being few publicly-traded corporations that report compensation for the range selected. Also, ERI provides a disclaimer when a lack of sufficient data precludes a reasonable estimation of compensation and when fewer than three publicly-traded corporations report compensation for a particular analysis. For purposes of persuading a trial judge, acting as gatekeeper regarding the admissibility of evidence, (see more below), each user should closely match the eSIC code to the specific industry code in question.

Ranges, Minimums, Maximums

ERI calculates the minimum and maximum ranges for each job based upon calculations using a standard error. Each job is stored data-wise as a polynomial regression equation that passes through points (weighted averages of collected surveys) with a horizontal axis described in terms of the effective date of the survey. Jobs that begin with the words "Director", "Top", and/or "Chief" utilize a size related X-axis. In these cases (also true for Officers and Controllers), the jobs are size sensitive and are related to either the assets, revenue, fiscal year budget, and/or numbers of employees found within an organization. Corporate revenue is the most common size criteria, but the size dimension found to be most statistically accurate for that industry will always be applied.

Key to ERI's methodology is the smoothing effect created by polynomial regression equations for each job, drawn across an X-axis of the organization's size most commonly measured by revenue. This allows ERI to smooth the impact and vagaries of any one survey that may report data in error or be highly affected by an abnormal survey population and/or sample size that may occur from year to year. This use of a polynomial equation for each job also allows ERI to smooth out fluctuations caused by diverse surveys that do not have consistent methodology between areas, from year to year and/or in their data questionnaires and analyses. Also, after reviewing the data from a new survey, ERI sometimes qualitatively devalues a survey and in some cases, does not find the data believable and drops the survey's inclusion in total (e.g. surveys, for example, that are conducted by recruiting firms oftentimes show selectively inflated numbers due to the conflict of interest inherent in promoting high salaries to potential employers and the corresponding increased commissions based upon higher than realistic competitive norms for executives).

Definition of Salaries

ERI maintains a common definition of wages and salaries in its analyses of salary surveys. The definition of a wage is straight-time gross pay, exclusive of bonus, commission and other current-year variable cash incentives. For executive compensation profiles, ERI assumes that surveys report the same definition of

salary as that found in SEC proxy reporting or Annual Report releases (e.g., annual direct bonuses are reported separately). Executive jobs are exempt from overtime requirements and thus are typically paid for the achievement of results regardless of the number of hours required to achieve those outcomes. It should be noted that most executives work far more than simple forty-hour weeks but some highly-paid executives are nevertheless still able to maintain superior business productivity despite working relatively short work weeks.

Survey Mean Salary

The Survey Mean salary is the estimated total salaries of an occupation divided by its estimated employment as described in a polynomial regression equation.

Median Salary

The median salary is the middle rate in a rank-ordered scale, the estimated 50th percentile of the distribution of salaries; 50% of executives in an occupation earn salaries below the median salary, and 50% earn salaries above the median salary. ERI provides an estimate of what this median might be (using a formula, actual numbers are not stored) and the relationship that exists.

Maximum Reasonable Compensation

The Survey & Proxy Analyses table displays total cash estimates (incentive + salary) with maximum reasonable compensation limits for an organization's 15 top jobs (collected/combined and analyzed from SEC proxy reporting or Annual Report Releases and/or management compensation surveys).

The Executive Compensation Assessor allows quick review of summary proxy data extracts for a direct comparison of XA application database calculations with industry matches of actual compensation, as well as downloads of the actual raw data sources (the proxies and 10-Ks themselves).

Long Term and Other Compensation

Since 2005, **XA** has utilized SEC definitions in reporting data for stock awards, option awards, non-equity incentive plan compensation, change in pension value and non-qualified deferred compensation earnings, and other executive compensation vehicles. These equity awards and other compensation calculations are based solely on ERI's analysis of SEC data. Conversely, ERI's estimate of base salary, incentive, and total cash compensation is based on ERI's combined analysis of the three data sources described above.

Total Cash

The Total Cash compensation amount is defined as the sum of direct salary plus incentive. Amounts shown represent the averages of executives within a specific industry grouping, such as the eSIC/NAICS/usSEC industry or the ukSIC (with an extra digit added to Europe's NACE codes). Note that the IRS used PBA/ Principal Business Activity codes to determine comparison industries, rather than SIC/ Standard Industry Codes until adoption of the NAICS code in 1998. The SEC, not being under the mandate for governmental statistical agencies to convert to the NAICS, still continues to use an abbreviated, SEC specific, 445 SIC-like coding system; see more below. Each Assessor Series® application database report prints out the ERI crosswalk for these codes. Note: Some of the data utilized in ERI's application product(s) have been supplied to ERI by MGFS, Inc. under a Distributor [License] Agreement, and MGFS retains all proprietary rights in that data. As to that data, THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF ANY KIND. Also, if this product is used for Canada, UK and Euro Zone countries, may include reference to the respective countries' national statistics offices that have leased underlying data to ERI. Government rights are listed in the applications and are limited pursuant to various lease agreements as therein described.

Note: Tool tips can be found on the column headers of the Survey & Proxy Analyses main grid. These are in the form of small question marks that, when clicked, display specific working definitions of each compensation element.

Comparable Companies

A list of comparable companies can again be found below the main table on the Survey & Proxy Analyses tab. Icons next to each company name allow for quick access to source proxy and 10-K statements.

Compensation Comparables

The Compensation Comparables tab allows users to create customized lists of individual executive compensation observations tied directly to same-year company performance metrics. This process is designed to reinforce the regression-based estimates generated elsewhere in the product using similar exclusion criteria. Because person-level executive information is displayed here, only publicly-traded companies will be available for this analysis. Compensation Comparables is also only available for those companies in the United States or Canada.

Selection of Jobs and Matching of Comparable Jobs

ERI utilizes a proprietary and customized form of contextual text mapping (Semantic Analysis) in the collection of data and the selection of comparable jobs using the Search String field in the Enter New Job function. ERI **Assessor Series**[®], the **eDOT Project**, ERI Internet applications and Distance Learning Center use Semantic Analysis* for advanced skill set matching. This new methodology allows a subscriber to specifically define job function, related skills and experience by typing in descriptive words (or job title).

*The effectiveness of contextual text mapping (Semantic Analysis) requires a universe of prose in which to operate. ERI's library of copyrighted descriptions, its eDOT Project (patent pending), historical library of competitive compensation information (since 1986), Internet mining (with CareerJournal and other job boards), and study of work (PAQ data since 1974), create a unique, not duplicated, universe of data for creating competitive salary estimates, job availability assessments, and updating of the **enhanced Dictionary of Occupational Titles**[™] job demands. Others may claim they use Semantic Analysis, but none can duplicate the breadth of data accessed by ERI.

Semantic Analysis allows subscribers to benchmark their rates against the most current data available. All **Assessor Series**[®] and **eDOT** databases are updated on a real time basis with the ERI fileservers gathering data at the rate of over 2.5 million unique inputs a month, meaning some data elements are changed and improved every second.

Determination of Maximum Reasonable Compensation

Tax authorities invariably analyze external data when analyzing the reasonableness of executive compensation arrangements. Maximum reasonable compensation is the highest amount of cash compensation provided by similar organizations, in similar industries for similar performance under comparable circumstances which is expected to be defensible as the upper threshold of deductible compensation. ERI developed a definition of maximum reasonable compensation in terms of the standard error of the distribution of compensation for comparable executives. For years, this deviation was set at 3.01 standard errors, however, in late 2003, this amount was lowered to 2.0 standard errors. Very similar to the standard deviation, the standard error represents the range of pay in which one might find approximately 90% of the population in a skewed distribution.

Retrieve Full DEF-14A Proxies & Full 10-Ks (or Annual Report or Information Circular)

The Executive Compensation Assessor allows users access ERI's library of proxies, 10-Ks, summary compensation tables and appraisal norms, allowing you to retrieve more extensive data on that corporation. XA accesses current and historical SEC filings and quickly extracts these compensation related documents. Proxies include a detailed breakdown of the compensation paid to the Chief Executive Officer, Chief Financial Officer, and the three other most highly compensated executive officers; 10-Ks provide data relating to size dimensions (i.e., revenue, assets, and/or fiscal year budget). Full 10-K datasets can be quickly downloaded and printed out as well.

Variance Statistics - A Note for U.S. Expert Witnesses

Over a hundred surveys may contribute to a given analysis, making our data very robust. As the sample size increases the reliability of the data increases. However, to complicate matters, in the majority of cases, salary surveys do not report a standard error. The calculation for standard errors and standard deviations has the "n" count of participants in the denominator. Typically, the higher the number of observations, the

lower the reported standard error. The Standard Errors shown in the Variance Statistics may be considered to be the maximum that exist for the XA application due to the conservative approach to participant counts described in the next section (*Calculation of Populations*). The top six executive jobs include independently calculated standard errors, while lower-level management jobs may include the U.S. reported Relative Standard Error.

Calculation of Populations

Populations shown are the number of publicly-traded corporations applicable to any particular subscriber scenario. Source organization names can be found in the bottom pane of the Survey & Proxy Analysis tab, and the accompanying executive compensation is graphically presented via "dots" on the graph from the same tab. If a dot is clicked, XA will display summary compensation information for executives at the corresponding source company. Because other surveys may report on the same company (that is, two competing surveys would sample the same population), reporting other surveys total counts would assure double, triple, and even higher redundant counting. Because of this, ERI limits its reported counts to downloaded cases from the actual SEC data so that the user can immediately verify the publicly-reported compensation data presented pursuant to the search parameters of the size and industry code match criteria documented in the Data That Affects Salaries section.

Industry

ERI utilizes an **enhanced Standard Industrial Classification (eSIC)** code based on the U.S. SIC structure. These codes are then cross-walked to the North American Industrial Classification System (NAICS) and the Securities & Exchange Commission's Standard Industry Classification (usSEC).

Data Plots

The plot of dots found in XA are actual data plots as derived from proxy compensation extracts of enterprises whose industry code matches the code specified. As defined on the Graph Screen, the precise number of additional individual discrete private employers (including private corporations, partnerships, sole proprietorships, etc.) contributing input to the pay figures shown in the tabular summaries cannot be determined from the non-public survey sources. Only the identities and counts of public corporations can be exactly determined. Nonetheless, in over a decade of research, ERI has found no discernable differences in the cash compensation practices of public and private corporations; the reality is that private executives are quick to emulate the practices of their public rivals, using the compensation practices of public firms to justify the same practices in their private enterprises.

Placing the cursor over a dot identifies the values; clicking a dot brings up the entire source document.

ERI Statement as to the Relevance and Reliability of Data

Relevance is totally determinable by the circumstances and situation presented. **ERI** provides outsourced analyses and presentations of salary, executive compensation, benefit, and cost of living survey data.

Reliability is described in a non-exclusive summary:

Subject to Publication and Peer Review

ERI's peers are its competitors, those firms that also provide data analyses to their clients. Unlike **ERI**, which solicits an annual subscription, most compensation and benefit consulting firms charge an hourly rate for their research services. **ERI** data are used by these firms in their consulting with their clients. **ERI** data and analyzes are under constant review and critique by its competitors. **ERI**, unlike these firms, provides no fee-for-service/time consulting.

Known or Potential Rate of Error

Each **Assessor Series** application database illustrates via a Variance Statistics link, the beginning of a statistical overview of **ERI** data. Statistics are reported as derived from just one survey source for all salary and compensation presentations (so that copyright restrictions are not violated). **ERI** accumulates many survey sources to compile its analyses. Hence the data illustrated may be, in **ERI's** estimate, considered to be the highest possible standard error that might exist with each analysis. **Assessor Series** application database results are, by logic, more robust than the standard error displayed and reported.

General Level of Acceptance within the Discipline's Community

Thousands of subscribers send money each year to purchase their subscriptions to **ERI** analyses. Special

extracts of **ERI** databases are purchased annually by large organizations. **ERI** exhibits at major tradeshows (e.g., WaW and SHRM). ERI data is used as source data by major publications and job boards. WorldatWork, NASBA, and HRCI accept ERI Distance Learning Center courses for professional maintenance and recertification continuing education credit. Major U.S. employers rely upon ERI data as cited in corporate proxy filings (see <http://www.erieri.com/ExecutiveCompensationProxyData>).

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