ECONOMIC RESEARCH INSTITUTE

Developing a Competitive Salary Structure

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A competitive salary structure should be based on a well-designed Compensation Strategy that is thoughtfully linked to an organization's Total Rewards Strategy, Human Resources Strategy, and Business Strategy. This will support the organization in executing its annual operating plan and the ability to attract, retain, motivate, and engage employees.

Business Strategy

Human Resources Strategy

Total Rewards Strategy

Compensation

Benefits

Recognition

Performance Management

Work-Life Effectiveness

Career Development

Consider this example of a simplified Compensation Strategy within the Total Rewards Strategy:

SIMPLIFIED COMPENSATION STRATEGY - EXAMPLE

Top management approves global Total Rewards programs as managed by the Corporate Total Rewards team:

- Global market pricing

- Global salary grades

- Salary structure based on a July 1 lead-lag strategy

- Short- and long-term performance-based incentive plans

- Total cash compensation managed at the following market positions when the business meets 100% of its annual goals and objectives:

    - Executive - 75th percentile of national market for the defined industry*

    - Professional/Management - 50th percentile of regional market for the defined industry or all industries combined

    - Administrative/Operative - 50th percentile of local market for all industries combined

        *Approved by the Compensation Committee of the Board of Directors

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Your top management's approval of the Total Rewards Strategy and Compensation Strategy will drive company-wide support of key compensation programs. A Compensation Strategy will ensure organizational consistency in key compensation programs throughout a business and also among complex, global operations and acquired businesses.

Building a sound compensation program, including your salary structure, will support successful pay transparency and should include these seven important objectives:

There are eight major steps towards developing a market-based salary structure:

1) Participate in three or more salary surveys including the desired industry, location, and jobs.

2) Collect internal data and salary survey results.

3) Identify and match benchmark internal jobs to external marketplace using job documentation.

4) Develop an external market summary and age the survey results to your desired salary structure date.

5) Summarize external market further and rank (low to high) the results for base salary and/or total cash compensation (TCC). Group data by desired salary grades and internal job titles.

6) Develop proposed salary structure using one of the following approaches:
   - Manual Excel approach
   - Excel RATE formula
   - Straight-line regression formula
   - Curved-line regression formula

7) Slot the remaining non-benchmark jobs into the structure.

8) Develop compa-ratio report to determine effectiveness and costs for implementation.

As you design your salary structure, it is important to consider all forms of cash compensation. Over 80% of companies develop their salary structures based on base salary, but almost 15% of companies develop their salary structures based on total cash compensation. Although the vast majority of companies tie their salary structures to base pay, it is important not to lose sight of market competitiveness for total cash compensation or total direct compensation when designing your salary structure.

Base Salary

+ Short-Term Incentives (typically 1 year or less outlook)

= Total Cash Compensation

+ Long-Term Incentives (typically 2-5 year outlook)

= Total Direct Compensation

So, how many salary structures will you need for your business? Each country has a unique labor market, tax system, and benefit plans, so will require its own salary structure. Also, most companies will use separate salary structures for the following employee types:

• Executive/professional/management

• Administrative/operative

Executives, sales, and technical jobs such as Engineers are commonly managed to their own salary structures as well. Different compensation strategies, labor markets, incentive plans, unionization, job types, and job evaluation methodologies can all influence the need for separate salary structures.

External Market Summary

The External Market Summary on the following page is a sample format for documenting survey results for benchmark jobs from the external marketplace. Three or more surveys should be assessed when building a salary structure. When using Excel to build an External Market Summary, you may wish to format the surveys horizontally to better allow for built-in formulae and pivot tables for ease of calculations.

DATA AGED TO _____

COMPANY / **MARKET**

SALARY GRADE	JOB TITLE	WORK LOCATION	COMPANY JOB CODE	COMPANY SCOPE	SURVEY NAME		SURVEY DATE	SURVEY JOB TITLE	SURVEY JOB CODE	# COS	#EES	SURVEY SCOPE	SURVEY MATCH	BASE	TCC	% WEIGHT IF APPLIC	% AGING	AGED BASE	AGED TCC
						1													
						2													
						3													
						4													
							AVERAGE												
						1													
						2													
						3													
						4													
							AVERAGE												
						1													
						2													
						3													
						4													
							AVERAGE												

Once the external marketplace has been summarized and analyzed, the Average Aged Base Salary for each job can be placed in low to high order. The Average Aged Total Target Compensation can also be displayed. This will support in developing the hierarchy of the organization and assigning salary grades to each job. Ideally, the management/professional progression from salary grade to salary grade typically should be between 10 and 15%. The administrative/operative progression should be between 5 and 10%. The progression of market data can vary depending on industry, type of job, and level of job. Once the average market data for the benchmark jobs has been summarized in low to high order, comparable jobs and pay rates should be grouped together and an average aged base salary calculated. Salary grades can then be added to the example professional/management/executive hierarchy as displayed in the table below:

Summarized Market Data by Salary Grade

Salary Grade	Aged Base
1	$61,882
2	$66,566
3	$74,182
4	$86,800
5	$96,500
6	$105,000
7	$118,000
8	$139,143
9	$160,291
10	$188,000
11	$227,958

So, how many salary grades should be used for your professional/management/executive jobs? This typically depends on the size and type of business. In general, 10 to 12 grades will work for a smaller business, and up to 18 grades will work for a company of up to 5,000 employees. The business in our hypothetical example assumes a start-up operation based on annual revenue of $5 million.

A market-competitive salary structure can now be developed. The following three different approaches will be evaluated for the design:

• Excel RATE Formula

• Straight Line (Linear) Regression Formula

• Curved Line (Exponential) Regression Formula

Excel Rate Formula

The Excel RATE formula can be used to calculate the recommended percent progression from midpoint to midpoint. This can easily be done by inserting the desired number of salary grades, the desired lowest midpoint, and the desired highest midpoint into the formula. Using the Salary Grades and Aged Base Salary market data above, the formula suggests that 13.92763% be used as the Midpoint % Progression for the preceding set of numbers.

=RATE((Number of Salary Grades – 1),0,(Desired Lowest Midpoint*-1),Desired Highest Midpoint,1)

=RATE((11-1),0(61882*-1),227958,1)

13.92763%=RATE or Midpoint % Progression

The 13.92763% midpoint progression can be calculated by multiplying the Salary Grade 1 midpoint of $61,882*(1+.1392763) to attain the midpoint for Salary Grade 2. Each midpoint afterwards can be calculated by multiplying each result by (1+.1392763) until the top of the structure has been reached.

Midpoint % Progression	13.92763%
# of Grades	11
Lowest Midpoint	61882
Highest Midpoint	227958

Salary Grade	Midpoint
1	$61,882
2	$70,501
3	$80,320
4	$91,506
5	$104,251
6	$118,771
7	$135,313
8	$154,159
9	$175,629
10	$200,090
11	$227,958

The results can be applied to a table which displays the RATE driven midpoint with a sample salary structure using a 50% salary range spread with 80% = minimums, 100% = midpoints, and 120% = maximums. The suggested salary structure can be compared with the original Aged Market Data to assess how well the structure fits the original market data.

Pay Grade	RATE Driven Midpoint	% Progression	Salary Structure (50% Range Spread)			Orig Data	% Diff
			Minimum 80%	Midpoint 100%	Maximum 120%		
1	61,882	--	49,520	61,900	74,280	61,882	0.0%
2	70,501	13.92763%	56,400	70,500	84,600	66,566	5.9%
3	80,320	13.92763%	64,240	80,300	96,360	74,182	8.2%
4	91,506	13.92763%	73,200	91,500	109,800	86,800	5.4%
5	104,251	13.92763%	83,440	104,300	125,160	96,500	8.1%
6	118,771	13.92763%	95,040	118,800	142,560	105,000	13.1%
7	135,313	13.92763%	108,240	135,300	162,360	118,000	14.7%
8	154,159	13.92763%	123,360	154,200	185,040	139,143	10.8%
9	175,629	13.92763%	140,480	175,600	210,720	160,291	9.6%
10	200,090	13.92763%	160,080	200,100	240,120	188,000	6.4%
11	227,958	13.92763%	182,400	228,000	273,600	227,958	0.0%

Although we have attained a fixed percent progression from midpoint to midpoint, the market does not follow a fixed progression. The RATE formula produces salary range midpoints in excess of the marketplace for the majority of the entire salary structure.

It is appropriate to review other salary structures to see if there is a closer fit.
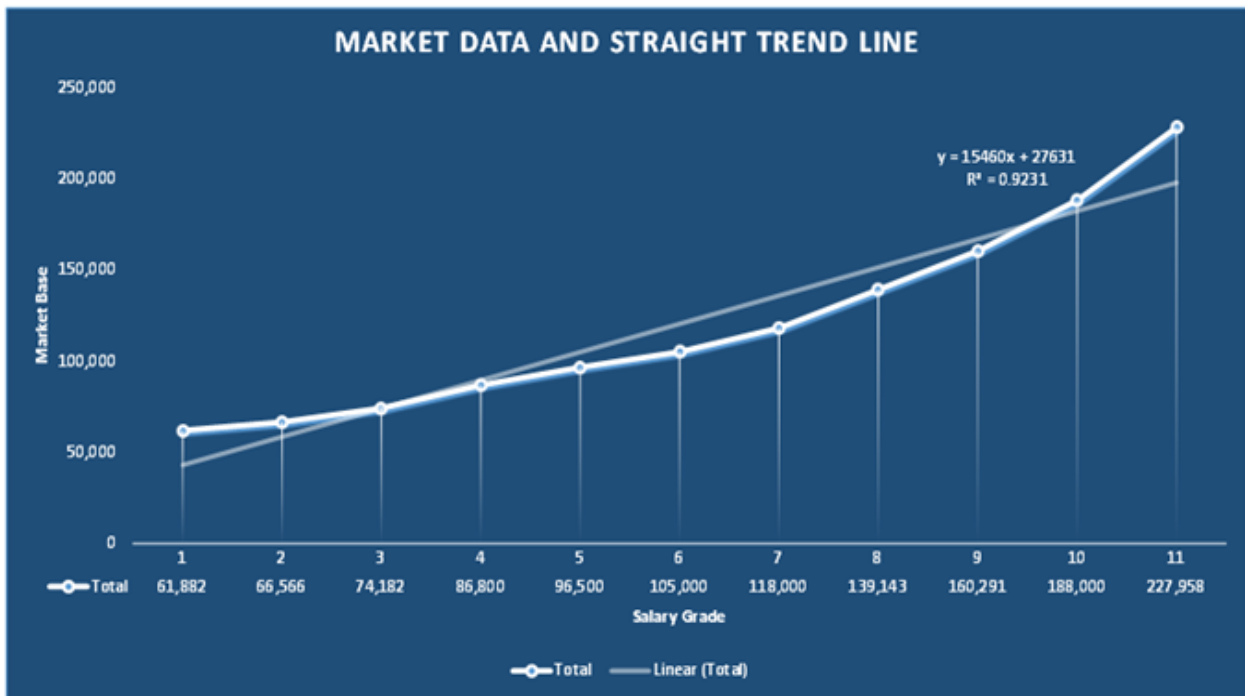
Straight Line Regression Formula

Next, we will apply a straight line (linear) regression formula to calculate another salary structure using the same market data.

Using the salary grade and aged base salary field in low to high order, we can also use an Excel pivot table and pivot chart to create a linear regression formula for the salary range midpoints.

Row Labels	Sum of AGED BASE
1	$61,882
2	$66,566
3	$74,182
4	$86,800
5	$96,500
6	$105,000
7	$118,000
8	$139,143
9	$160,291
10	$188,000
11	$227,958

MARKET DATA AND STRAIGHT TREND LINE

$y = 15460x + 27631$
$R^2 = 0.9231$

| | Total | 61,882 | 66,566 | 74,182 | 86,800 | 96,500 | 105,000 | 118,000 | 139,143 | 160,291 | 188,000 | 227,958 |

The Market Base Salary is recorded under the Total Line, and the Regression Line is recorded under Linear (Total).
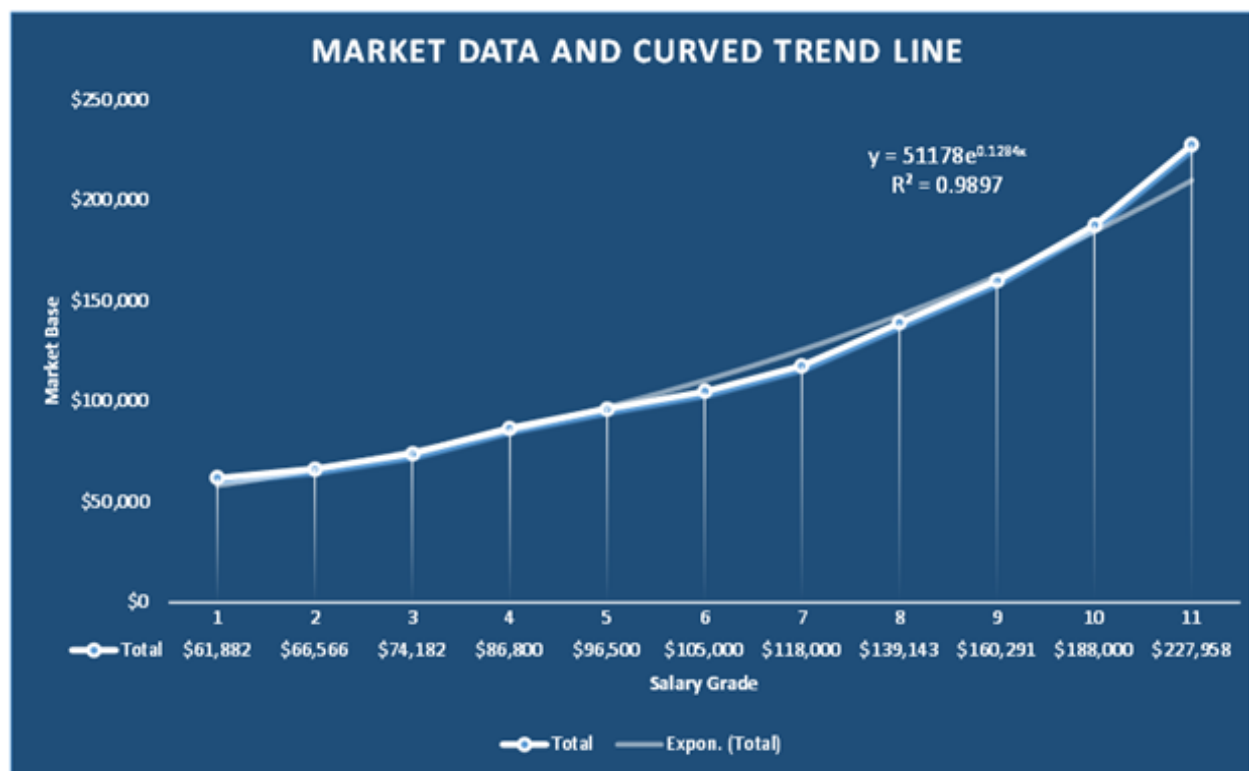
Although the R-squared is 0.9231, reflecting a reasonably good fit of the data, you can see that the regression line is below the market data at Salary Grade 1 and 2, above the market data at Grade 6, 7, and 8, and significantly below the market data at Salary Grade 11. The market data appears to follow a curved regression line, so that will be reviewed next.

Curved Line Regression Formula

Next, we will apply a curved line (exponential) regression formula to calculate the salary range midpoints using the desired Salary Grades and Aged Base Salary for each salary grade in low to high order.

Row Labels	Sum of AGED BASE
1	$61,882
2	$66,566
3	$74,182
4	$86,800
5	$96,500
6	$105,000
7	$118,000
8	$139,143
9	$160,291
10	$188,000
11	$227,958

An Excel pivot chart can then be used to create a curved line (exponential) regression analysis.

MARKET DATA AND CURVED TREND LINE

$$y = 51178e^{0.1284x}$$
$$R^2 = 0.9897$$

	1	2	3	4	5	6	7	8	9	10	11
Total	$61,882	$66,566	$74,182	$86,800	$96,500	$105,000	$118,000	$139,143	$160,291	$188,000	$227,958

Salary Grade

—O— Total —— Expon. (Total)

The Excel pivot chart on the preceding page displays a curved regression line with an R-squared of 0.9897, which is an outstanding fit of the market data to the curved regression line. You will see that the external market data is almost a perfect fit from Grades 1 through Grade 5 and again at Grades 8, 9, and 10. The curved regression line is slightly above the market data at Grades 6 and 7. The primary area of concern is at Salary Grade 11, where the curved regression line appears very low to the external marketplace.

Using the formula in the curved regression line below, we are able to calculate the formula-driven Salary Grade midpoints (Y) by Salary Grade (X).

Y = 51178*exp(0.1284X)

X (Pay Grade)	Y (Market Base)
1	58,190
2	66,162
3	75,227
4	85,534
5	97,252
6	110,577
7	125,727
8	142,952
9	162,538
10	184,807
11	210,127

Displaying the equation and R-squared on a pivot chart can be tricky if you don't use Excel often. If you have difficulty, follow these instructions:

Click within your desired Chart
Under Pivot Chart Tools (Top of Screen), Click on Design
Click on Add Chart Element (Left Side of Screen)
Click on Trendline
Click on More Trendline Options
Under Format Trendline (Right Side of Screen), Go to Trendline Option
Select Display Equation on Chart
Select Display R-Squared Value on Chart

We are able to better evaluate the results produced by the curved regression line by displaying in the table below:

Pay Grade	RATE Driven Midpoint	% Progression	Salary Structure (50% Range Spread)			Orig Data	% Diff
			Minimum 80%	Midpoint 100%	Maximum 120%		
1	58,190	--	46,552	58,190	69,828	61,882	-6.0%
2	66,162	13.07008%	52,960	66,200	79,440	66,566	-0.5%
3	75,227	13.07008%	60,160	75,200	90,240	74,182	1.4%
4	85,534	13.07008%	68,400	85,500	102,600	86,800	-1.5%
5	97,252	13.07008%	77,840	97,300	116,760	96,500	0.8%
6	110,577	13.07008%	88,480	110,600	132,720	105,000	5.3%
7	125,727	13.07008%	100,560	125,700	150,840	118,000	6.5%
8	142,952	13.07008%	114,400	143,000	171,600	139,143	2.8%
9	162,538	13.07008%	130,000	162,500	195,000	160,291	1.4%
10	184,807	13.07008%	147,840	184,800	221,760	188,000	-1.7%
11	210,127	13.07008%	168,080	210,100	252,120	227,958	-7.8%

Observe that the formula-driven midpoints have a midpoint-to-midpoint progression of 13.7008%, which is a reasonable percentage for a professional/management salary structure. The salary range midpoints can be rounded to the nearest hundred, or even thousand, depending on your preference. We elect to use a 50% salary range spread for the professional/ management workforce. To achieve this spread, we multiply the midpoint of each grade by 80% to calculate the minimum and by 120% to calculate the maximum. We are now able to compare the new structure to the original external market data (non-regressed) and have displayed the percent difference between the market data and proposed salary range midpoints.

In evaluating the original market data to the proposed salary structure, we are able to observe the relationship of the structure to the marketplace. Salary Grade 1 is 6.0% below the market, and the minimum is below the $47,476 U.S. federal overtime threshold effective December 1, 2016. The relationship to the market is determined to be acceptable, but the minimum needs to be raised to at least $47,476. From Grade 2 to 5, the relationship is close to perfect. Salary Grade 6, 7, 8, and 9 are 5.3%, 6.5%, 2.8%, and 1.4%, respectively, above the market. This can be supported since very experienced, critical employees fall within these grades. Salary Grade 10 is in line with the market at just 1.7% below the market. The midpoint for Salary Grade 11 is concerning, especially for the CEO and top job in the structure. There are a few ways to evaluate this relationship.

• **Keep as is.** We could retain this Salary Grade 11 midpoint at 7.8% below market for the CEO. If we were to do this, we could ensure that total cash compensation and total direct compensation are competitive relative to the marketplace. This would allow us to place increased emphasis on performance-based short- and long-term incentives. The Compensation Committee of the Board of Directors may support this recommendation.

• **Change.** In lieu of using the Salary Grade 11 regression formula, we could use the actual market data for this job only. This would allow us to set the salary range midpoint at 100% of the marketplace. Since the regression line will frequently become steeper at the top end of the structure, this may be a very appropriate step to take.

Recommendation

The change approach is recommended, with the Salary Grade 11 midpoint managed equal to the marketplace, rather than following the regression line. Also, the Salary Grade 1 midpoint has been raised to ensure compliance with the U.S. federal overtime threshold. It continues to be market competitive with a midpoint of $59,400. As an alternative, we could have just raised the minimum to the overtime threshold of $47,476, but the suggested approach ensures a 50% salary range spread and improves its competitiveness to the market.

Salary Structure

Pay Grade	RATE Driven Midpoint	% Progression	Salary Structure (50% Range Spread)			% Midpoint Progression	Orig Data	% Diff	
			Minimum 80%	Midpoint 100%	Maximum 120%				
1	58,190	--	47,520	59,400	71,280	--	61,882	-4.0%	←
2	66,162	13.07008%	52,960	66,200	79,440	11.4478%	66,566	-0.5%	
3	75,227	13.07008%	60,160	75,200	90,240	13.5952%	74,182	1.4%	
4	85,534	13.07008%	68,400	85,500	102,600	13.6968%	86,800	-1.5%	
5	97,252	13.07008%	77,840	97,300	116,760	13.8012%	96,500	0.8%	
6	110,577	13.07008%	88,480	110,600	132,720	13.6691%	105,000	5.3%	
7	125,727	13.07008%	100,560	125,700	150,840	13.6528%	118,000	6.5%	
8	142,952	13.07008%	114,400	143,000	171,600	13.7629%	139,143	2.8%	
9	162,538	13.07008%	130,000	162,500	195,000	13.6364%	160,291	1.4%	
10	184,807	13.07008%	147,840	184,800	221,760	13.7231%	188,000	-1.7%	
11	210,127	13.07008%	182,400	228,000	273,600	23.3766%	227,958	0%	←

Compa-ratio Report

A Compa-ratio report applies the new salary structure to your workforce. It supports you in evaluating the overall costs of the new structure and fit within the organization.

In this instance, the company will be at 97% of the market based on the new salary structure prior to adjustments to minimum and a 3% merit increase budget. After the $1,600 in adjustments to minimum and a 3% merit increase budget have been administered, the organization will be at 100% of market. Total annualized costs are $42,636 at base salaries and $48,243 at total target cash compensation.

Employee #	Hire Date	Job Title	Salary Grade	Base Salary	Bonus Target %	Total Target Cash Comp	Salary Range (Base)			Compa-Ratio	Under Min	Over Max
							Min 80%	Mid 100%	Max 120%			
1	8/1/15	Job A	1	$45,920	3%	$47,298	$47,520	$59,400	$71,280	0.77	$1,600	$0
2	8/13/13	Job B	2	$61,000	3%	$62,830	$52,960	$66,200	$79,440	0.92	$0	$0
3	3/21/05	Job C	3	$73,000	3%	$75,190	$60,160	$75,200	$90,240	0.97	$0	$0
4	2/8/15	Job D	4	$84,000	5%	$88,200	$68,400	$85,500	$102,600	0.98	$0	$0
5	1/18/05	Job E	5	$94,000	5%	$98,700	$77,840	$97,300	$116,760	0.97	$0	$0
6	1/20/14	Job E	5	$92,000	5%	$96,600	$77,840	$97,300	$116,760	0.95	$0	$0
7	8/1/13	Job F	6	$89,000	10%	$97,900	$88,480	$110,600	$132,720	0.80	$0	$0
8	3/21/05	Job G	6	$105,000	10%	$115,500	$88,480	$110,600	$132,720	0.95	$0	$0
9	4/30/10	Job H	7	$123,000	10%	$135,000	$100,560	$125,700	$150,840	0.98	$0	$0
10	5/15/12	Job I	9	$164,350	15%	$189,003	$130,000	$162,500	$195,000	1.01	$0	$0
11	3/21/5	Job K	10	$205,000	20%	$246,000	$147,840	$184,800	$221,760	1.11	$0	$0
12	3/21/5	Job L	11	$230,000	30%	$299,000	$182,400	$228,000	$273,600	1.01	$0	$0
Total - (USD)				$1,366,270		$1,551,520		$1,403,100		0.97	$1,600	$0
Total with Adjustments to Minimum				$1,367,870		$1,553,168		$1,403,100		0.97	$1,600	$0
Total with 3% Merit Increase Budget				$1,408,906		$1,599,763		$1,403,100		1.00	$1,600	$0

For the organization being considered, the above salary structure appears to be possible to implement and appropriate for the organization.

As the marketplace continues to evolve, a company's competitiveness to the market fluctuates from year to year. An overall compa-ratio of 0.95 to 1.05 can be viewed as an acceptable competitive range for an organization. When below 0.95 and over 1.05, corrective steps should be considered.

As your salary structure design is being evaluated, it is important to consider the following questions: Can we afford the program, is it legal, is it equitable, is it market competitive, and is it can it be implemented in my organization?

Keeping Your Plan Up to Date

It is important to keep your salary structure up to date. This starts with annual salary survey participation. Also, occasionally you may need to conduct department-wide or job-specific market reviews, as required.

The vast majority of companies will update their salary structures annually. Some companies may go two to three years before updating their structures. When this is done, the structure is typically increased by a flat percent salary structure adjustment. Normally, the structure adjustment is 1% below the market movement of salaries. Salary increase budget surveys typically will also report the market practice on the projected salary structure movement and should be validated for each year that a salary structure adjustment is applied.

Summary

There are many ways to develop a competitive salary structure to support the annual operating plan. At the end of the day, though, it is important that the program is cost-effective and possible for the organization to implement. Will your compensation program support you in attaining internal equity, external competitiveness, and cost effectiveness? Is the program simple to understand and legally defensible? Is the program easy to administer? Is the program flexible and ongoing to support the long-term requirements of the organization? When you add short- and long-term incentives at target, does the plan engage and motivate plan participants to attain desired business results? Finally, top management support is always critical to the success of the overall compensation program.

A sound compensation plan is essential to attain meaningful pay transparency and an engaged workforce for a high-performing business.

Please email Linda Cox at linda.cox@erieri.com with questions or comments.

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