2019 Study of Economic Assumptions

Used for ASC 715 Purposes

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Introduction

Under the FASB Accounting Standards Codification (ASC), the sponsor of a defined benefit pension plan is required, in measuring the plan's obligations and annual expense, to use assumptions that (1) are explicit (ASC 715-30-35-42) and (2) are "consistent [with each other] to the extent that each reflects expectations of the same future economic conditions" (ASC 715-30-35-31). In general, the benefit obligation is most sensitive to the discount rate assumption; for example, a relatively small change in the discount rate (of, say, 25 basis points) could result in a change in the measurement of the benefit obligation on the order of, perhaps, 2 to 4 percent.

ASC 715-30-35-43 describes the method of selecting the discount rate. The discount rate "shall reflect the rates at which the pension benefits could be effectively settled." ASC 715-30-35-44 notes that the discount rate should reflect the yield of a portfolio of high-quality fixed-income instruments whose coupons and maturities match projected benefit payments.

However, ASC 715-30-35-1 allows the use of computational shortcuts that are expected to produce results that are not materially different from those resulting from a more detailed analysis. Because the duration of a plan's benefit obligation is affected by the plan design and by the demographic characteristics of the plan population (e.g., average age, average service, proportion of retirees), one might generally expect that plans with similar plan designs and demographics would use similar discount rates. Conversely, one might expect that plans with dissimilar plan designs or demographics may not use similar discount rates.

Of course, there may be circumstances — such as a relatively flat yield curve — in which plans with dissimilar plan designs or demographics would be able to support similar discount rates. In summary, the process an entity uses to select the discount rate should take into account the facts and circumstances specific to the plan as well as the high-quality corporate bond yield rates as of the Measurement Date.

ASC 715-60-35-79 and 35-80 outline similar requirements for the selection of assumptions for other post-retirement employee benefit (OPEB) plans.

Companies must also disclose other economic assumptions: the expected rate of return on plan assets, the expected rate of salary increases, and the expected increase in health care costs.

Although the selection of assumptions should be specific to the individual plan, plan sponsors, as well as regulators, often compare their discount rate and other assumptions to those of other plan sponsors. In this study, Deloitte's Human Capital practice has compiled information disclosed by many of the Fortune 500 companies in their most recent annual reports. We have focused on 237 companies that sponsor pension or other post-retirement benefits in the US and that have calendar fiscal years. Of these, 233 companies disclosed information about defined benefit plans. Information about OPEB (subject to ASC 715-60) was disclosed by 195 companies, including four that disclosed only OPEB arrangements.

Prevailing Interest Rates

The SEC staff has commented[1] about the guidance on the selection of the discount rate, noting that it believes that the term "high-quality" refers to those fixed-income instruments with at least an Aa3 rating from Moody's (or its equivalent from another rating service). Exhibit 1 shows the FTSE (formerly Citigroup) Pension Discount Curve as of year-end 2017, year-end 2018, and June 30, 2019.

Exhibit 1 indicates that the yields at year- end 2018 are higher across all maturities, than at year-end 2017. It also shows the FTSE (formerly Citigroup) Pension Discount Curve as of June 30, 2019, which indicates that rates have decreased across all maturities since year-end 2018.

Over the past several years, the rates available on corporate bonds as suggested by published indices such as Merrill Lynch US Corporates Aa 15+ years, Merrill Lynch US Corporates Aa/Aaa 10+ years, as well as FTSE's (formerly Citigroup's) Pension Liability Index have varied considerably. The historic yields over the past several years for these indices are plotted in Exhibit 2.

This exhibit indicates that these indices experienced increases during 2018, and finished the year approximately 60-70 basis points higher as compared to the end of 2017. Furthermore, Exhibit 2 indicates that rates are currently (as of the end of June 2019) lower than at the end of 2018.

Exhibit 1: FTSE (formerly Citigroup) Pension Discount Curve[2]

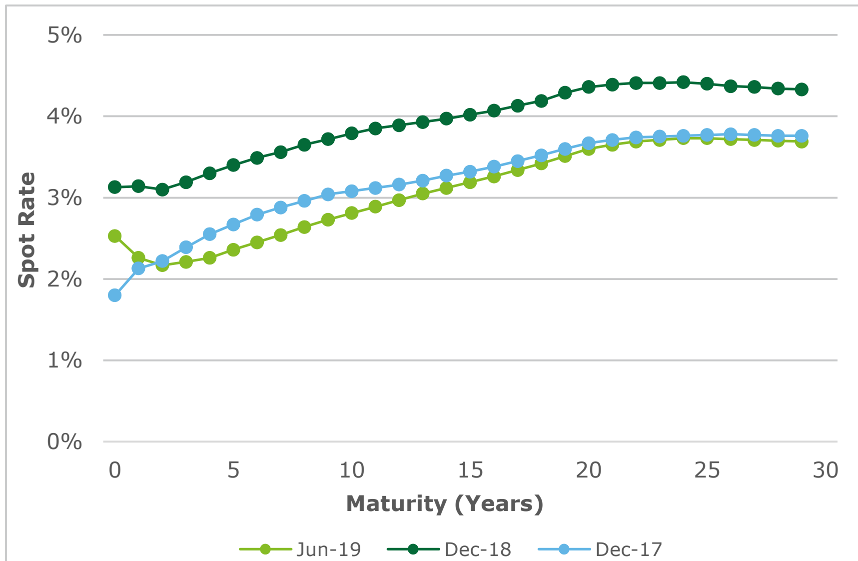
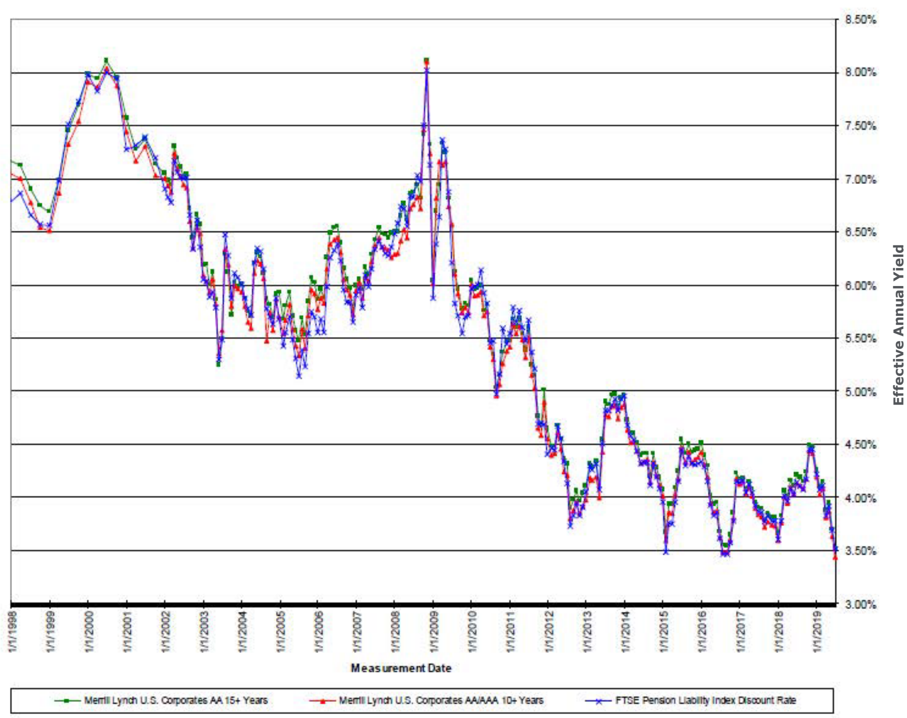


Exhibit 2: Corporate Bond Month-End Index Rates



1 cf. ASC 715-20-S99-1.
2 Data from FTSE Fixed Income LLC (formerly Citigroup Global Capital Markets)

Discount Rate Assumption

Exhibit 3 summarizes the discount rate for ASC 715-30 purposes disclosed as of December 31, 2018, and December 31, 2017. The average discount rate disclosed as of December 31, 2018, was 4.19 percent, about 60 basis points higher than the average discount rate disclosed by these companies at the end of 2017. Ninety-one percent of the companies included in this study were between 4.00 percent and 4.50 percent. The spread of discount rates stayed relatively constant compared to the prior year.

The FASB and SEC staffs have indicated that they expect discount rates to move with general economic trends[3]. Exhibit 4 presents the change from December 31, 2017 to December 31, 2018. The SEC staff has further indicated that it expects companies to disclose the basis for the selection of the discount rate. Companies that rely on an index to support their selection of the discount rate are further expected to provide evidence that such index is appropriate for the particular plan.

If a registrant uses published long-term bond indices as a benchmark for its assumptions, it is expected to explain how it determined that the timing and amount of cash outflows related to the bonds included in the indices matches its estimated defined benefit payments. If there are differences between the terms of the bonds and the terms of the defined benefit obligations (e.g., if the bonds are callable), the registrant is expected to explain how it adjusts for the difference. Increases to the benchmark rates should not be made unless the registrant has detailed analysis that supports the specific amount of the increase[4].

Exhibit 3: Discount Rates for Disclosures

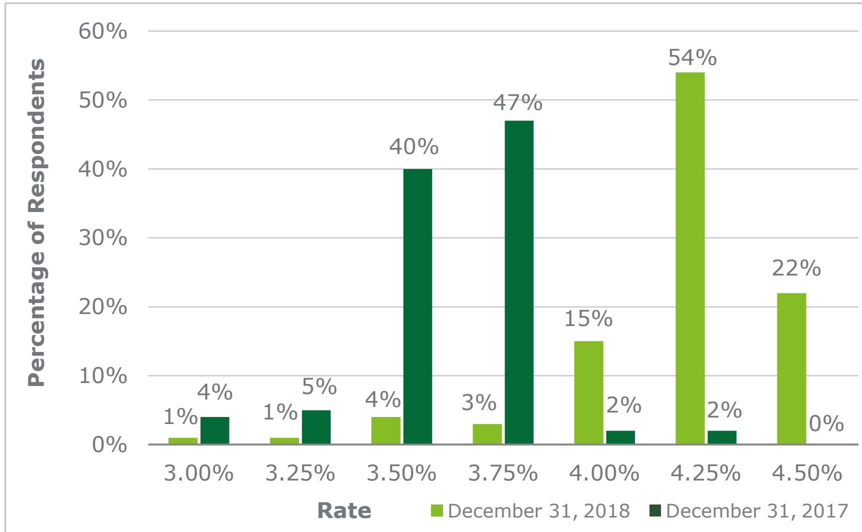
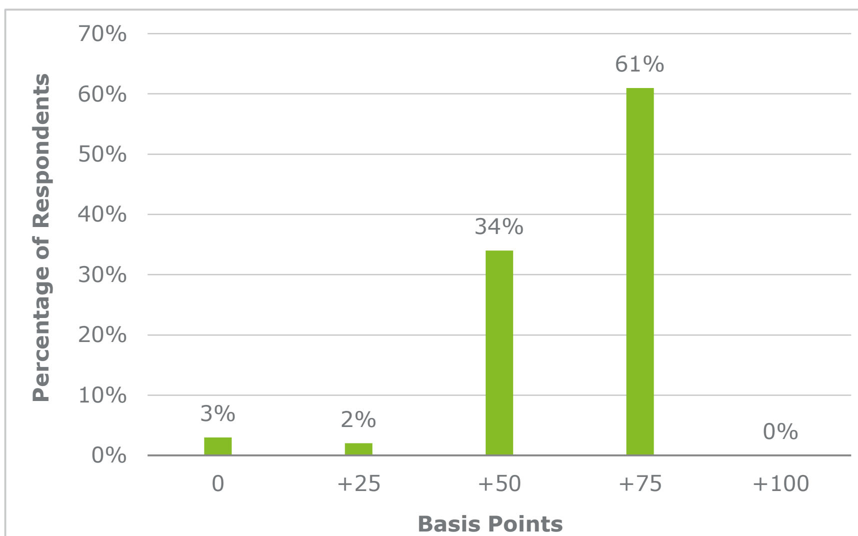


Exhibit 4: Change in Discount Rate



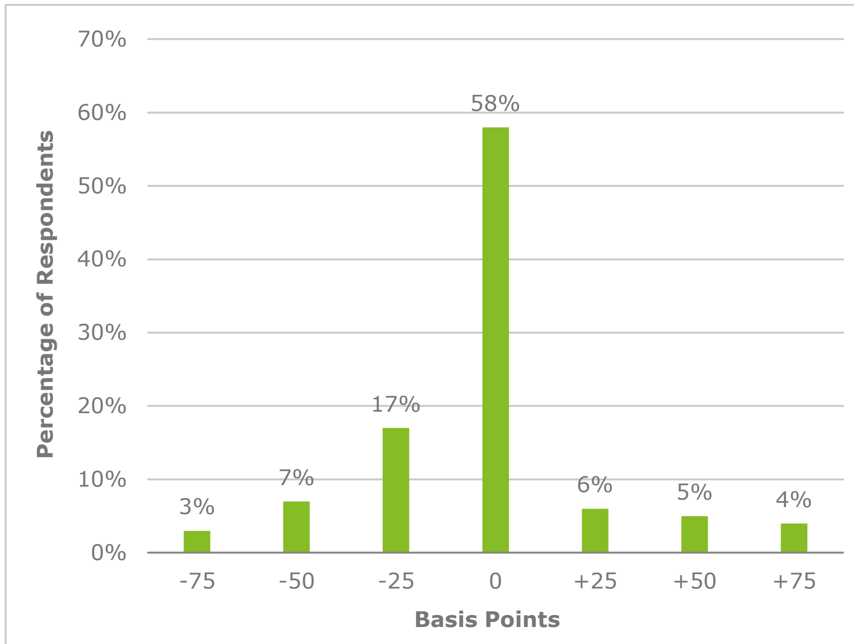
3 ASC 715 20 S99 1 (formerly EITF Topic D-36)
4 cf. Section II H 1 at www.sec.gov/divisions/corpfin/acctdis030405.htm

On average, discount rates increased by around 60 basis points from December 31, 2017 to December 31, 2018. Ninety-seven percent of companies increased this assumption from year end-2017; the remaining 3 percent did not change this assumption.

We also compared the discount rate disclosed for ASC 715-60 purposes with that disclosed for measuring pension obligations in accordance with ASC 715-30. As shown in Exhibit 5, 58 percent of the companies included in this study disclosed similar discount rates for both Measurement Dates, comparable to the percentage in last year's study. Fifteen percent of companies disclosed a higher discount rate for measuring post-retirement benefits than for measuring pension benefits, while 27 percent used a lower discount rate.

In 2015, the SEC staff released guidance[5] that it would not object to certain alternative discount rate methodologies for purposes of developing the service cost and interest cost components of net periodic pension cost (expense). We compared the discount rate used as of January 1, 2018 for 2018 expense to the disclosed discount rate at year-end 2017. Seventy-two percent of companies continued using the same rate for both purposes. Of the remaining 28 percent, approximately a third disclosed a single alternative rate for 2018 expense, and the other two-thirds disclosed rates for service cost and interest cost separately.

Exhibit 5: Difference in Discount Rate for ASC 715-60 Purposes and ASC 715-30 Purposes



5 cf. Deloitte Financial Reporting Alert 15-3 (Revised)

Salary Increase Assumption

Plans that provide pay-related benefits are required to disclose the salary increase assumption underlying the measurements. A majority of the companies in the study disclosed a salary increase assumption. ASC 715-30 provides relatively little guidance on the selection of the salary increase assumption. However, ASC 715-30-35-31 notes it should reflect "future changes attributed to general price levels, productivity, seniority, promotion, and other factors."

The range of assumed salary increase is fairly wide, as summarized in Exhibit 6. The average salary increase assumption disclosed as of December 31, 2018, was 3.61 percent, consistent with 2017. Eighty-two percent of the companies included in this study used an assumption between 3.00 and 4.50 percent. Exhibit 7 shows the change in the salary increase assumption from December 31, 2017, to December 31, 2018. Similar to last year, between these two Measurement Dates, 85 percent of the companies included in this study reported no change in the salary increase assumption. Roughly 7 percent decreased this assumption.

Exhibit 6: Salary Increase Disclosures

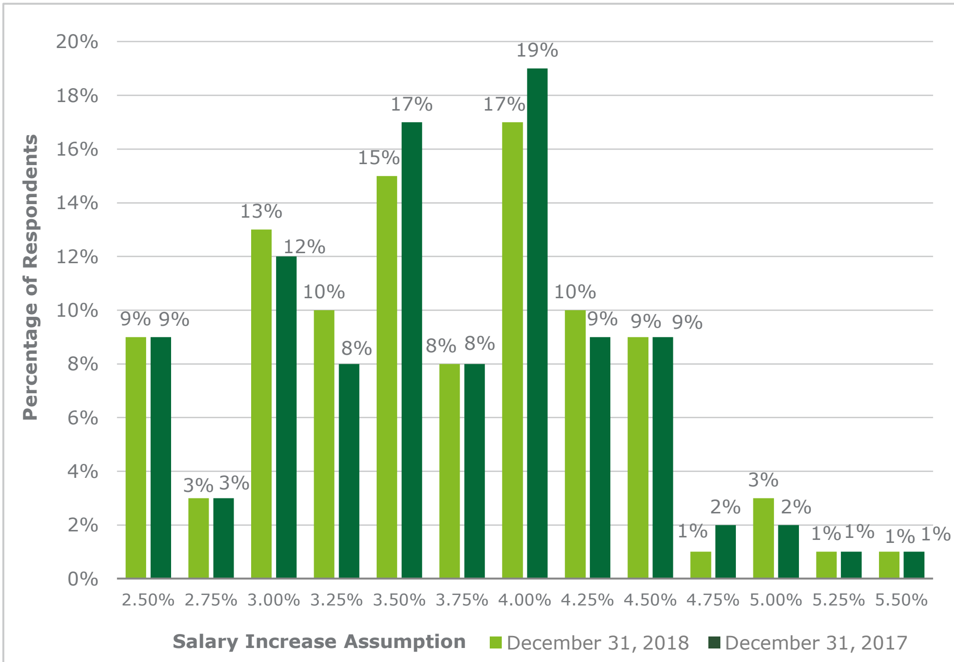
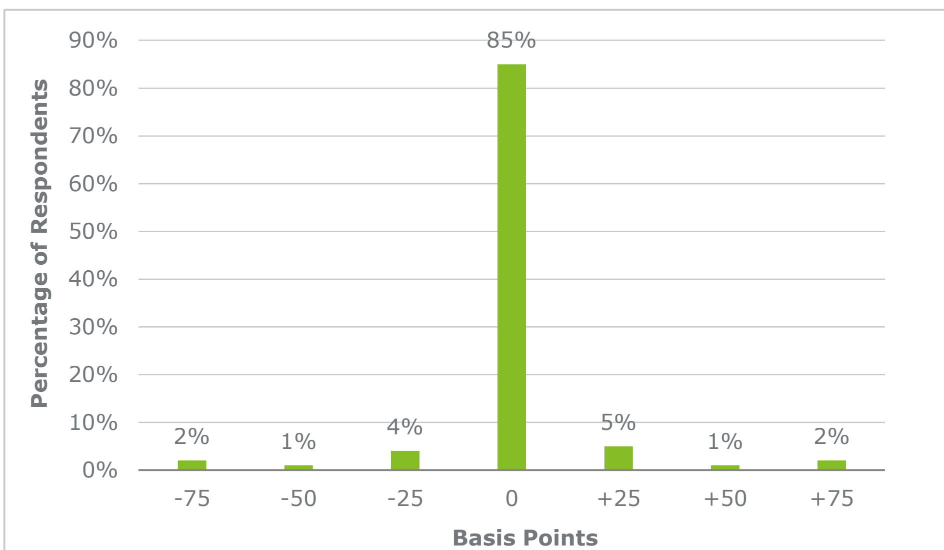


Exhibit 7: Change in Salary Increase Assumption



Expected Return Assumption

Under ASC 715-30-20, the expected long-term rate of return (i.e., expected return assumption) should reflect "the average rate of earnings expected on the funds invested or to be invested to provide for the benefits." Furthermore, ASC 715-20-50- 1(d) requires that plan sponsors provide a narrative description of both a plan's actual investment policy and the basis they used to determine the overall expected long-term rate of return. As a result, companies with different asset allocations or different investment philosophies may have different long-term return assumptions.

We understand that some companies, therefore, engage in a process (with varying degrees of rigor) for developing the expected return assumption.

One method for determining the expected return assumption is based on a "building block" approach. In our experience, the building block approach is used by many in the investment management industry to develop capital market expectations. This approach begins with the development of a long-term level of expected inflation. The level of inflation becomes the "building block" for the development of expected returns for each of the various asset classes (i.e., the difference between real and nominal returns).

Next, companies develop an expected return on cash ("risk-free" asset), typically by using 90-day Treasury bills as a proxy. Risk premiums above cash are developed as the primary determinant of expected return for the various asset classes (e.g., US equities, US core fixed income) included in the portfolio. Risk premiums should reflect the risk of each asset class (the riskier the asset class, the larger the risk premium).

Finally, under the building block approach, companies calculate the expected return of the total portfolio by using the asset class returns developed, taking into account the overall strategic asset allocation of the portfolio. Some companies engaging in active investment management may be able to document a premium for this strategy and may choose to incorporate a return premium to reflect their belief that active management will provide an additional incremental return. Note that management fees for actively managed investments are typically higher than passively managed products and that the premium assigned for active management should be net of additional investment management fees.

Another approach to developing the long-term rate of return assumption is to develop a consensus forecast, whereby the company gathers long-term capital market forecasts from multiple, reputable organizations in the financial services industry (such as investment consultants, investment managers, or other financial institutions). Typically, these capital market forecasts include long-term expected return assumptions for various asset classes. The company can calculate the expected return of the portfolio by "averaging" the expected return forecasts gathered by asset class and using these inputs to calculate the total expected return on the overall portfolio.

Alternatively, some companies may choose to determine the projected range of returns for the overall portfolio by using stochastic simulation. Stochastic simulation is a tool that allows the company to forecast the overall portfolio return under various potential economic environments. The inputs to the model typically include mean-variance assumptions for each asset class (which can be generated by using the building block method or consensus forecast) as well as assumptions related to future levels of inflation and interest rates. The results of the stochastic simulation will provide the company with the range of potential returns for the portfolio over a long-term horizon (although it is worth noting that the output of the analysis is largely predicated upon the assumptions).

Exhibit 8 shows the range of the expected return used in measuring pension expense for 2018 and 2017. While ASC 715-60 has a similar definition, many OPEB plans are unfunded; this assumption is not used for unfunded plans.

The average expected return was 6.54 percent for 2018 (roughly 20 basis points lower than the average expected return disclosed by these companies for 2017), with 50 percent of companies between 6.50 and 7.50 percent. Thirty-eight percent were less than 6.50 percent and 12 percent were higher than 7.50 percent. As shown in Exhibit 9, compared with 2017, approximately 39 percent of companies lowered this assumption in 2018, 58 percent of the companies kept the same assumption as 2017 and the remaining 3 percent raised the assumption. Our analysis also shows that larger plans used a somewhat higher (by as much as 65 basis points on average) expected return assumption. This difference could be due to many reasons, including more aggressive asset strategies, lower expense ratios, or different investment opportunities.

Exhibit 8: Expected Long-Term Rate of Return Assumption

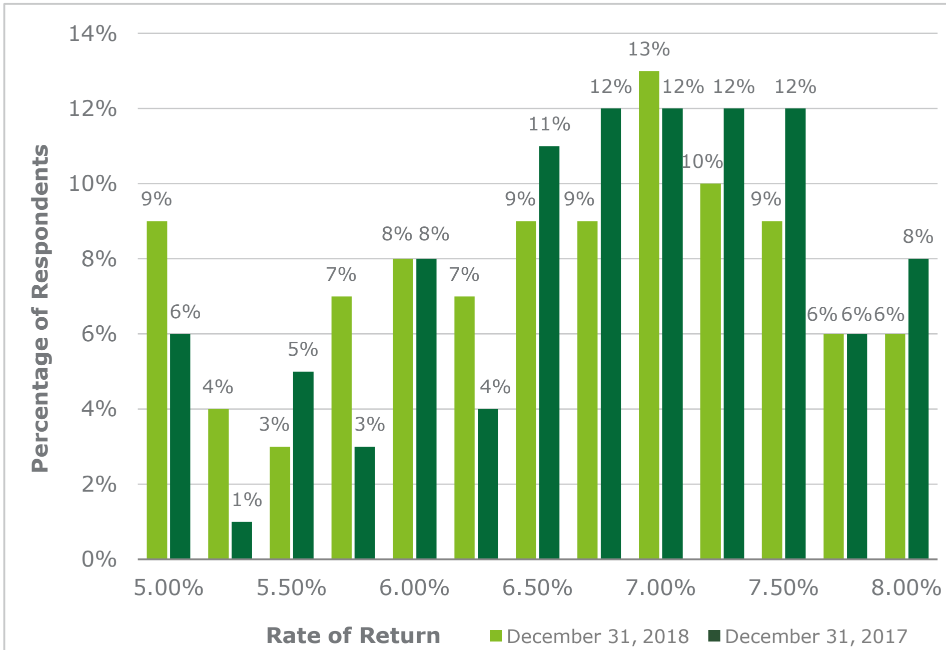
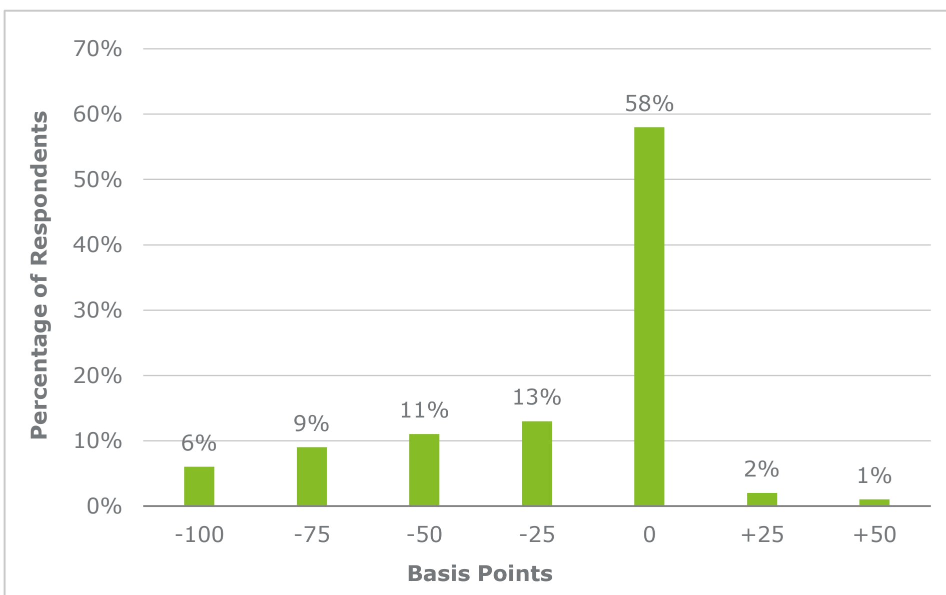


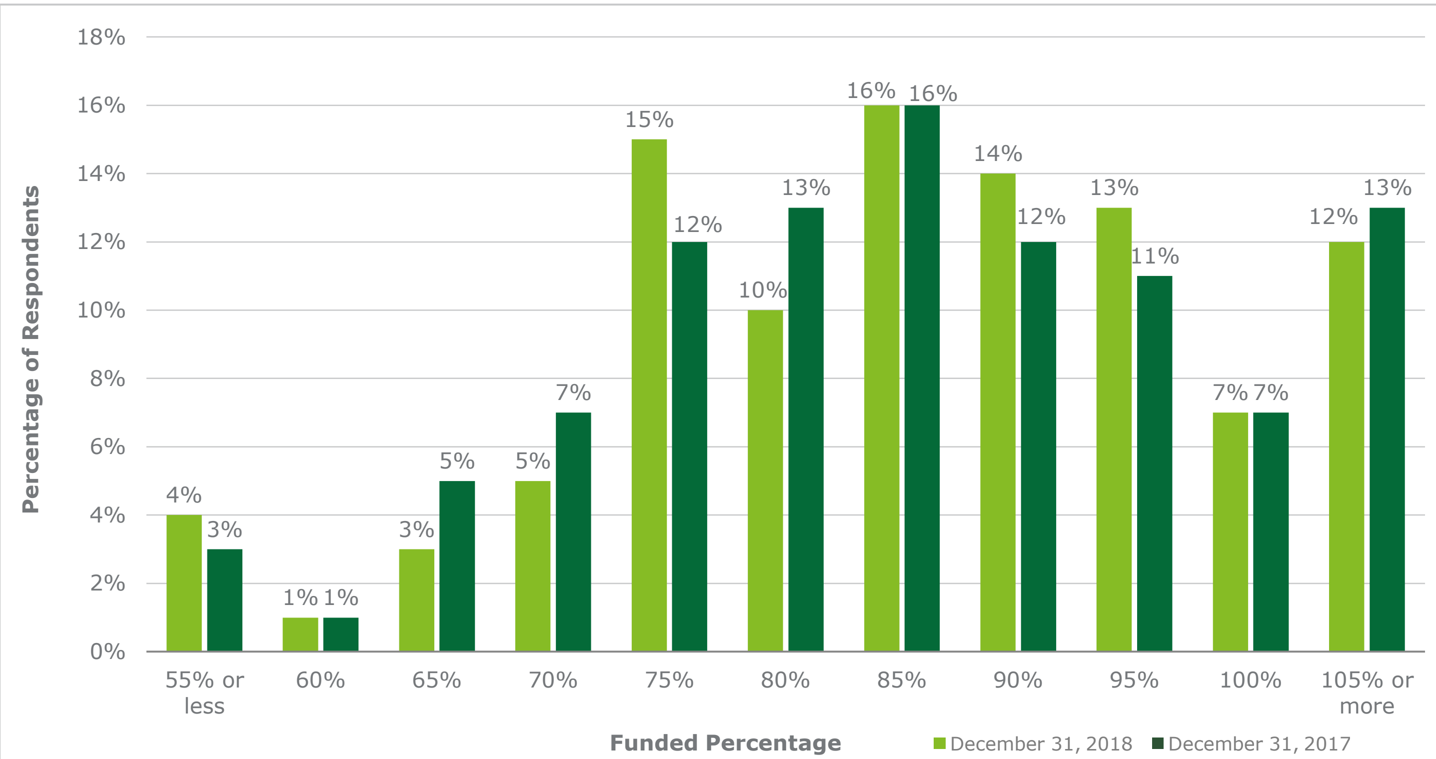
Exhibit 9: Change in Expected Long-Term Rate of Return Assumption



Funded Status

Exhibit 10 shows the funded status[6] (measured as the ratio of market value of assets to the projected benefit obligation) at December 31, 2018 and at December 31, 2017. The funded status of the plans as of the end of 2018 averaged approximately 86 percent, about 1 basis point higher than in 2017. Last year, approximately 31 percent of these companies had a funded status of at least 95 percent; this year, 32 percent.

Exhibit 10: Funded Status Percentage



6 This chart incorporates both funded as well as unfunded plans.

Health Care Cost Trend Rate Assumptions

ASC 715-60-35-99 describes the health care cost trend assumption as representing "the expected annual rates of change in the cost of health care benefits… for each year from the Measurement Date until the end of the period in which benefits are expected to be paid." ASC 715-60-35-100 notes that "health care cost trend rates may be assumed to continue at the present level for the near term, or increase for a period of time, and then grade down over time to an estimated health care cost trend rate ultimately expected to prevail."

As of December 31, 2018, 82 percent of the companies disclosed an initial health care cost trend assumption of between 6.00 percent and 7.00 percent. Eleven percent used a higher initial trend, and the remaining plans disclosed a lower trend assumption. A comparison of the current and prior year is shown in Exhibit 11.

The average initial trend was 6.58 percent, down from the 6.74 percent for the prior year. Sixty-two percent of the companies used the same rate as the prior year (as shown in Exhibit 12). Eight percent used a higher initial trend, and the remaining plans disclosed a lower trend assumption. Three percent decreased their initial rate by 100 basis points or more.

Exhibit 11: Initial Health Trend Assumption

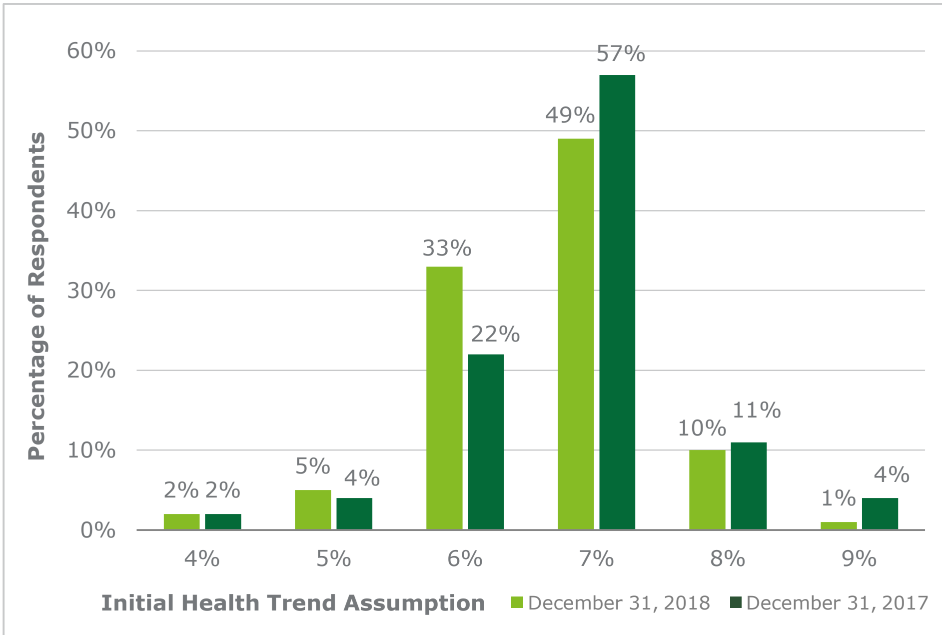


Exhibit 12: Change in Initial Health Trend Assumption

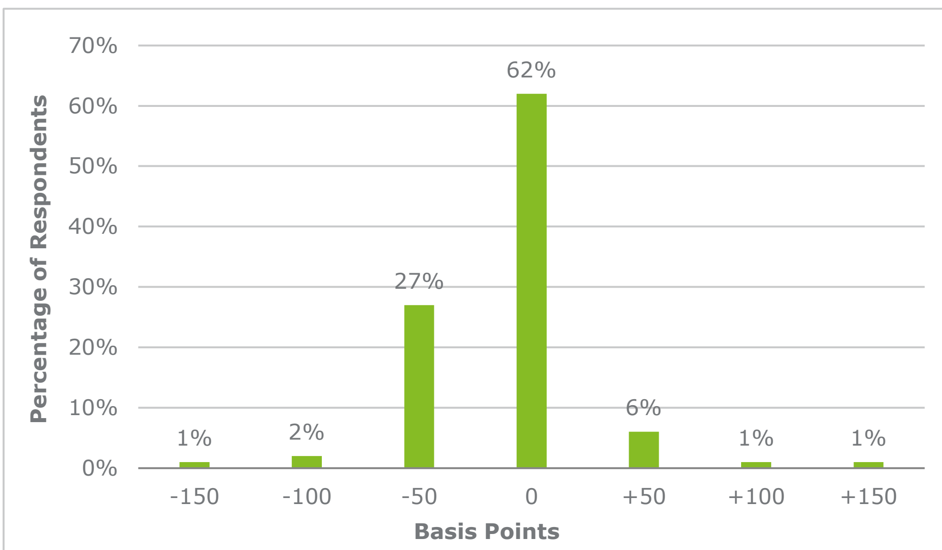


Exhibit 13 summarizes the ultimate health care cost trend disclosed as of December 31, 2018. At the end of 2018, the average ultimate health care cost trend rate was 4.73 percent, consistent with that disclosed at the end of the prior year for these companies.

Exhibit 14 compares the difference between the initial and ultimate trends at year-end 2018 compared with year-end 2017. Over the year, on average this difference narrowed slightly (from 194 basis points in 2017 to 182 basis points in 2018).

Exhibit 13: Ultimate Health Trend Assumption

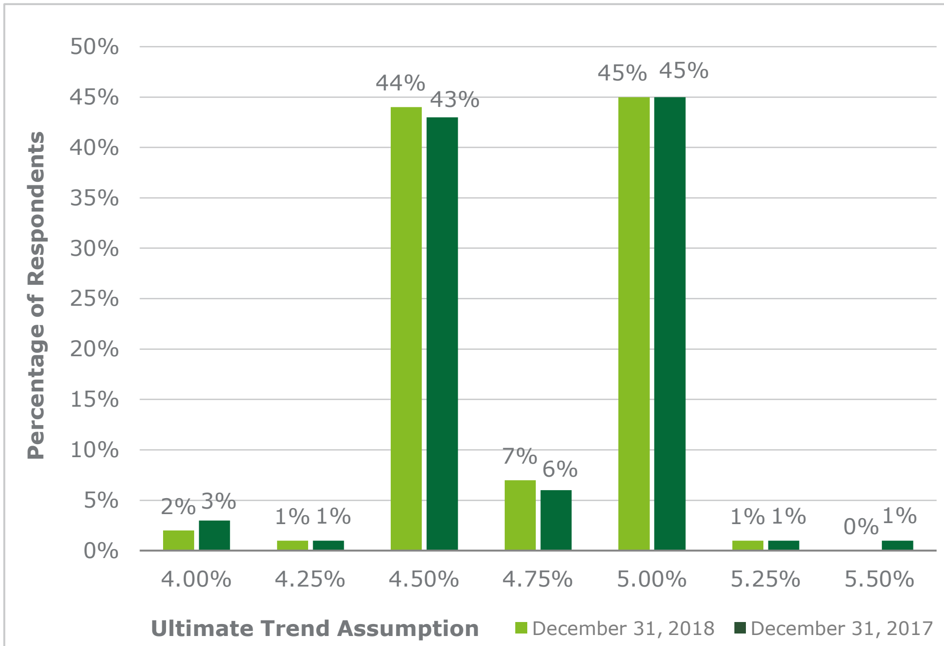
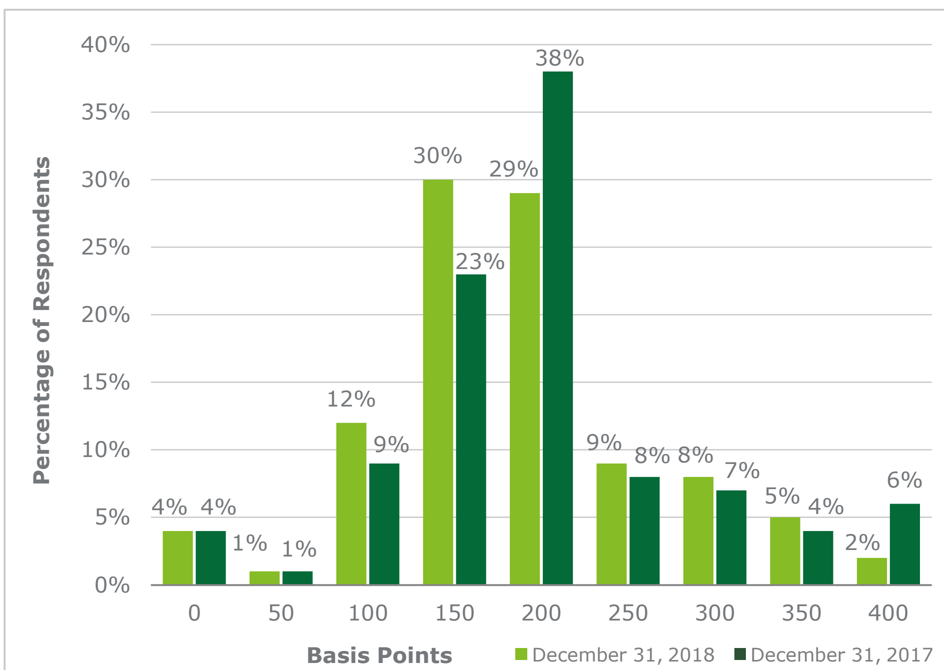


Exhibit 14: Difference between Initial and Ultimate Health Trends



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