

Perspectives



Accounting for Pensions and Other Postretirement Benefits, 2017

Financial Reporting Under U.S. GAAP by the *Fortune* 1000 Companies

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Fortune 1000 Companies

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Introduction

In this report, Willis Towers Watson analyzes disclosures for fiscal year (FY) 2016 under the Financial Accounting Standards Board's Accounting Standards Codification Topic 715 (ASC 715), *Compensation-Retirement Benefits*. The disclosures are from the financial statements of the nation's largest public companies – those in the 2017 listing of the *Fortune* 1000.

This report summarizes the assumptions used by companies in the calculation of defined benefit plan costs and obligations under ASC 715, including the disclosure of pension assets and obligations, and disclosures regarding postretirement benefits other than pensions, primarily retiree health and death benefits. This summary report is the 30th in a series by Willis Towers Watson of annual analyses of defined benefit pension disclosures and the 24th summary report to analyze postretirement benefit disclosures.

ASC 715 prescribes the financial accounting and reporting under U.S. generally accepted accounting principles (GAAP) for employers that offer pension or other postretirement benefits to their employees. The Securities Exchange Commission (SEC) requires publicly held companies in the U.S. to follow ASC 715; non-U.S. registrants may follow either ASC 715 or International Accounting Standard No. 19 (revised 2011), as issued by the International Accounting Standards Board. Nonpublic companies that prepare their financial statements in accordance with U.S. GAAP must also follow ASC 715.

This report focuses on the disclosures in the fiscal 2016 annual reports of *Fortune* 1000 companies with fiscal years ending October 1 through December 31; therefore, data on economic assumptions or on values that rely on economic assumptions, such as discount rates or funded status, do not include data from companies with fiscal years ending January through September. Results on economic assumptions are summarized for roughly 83% of the companies reporting pension disclosures. Results on prevalence, however, incorporate all companies.

If you have questions about this report or are interested in a more detailed or specialized analysis, please contact your local Willis Towers Watson consultant.

Key findings

Measurement of pension costs and obligations

Year-end assumption	2016			2015		
	Minimum	Average	Maximum	Minimum	Average	Maximum
Discount rate	1.60%	4.03%	4.98%	2.10%	4.33%	5.25%
Rate of compensation increase	0.20%	3.53%	6.00%	0.20%	3.57%	6.09%
EROA	2.52%	6.83%	9.00%	2.50%	6.97%	9.00%

- At fiscal year-end (FYE) 2016, the average discount rate used to calculate the present value of pension obligations decreased to 4.03%, compared with the 2015 rate of 4.33%.
- The rate of compensation increase assumption used to project current pay decreased slightly from an average of 3.57% in 2015 to 3.53% at fiscal year-end 2016.
- The expected long-term rate of return on plan assets (EROA) assumption decreased 14 basis points from 6.97% to 6.83% from fiscal year-end 2015 to fiscal year-end 2016.

Funded status of defined benefit pension plans

- The average projected benefit obligation (PBO) funded status (plan assets/PBO) was 81% at fiscal year-end 2016, a minor uptick from the 2015 level of 80%.
- At fiscal year-end 2016 and 2015, about half of the companies had a PBO funded status greater than 80%.
- The average target equity allocation remained essentially unchanged. Average target equity allocations were 46% for 2016.
- The average actual return on plan assets for plan sponsors in fiscal year 2016 was 7.37%, 40 basis points above the average expectation on the year. For fiscal year 2015, the actual return on plan investments for companies in last year's report was -1.26%.

Other postretirement benefits

Analysis of the prevalence of other postretirement benefits reported here is limited to companies that also sponsor a pension plan. For this year's analysis, 83% of companies were found to manage postretirement medical benefits.*

- The fiscal year-end 2016 discount rate for other postretirement benefits ranges from 2.84% to 6.63% in the current survey, with an average of 4.04%. At fiscal year-end 2015, discount rates for companies included in this year's report ranged from 3.25% to 6.47%, with an average value of 4.28%. Pension and health plans might have different patterns of cash flows for benefits and potentially different discount rates; however, 15% of companies report using the same discount rates for both pension and postretirement purposes.
- Among companies that use the same health care cost trend rate for pre- and post-age 65 benefit coverage, that cost trend rate for 2016 ranged from 3.65% to 9.65%, with an average of 6.79%.
- The ultimate health care cost trend rate for companies that use the same health care cost trend rate for pre- and post-age 65 benefit coverage ranged from 3.00% to 6.16%, with an average of 4.74%.

- The median number of years to reach the ultimate health care cost trend rate is seven.
- 39% of companies with postretirement medical benefits have assets associated with their postretirement benefit plans. For companies with assets supporting their postretirement benefit plan, the median level of assets as a percentage of accumulated postretirement benefit obligation (APBO) was 57% at fiscal year-end 2016. For those with assets set aside to fund their postretirement obligations, APBO funding levels increased slightly from fiscal year-end 2015. According to last year's report, the median level of assets as a percentage of APBO was 54% at fiscal year-end 2015.

*For the purposes of this analysis, a company is classified as providing a postretirement benefit if it is still managing the plan obligations. Many postretirement benefits are closed to new entrants.

Background

Pensions

The current structure of accounting and financial reporting for pensions is designed to:

- Provide meaningful reporting of the entity's financial position by including the plan's funded status as an asset or liability on the company's balance sheet
- Provide disclosures that will allow financial statement users to understand the financial effect of a company's decision to provide and fund pension benefits
- Provide a measure of net periodic pension cost that is understandable and comparable, because it reflects the terms of the underlying plan and approximates the recognition of the cost of an employee's pension over that employee's service period

Any pension accounting method that recognizes the cost of benefits before the payment of those benefits to retirees must be based on estimates or assumptions about future events that will determine the actual amount and timing of benefit payments.

This report focuses on:

- The discount rate used to calculate the present value of obligations, discount rate used to measure service cost and interest cost, rate of compensation increase and expected long-term rate of return on plan assets assumptions
- The funded status of benefit plans
- The target asset allocations

Other postretirement benefits

As with accounting for pensions, ASC 715 requires employers to accrue the cost of their postretirement benefits other than pensions – primarily medical and death benefits – over a period of years until employees become fully eligible for the postretirement benefits.

Compliance with ASC 715 requires extensive disclosures about the plan, the costs and obligations created by the plan, and the assumptions used to determine such costs and obligations.

This report focuses on:

- The discount rate used to measure APBO, rate of compensation increase and expected long-term rate of return on plan assets assumptions
- The benefit obligations
- The assumed health care cost trend rate

Companies analyzed

Pension and other postretirement benefit information was compiled and analyzed for the 511 companies that maintain a U.S. qualified pension and/or another postretirement benefit, even if not for their main workforces, in the 2017 listing of the *Fortune* 1000. The names of the companies included in our analysis are listed in the Appendix (page 22).

Measurement of pension costs and obligations

The determination of pension costs and obligations is based on the attribution of pension benefits to periods of employee service and the use of actuarial assumptions to calculate the present value of such benefits. Actuarial assumptions reflect the time value of money and the probability of payment. The following three economic assumptions used in determining pension costs are required to be disclosed under ASC 715:

- The discount rate
- The rate of compensation increase
- The expected long-term rate of return on plan assets

Figure 1 shows the trends in key economic assumptions for determining costs and obligations under ASC 715.* The average values shown in Figure 1 represent the assumptions of companies surveyed from fiscal year-end 1999 to fiscal year-end 2016. The data reflect values for companies with fiscal years ending after September.

The average discount rate assumption for benefit obligations decreased in 2016, after an increase in 2015. The average was 4.03% at fiscal year-end 2016 and 4.34% at fiscal year-end 2015. By fiscal year-end 2016, the average discount rate accumulated a total decrease of 360 basis points since 1999.

The average rate of compensation increase assumption decreased slightly, down seven basis points from last year's report to 3.53% in 2016. Compared with the expected long-term rate of return and the discount rate, the average rate of compensation increase shows the smallest change since 1999 with a drop of 106 basis points.

Figure 1. Trends in discount rate, salary scale and expected rate of return assumptions, FYE 1999 – 2016

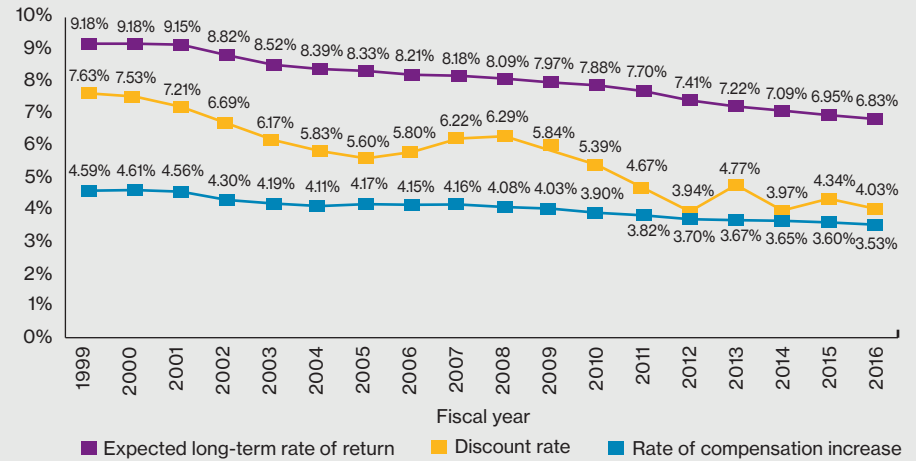
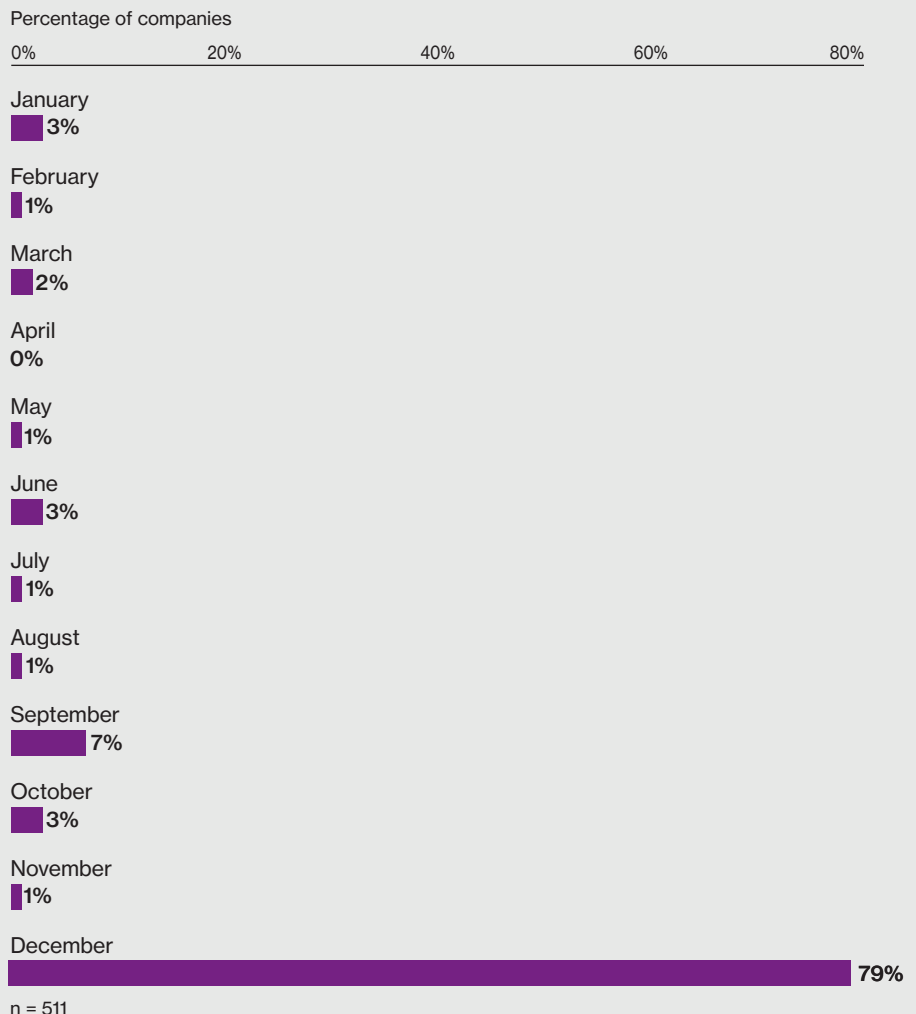


Figure 2. Distribution of FYE dates, 2016



*Historical values shown in Figures 1, 13, 15, 16, 18, 19, 22, 23, 28, 29 and 30 are derived from prior studies, using their values and samples. The 2015 values described in all other figures and text are derived from the 2016 sample and using last year's values.

The average expected long-term rate of return on plan assets assumption continues its downward trend. From last year's report the rate has declined 12 basis points to 6.83% in 2016. The average expected long-term rate of return on plan assets assumption reported in the survey has declined by 225 basis points since 1999.

Figure 2 represents the fiscal year-end of the analyzed companies. The vast majority of companies have a fiscal year-end date in the last quarter of the year.

Discount rate

Discount rates are used to calculate the present value of the future cash flows to satisfy the pension obligations and the service cost and interest cost components of net periodic pension cost. The discount rate is intended to represent the rate at which pension benefit obligations could be effectively settled. According to ASC 715, the discount rate may be based on the rates implicit in current annuity rates or available rates on high-quality corporate bond yields.

Figure 3 compares the average pension discount rates for benefit obligations with the Citigroup Pension Liability Index, the Moody's AA corporate bond rate, the Treasury 20-year constant maturity rate and the IRS composite corporate bond rate.

Discount rates are typically based on corporate bond yields. It has been increasingly common to match expected cash flows from the plan either to a hypothetical portfolio of bonds that generate sufficient cash flows or to a notional yield curve generated from available bond information. During 2016, there were similar movements between corporate and government bond yields and discount rates as shown in Figure 3. From October 2016 to December 2016, discount rates (and coinciding bond yields) increased by 44 basis points. Pension sponsors with December fiscal year-end dates benefited from this tick up in interest rates, which helped mitigate some of the pension liability growth realized earlier in the year.

Figure 3. Fixed-income and pension discount rates, 2015 – 2016

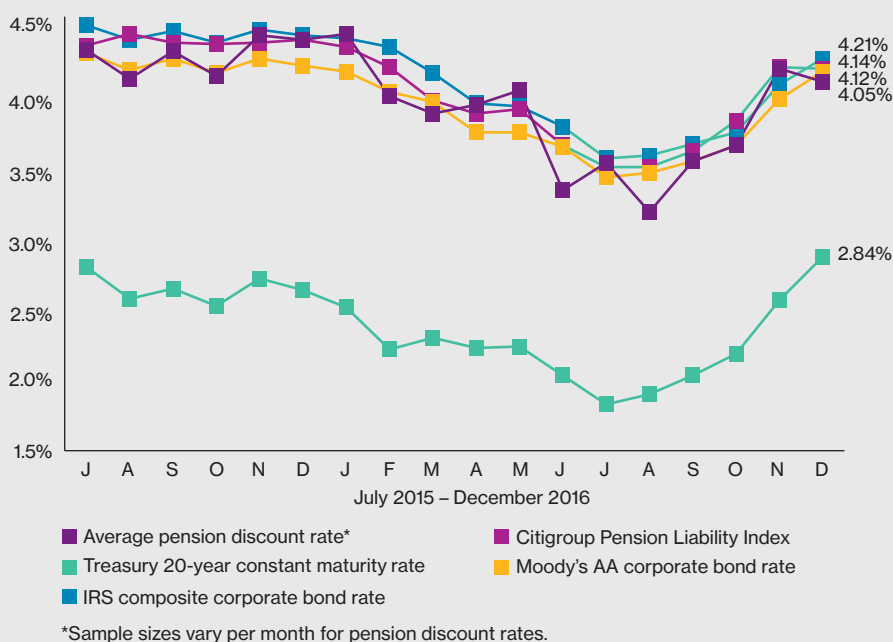


Figure 4. Distribution of pension discount rate assumptions for benefit obligations, FYE 2016

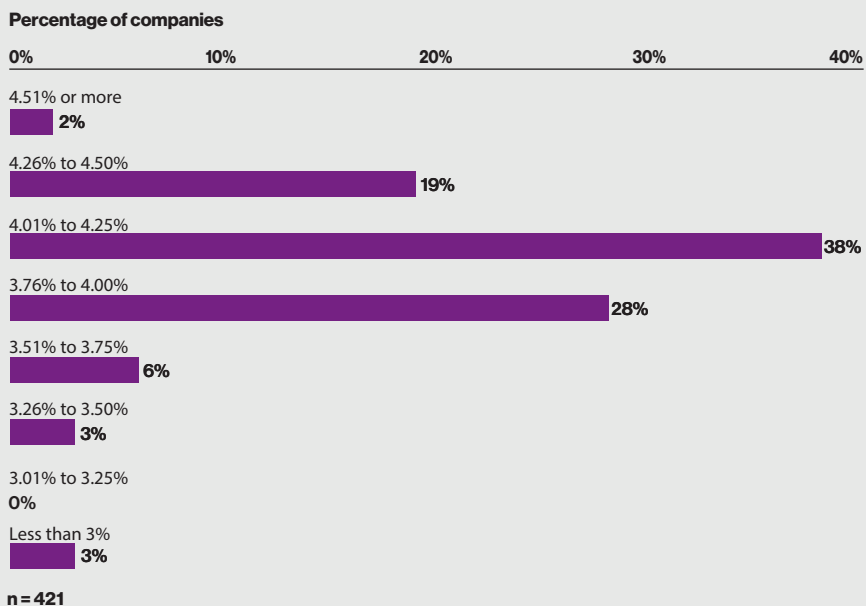


Figure 4 shows the distribution of discount rates for benefit obligations at year end 2016 for the analyzed companies. Discount rates ranged from 1.60% to 4.98%, with an average rate of 4.03%. The median discount rate is 4.09%. Seventy-nine

percent of companies used a discount rate of 4.25% or less at fiscal year-end 2016. Quite a different scenario was observed at fiscal year-end 2015, where 38% of companies represented in this report used discount rates of 4.25% or less.

Figure 5 shows the distribution of the differences between the discount rate assumptions used for pension obligations reported at fiscal year-end 2016 and fiscal year-end 2015 for companies represented in this report that provided rates in both years.

Ninety-six percent of companies showed a decrease in their discount rate assumption for determining PBO from 2015 to 2016. For 60% of companies in this analysis, discount rates dropped more than 25 basis points. The average discount rates declined by 30 basis points for companies in this year's report.

In 2015, the SEC staff stated that they would not object to an alternative approach to setting the discount rate for measuring service and interest cost components of net periodic pension expense (i.e., the granular approach). This refinement applies to pension and other postretirement benefit plans for companies reporting under U.S. GAAP. Under this approach, specific spot rates along the yield curve are applied to the relevant projected cash flows for each component as an alternative to the traditional single weighted average discount rate. Companies that adopted this method should disclose multiple weighted average discount rates in their annual reports: the rate used to determine the PBO, the rate used to determine service cost and the rate used to determine interest cost.

Figure 6 depicts the percentage of companies in this year's survey that have adopted the granular approach for the setting of the discount rate for measuring pension obligations' service and interest cost. The charts show the prevalence of this approach both among all companies with fiscal years ending October 1 through December 31 and among those using a yield curve methodology to derive their discount rate assumption. Companies using bond-matching to determine their discount rate assumptions are not permitted to adopt this alternative approach.

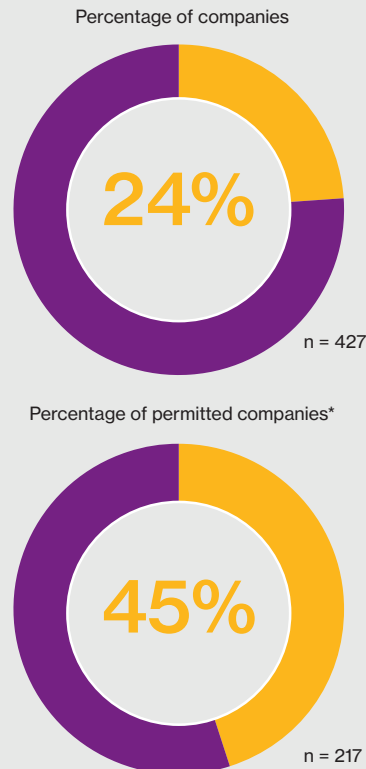
Figure 5. Change in pension discount rate assumptions, FYE 2016 – 2015*

	Percentage of companies
Current-year rates greater than prior-year rate	2%
Rates are the same in both years	2%
Current-year rate less than prior-year rate	96%
1 to 24 basis points	36%
25 to 49 basis points	44%
50 to 74 basis points	12%
75 to 99 basis points	2%
100 or more basis points	1%
Total	100%

n = 415

*For companies in this year's report

Figure 6. Percentage of companies adopting the granular approach, FYE 2016



*Comprised of companies that use a yield curve to derive their discount rate assumption

Twenty-four percent of all pension sponsors in our analysis chose to adopt the granular approach. Among eligible companies, 45% chose to adopt the granular discount rate approach during fiscal year 2016. *Figure 7* shows the average discount rates for PBO, service cost and interest cost for companies using the granular approach.

On average, among companies adopting the granular approach and reporting various discount rate assumptions, the discount rate assumption used to measure service cost was 50 basis points higher than the PBO discount rate, and the discount rate assumption used to measure the interest cost was 60 basis points lower than the PBO discount rate.

Rate of compensation increase

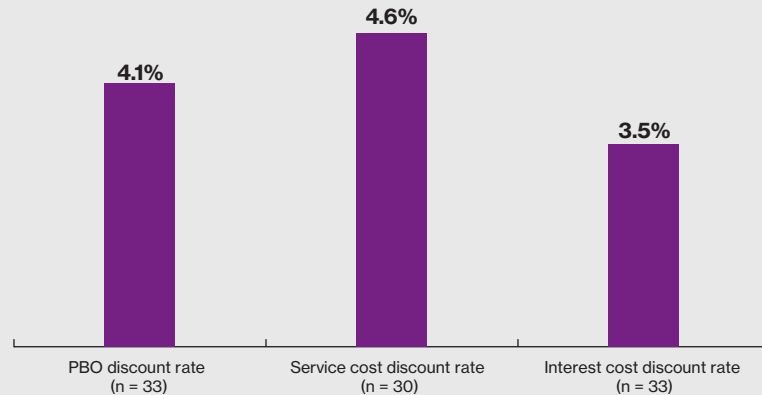
The rate of compensation increase assumption is used to project current pay levels into the future. The assumption is a factor in the determination of the PBO and service cost for pay-related plans.

The rate of compensation increase assumption ranges from 0.20% to 6.00%, with an average rate of 3.53% at fiscal year-end 2016. By comparison, in 2015, for companies included in this year's report, the rate of compensation increase had a similar range of 0.20% to 6.09%, with an average rate of 3.57%.

Figure 8 shows the distribution of the rate of compensation increase assumptions.

Forty-eight percent of the companies used a rate of compensation increase assumption of 3.50% or less at fiscal year-end 2016.

Figure 7. **Average PBO, service cost and interest cost discount rate assumptions,***
FYE 2016



*Companies reporting service cost or interest cost granular discount rate data

Figure 8. **Distribution of pension rate of compensation increase assumptions, FYE 2016**

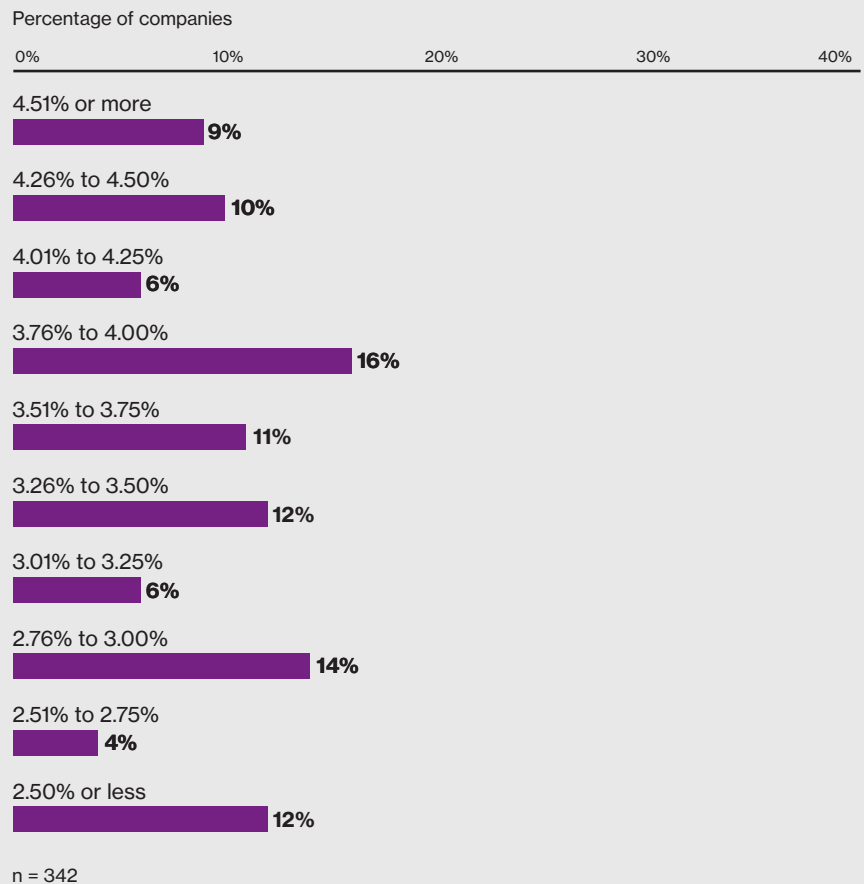


Figure 9 shows the distribution of the difference between the rate of compensation increase assumptions reported at the current and prior fiscal year-ends for companies reporting the assumptions in both years.

Forty-seven percent of companies changed their rate of compensation increase assumption from fiscal year-end 2015 to fiscal year-end 2016: 21% increased their assumption and 26% decreased it.

Changes in the discount rate for benefit obligations and compensation increase rate have opposing effects on the pension obligation: The higher the discount rate, the lower the obligation, and the higher the assumed rate of compensation increase, the higher the obligation. The larger the spread between the two measurements, the lower the obligation, and vice versa.

For companies represented in this report, the average spread between the discount rate for benefit obligations and the rate of compensation increase assumptions decreased by 26 basis points – from 77 basis points to 51 basis points – from fiscal year-end 2015 to fiscal year-end 2016. This was primarily due to a decline in discount rate assumptions in fiscal year-end 2016 reporting. The median spread between the discount rate for benefit obligations and rate of compensation increase assumption at fiscal year-end 2016 was 50 basis points.

Figure 10 shows the distribution of the difference between the discount rate for benefit obligations and the rate of compensation increase assumptions at the most recent fiscal year-end for all companies. At fiscal year-end 2016, over 70% of the companies in this report use a discount rate for benefit obligations that is greater than their rate of compensation increase assumption.

Figure 9. Change in pension rate of compensation increase assumptions, FYE 2016 – 2015*

	Percentage of companies
Current-year rates greater than prior-year rate	21%
50 or more basis points	3%
25 to 49 basis points	2%
1 to 24 basis points	16%
Rates are the same in both years	53%
1 to 24 basis points	13%
25 to 49 basis points	7%
50 to 74 basis points	3%
75 to 99 basis points	1%
100 or more basis points	2%
Current-year rate less than prior-year rate	26%
Total	100%

n = 337

*For companies in this year's report

Figure 10. Spread between discount rate and rate of compensation increase assumptions, for pension purposes, FYE 2016

	Percentage of companies
Discount rate greater than rate of compensation increase	71%
200 or more basis points	5%
150 to 199 basis points	6%
100 to 149 basis points	16%
50 to 99 basis points	24%
1 to 49 basis points	20%
Rates are the same	2%
1 to 49 basis points	16%
50 to 99 basis points	6%
100 or more basis points	4%
Discount rate less than rate of compensation increase	27%
Total	100%

n = 342

Expected long-term rate of return on plan assets

The expected long-term rate of return on plan assets assumption is the long-term expectation of the pension fund's annual earnings rate. The expected long-term rate of return on plan assets is a component of net periodic pension cost, which lowers pension cost.

Figure 11 shows the distribution of expected long-term rate of return on plan assets assumption at fiscal year-end 2016.

The expected long-term rate of return on plan assets ranged from 2.52% to 9.00%, with an average of 6.83%. The median expected long-term rate of return on plan assets assumption was 7.00%. Half of companies in this year's analysis had an expected long-term rate of return on assets assumption between 6.51% and 7.50%.

Figure 11. **Distribution of pension expected long-term rate of return on plan assets assumptions, FYE 2016**

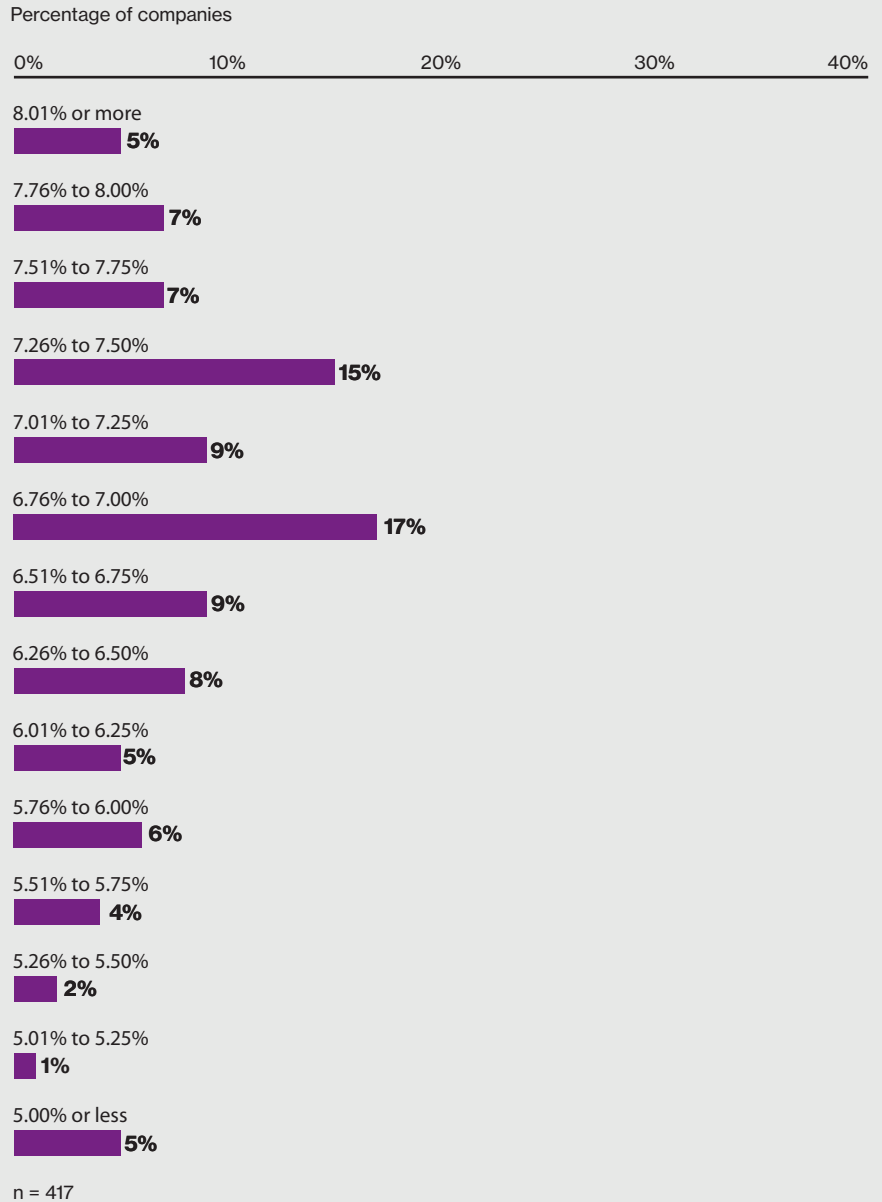


Figure 12 shows the distribution of the difference between the expected long-term rate of return on plan assets assumption reported for fiscal year-end 2016 and fiscal year-end 2015 for companies reporting such rates in both years. Forty-two percent of companies maintained their expected long-term rate of return on plan assets assumption from fiscal year-end 2015 to fiscal year-end 2016. As in fiscal year-end 2015, the majority of companies reported a change in their assumption with most decreasing it. On average, the expected long-term rate of return on plan assets assumption fell by 14 basis points for companies reporting a value in both years.

Actual rate of return on plan assets

The actual rate of return on plan assets is the investment growth realized by the pension fund during the year.

Figure 13 depicts the average actual annual rate of return on plan assets from fiscal year-end 1999 to fiscal year-end 2016. The average rate of return on plan assets during 2016 was 7.37%. The median rate of return on pension plan assets was 7.51%.

Figure 12. **Change in pension expected long-term rate of return on plan assets, FYE 2016 – 2015***

	Percentage of companies
Current-year rates greater than prior-year rate	11%
50 or more basis points	1%
1 to 49 basis points	10%
Rates are the same in both years	42%
1 to 49 basis points	34%
50 or more basis points	13%
Current-year rate less than prior-year rate	47%
Total	100%

n = 412

*For companies in this year's report

Figure 13. **Average returns on pension assets, FYE 1999 – 2016**

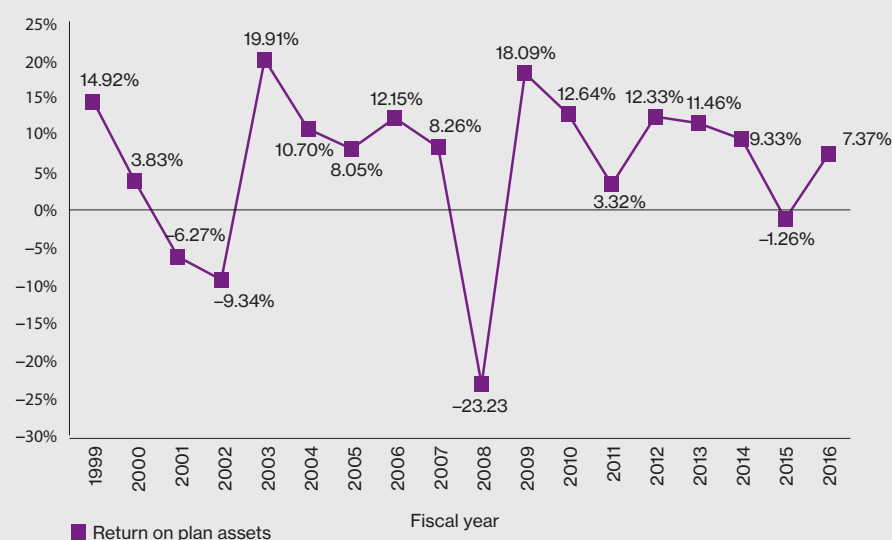


Figure 14 depicts the distribution of actual rates of return on assets at fiscal year-end 2016. Eighty-seven percent of companies had an actual return on their assets of 5% or higher.

Figure 15 shows the difference between actual return on assets and the expected long-term return assumption from fiscal year-end 1999 to fiscal year-end 2016. Contrary to the previous year, fiscal year-end 2016 depicts a positive spread as the average actual returns exceeded the expectations by 51 basis points. Companies have exceeded their expectations in six of the last eight years, whereas in the prior nine years (2000 to 2008) expectations were only exceeded on three occasions.

Figure 14. **Distribution of actual rates of return on pension assets, FYE 2016**

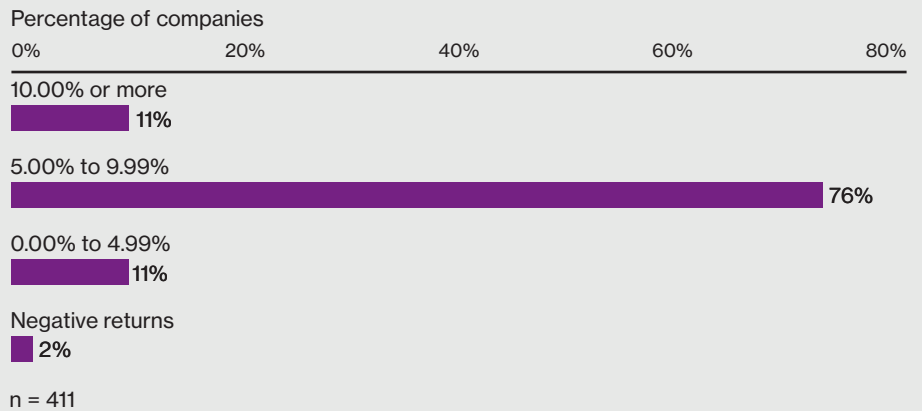
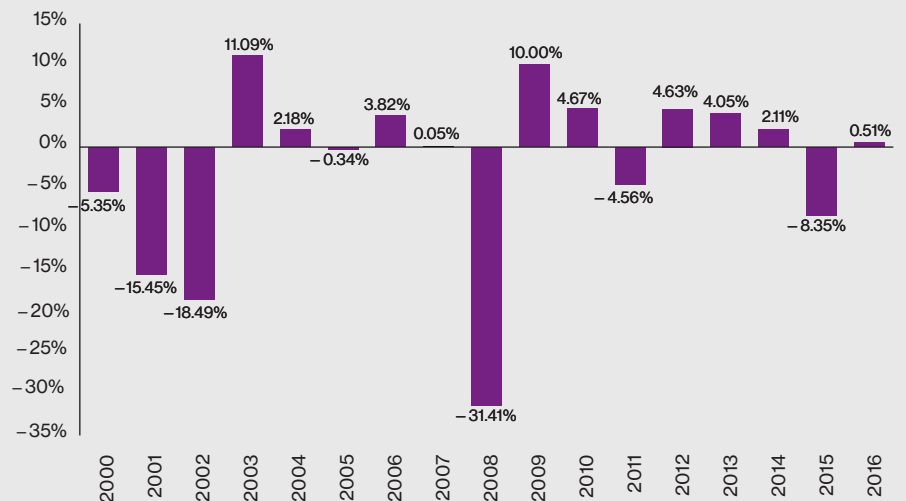


Figure 15. **Average spread between actual and expected long-term rate of return, FYE 1999 – 2016**



Asset allocation of pension plans

ASC 715 requires the disclosure of the allocation of pension plan assets by type of investment. The allocation of assets in pension plans is an important determinant of the plan's overall investment performance. More specifically, asset allocation strongly influences volatility in the plan's funded status and the plan sponsor's cash and accounting cost. The sponsor's creditors, investors, regulators and participants want to know about asset allocation in order to evaluate the plan's risk exposure and long-term cost.

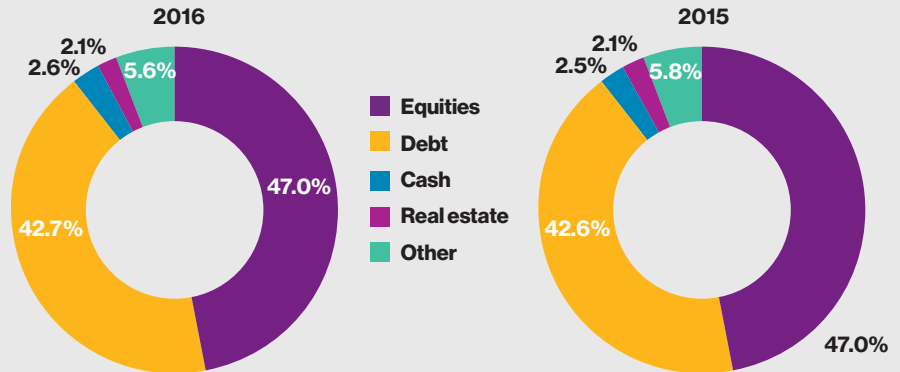
Figure 16 depicts the average asset allocation for sponsors in this analysis. Average allocation for 2016 remained relatively unchanged from 2015.

Figure 17 shows the relationship between expected long-term rate of return assumptions and sponsors' asset allocation to cash and debt. As expected the figure depicts a downward trend, meaning lower expected long-term return assumptions positively correlate with larger asset allocation to cash and debt holdings.

Companies are also required to disclose their target asset allocation for plan assets. Some companies used a single value as their target allocation; others used a range to denote their allocation target. For purposes of Figure 18, if the target allocation was shown as a range, results were normalized to equal 100%.

Overall, there were no major changes to the target asset allocation of plan assets during 2016. The average target equity allocation for fiscal year-end 2017 was 46.3%.

Figure 16. Average allocations of pension plan assets, FYE 2016 vs. FYE 2015*



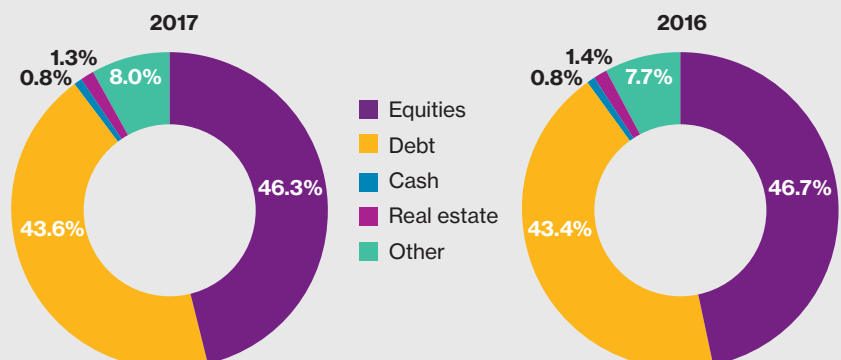
n = 402

*2015 results are from last year's report, based on last year's sample.

Figure 17. Expected long-term rate of return on assets assumption and asset allocation to cash and debt



Figure 18. Average target asset allocations for FYE 2017 and FYE 2016*



n = 368

*2016 results are from last year's report, based on last year's sample.

Funded status of pension plans

Funded status is a primary measure of the financial health of pension plans and is defined as the relationship between plan assets and obligations.

PBO funded status

The PBO funded status is defined as the fair value of plan assets divided by the PBO. The PBO is the actuarial present value of all benefits attributed by the benefit formula to service before the measurement date. This includes the effect of expected future compensation increases that are part of the benefit formula.

Figure 19 shows the changes in the PBO funded status from fiscal year-end 1999 to fiscal year-end 2016.

The average PBO funded status ticked up minimally to 81% at the end of 2016, leaving funding levels relatively constant since fiscal year-end 2014.

Figure 20 shows the distribution of PBO funded status for companies in this report at fiscal year-end 2016 and fiscal year-end 2015.

By fiscal year-end 2016, funded status remained essentially unchanged from last year. By the end of the 2016 fiscal year, 50% of companies had funded ratios greater than 80%, up from 48% at fiscal year-end 2015.

Companies in this report with a fiscal year-end after September had roughly \$1,706 billion in projected benefit obligations and \$1,379 billion in pension plan assets in aggregate at the end of 2016.

Figure 19. Average PBO funded status, FYE 1999 – 2016

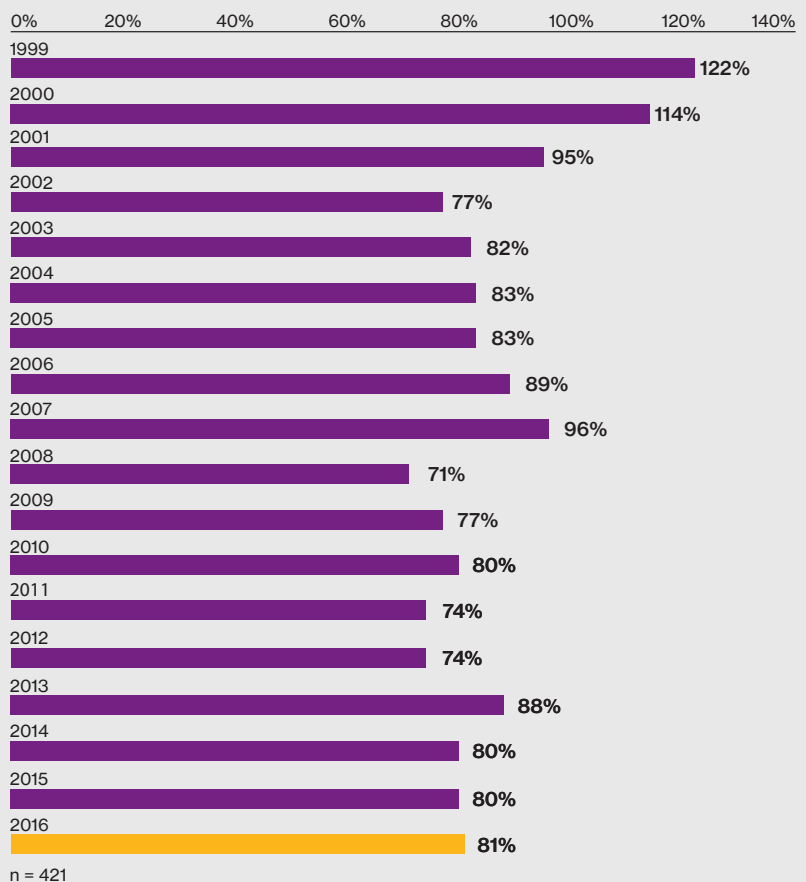
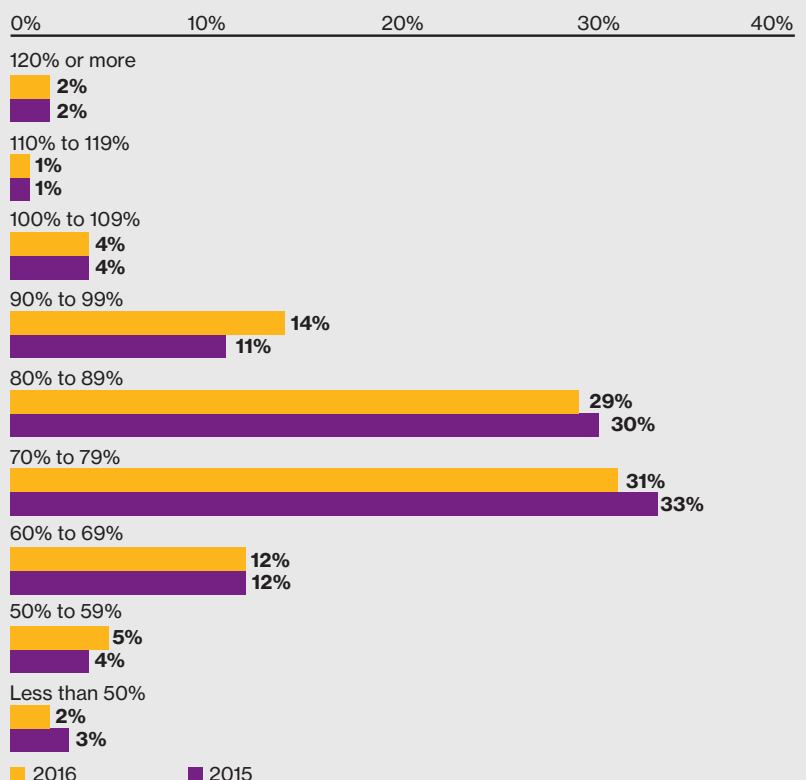


Figure 20. Distribution of PBO funded status, FYE 2016 vs. FYE 2015*



*For companies in this year's report

Other postretirement benefits

Most companies in the *Fortune* 1000 that manage defined benefit pensions also manage postretirement medical benefits. Eighty-three percent of companies in this study also manage postretirement medical benefits.



Measurement of other postretirement benefit costs and obligations

The determination of the costs and obligations for postretirement benefits other than pensions is based on the calculation of the actuarial present value of the postretirement benefits that are expected to be paid to or on behalf of current and future retirees under the terms of the plan and the attribution of such present value to periods of service. Generally, the attribution period is from the date of hire to the date the employee gains full eligibility for benefits. Benefits are generally allocated equally to each year of service.

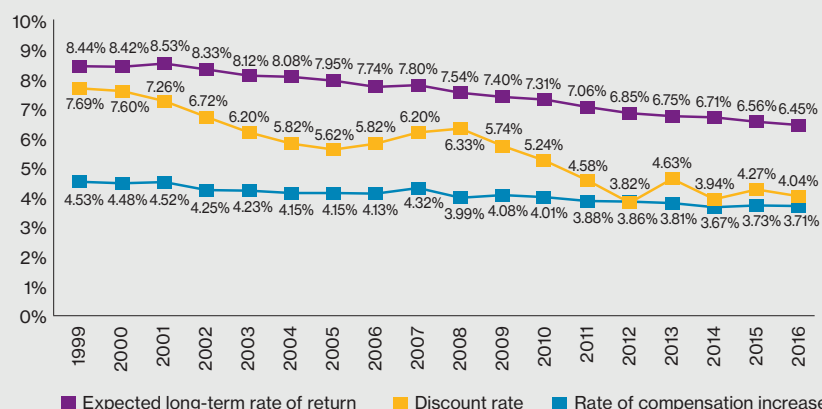
The APBO as of a particular date is the actuarial present value of expected benefits attributed to current and former employees' service rendered to that date. A postretirement benefit plan's APBO includes salary progression if the plan's benefits are pay-related.

Actuarial assumptions are used to determine the present value of expected benefits. The following actuarial assumptions are required to be disclosed:

- Discount rate for APBO
- Health care cost trend rate
- Rate of compensation increase
- Expected long-term rate of return on plan assets

Figure 21 shows the discount rate for APBO, rate of compensation increase and expected long-term rate of return assumptions from the current and past reports. These assumptions and trends are often the same as or similar to the assumptions for pension plans, except for the expected long-term rate of return on asset assumptions, in which most companies are using lower rates for their other postretirement

Figure 21. Trends in other postretirement discount rate, rate of compensation increase and expected long-term rate of return assumptions, FYE 1999 – 2016



plans than for their pensions, primarily because of taxes and possibly due to differences in asset mixes.

The majority of companies do not advance fund their other postretirement benefit plans. For those companies that do advance fund their other postretirement benefit plans, the average expected long-term rate of return on assets assumption reported in the survey has declined by 199 basis points since 1999. Over this same period of time, average rate of compensation increase assumption has declined by 82 basis points.

The discount rate for APBO

Assumed discount rates are intended to "reflect the time value of money as of the measurement date in determining the present value of future cash outflows currently expected to be required to satisfy the postretirement benefit obligation." Plan sponsors generally use rates based on the rates of return on high-quality fixed-income investments.

Discount rates for all companies range from 2.84% to 6.63%, with an average value of 4.04% at fiscal year-end 2016. By comparison, discount rates at fiscal year-end 2015 for companies included in this year's report ranged from 3.25% to 6.47%, with an average value of 4.28%.

Although the pattern of cash flows can differ, 15% of companies with postretirement medical benefits and pension plans use the same discount rate for their pension and postretirement plan obligations. Thirty-four percent of the companies use a higher discount rate for their postretirement plan than for their pension plan, and 51% use a lower rate.

Rate of compensation increase

Comparison of the rate of compensation increase assumptions for pension and postretirement benefit purposes shows that a good number of sponsors use the same rate of compensation increase assumption for both types of plans. Reasons for different assumptions include different employee groups covered under the plans.

The rate of compensation increase assumption for postretirement benefits ranges from 1.60% to 5.75%, with an average value of 3.71%.

Forty-five percent of companies reporting a rate of compensation increase for postretirement benefits use the same assumption they use for pension purposes; 36% use a postretirement rate of compensation increase assumption greater than their pension assumption, and 19% use a lower assumption.

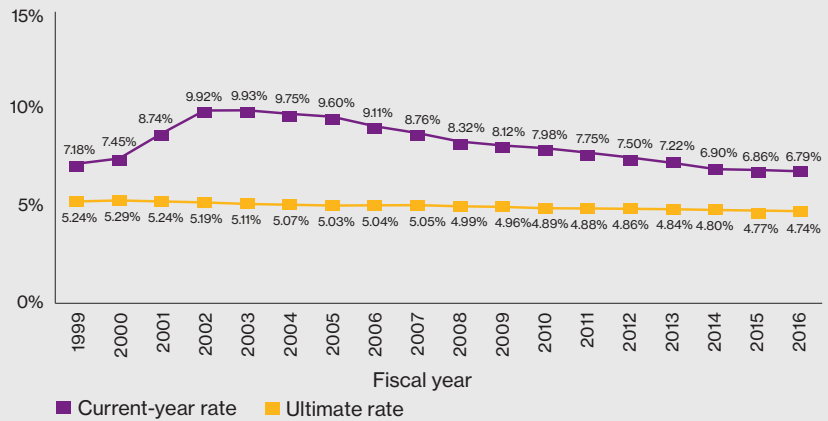
The health care cost trend rate

The health care cost trend rate is one of several assumptions unique to measuring the obligation for and cost of postretirement health care benefits. Other assumptions unique to these measurements are the per capita claims cost at each age at which the participant is expected to receive benefits and medical coverage available from other providers, such as Medicare. Of these assumptions, only information on the health care cost trend rate is a required disclosure item in the financial statements – in particular, the initial health care cost trend rate and the ultimate rate, and the year the ultimate rate is reached.

Initial and ultimate health care cost trend rates

Figure 22 shows the assumed health care cost trend rates from fiscal year-end 1999 to fiscal year-end 2016. The figure represents companies that use the same trend rate assumption for health care costs for retirees above and below age 65.

Figure 22. Initial and ultimate health care cost trend rate assumptions for companies using the same assumption for pre- and post-age 65 costs, FYE 1999 – 2016



The average initial health care cost trend rate continued to decline during 2016, down to 6.79%. This rate has declined 314 basis points since 2003 figures (9.93%) when the initial health care cost trend reached its highest point. On the other hand, the average ultimate health care trend rate remains relatively stable, having declined by 50 basis points since 1999. *Figure 23* shows the distribution of the initial health care cost trend rate for companies that use the same health care cost trend rate assumption for pre- and post-age 65 cost. Seventy-five percent of companies in this report used an initial health care cost trend rate between 6.01% and 8.00%. The median initial health care cost trend rate was 6.80% at fiscal year-end 2016.

For companies that use the same trend rate assumption for pre- and post-65 health care costs, the average initial health care cost trend rate is 6.79%, with a range from 3.65% to 9.65% at fiscal year-end 2016. The initial health care cost trend rate ranged from 3.74% to 10.00% with an average of 6.86% at fiscal year-end 2015.

Figure 23. **Distribution of initial health care cost trend rates for companies using the same assumption for pre-Medicare and Medicare-eligible costs, FYE 2016**

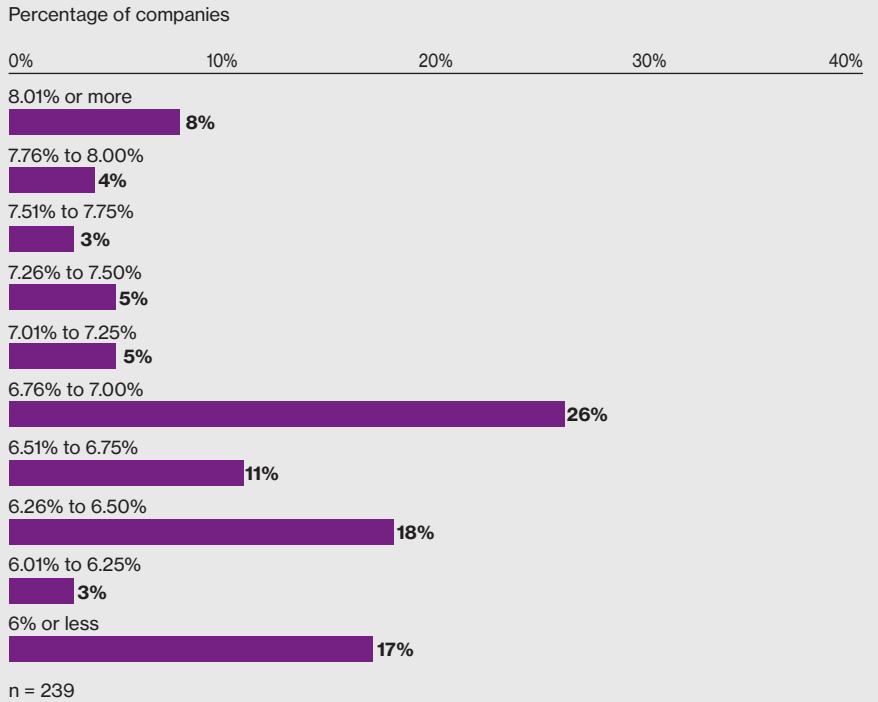


Figure 24 shows the distribution of the ultimate health care cost trend rate. The majority of companies in this year's report had an ultimate health care cost trend rate of 5.00%. The average ultimate health care cost trend rate was 4.74% at fiscal year-end 2016, with a range of 3.00% to 6.16%.

Years to reach ultimate health care cost trend rate

Figure 25 shows the distribution of the years in which the ultimate health care cost trend rate is expected to be achieved for companies that use the same assumption for pre- and post-age 65 health care costs. For 58% of companies, the ultimate health care cost trend rate is expected between 2021 and 2026. The median number of years to reach the ultimate health care cost trend rate is seven.

Figure 24. **Distribution of ultimate health care cost trend rates for companies using the same assumption for pre- and post-65 costs, FYE 2016**

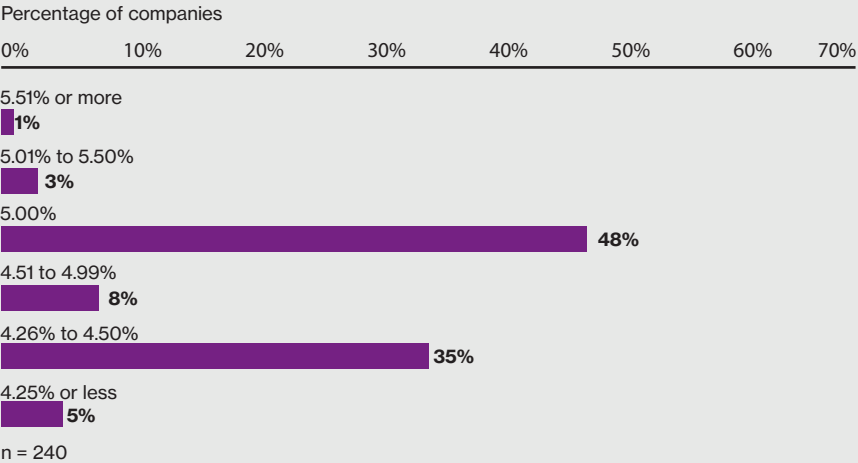
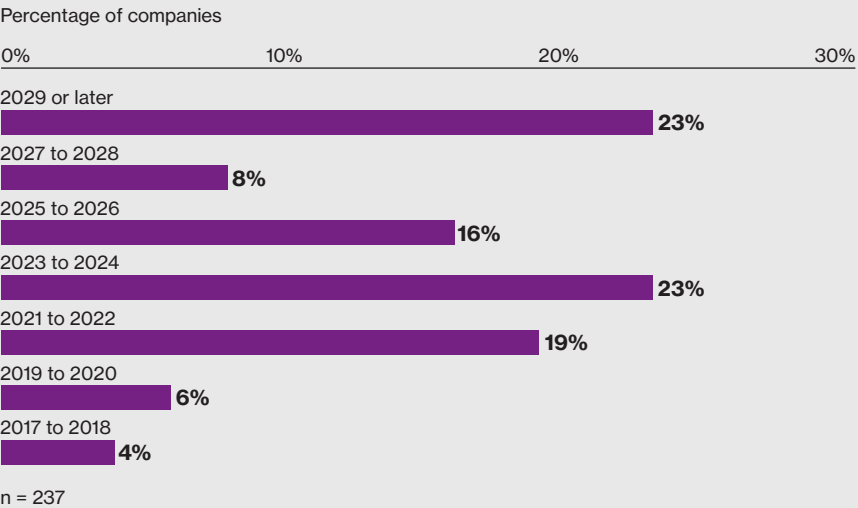


Figure 25. **Distribution of years in which ultimate health care cost trend rate is expected to be achieved, FYE 2016**



The spread between the discount rate for postretirement obligations and the ultimate health care cost trend rate

Figure 26 shows that the ultimate health care cost trend rate exceeds the discount rate for APBO for almost all companies. Overall, 92% of companies reported a discount rate for postretirement plans that is less than the ultimate health care cost trend rate.

The spread between the discount rate for postretirement obligations and the ultimate health care cost trend rate ranges from –210 basis points to 121 basis points, with an average value of –71 basis points. Figure 27 illustrates how the spread has remained negative over the past six years, mirroring the movements of the discount rate used to measure postretirement benefits.

Companies reporting separate health care cost trend rates for retirees below age 65 and above age 64

Some plan sponsors elect to use two health care cost trend rates: one for retirees below age 65 (pre-Medicare) and one for retirees above age 64 (Medicare-eligible).

About 11% of companies that disclosed health care cost trend data reported separate health care cost trend assumptions for retirees below age 65 and retirees above age 64.

The average current-year health care cost trend rate for retirees below age 65 is 6.94%, with values ranging from 4.00% to 10.65%. The median current-year health care cost trend rate for retirees below age 65 is 7.00%.

For retirees above age 64, the average trend rate is 6.84%; values range from 5.75% to 10.00%. The median trend rate is 6.75%.

Figure 26. Spread between the discount rate for APBO and the ultimate health care cost trend rate, FYE 2016

	Percentage of companies
Discount rate greater than ultimate health care cost trend rate	6%
100 or more basis points	1%
50 to 99 basis points	3%
1 to 49 basis points	3%
Rates the same	1%
1 to 49 basis points	21%
50 to 99 basis points	40%
100 to 149 basis points	27%
150 or more basis points	4%
Discount rate less than ultimate health care cost trend rate	92%
Total	100%

n = 238

Figure 27. Average spread between the discount rate and the ultimate health care cost trend rate, FYE 1999 – 2016



The ultimate health care cost trend rates are, on average, 4.69% for retirees below age 65 and 4.71% for retirees above age 64, while the median ultimate health care cost trend rate is 4.50% both for retirees below age 65 and above age 64.

Expected long-term rate of return on plan assets

Most other postretirement benefit plans are not advance funded; an expected long-term rate of return on plan assets assumption was reported by only about one-third of companies that provide postretirement benefits. The expected long-term rate of return assumption for postretirement benefit plan assets ranged from 1.50% to 9.95%, with an average value of 6.45% and a median value of 6.80%.

Due to limited tax-effective methods for advance funding other postretirement benefits, most postretirement benefit plans other than pensions remain unfunded. *Figure 28* depicts the APBO funded status for companies that have funded postretirement benefits from fiscal year-end 1999 to fiscal year-end 2016. Since 2009, APBO funding levels have mostly increased, reaching a median funded status of 57% at fiscal year-end 2016. Despite the decline in discount rates for postretirement obligations over fiscal year-end 2016 that led to increases in APBO, median funded status improved relative to the previous year. Investment returns and plan contributions were able to counterbalance the negative impact of lower interest rates.

Figure 28. **Median APBO funded status for firms with funded other postretirement benefits, FYE 1999 – 2016**

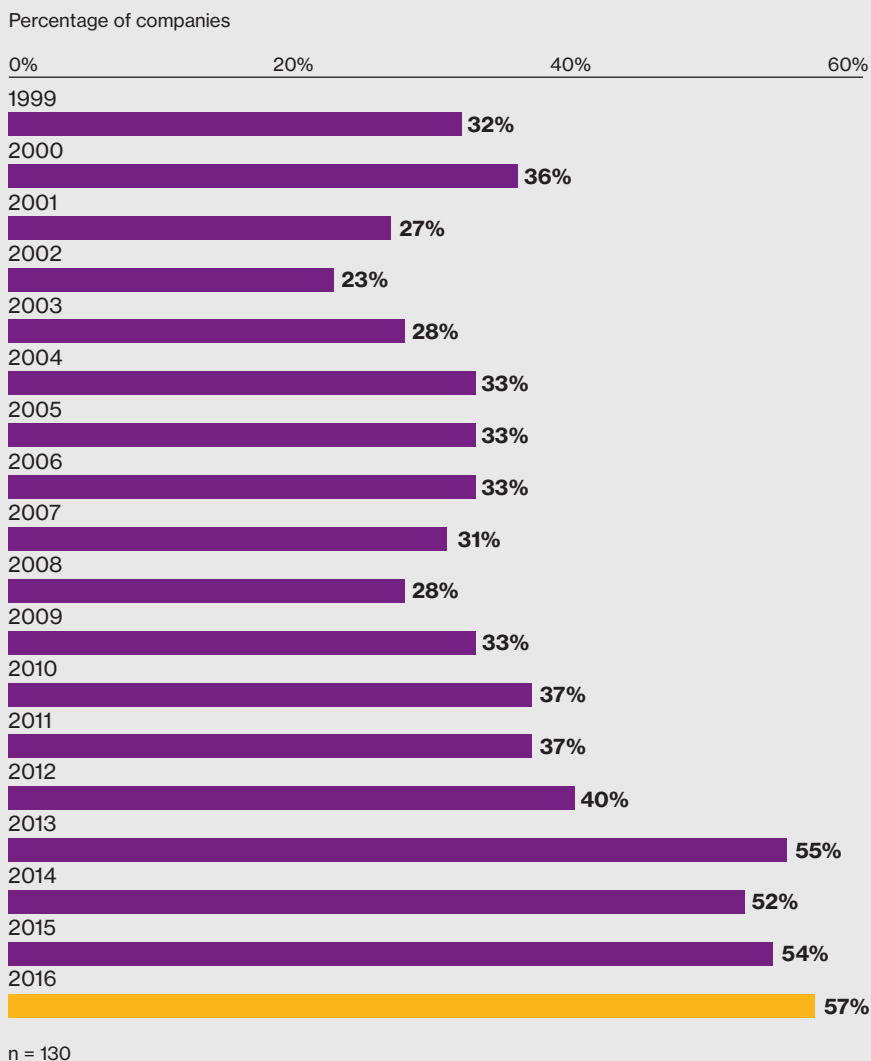
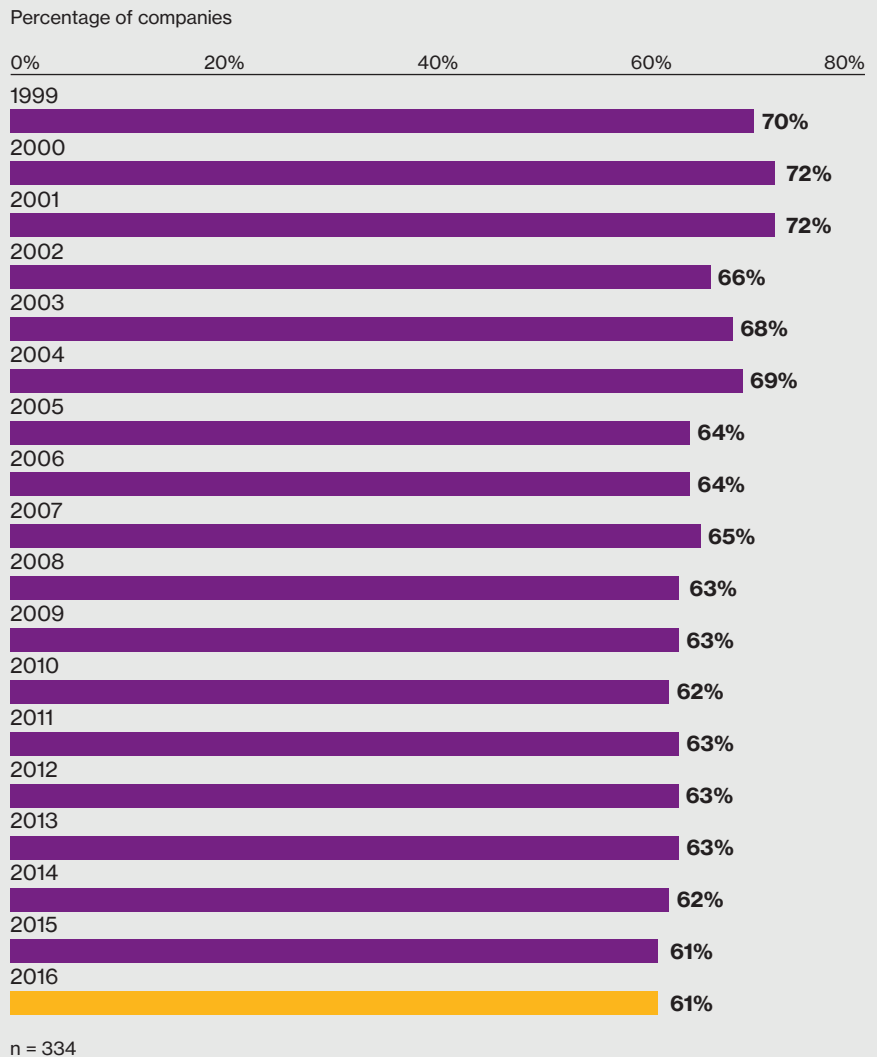


Figure 29 shows the percentage of companies that offer postretirement benefits that are not funded, from fiscal year-end 1999 to fiscal year-end 2016. While this ratio has declined over the last 12 years, the vast majority of plan sponsors still are choosing not to advance fund their other postretirement benefits due to the lack of tax-effective vehicles. Instead, retirees' benefits are paid from corporate assets as they come due.

Figure 29. Percentage of companies with unfunded other postretirement benefits, FYE 1999 – 2016



Appendix – Companies analyzed

3M Company	Ashland Inc.	CH2M Hill Companies Ltd.
A. O. Smith Corporation	Assurant Inc.	Charter Communications Inc.
A. Schulman	AT&T Inc.	Chevron Corporation
Abbott Laboratories	Atmos Energy Corporation	CHS Inc.
AbbVie Inc.	Autoliv Inc.	CIGNA Corporation
ABM Industries Inc.	Automatic Data Processing	Cincinnati Financial Corporation
Acadia Healthcare Company, Inc.	Autozone Inc.	CIT Group Inc.
Acuity Brands Inc.	Avery Dennison Corporation	Citigroup Inc.
AECOM	Avis Budget Group Inc.	Citizens Financial Group, Inc.
AES Corporation	Avnet Inc.	Cliffs Natural Resources
Aetna Inc.	Avon Products Inc.	Clorox Company
AFLAC Inc.	Baker Hughes Inc.	CME Group Inc.
AGCO Corporation	Ball Corporation	CMS Energy Corp.
Agilent Technologies Inc.	Bank of America Corporation	CNO Financial Group
Air Products and Chemicals Inc.	Bank of New York Mellon Corporation	Coca-Cola Bottling Company
AK Steel Holding Corporation	Baxter International Inc.	Coca-Cola Company
Alaska Air Group Inc.	BB&T Corporation	Colfax
Albemarle Corporation	Becton Dickinson and Company	Colgate-Palmolive Company
Alcoa Corporation	Belden	Comerica Inc.
Aleris Corporation	Bemis Company Inc.	CommScope Holding Company, Inc.
Allegheny Technologies Inc.	Berkshire Hathaway Inc.	Computer Sciences Corp.
Alliance Holdings GP, LP	Berry Global, Inc.	ConAgra Foods Inc.
Alliance One International Inc.	Bluelinx Holdings Inc.	ConocoPhillips
Alliant Energy Corporation	Boeing Company	Consol Energy Inc.
Allison Transmission Holdings	Boise Cascade Holdings, LLC	Consolidated Edison Inc.
Allstate Corporation	Bon-ton Stores Inc.	Convergys Corporation
ALON USA Energy, Inc.	BorgWarner Inc.	Cooper Companies, Inc.
Altria Group Inc.	Briggs and Stratton Corporation	Cooper Tire and Rubber Company
Ameren Corporation	Brink's Company	Cooper-Standard Holdings
American Airlines Group Inc.	Bristol-Myers Squibb Company	Corning Inc.
American Axle & Manufacturing Holdings	Brown-Forman Corporation	Crane Co.
American Electric Power Company	Buckeye Partners, LP	Crown Holdings Inc.
American International Group Inc.	C. R. Bard Inc.	CSRA Inc.
American National Insurance Company	Cabot Corporation	CSX Corporation
American Water Works Company Inc.	Caleres	Cummins Inc.
Ameriprise Financial Inc.	Calpine Corporation	CUNA Mutual Group
Ametek Inc.	Calumet Specialty Products Partners	Curtiss-Wright Corporation
Amphenol Corporation	Campbell Soup Company	Dana Holding Corporation
Anadarko Petroleum Corporation	Capital One Financial Corporation	Danaher Corporation
Anixter International Inc.	Carlisle Companies Inc.	Darden Restaurants Inc.
Anthem Inc.	Carmax Inc.	Darling Ingredients Inc.
Applied Industrial Technologies	Carpenter Technology	Dean Foods Company
AptarGroup Inc.	Carter's Inc.	Deere & Company
ArcBest Corporation	Catalent, Inc.	Dell Technologies Inc.
Arch Coal Inc.	Caterpillar Inc.	Delta Air Lines Inc.
Archer Daniels Midland Company	CBS Corporation	DENTSPLY SIRONA Inc.
Arconic Inc.	Celanese Corporation	Devon Energy Corporation
Arrow Electronics Inc.	CenterPoint Energy Inc.	Diebold Nixdorf, Incorporated
Arthur J. Gallagher & Company	CenturyLink, Inc.	Discover Financial Services LLC
	CF Industries Holdings Inc.	Dominion Resources Inc.

Domtar Corporation
 Donaldson Company Inc.
 Dover Corporation
 Dow Chemical Company
 Dr. Pepper Snapple Group Inc.
 DTE Energy Co.
 Duke Energy Corporation
 Dynegy Inc.
 E.I. Du Pont De Nemours & Company
 Eastman Chemical Company
 Ecolab Inc.
 Edgewell Personal Care
 Edison International
 Eli Lilly and Company
 Emerson Electric Co.
 EnerSys
 Engility Holdings, Inc.
 Entergy Corporation
 Equifax Inc.
 Erie Insurance Group
 Essendant
 Estee Lauder Companies Inc.
 Esterline Technologies
 Eversource Energy
 Exelon Corporation
 Exxon Mobil Corporation
 Fedex Corporation
 Fidelity National Financial Inc.
 Fifth Third Bancorp
 FirstEnergy Corp.
 Flowers Foods Inc.
 Flowserve Corporation
 FM Global
 FMC Corporation
 FMC Technologies Inc.
 Foot Locker Inc.
 Ford Motor Company
 Fortune Brands Home & Security
 Freeport-McMoRan Copper & Gold Inc.
 Frontier Communications Corp.
 Gannett Co. Inc.
 General Cable Corporation
 General Dynamics Corporation
 General Electric Company
 General Mills Inc.
 General Motors Company
 Genesco Inc.
 Genuine Parts Company
 Global Partners LP
 Goodyear Tire & Rubber Company

Graham Holdings Company
 Graphic Packaging Holding Corporation
 Graybar Electric Company Inc.
 Great Plains Energy Inc.
 Greif, Inc.
 Griffon Corporation
 H. B. Fuller Company
 Hanesbrands Inc.
 Hanover Insurance Group Inc.
 Harley-Davidson Inc.
 Harris Corporation
 Hartford Financial Services Group
 Hasbro Inc.
 Hawaiian Electric Industries Inc.
 Hawaiian Holdings
 Hershey Company
 Hertz Global Holdings Inc.
 Hess Corporation
 Hexion Inc.
 Hill-Rom Holdings, Inc.
 Hilton Worldwide Holdings Inc.
 Honeywell International Inc.
 Hormel Foods Corporation
 HP, Inc.
 HRG Group, Inc.
 Hubbell Inc.
 Huntington Bancshares Inc.
 Huntington Ingalls Industries
 Huntsman Corporation
 Hyster-Yale Materials Handling
 Icahn Enterprises LP
 IDEX
 Illinois Toolworks
 Ingredion Inc.
 Intel Corporation
 Intercontinental Exchange, Inc.
 International Business Machines Corporation
 International FCStone Inc.
 International Flavors & Fragrance
 International Paper Company
 Interpublic Group of Companies Inc.
 ITT Corporation
 J. M. Smucker Company
 J.C. Penney Company Inc.
 Jacobs Engineering Group Inc.
 Johnson & Johnson
 JPMorgan Chase & Co.
 Kaman Corporation
 KapStone Paper and Packaging Corporation

KBR Inc.
 Kellogg Company
 Kemper
 Kennametal Inc.
 Keycorp
 Keysight Technologies, Inc.
 Kimberly-Clark Corporation
 Kinder Morgan Inc.
 Komatsu Mining Corporation
 Kraft Heinz Company
 Kroger Co.
 L-3 Communications Holdings Inc.
 Laboratory Corporation of America
 Land O'Lakes Inc.
 Lear Corporation
 Leggett & Platt Inc.
 Lennox International Inc.
 Leucadia National
 Levi Strauss & Co.
 Liberty Mutual Holding Company
 LifePoint Health, Inc.
 Lincoln Electric Holdings Inc.
 Lincoln National Corporation
 Lockheed Martin Corporation
 Loews Corporation
 Louisiana-Pacific Corporation
 LSC Communications, Inc.
 M&T Bank Corporation
 Macy's Inc.
 Magellan Midstream Partners LP
 ManpowerGroup
 Marathon Oil Corporation
 Marathon Petroleum Corporation
 Marriott International Inc.
 Marsh & McLennan Companies Inc.
 Martin Marietta Materials Inc.
 Masco Corporation
 Matson, Inc.
 Mattel Inc.
 McCormick and Company Inc.
 McKesson Corporation
 MDU Resources Group Inc.
 Mead Johnson Nutrition
 Merck & Co. Inc.
 Meritor Inc.
 Metaldyne Performance Group Inc.
 MetLife Inc.
 Mettler-Toledo International Inc.
 Middleby Corporation

Molson Coors Brewing Company
 Mondelez International Inc.
 Monsanto Company
 Moody's Corporation
 Moog Inc.
 Morgan Stanley
 Mosaic Company
 MPM Holdings Inc.
 Mueller Industries Inc.
 Murphy Oil Corporation
 Mutual of Omaha Insurance
 Nasdaq, Inc.
 National Oilwell Varco Inc.
 Navistar International Corporation
 NCR Corporation
 Neiman-Marcus Group LTD LLC
 New Jersey Resources Corporation
 New York Community Bancorp Inc.
 New York Life Insurance
 Newell Brands Inc.
 Newmarket Corp.
 Newmont Mining Corporation
 News Corp
 Nextera Energy Inc.
 NiSource Inc.
 NLV Financial Corporation
 Nordson Corporation
 Norfolk Southern Corporation
 Northern Trust Corporation
 Northrop Grumman Corporation
 NRG Energy Inc.
 Occidental Petroleum Corporation
 Office Depot Inc.
 OGE Energy Corporation
 Old Republic International Corporation
 Olin
 Omnicom Group Inc.
 OneMain Holdings, Inc.
 ONEOK Inc.
 Orbital ATK, Inc.
 Oshkosh Corporation
 Owens Corning
 Owens-Illinois Inc.
 PACCAR Inc.
 Packaging Corporation of America
 PAR Pacific Holdings, Inc.
 Parker Hannifin Corporation
 PBF Energy
 Peabody Energy Corporation
 PepsiCo Inc.

Perkinelmer Inc.
 Pfizer Inc.
 PG&E Corporation
 Philip Morris International Inc.
 Phillips 66
 Pinnacle Foods Inc.
 Pinnacle West Capital Corporation
 Pitney Bowes Inc.
 Platform Specialty Products Corporation
 Ply Gem Holdings, Inc.
 PNC Financial Services Group Inc.
 PolyOne Corporation
 Popular Inc.
 Portland General Electric Company
 Post Holdings, Inc.
 PPG Industries Inc.
 PPL Corporation
 Praxair Inc.
 Principal Financial Group Inc.
 Procter & Gamble Company
 Prudential Financial Inc.
 Public Service Enterprise Group
 Puget Energy Inc.
 PVH Corporation
 Quad/Graphics
 Quintiles IMS Holdings, Inc.
 R. R. Donnelley & Sons Company
 Raytheon Company
 Realogy Holdings Corp.
 Regal-Beliot Corporation
 Regions Financial Corporation
 Reinsurance Group of America Inc.
 Reliance Steel and Aluminum Company
 Republic Services Inc.
 Resolute Forest Products Inc.
 Revlon Inc.
 Rexnord
 Reynolds American Inc.
 Rockwell Automation Inc.
 Rockwell Collins Inc.
 RPM International Inc.
 Ryder System Inc.
 Ryerson Holding Corporation
 S & P Global Inc.
 Sabre Corporation
 Sanmina-SCI Corporation
 Scana Corporation
 Scotts Miracle-Gro Company
 Scripps Networks Interactive Inc.
 Seaboard Corporation

Sealed Air Corporation
 Sears Holding Corporation
 Securian Financial Group
 Selective Insurance Group Inc.
 Semptra Energy
 Sherwin-Williams Company
 Silgan Holdings Inc.
 Smart & Final Stores, Inc.
 Snap On Inc.
 Sonoco Products Company
 Southern Company
 Southwest Gas Corporation
 Southwestern Energy Company
 SpartanNash Company
 Spirit AeroSystems Holdings
 Stanley Black & Decker Corporation
 State Street Corporation
 Steelcase Inc.
 Stryker Corporation
 SunTrust Banks Inc.
 Supervalu Inc.
 Sysco Corp.
 Target Corporation
 Taylor Morrison Home Corporation
 Tegna, Inc.
 Teledyne Technologies Inc.
 Teleflex Inc.
 Tempur Sealy International Inc.
 Tenet Healthcare Corporation
 Tenneco Inc.
 Terex Corporation
 Tesoro Corporation
 Texas Instruments Inc.
 Textron Inc.
 Thermo Fisher Scientific Inc.
 Tiffany & Company
 Time Warner Inc.
 Timken Company
 TJX Companies Inc.
 Toll Brothers Inc.
 Torchmark Corporation
 Toro
 Tower International
 TransDigm Group Inc.
 Travelers Companies
 Treehouse Foods
 Tribune Co.
 Trinity Industries Inc.
 Triple-S Management Corporation
 Triumph Group

Tupperware Brands Corporation
Tutor Perini Corporation
Twenty-First Century Fox, Inc.
Tyson Foods Inc.
U.S. Bancorp
UGI Corporation
Unified Grocers Inc.
Union Pacific Corporation
Unisys Corporation
United Continental Holdings, Inc.
United Parcel Service Inc.
United Refining Company
United States Steel Corporation
United Technologies Corporation
Univar Inc.
Universal Corporation
Universal Health Services Inc.
Unum Group
US Foods Holding Corp.
USG Corporation
V.F. Corporation
Valero Energy Corporation
Valspar Corporation
Vectren Corporation
Verisk Analytics, Inc.
Veritiv Corporation
Verizon Communications Inc.
Verso Corporation
Viacom Inc.
VISA Inc.
Vista Outdoor Inc.
Visteon Corporation
Vistra Energy
Voya Financial, Inc.
Vulcan Materials Company
VWR International Inc.
WABCO Holdings
Walt Disney Company
Waters Corporation
WEC Energy Group, Inc.
Wells Fargo & Company
Westar Energy Inc.
Western Refining Inc.
Western Union Company
Westinghouse Air Brake Technologies
Westlake Chemical Corporation
WestRock Company
Weyerhaeuser Company
WGL Holdings Inc.
Whirlpool Corporation

Whitewave Foods Company
Williams Companies Inc.
Windstream Holdings Inc
Wolverine World Wide Inc.
Woodward
Worthington Industries Inc.
Xcel Energy Inc.
Xerox Corporation
XPO Logistics, Inc.
Xylem
YRC Worldwide Inc.
YUM! Brands, Inc.
Zimmer Biomet Holdings, Inc.
Zions Bancorp

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