January 2018

Pension Funds 2017 Year in Review

Strong Markets, Lower Discount Rates (again!) and a Pension "To-Do" List...

Kevin D. O'Brien, CFA
Partner & Senior Consultant

Overview

Buoyed by continued improvements in global growth, 2017 witnessed a very strong year for capital market returns.

2017 also saw an overall decline in medium- and long-dated interest rates and, more specifically, discount rates used to value pension liabilities. Lower discount rates result in higher liabilities.

Despite falling discount rates in 2017, overall funded status slightly improved during 2017, helped by strong equity returns. Willis Towers Watson estimates the largest U.S. pension plans ended 2017 at 83% funded, compared to 81% at the end of 2016.[1]

In this paper we'll review assets and liabilities and also discuss some items pension plan sponsors may want to put on their 2018 "to-do" list, such as:

- Review your asset/liability mix—specifically, how your fixed income hedging assets are designed
- Be aware that the benefits of pension funding relief may be wearing away, and as a result required contributions may increase
- Document efforts to find missing pension participants—the DOL is watching more closely
- Tax reform: Consider making pension contributions to the 2017 plan year—deducting at higher 2017 rates can reap meaningful savings (up to 14%)

Asset & Liability Performance Review - 2017

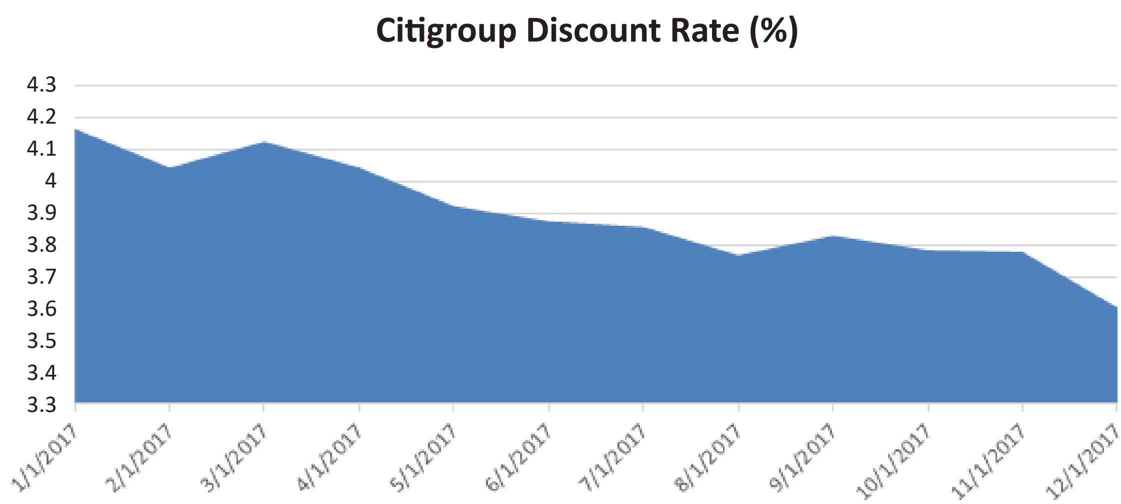
Equity markets experienced strong returns in the calendar year, as coordinated global growth continued to show strength and resiliency. Emerging market equities were the big winner in the year, advancing 37.3%, as international equities generally outpaced domestic equities for the year. Fixed income performance was also strong despite a flattening yield curve in the U.S. Absent higher inflation and continued strong demand from investors, long term bonds, as measured by the Bloomberg Barclays U.S. Long Government/Credit Index, advanced 10.7% for the year. Returns for selected indexes are summarized in the following chart:

[1]Source: Willis Towers Watson estimates from 389 of Fortune 1000 companies with available data, 1-2-18

	2017
Equity	
S&P 500 Index	21.8%
Russell 2000 Index	14.6%
MSCI EMerging Markets (Net) Index	37.3%
MSCI EAFE (Net) Index	25.0%
Fixed Income	
Bloomberg Barclays U.S. Long Government/Credit	10.7%
Bloomberg Barclays U.S. Aggregate bond	3.5%
Bloomberg Barclays U.S. Corporate High Yield	7.5%

Source: Lipper

Pension liabilities were negatively impacted throughout 2017, as the discount rates continued a year-over-year decline. As illustrated below, the Citigroup Discount Rate started 2017 at 4.14% and trended lower throughout the year, to end at 3.6%.



Source: Citigroup

Liability Hedging Fixed Income Review & Glide Path Implementation

Given the decline in discount rates, strong asset performance, and potential for future interest rate increases, plan sponsors may want to consider revisiting their fixed income allocations through the lens of liability hedging and, more specifically, consider how their fixed income allocation is designed across key duration risks.

Reviewing the pension plan's liability cash flows and exposure to key interest rate durations is an important consideration, particularly in the current interest rate environment. Credit spread exposure varies according to the amount of credit bonds held in portfolios.

Liability Hedge %	2y	5y	7y	10y	15y	20y	30y	Total
Interest Rate Risk	90%	90%	90%	90%	90%	90%	90%	90%
Credit Spread Risk	49%	46%	44%	52%	60%	95%	94%	72%

Source: Legal & General Investment Management America - sample

For well-funded pensions with more of a plan "hibernation" strategy in place, matching assets and liabilities across key rate duration exposures is critical, as changes in the yield curve can have a meaningful impact.

For pensions with a de-risking glide path in place, FIA would advocate, as always, a review of how portfolio changes are implemented. For instance, how often do you get an actuarial update regarding funded status? Semi-annually? Quarterly? Having the ability to act quickly based upon timely information related to changes in interest rates and funded status is crucial when it comes to harvesting improvements in funded status.

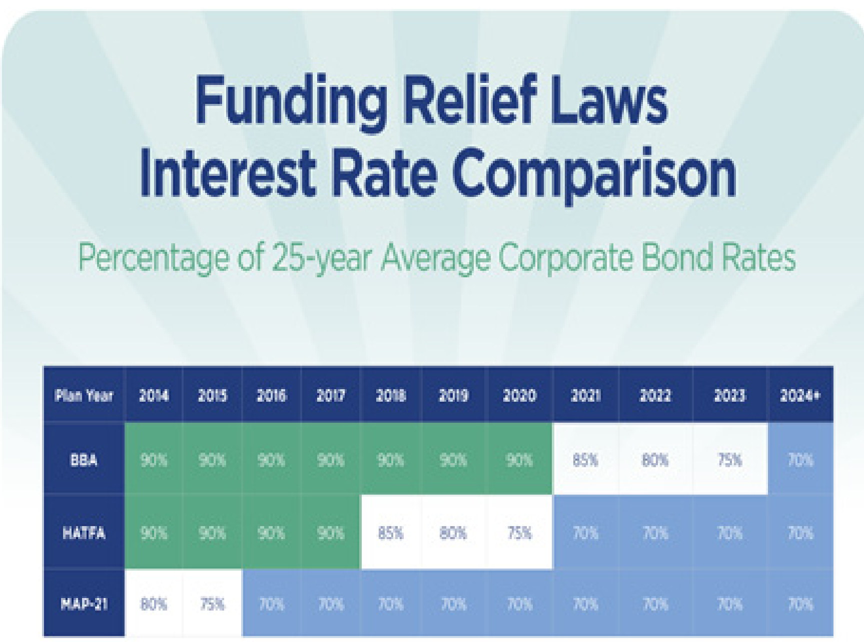
Funding relief will be wearing away — Will higher required contributions follow?

Plan sponsors should be aware of the prospect of higher required contributions, as funding relief measures enacted several years ago are likely to sunset.

The Pension Protection Act of 2006 (PPA) originally defined the minimum interest rate for funding to be a **24-month average** of high quality bonds.

2012's MAP-21 (Moving Ahead for Progress in the 21st Century) provided relief to plan sponsors, given persistently low interest rates via a second funding rate equal to a **25-year average** of high quality bonds using a "multiplier" of 90% (called the "stabilized rate").

2014's Highway and Transportation Funds Act (HATFA) extended funding relief, and The Balanced Budget Act of 2015 extended MAP-21 rate relief even further, while increasing PBGC premiums.



Funding Relief Laws
Interest Rate Comparison

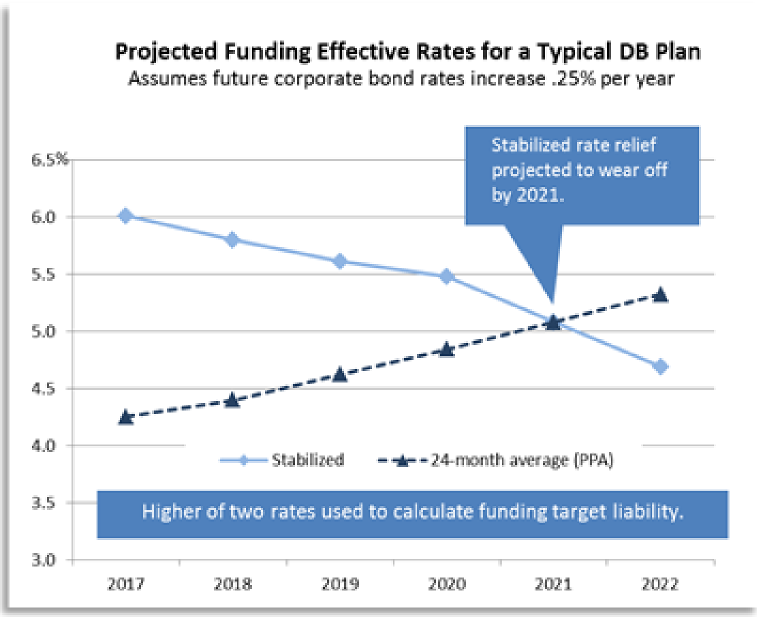
Percentage of 25-year Average Corporate Bond Rates

Plan Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024+
BBA	90%	90%	90%	90%	90%	90%	90%	85%	80%	75%	70%
HATFA	90%	90%	90%	90%	85%	80%	75%	70%	70%	70%	70%
MAP-21	80%	75%	70%	70%	70%	70%	70%	70%	70%	70%	70%

Source: Principal Financial

- MAP-21, HAFTA, and the Balanced Budget Act of 2015 all provided funding relief with higher stabilized rates
- Higher stabilized rates = Lower required contributions
- The impact of relief starts to decrease in 2021

The multiplier is locked at 90% through 2020, but will begin to decrease thereafter.



Source: Principal Financial

The combination of a lower 25-year average interest rate and a lower multiplier will cuse the benefit of funding relief to wear away.

As higher rates from 25 years ago fall out of the calculation, the impact of lower current rates will bring the stabilized rate lower. In addition, the multiplier is currently scheduled to reduce to 85% in 2021.

Barring any new funding relief legislation, plan sponsors may want to prepare for potentially higher required contributions.

DOL focusing in on missing participants — Be prepared!

The Philadelphia Department of Labor office started a pilot project in 2016 to identify plans with high numbers of terminated vested participants who were not receiving their benefits. From October 2016 to August 2017, the Philadelphia Department of Labor recovered approximately $165 million in benefits that should have been paid to participants.[2]

Failure to locate and contact missing participants may come under scrutiny as a potential breach of fiduciary duty under ERISA. Plan sponsors may want to prepare for potential scrutiny/audits from regulators in this area. Consider consulting with your plan actuary regarding best practices, such as:

- Proactively and periodically attempting to contact participants
- Sending a certified letter to the last known address
- Trying to contact missing participants through most recent phone numbers and email
- Carefully documenting efforts to reach terminated vested participants

December 2017 Tax Reform — Maximize your contribution deduction!

A significant component of the December 2017 tax reform legislation is lower corporate tax rates. The top marginal corporate rate declines from 35% to 21% in 2018. Pension contributions are generally tax deductible up to certain limits.

[2]Source: DOL is Stepping up Missing Participant Retirement Plan Audits - Society for Human Resource Management Oct 12, 2017

The timing of contribution deductibility for pension plans varies based on the plan year, but oftentimes contributions can be made well into the next plan year while remaining deductible. For example, a pension plan with a December 31, 2017 plan year could make contributions up to September 15, 2018 if all filing extensions are utilized.

There is an opportunity for sponsors to realize up to 14% in additional tax deduction savings (if they are at the top marginal rate) by making a contribution to their 2017 plan year at the 35% rate, versus making that same contribtuion in 2018 at the 21% rate.

Summary

2018 will certainly bring yet another interesting year for pension plan management. Being prepared with regard to your plan's asset structure, liability profile, and general plan management will be increasingly important.

FIA stands ready to assist however we can. Please contact us if you have any questions or would like to have a discussion.

Fiduciary Investment Advisors, LLC ("FIA")

FIA is an independent institutional consulting group with over 20 years of investment consulting experience. FIA is an employee owned firm with 100% of the firm's revenue derived from fees clients pay for investment advice. Our mission is to provide customized investment consulting services to assist our clients in achieving their investment and financial objectives, while fulfilling their fiduciary obligations. Our clients include corporate retirement plans, endowments & foundations, public plans and private clients. Our consulting services include:

- Investment Policy Statement Review/Creation
- Retirement Service Provider Search (RFI/RFP)
- Plan Benchmarking
- Investment Menu Analysis and Design
- Total Plan Fee Analysis (full fee disclosure)
- Fiduciary Governance Consulting
- Investment Fund Performance Measurement, Analysis and Reporting
- Risk-Based Model Portfolio Construction
- Employee Communication and Education
- Asset Allocation Analysis
- Investment Manager Searches
- Liability Driven Investment ("LDI") Strategies for Pension Plans
- Quarterly In-Person Meetings with Finance/Investment Committees
- Strategic Guidance on Relevant Topics of Interest

For More Information Please Contact:

Kevin D. O'Brien, CFA
Partner & Senior Consultant
Fiduciary Investment Advisors, LLC
100 Northfield Drive
Windsor, CT 06095
Direct: (860) 697-7453
Email: kobrien@fiallc.com