

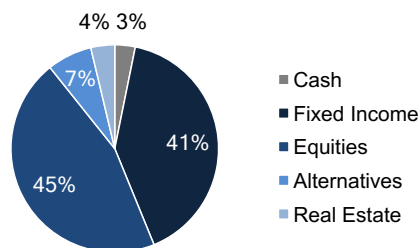
# Pension Funded Status Tracker

November 2018

The funded status of the average US corporate defined benefit pension plan remained flat at 88% funded, between the beginning and end of November 2018.

- » Assets increased as both the growth and hedging portfolios increased in value:
  - Equities across the globe outperformed with the exception of EAFE, which was broadly flat over the month.
  - Within fixed income, US Treasuries outperformed while credit spreads widened out.
- » Liabilities remained relatively flat over the month:
  - The decrease in interest rates was nearly offset by a widening in the high quality corporate bond spread.
  - As a result, the effective discount rate dropped by less than 1 basis point in November.

## Asset Allocation



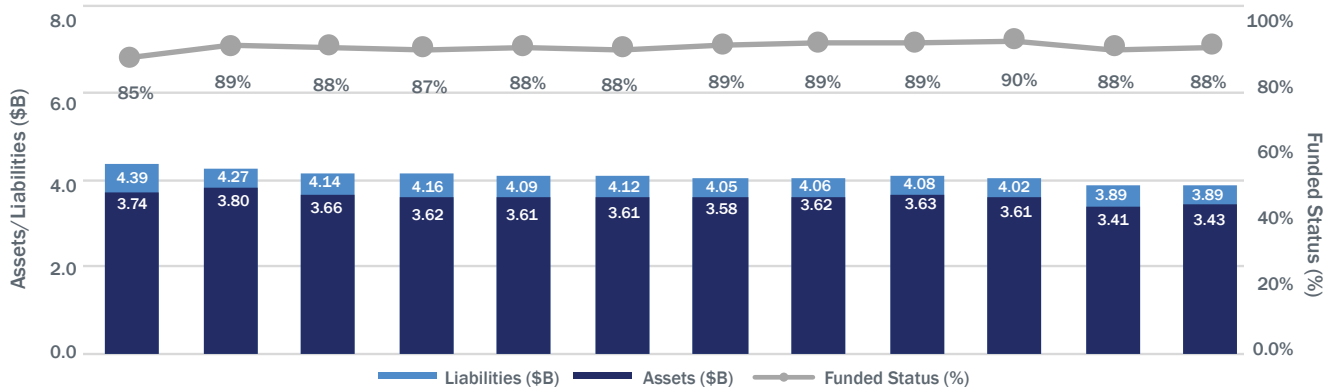
Prepared by Conning, Inc. Source: ©2018 Bloomberg, L.P. As of November 30, 2018

## Key Metrics

Pension Plan	Assets	Liabilities†	Funded Status†
Valuation (\$B)	3.43	3.89	88%
Duration (Yr)	4.4	12.1	Interest Rate Hedge Ratio
Dollar Duration (\$mm)	1.5	4.7	
Yield* / Discount Rate	3.8%	4.3%	32%

Prepared by Conning, Inc. Source: ©2018 Bloomberg L.P. November 30, 2018 \*Yield quoted is duration-weighted yield † Funded Status is hypothetical and calculated according to the Data and Methodology section outlined on Page 3. Refer to the Hypothetical Model Disclosures (page 3) for more important information.

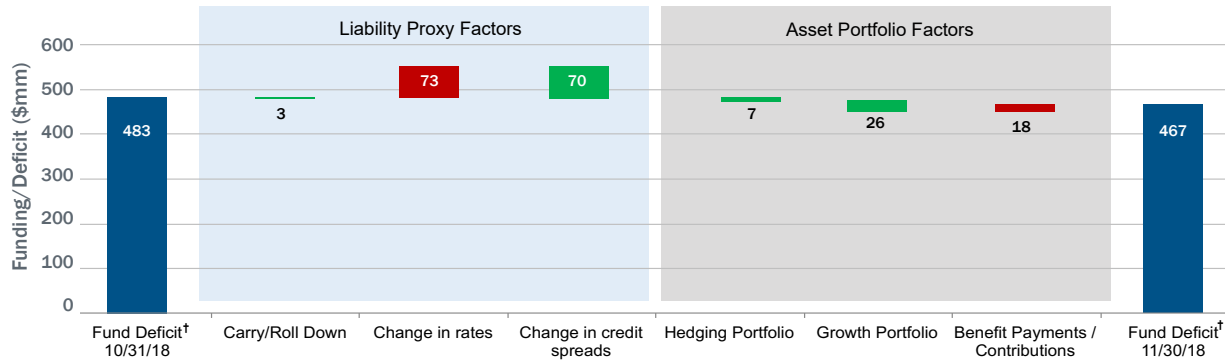
## Pension Plan Tracker (November 30, 2018)†



	Dec '17	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov '18
Funded Status (%)	85%	89%	88%	87%	88%	88%	89%	89%	89%	90%	88%	88%
Assets (\$B)	3.74	3.80	3.65	3.62	3.60	3.61	3.58	3.62	3.63	3.61	3.41	3.43
Liabilities (\$B)	4.39	4.27	4.14	4.16	4.09	4.12	4.05	4.06	4.08	4.02	3.89	3.89
Discount Rate (GAAP)	3.4%	3.6%	3.9%	3.8%	3.9%	3.9%	4.0%	4.0%	3.9%	4.0%	4.3%	4.3%

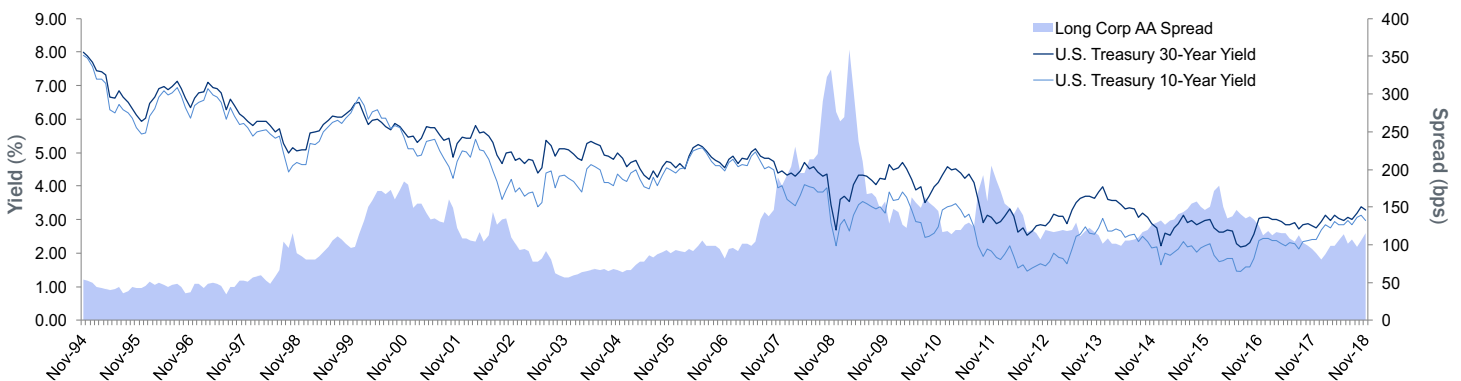
† Pension Plan Tracker results presented do not reflect actual performance. The results are hypothetical, and are generated according to the Data and Methodology section outlined on Page 3. Refer to the Hypothetical Model Disclosures (page 3) for more important information. Prepared by Conning, Inc. for illustrative purposes only. Source: ©2017-2018 Bloomberg, L.P.

## Funded Status Attribution (October 31, 2018 – November 30, 2018)



† Funded Status Attribution presented does not reflect actual performance. The results are hypothetical, and are generated according to the Data and Methodology section outlined on Page 3. Refer to the Hypothetical Model Disclosures (page 3) for more important information. Chart shows the liability proxy and asset portfolio factors that contributed to the change in funded status over the month. Prepared by Conning, Inc., for illustrative purposes only. Source: ©2018 Bloomberg, L.P.

## Yields and Corporate Spreads



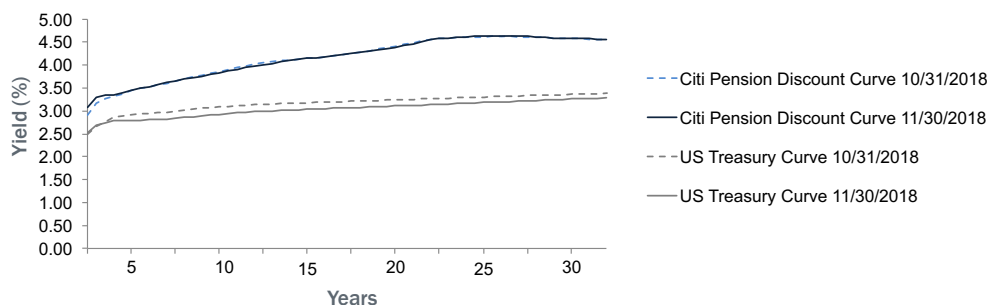
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## Market Performance (November 30, 2018)

	MTD	QTD	YTD	
<b>Equities</b>	S&P 500	2.0%	-4.9%	5.1%
	Russell 2000	1.6%	-9.5%	1.0%
	MSCI World ACWI	1.5%	-6.1%	-2.1%
	EAFE	-0.1%	-8.0%	-8.9%
	MSCI Emerging Markets	4.1%	-4.9%	-12.0%
<b>Alternatives</b>	Private Equity	-0.8%	-9.2%	-4.3%
	Hedge Funds	-0.2%	-3.3%	-2.0%
	Real Estate	4.7%	1.8%	4.0%
<b>Fixed Income</b>	High Yield	-0.9%	-2.4%	0.1%
	US Aggregate	0.6%	-0.2%	-1.8%
	US Long Gov/Credit	0.6%	-2.8%	-8.1%
	US Long Credit	-0.4%	-4.0%	-9.0%
	US Long Corporate AA	0.4%	-3.2%	-8.3%
	US Treasury 10 Yrs	1.4%	0.9%	-2.4%
	US Treasury 30 Yrs	1.9%	-1.4%	-8.0%

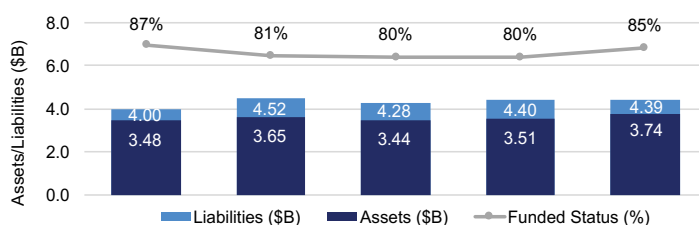
Prepared by Conning, Inc. Source: ©2018 Bloomberg L.P.

## Liability Discount Curve



Prepared by Conning, Inc. Source: ©2017-2018 Bloomberg L.P. and ©2017-2018 Analytics provided by "The Yield Book"® Software and Services/London Stock Exchange Group plc

## Pension Plan Tracker (Annual 2013-2017)



	2013	2014	2015	2016	2017
Funded Status (%)	87%	81%	80%	80%	85%
Assets (\$B)	3.48	3.65	3.44	3.51	3.74
Liabilities (\$B)	4.00	4.52	4.28	4.40	4.39
Discount Rate (GAAP)	4.6%	3.7%	4.1%	3.9%	3.4%

Prepared by Conning, Inc. Source: ©2013-2017 Bloomberg, L.P.

## Conning's LDI Team

**Sean Kurian, FSA, CAIA**

Head of Institutional Solutions

**Erin Spalsbury, CFA**

Head of LDI Portfolio Management

**Hamdan Malik, CFA**

LDI & Derivatives Strategist

**Frank Shi**

Quantitative Analyst

## Conning Pension Risk Analyzer®

Learn more about Conning's LDI approach and try the interactive [Pension Risk Analyzer](#)

Contact us at [LDI@conning.com](mailto:LDI@conning.com)

## About Conning®

Conning ([www.conning.com](http://www.conning.com)) is a leading investment management firm with approximately \$134 billion in global assets under management as of September 30, 2018.\* With a long history of serving the insurance industry, Conning supports institutional investors, including pension plans, with investment solutions and asset management offerings, award-winning risk modeling software, and industry research. Founded in 1912, Conning has investment centers in Asia, Europe and North America.

\*As of September 30, 2018, represents the combined global assets under management for the affiliated firms under Conning Holdings Limited, Cathay Securities Investment Trust Co., Ltd. ("SITE") and Global Evolution Fondsmæglerelskab A/S and its group of companies (the "Global Evolution Companies"). The Global Evolution Companies are affiliates of Conning. SITE reports internally into Conning Asia Pacific Limited, but is a separate legal entity under Cathay Financial Holding Co., Ltd. which is the ultimate controlling parent of all Conning controlled entities.

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## Data and Methodology

Conning's Funded Status Tracker is a monthly publication that tracks the performance of the average defined benefit pension plan (the "Plan") of select corporate sponsors comprising a subset of the Russell 3000 Index. The data in this monthly review was reported in the 10-Ks of 496 publicly traded companies from the Russell 3000 index for the 2017 year-end.<sup>1</sup> Further, the Funded Status Tracker was updated retroactively to reflect published 10-K data for the 2017 year-end. All months of 2018 have been restated to account for the, now known, 2017 year-end position. Note: these assets may include non-U.S. pension plans. In aggregate, these 496 entities reported \$1.8 trillion in plan assets and \$2.2 trillion in plan liabilities at year end 2017.

The average plan size of the subset of the Russell 3000 index universe outlined above is approximately \$3.74 billion in assets and \$4.39 billion in liabilities, as of December 31, 2017. The Plan's liability is a hypothetical cash flow generated from our proprietary model to reflect a 13-year duration and valuation equivalent to the Plan's PBO on a US GAAP valuation basis as at the end of 2017, but allowed to drift with market conditions during the following year.

It is important to note that asset definitions are not uniform. Conning's analysis of companies' financial statements has found that some firms only report individual stocks as equities, while other firms include stock mutual funds. A similar mixing of types occurs in fixed income. In this analysis, Conning has used the allocations as reported by the companies and not adjusted them. Funded status is the percentage of liabilities that are covered by assets. Interest rate hedge ratio is the dollar duration of assets as a percentage of liability dollar duration.

<sup>1</sup>For the periods 2012-2016, data from 389 publicly traded companies were used. These companies were selected because they had consistently filed pension data every year for the period from 2012 through to 2016. However, for the year 2017: an aggregate of 496 publicly traded companies were used since by this time more companies reported on a consistent basis.

## LDI Hypothetical Model Disclosures

The proprietary model analysis presented herein is for illustrative purposes only. The model relies on a number of assumptions that are generally stated in the Data and Methodology and within the illustrations. The assumptions can be subject to significant uncertainties and contingencies, and such illustrations may change materially in response to small changes in one or more of such assumptions. The data used for this model was obtained from sources deemed reliable, and then organized by Conning, Inc. and was not audited by any third party. Errors could have occurred in the data, in the calculations, or in the preparation of this analysis. Therefore, information contained in this analysis may not be precise. C: 7886555