

Pension Funded Status Tracker

July 2019

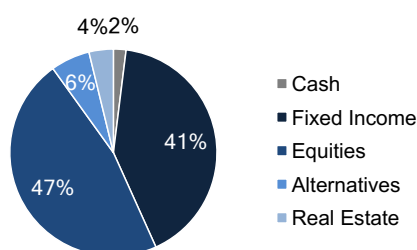
ASSET MANAGEMENT | REPORT

During the month of July 2019, the average corporate defined benefit pension plan's funded status remained flat at 90% funded.

- » The asset portfolio marginally increased in value over the month:
 - U.S. Equities led the market forward, but were offset by losses in equity markets abroad.
 - Within fixed income, long duration corporate bonds gained the most, whereas U.S. Treasuries were relatively flat.

- » Liabilities increased in value as a result of spreads tightening:
 - Interest rates were relatively unchanged over the month, but high quality spread tightened.
 - The effective discount rate used to value plan liabilities dropped by roughly 7 basis points over July.

Asset Allocation



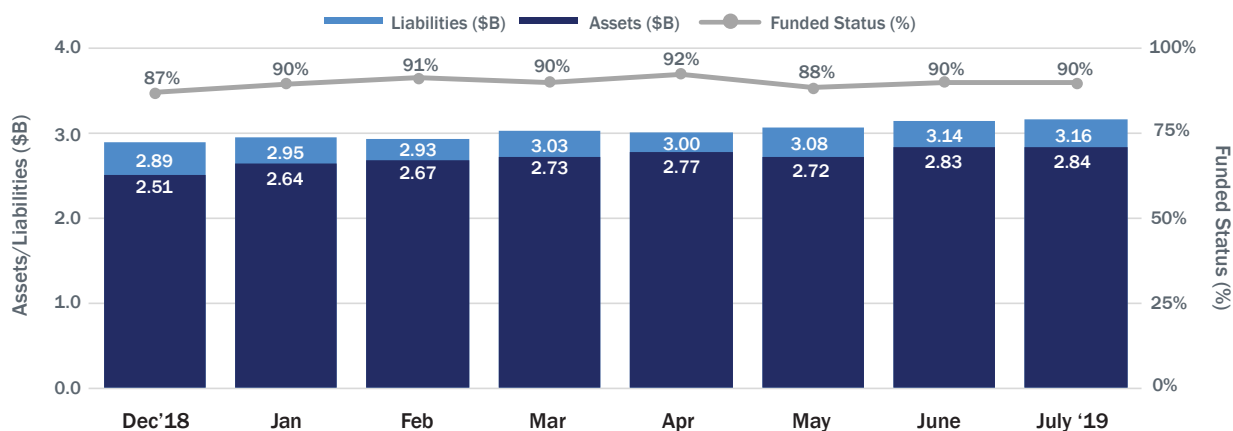
Prepared by Conning, Inc. Source: ©2019 Bloomberg, L.P. As of July 31, 2019

Key Metrics

Pension Plan	Assets	Liabilities†	Funded Status†
Valuation (\$B)	2.84	3.16	90%
Duration (Yr)	4.7	11.4	Interest Rate Hedge Ratio
Dollar Duration (\$mm)	1.3	3.6	
Yield* / Discount Rate	3.8%	3.1%	37%

Prepared by Conning, Inc. Source: ©2019 Bloomberg L.P. July 31, 2019. *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.

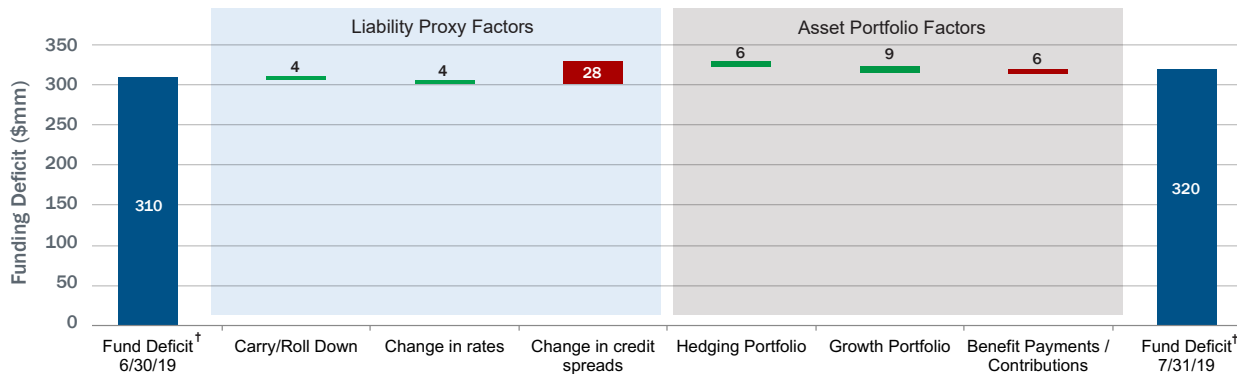
Pension Plan Tracker (July 31, 2019)†



Funded Status (%)	87%	90%	91%	90%	92%	88%	90%	90%
Assets (\$B)	2.51	2.64	2.67	2.73	2.77	2.72	2.83	2.84
Liabilities (\$B)	2.89	2.95	2.93	3.03	3.00	3.08	3.14	3.16
Discount Rate (GAAP)	3.8%	3.8%	3.8%	3.5%	3.6%	3.4%	3.2%	3.1%

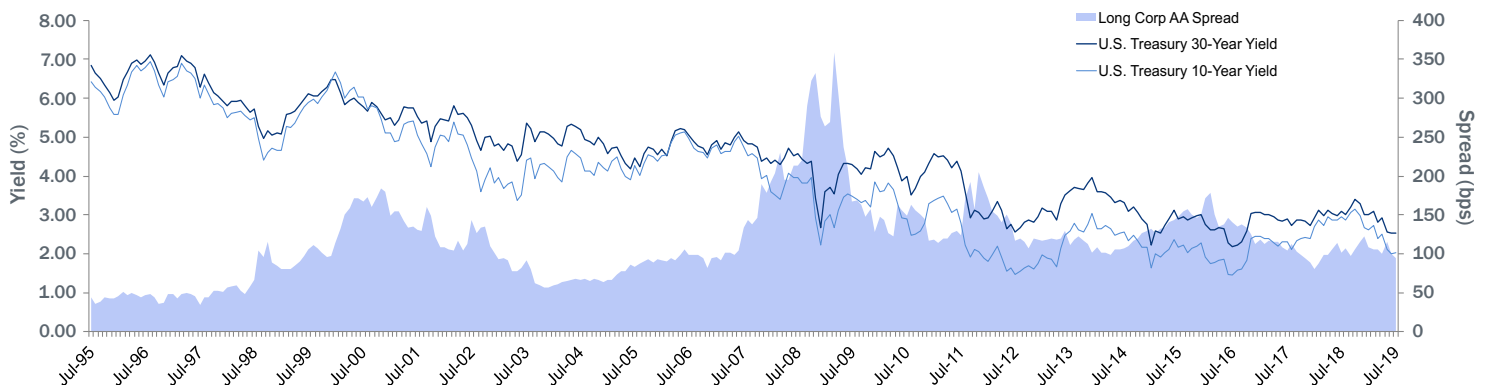
† Pension Plan Tracker results presented do not reflect actual performance. The results are hypothetical, and are generated according to the Data and Methodology section outlined on Page 3. Refer to the Hypothetical Model Disclosures (page 3) for more important information. Prepared by Conning, Inc. for illustrative purposes only. Source: ©2018-2019 Bloomberg, L.P.

Funded Status Attribution (June 30, 2019 – July 31, 2019)



† 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: ©2019 Bloomberg, L.P.

Yields and Corporate Spreads



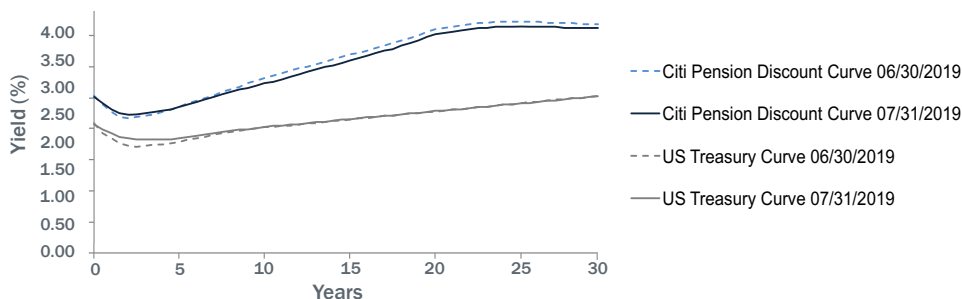
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Market Performance (July 31, 2019)

	MTD	QTD	YTD	
Equities	S&P 500	1.4%	1.4%	20.2%
	Russell 2000	0.6%	0.6%	17.6%
	MSCI World ACWI	0.3%	0.3%	17.0%
	EAFE	-1.3%	-1.3%	13.1%
	MSCI Emerging Markets	-1.2%	-1.2%	9.5%
Alternatives	Private Equity	1.3%	1.3%	30.0%
	Hedge Funds	0.7%	0.7%	8.0%
	Real Estate	1.8%	1.8%	21.4%
Fixed Income	High Yield	0.6%	0.6%	10.6%
	US Aggregate	0.2%	0.2%	6.3%
	US Long Gov/Credit	0.7%	0.7%	14.3%
	US Long Credit	1.2%	1.2%	16.8%
	US Long Corporate AA	1.1%	1.1%	15.1%
	US Treasury 10 Yrs	0.2%	0.2%	7.8%
US Treasury 30 Yrs	0.3%	0.3%	12.3%	

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Liability Discount Curve



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Conning's LDI Team

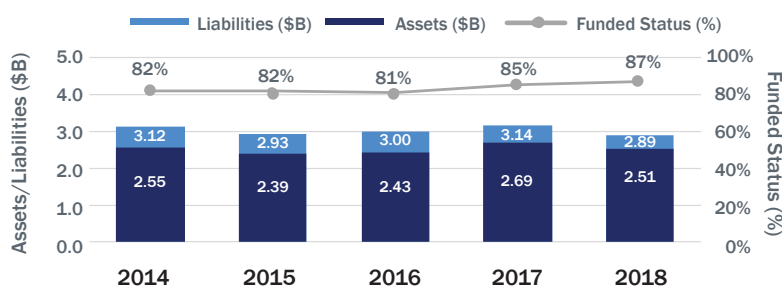
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Quantitative Analyst

Pension Plan Tracker (Annual 2014 – 2018)



	2014	2015	2016	2017	2018
Funded Status (%)	82%	82%	81%	85%	87%
Assets (\$B)	2.55	2.39	2.43	2.69	2.51
Liabilities (\$B)	3.12	2.93	3.00	3.14	2.89
Discount Rate (GAAP)	4.2%	4.1%	3.9%	3.6%	3.8%

Prepared by Conning, Inc. Source: ©2014-2018 Bloomberg, L.P.

Conning Pension Risk Analyzer®

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Contact us at LDI@conning.com

About Conning®

Conning (www.conning.com) is a leading investment management firm with approximately \$145 billion in global assets under management as of June 30, 2019.* With a long history of serving the insurance industry, Conning supports institutional investors, including pension plans, with investment solutions and asset management offerings, risk modeling software, and industry research. Founded in 1912, Conning has investment centers in Asia, Europe and North America.

*As of June 30, 2019, 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 Fondsmæglerselskab 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 658 publicly traded companies from the Russell 3000 index for the 2018 year-end.† Further, the Funded Status Tracker was updated retroactively to reflect published 10-K data for the 2018 year-end. All months of 2019 have been restated to account for the, now known, 2018 year-end position. In addition, the annual tracking of the 10-K data for the years 2014-2017 have been restated to reflect the change of the underlying universe of 496 plans to the current universe of 658 plans. The monitoring of 2019 months will continue until 2018 10-Ks become available, at which point, the same methodology will be applied to include 2018 year-end position with the subsequent 2019 months retroactively updated. 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 2018.

The average plan size of the subset of the Russell 3000 index universe outlined above is approximately \$2.51 billion in assets and \$2.89 billion in liabilities, as of December 31, 2018. 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.

†For the periods 2014-2018, 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 2014 through to 2018. However, for the year 2018: an aggregate of 658 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:8861656