Pension Funded Status Tracker

April 2018

Over April 2018, the average corporate defined benefit pension plan's funded status improved by 1%, from 85% to 86% funded.

» Within the asset portfolio, risk assets led the recovery and are poised to re-test those all-time highs:

  – Major global equity indices rebounded and ended the month relatively flat for YTD 2018.

  – Bond markets, with the exception of high yield assets, lost value as interest rates rose with the key 10 year Treasury rate crossing the 3% mark for the first time since 2014.

» Liabilities witnessed a decrease over the month contributing to an increase in funding level:

  – The effective discount rate increased by 13bps in April.

Asset Allocation

Cash, Fixed Income, Equities, Alternatives, Real Estate

4% 2%
8%
50%
37%
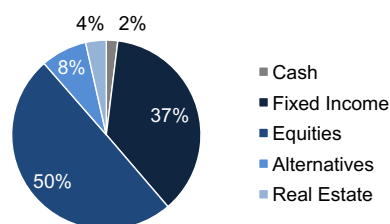
Prepared by Conning, Inc. Source: ©2018 Bloomberg, L.P.
As of April 30, 2018

Key Metrics

Pension Plan	Assets	Liabilities†	Funded Status†
Valuation ($B)	3.75	4.36	86%
Duration (Yr)	4.0	13.7	**Interest Rate Hedge Ratio**
Dollar Duration ($mm)	1.5	6.0	
Yield* / Discount Rate	3.8%	4.0%	25%

Prepared by Conning, Inc. Source: ©2018 Bloomberg L.P.
As of April 30, 2018 *Yield quoted as 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 (April 2018)†
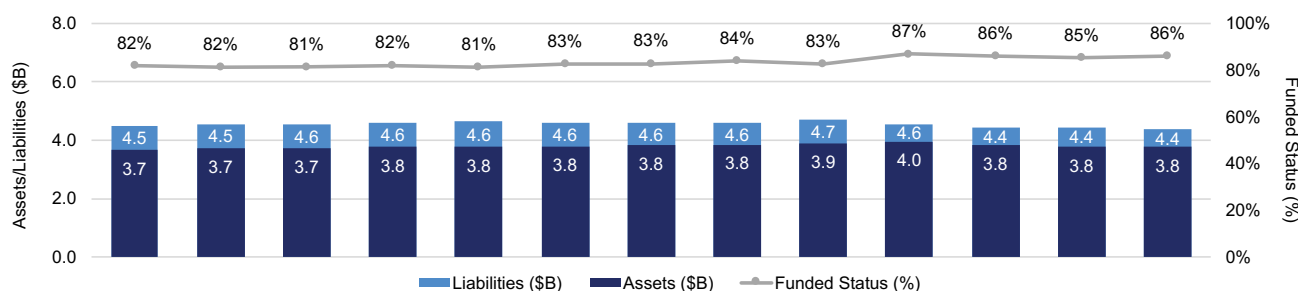
| Pension Plan	Apr '17	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr '18
Funded Status (%)	82%	82%	81%	82%	81%	83%	83%	84%	83%	87%	86%	85%	86%
Assets ($B)	3.66	3.70	3.71	3.76	3.77	3.79	3.81	3.84	3.88	3.96	3.81	3.77	3.75
Liabilities ($B)	4.47	4.54	4.55	4.57	4.63	4.58	4.60	4.59	4.68	4.55	4.42	4.44	4.36
Discount Rate (GAAP)	3.8%	3.7%	3.7%	3.6%	3.5%	3.6%	3.6%	3.6%	3.6%	3.7%	3.9%	3.8%	4.0%

† 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 (March 31, 2018 – April 30, 2018)
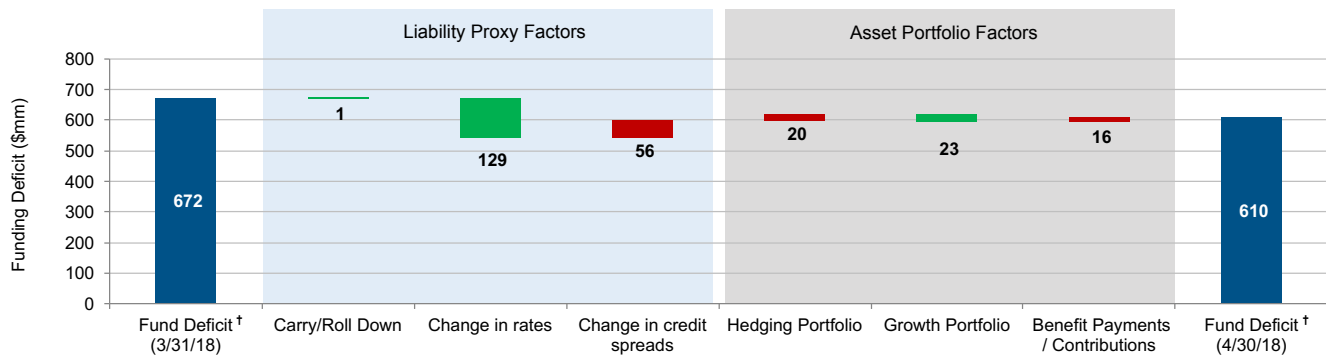
† Funded Status Attribution presented does not reflect actual performance. The results are hypothetical, and are generated according to the Data and Methodology section outlined on Page 3. Refer to the Hypothetical Model Disclosures (page 3) for more important information. Chart shows the liability proxy 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.
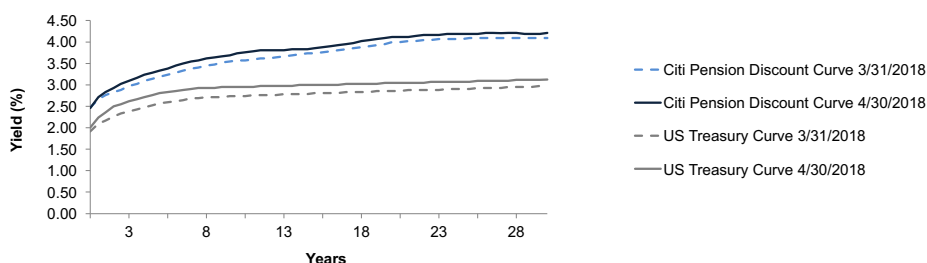
Yields and Corporate Spreads
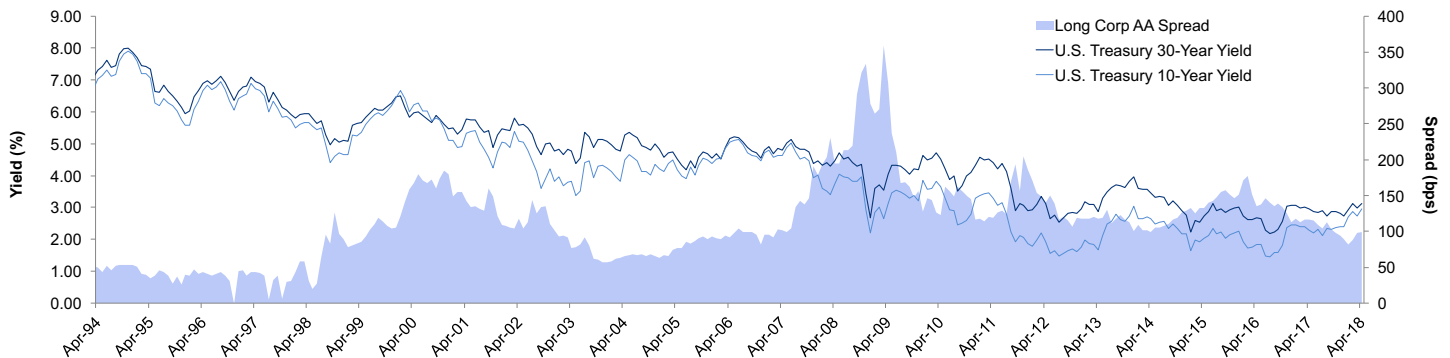
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Market Performance (April 2018 YTD)

		MTD		QTD		YTD	
Equities	S&P 500	0.4%		0.4%		-0.4%	
	Russell 2000	0.9%		0.9%		0.8%	
	MSCI World ACWI	1.0%		1.0%		0.2%	
	EAFE	2.4%		2.4%		0.9%	
Alternatives	Private Equity	1.6%		1.6%		-1.6%	
	Hedge Funds	0.4%		0.4%		0.4%	
	Real Estate	0.3%		0.3%		-5.7%	
Fixed Income	High Yield	0.7%		0.7%		-0.2%	
	US Aggregate	-0.7%		-0.7%		-2.2%	
	US Long Gov/Credit	-1.9%		-1.9%		-5.5%	
	US Long Credit	-1.9%		-1.9%		-5.7%	
	US Long Corporate AA	-1.9%		-1.9%		-5.8%	
	US Treasury 10 Yrs	-1.5%		-1.5%		-3.6%	
	US Treasury 30 Yrs	-2.4%		-2.4%		-6.3%	

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Liability Discount Curve

Citi Pension Discount Curve 3/31/2018
Citi Pension Discount Curve 4/30/2018
US Treasury Curve 3/31/2018
US Treasury Curve 4/30/2018

Prepared by Conning, Inc. Source: ©2017-2018 Bloomberg L.P. and ©2017-2018 Analytics Provided by "The Yield Book"® Software and Services

Pension Plan Tracker (Annual 2012-2016)

Liabilities ($B)   Assets ($B)   Funded Status (%)
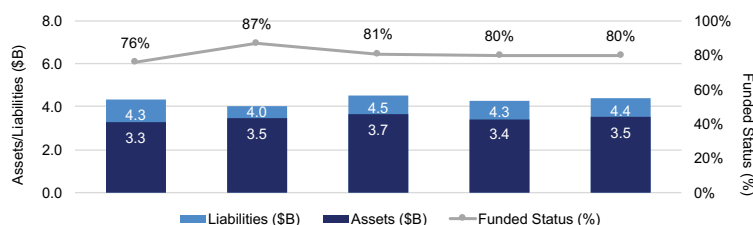
Pension Plan	2012	2013	2014	2015	2016
Funded Status (%)	76%	87%	81%	80%	80%
Assets ($B)	3.3	3.5	3.7	3.4	3.5
Liabilities ($B)	4.3	4.0	4.5	4.3	4.4
Discount Rate (GAAP)	3.7%	4.6%	3.7%	4.1%	3.9%

Prepared by Conning, Inc. Source: ©2012-2016 Bloomberg, L.P.

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Conning Pension Risk Analyzer®

Learn more about Conning's LDI approach and try the interactive Pension Risk Analyzer

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About Conning®

Conning (www.conning.com) is a leading investment management firm with approximately $122 billion in global assets under management as of March 31, 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 March 31, 2018, represents the combined global assets under management for the affiliated firms under Conning Holdings Limited, and Cathay Securities Investment Trust Co., Ltd. ("SITE"). 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 entities.

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 corporate sponsors comprising the Russell 3000 Index. The average plan size is approximately $3.8 billion in assets and $4.6 billion in liabilities. 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.

The data in this monthly review was reported in the 10-Ks of 389 publicly traded companies. These companies were selected because they had consistently filed pension data every year for the period of 2012 through 2016.

Conning categorized these companies based on their plan assets and their business sector. Note, those assets may include non-U.S. pension plans. In aggregate, these 389 reported $1.4 trillion in plan assets and $1.7 trillion in plan liabilities.

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.

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: 7105251