



**Asset
Management**

Goldman Sachs Asset Management Industry Study

Utility Pension Plan Study

Global Portfolio Solutions
February 2020

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I. Executive Summary

Executive Summary



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GSAM analyzed the financial statements of 44 publicly traded utility companies for the year-end 2018. The key findings are:

- Defined benefit (“DB”) plan funded status for the utility industry decreased from 87% to 86%, year-over-year, due to poor asset performance, despite an increase in discount rates
- Unfortunately, the financial risks found in the DB plans for the industry remain material, due to the mismatch between plan assets and plan liabilities, representing a potential loss for the industry in excess of \$71BN over the next seven years

Based on the analysis, the current weighted average strategic asset allocation across the industry is:

- 41% Equities, 43% Fixed Income, and 16% in Alternatives and Other; resulting in a weighted average expected return of 7.13%
- Given that few plans within the industry have been frozen (approximately 13.5%¹), liabilities are growing at roughly 6.7%, when adding the industry weighted average discount rate (4.4%) and service cost (2.3%), industry plan assets will likely struggle to keep up with growing liabilities, when incorporating the current deficit and PBGC Variable Rate Premiums

GSAM believes the industry plans may benefit by adopting a ‘capital efficient’ strategy that reduces interest rate risk via derivative overlays and re-deploys low yielding fixed income assets into higher yielding assets, all on a risk-neutral basis

Source: GSAM as of 12/31/2018. ¹Statistics from the DOL, per slide 9. Expected returns are estimates of hypothetical average returns of economic asset classes derived from statistical models. There can be no assurance that these returns can be achieved. Actual returns are likely to vary. The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. Please see additional disclosures. All illustrations of funded status, surplus and related funding information in this material are based on actuarial data provided by your actuary where appropriate. Illustrations reflect one possible outcome and reflect a number of assumptions which are disclosed therein. Goldman Sachs is not providing actuarial services in connection with providing the information contained therein.

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II. GSAM Industry Study

GSAM Industry Study

Industry Review

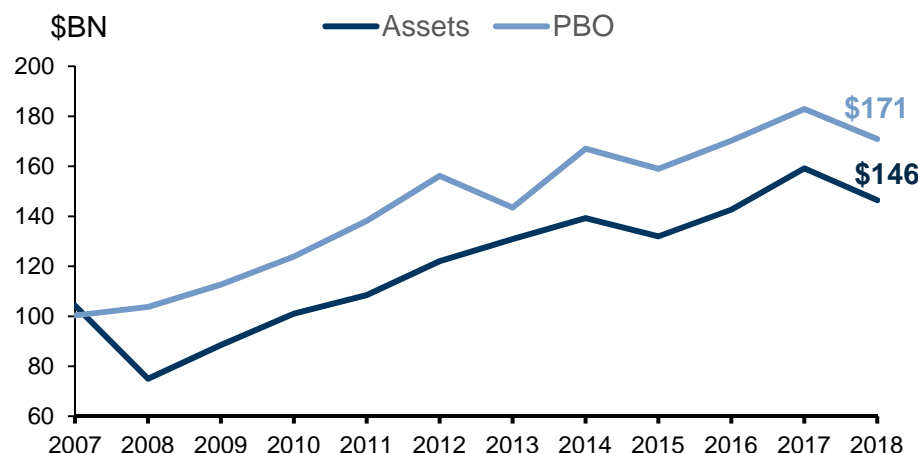


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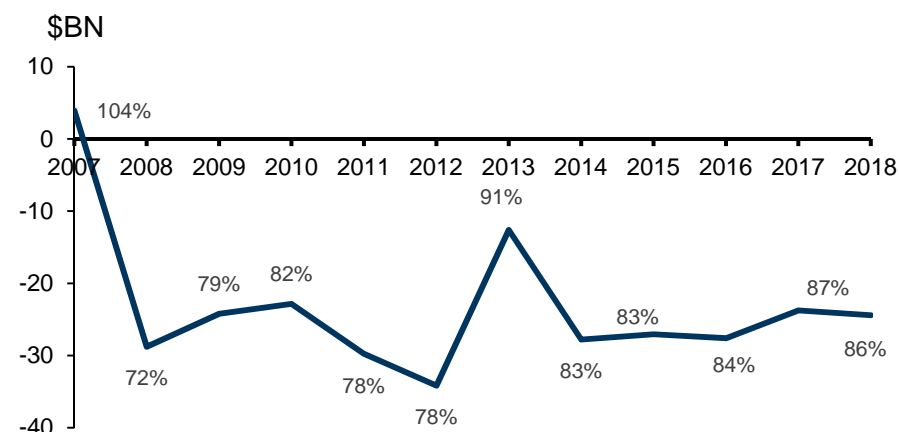
GSAM has analyzed the financial statements of 44 publicly traded utilities¹ for fiscal year-end 2018. Key findings are as follows:

- DB exposure, which totals an estimated ~\$171BN on an accounting basis, represents 23% of the peer group's aggregate market cap of \$736BN¹, resulting in a material risk exposure unrelated to the mandate of the industry
- Even though the industry plans were fully funded on an accounting basis in 2007, the funded status dropped by over \$33BN in 2008 alone and remains underfunded despite contributions in excess of \$50BN

Assets vs. GAAP Liability



Dollar Deficit and Percentage Funded Status



DB exposures are material, contain a high degree of market risk, and represent a contingent call on capital in a capital intensive industry

¹ Source: Bloomberg and 10-K (2007-2018) as of 12/31/2018. For a complete list of utility peer group members used in this analysis, see Appendix. All illustrations of funded status, surplus and related funding information in this material are based on actuarial data provided by your actuary where appropriate. Illustrations reflect one possible outcome and reflect a number of assumptions which are disclosed therein. Goldman Sachs is not providing actuarial services in connection with providing the information contained therein. For Illustrative Purposes Only. Goldman Sachs does not provide accounting, tax or legal advice. Please see additional disclosures at the end of this presentation. The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk. **Past performance does not guarantee future results, which may vary.**

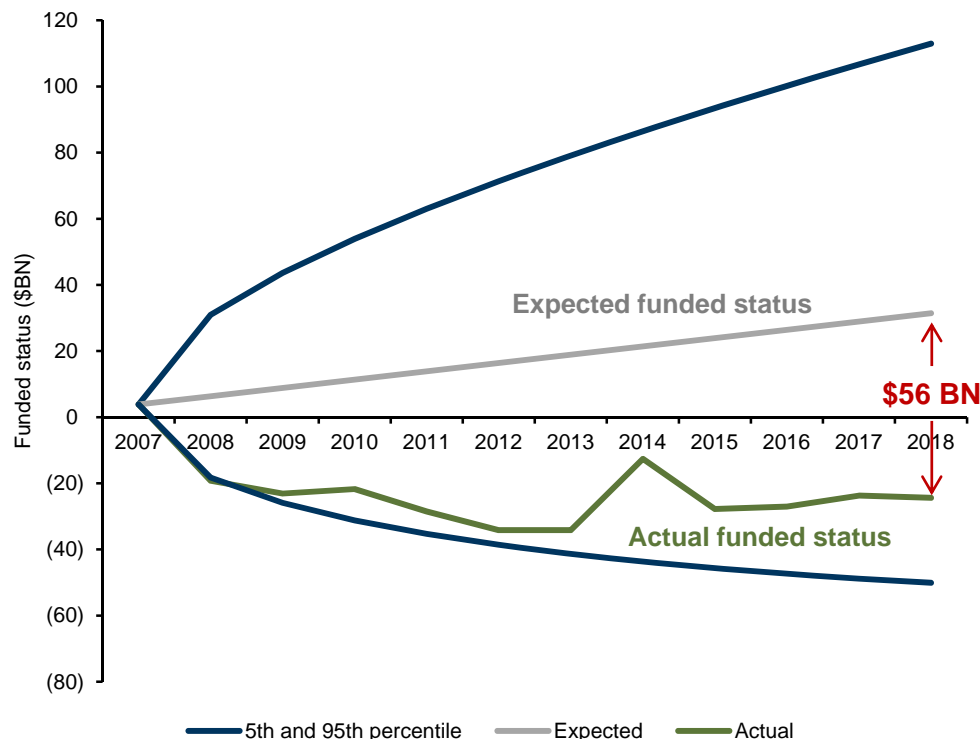
GSAM Industry Study

Industry Attribution Analysis of Underperformance



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FYE 2018 Funded Status vs. Expectations¹ Since FYE 2007



Beginning 12/31/2007 (\$BN)	Expected	Actual	Difference
Beginning assets	100	100	
Beginning liabilities	96	96	
Beginning funded status	4	4	
Changes in assets only			
Benefit payments	(85)	(85)	
Contributions	34	55	21
Asset returns	100	69	(31)
Other	0	8	8
Total changes in assets	49	46	(2)
Changes in liabilities only			
Benefit payments	(85)	(85)	
Service cost	34	34	
Interest cost	72	72	
Liability change due to market factors	0	34	34
Liability change due to demographics	0	8	8
Other	0	12	12
Total changes in liabilities	21	74	53
Ending assets	149	146	(2)
Ending liabilities	117	171	53
Ending funded status as of 12/31/2018	31	(24)	(56)
Total change in funded status	28	(28)	(56)

Since FYE 2007, the industry underperformed expectations primarily due to falling interest rates (\$34BN) and lower than anticipated asset returns (\$31BN) despite \$21BN of contributions in excess of service cost ¹

¹ Source: 10-K filings as of 12/31/2018. Peer group includes the 44 companies outlined on slide 17. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially. Views and opinions expressed are for informational purposes only and do not constitute a recommendation by GSAM to buy, sell, or hold any security. Views and opinions are current as of the date of this presentation and may be subject to change, they should not be construed as investment advice. **Past performance does not guarantee future results, which may vary.** All illustrations of funded status, surplus and related funding information in this material are based on actuarial data provided by your actuary where appropriate. Illustrations reflect one possible outcome and reflect a number of assumptions which are disclosed therein. Goldman Sachs is not providing actuarial services in connection with providing the information contained therein. Goldman Sachs is not providing actuarial services in connection with providing the information contained therein. See appendix for assumptions

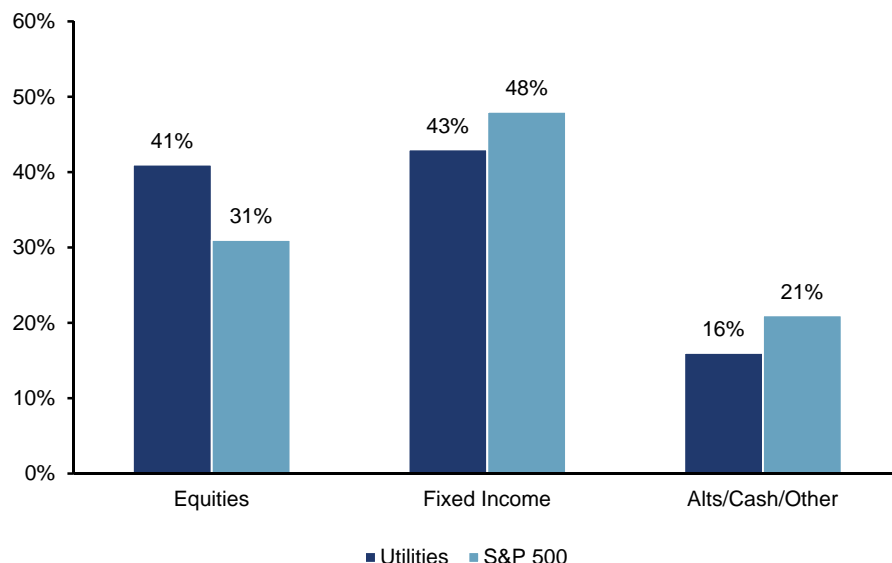
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2018 Asset Allocations Remain Highly Exposed to Equity Risk

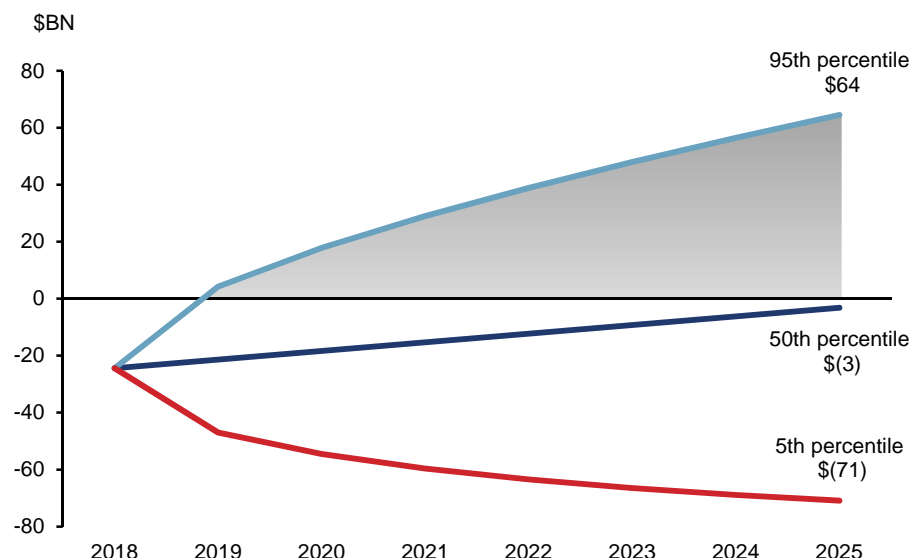


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Utility Industry Compared to S&P 500 (FYE 2018)¹



Projected Funded Status for Utilities Remains Volatile²



- Utility plans allocated 41% of assets to equities as compared to 31% of assets allocated to equities for the S&P 500 pension plans
- Allocations to fixed income trail the S&P 500 pension plans by 5%, with utility plans allocating 43% to fixed income and S&P 500 pension plans allocating 48% to fixed income
 - 64% of industry plans have less than a 50% allocation to fixed income
- The projected funded status of plans for the industry has a wide distribution of potential outcomes due primarily to a mismatch between plan assets and liabilities. Funding deficits could increase to approximately \$71BN by 2025 in a 1 in 20 case

¹Based on Company 10-K filings as of 12/31/2018. ²Best and worst case scenarios based on a 1.645 standard deviation move (i.e., 95% confidence interval), funded status volatility of 11% and contributions equal to service cost. Based on Company 10-K filings. See Appendix for details. Peer group includes the 44 companies outlined on slide 17. Goldman Sachs does not provide accounting, tax or legal advice. Please see additional disclosures at the end of this presentation. Targets are subject to change and are current as of the date of this presentation. Targets are objectives and do not provide any assurance as to future results. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially. The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. All illustrations of funded status, surplus and related funding information in this material are based on actuarial data provided by your actuary where appropriate. Illustrations reflect one possible outcome and reflect a number of assumptions which are disclosed therein. Goldman Sachs is not providing actuarial services in connection with providing the information contained therein. **Past performance does not guarantee future results, which may vary.**

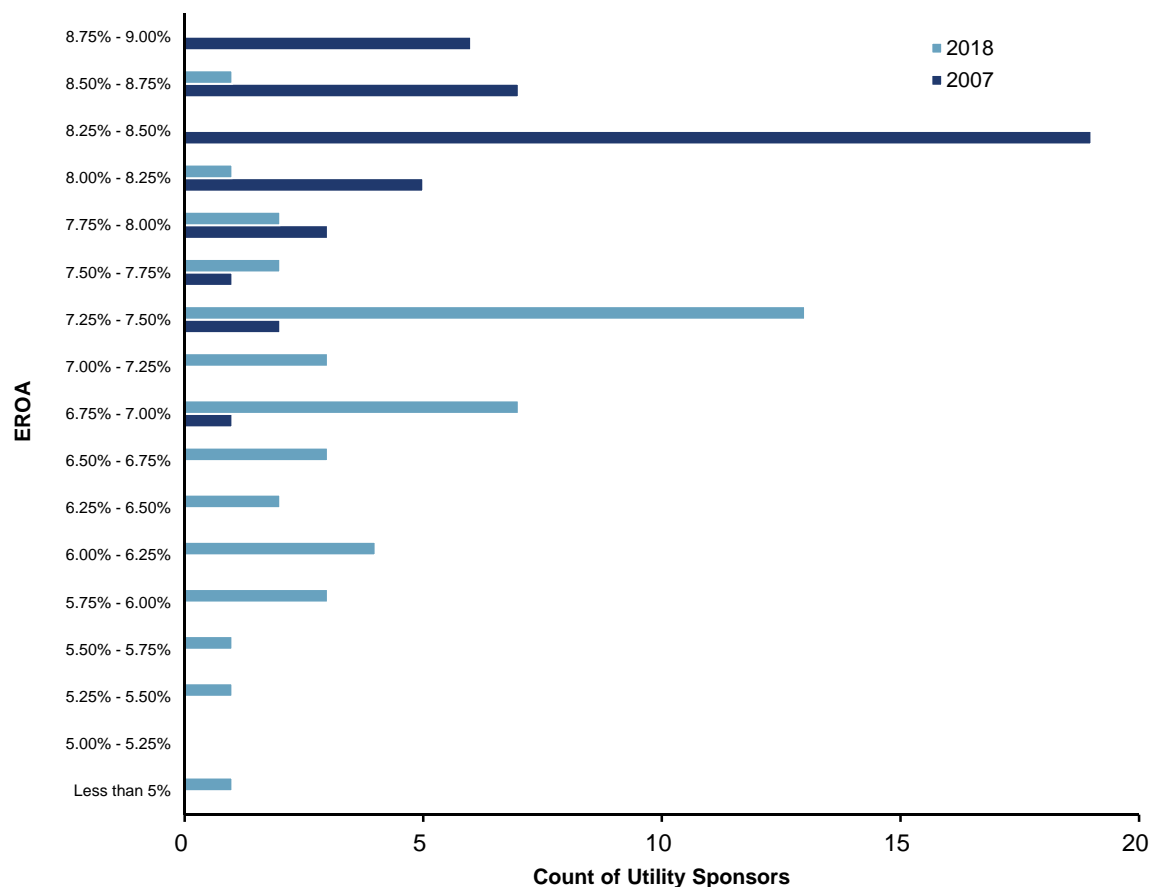
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Observation: Industry Sponsors Have Responded by Adopting Some Form of Funding and De-risking



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An Increasing Number of Plan Sponsors are Adopting Customized Asset Allocations



- **Many plan sponsors are customizing asset allocations to their unique liability profiles in order to account for:**
 - New pension regulations (e.g., PPA, MAP-21, HATFA, etc.)
 - Low interest rates
 - Less reliance on equities
- **Industry EROA average dropped from 8.5% to 7.1%**
- **A high degree of risk taking within DB plans might be endemic to the rate setting mechanism in a number of jurisdictions**
 - For example, many rate setting mechanisms include EROA of the pension plan as a part of the utility's income without fully considering the asset risk associated with EROA
 - As a result, pension plans invest heavily in equities
 - However, there may be a low likelihood that those EROAs are achieved
 - High equity allocations may lead to large losses that:
 - Increase pension deficits which may ultimately be more costly for rate payers than other types of corporate debt

Source: Company 10-K filings as of 12/31/2018. Peer group includes the 44 companies outlined on slide 17. Past results are not necessarily indicative of future results. Views and opinions expressed are for informational purposes only and do not constitute a recommendation by GSAM to buy, sell, or hold any security. Views and opinions are current as of the date of this presentation and may be subject to change, they should not be construed as investment advice. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially. Please see additional disclosures.

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Industry Review



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Industry	Number of Plans		Number of Active Participants (thousands) ¹		Total Assets (millions)	
	Total	Percent Frozen	Total	Percent In Frozen Plans	Total	Percent In Frozen Plans
Total	46,300	19.9%	13,866	12.8%	\$2,923,233	17.1%
Agriculture	543	20.8%	44	21.8%	6,019	30.4%
Mining	307	29.3%	80	17.2%	22,028	24.3%
Utilities	358	13.5%	450	0.7%	176,203	0.8%
Construction	2,544	13.6%	1,305	0.7%	189,500	0.9%
Manufacturing	5,582	37.3%	2,970	14.4%	1,096,952	16.1%
Wholesale trade	2,507	21.7%	245	29.2%	46,034	30.7%
Retail trade	1,628	21.5%	1,070	5.7%	68,984	12.3%
Transportation	728	26.3%	1,069	11.4%	198,171	15.4%
Information	815	31.8%	711	12.2%	160,112	14.0%
Finance, insurance & real estate	5,590	19.8%	2,186	13.0%	410,406	16.9%
Services	24,876	15.1%	3,231	20.9%	513,264	31.4%
Misc. organizations ²	813	40.3%	504	3.8%	35,552	17.0%
Industry not reported	8	0.0%	*/	0.0%	9	0.0%

Utilities lag other industries in risk transfer strategies such as suspension of benefit accruals

NOTE: Industry classifications are consistent with definitions of principal business activity listed in the 2016 Form 5500 Instructions. These principal business activity codes are based on the North American Industry Classification System.

NOTE: Total asset amounts shown do not include the value of allocated insurance contracts of the type described in 29 CFR 2520.104-44.

NOTE: "Suspension of benefit accruals" refers to plans in which no participants accrue any new benefits regardless of continuing service or compensation.

NOTE: Excludes "one-participant plans."

NOTE: Totals may not sum due to rounding.

¹ The definition of active participants includes individuals who are eligible to elect to have the employer make payments to a 401(k) type plan (even if individuals are not contributing) and nonvested former employees who have not yet incurred a break in service.

² Religious, grantmaking, civic, professional, labor, and similar organizations.

*/ Fewer than 500 participants.

**/ Less than \$500,000.

- Missing or zero.

SOURCE: Form 5500 filings for plan years ending in 2016.



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III. Proposed Capital Efficiency Strategy

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Proposed Capital Efficiency Strategy

Overview: Our Understanding of the Utility Industry's Pension Exposure



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- **We believe the rate-regulated utility industry to be unique in the following ways:**
 - Typically, the costs associated with DB plans are borne by rate payers via the rate making process
 - Earning higher expected returns above the discount rate helps lower the all-in costs of DB plans, potentially lowering the cost of electricity
 - However, if actual returns underperform expected returns, rate payers may be subject to additional, unanticipated costs
- **Mismatches between plan assets and plan liabilities create the risk of underperformance, roughly \$28BN, industry wide, in any one year, to possibly in excess of \$71BN in 7 years**
 - Hence, better aligning plan assets with plan liabilities may reduce this risk of underperformance
 - **However, increasing the asset allocation to lower yielding, duration matched fixed income instruments reduces risk but also lowers expected returns, potentially putting added pressure on electricity costs, absent unexpected losses or underperformance**
- **One potential approach to reducing the interest rate risk associated with plan liabilities is via the use of derivative overlays:**
 - Changes in plan liabilities due to changes in interest rates have a direct impact on a plan's funded status
 - Reducing this risk without tying up a significant amount of plan assets can dramatically improve capital efficiency
- **Once interest rate risk is reduced, a portion of the low yielding fixed income assets can be redeployed in higher yielding assets, improving overall expected plan performance by increasing expected returns while maintaining the same funded status volatility**

¹ As of 12/31/2018. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially. The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk. There is no guarantee that these objectives will be met. **All illustrations of funded status, surplus and related funding information in this material are based on actuarial data provided by your actuary where appropriate. Illustrations reflect one possible outcome and reflect a number of assumptions which are disclosed therein. Goldman Sachs is not providing actuarial services in connection with providing the information contained therein.**

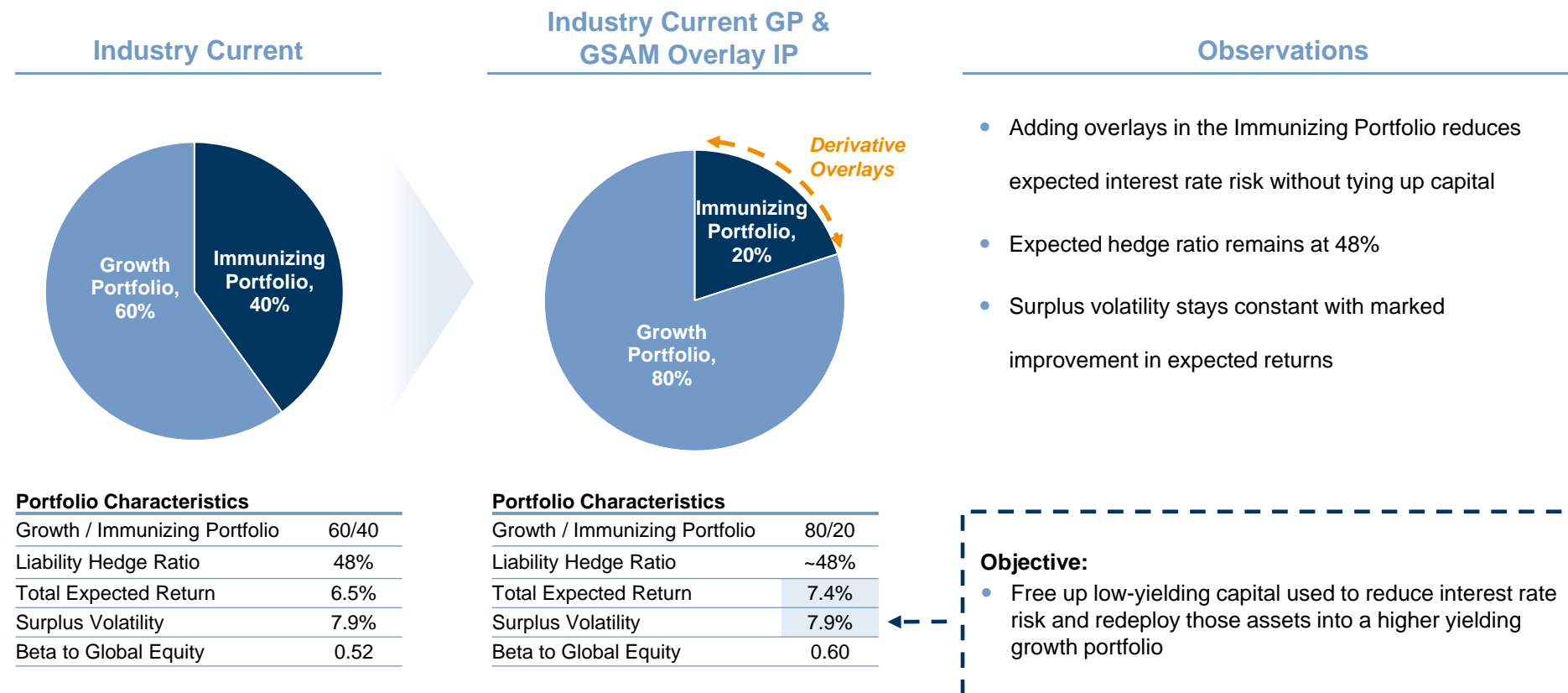
Proposed Capital Efficiency Strategy

Overlays Reduce Interest Rate Risk Without Binding Assets



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- GSAM's Proposed Portfolio achieves its objective of targeting capital efficiency



Source: Company 10-K filings as of 12/31/2018. Based on funded status of ~86%.

Hedge ratio on a GAAP basis. This does not constitute a recommendation to adopt any particular asset allocation or service provider model. For illustrative purposes only. GSAM Proposed allocations as of April 2019. Peer group includes the 44 companies outlined on slide 17. The investment manager may change the allocations over time. Allocations may not be representative of current or future investments. All numbers reflect GSAM Global Portfolio Solutions strategic assumptions as of December 31, 2018. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns. See additional disclosures. Although certain information has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness. Expected returns are estimates of hypothetical average returns of economic asset classes derived from statistical models. There can be no assurance that these returns can be achieved. Actual returns are likely to vary. Please see additional disclosures.



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Appendix A: Assumptions and Methodology

Assumptions and Methodology



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-
- All data (PBO, Assets, Expected Benefit Pmts, etc.) based on company 10-K filings for 44 U.S. shareholder-owned public utilities
 - Decomposition of annual liability (gains)/losses include assumed liability duration of 12 and actual reported change in discount rate
 - Projected expected funded status from 2007 FYE to 2018 FYE estimated based on information reported in company 10-K filings for 44 U.S. shareholder-owned public utilities and the following assumptions:
 - Asset growth reflects contributions equal to service cost and actual return equal to expected returns
 - Liability growth reflects no change in discount rate, pro-rata demographic (gains)/losses and service cost, and actual “other” liability changes
 - Funded status volatility estimated based on GSAM capital market assumptions on plan assets and liabilities (data available to client)
 - Benefit payments were assumed paid monthly, contributions made annually at the end of the seventh month of the year, and all other asset and liability cash flows at end of year
 - 1-in-20 best and worst case scenarios based on a 1.645 standard deviation move (i.e., 95% confidence interval) around the expected path
 - Growth assets based on allocation to equities and alternatives reported in 10-K asset allocation data

Company data as of 12/31/2018. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially.

Assumptions and Methodology for Plan Specific Performance



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- Actual funded status based on company 10-K filings for 44 U.S. shareholder-owned public utilities
- Decomposition of annual liability (gains)/losses include assumed liability duration of 12 and actual reported change in discount rate
- Liability return represents the increase due to change in interest rates using sponsor's FYE discount rate minus prior FYE discount rate multiplied by duration of 12 with no convexity assumed
- The difference between liability return and liability gains & losses as reported on 10-K is attributed to demographic and mortality updates
- Average assets and liabilities reflect the following cash flow timing assumptions:
 - Benefit payments paid monthly
 - Contributions made annually at the end of the seventh month of the year
 - All other asset and liability cash flows at end of year
- Net funded status return equals asset return minus liability return expressed as a percentage of the expected liability for the year
 - Rankings based on sample variance of calculated net funded status returns over rolling 5-year periods
 - Unless noted, material presented is reflective of US DB plans only

Company data as of 12/31/2018. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially.



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Appendix B: US Shareholder-Owned Public Utilities Used in this Study

US Shareholder-Owned Public Utilities Used in this Study



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Company	Ticker
AES Corporation	AES
ALLETE, Inc.	ALE
PEG Energy Corporation	LNT
Ameren Corporation	AEE
American Electric Power Company, Inc.	AEP
Avista Corporation	AVA
Black Hills Corporation	BKH
CenterPoint Energy, Inc.	CNP
Cleco Corporation	CNL
CMS Energy Corporation	CMS
Consolidated Edison, Inc.	ED
Dominion Resources Inc.	D
DTE Energy Company	DTE
Duke Energy Corporation	DUK
Edison International	EIX
El Paso Electric Company	EE
Entergy Corporation	ETR
Eversource Energy	ES
Exelon Corporation	EXC
FirstEnergy Corp.	FE
Hawaiian Electric Industries, Inc.	HE
IDACORP, Inc.	IDA

Company	Ticker
MDU Resources Group, Inc.	MDU
MGE Energy, Inc.	MGEE
NextEra Energy, Inc.	NEE
NiSource Inc.	NI
NorthWestern Energy	NWE
NRG Energy, Inc.	NRG
NW Natural	NWN
OGE Energy Corp.	OGE
Otter Tail Corporation	OTTR
PG&E Corporation	PCG
Pinnacle West Capital Corporation	PNW
PNM Resources, Inc.	PNM
Portland General Electric Company	POR
PPL Corporation	PPL
Public Service Enterprise Group, Inc.	PEG
Puget Sound Energy	PSD
Sempra Energy	SRE
Southern Company	SO
Unitil Corporation	UTL
Westar Energy, Inc.	WR
Wisconsin Energy Corporation	WEC
Xcel Energy, Inc.	XEL

Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities.



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Appendix C: GSAM Contact List

GSAM Contacts



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Name & Title		Contact Information	
Gregory Calnon <i>Global Head</i>		Tel: (212) 855-0124 E-mail: Gregory.Calnon@gs.com	
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Michael Moran <i>Managing Director</i>		Tel: (212) 357-3512 E-mail: Michael.Moran@gs.com	
Kate El-Hillow <i>Managing Director</i>		Tel: (212) 902-5363 E-mail: Kate.El-Hillow@gs.com	
Rose Serels <i>Vice President</i>		Tel: (212) 902-3012 E-mail: Rose.Serels@gs.com	
Samantha Holmes <i>Analyst</i>		Tel: (212) 357-2010 E-mail: Samantha.Holmes@gs.com	

Additional Information

Strategic Long-Term Assumptions: Expected Total Return and Volatility



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	Total Return	Total Volatility	Total Sharpe Ratio
Custom Benchmark	3.8%	10.7%	0.17
Private Equity	9.1%	22.5%	0.32
US Real Estate	6.9%	17.5%	0.28
Global Equity FX	2.6%	2.8%	0.20
Emerging Markets Equity 1	10.5%	20.3%	0.42
Global Small Cap Equity	8.5%	16.5%	0.39
LIBOR Floors	29.4%	135.9%	0.20
Global Equity 1	7.8%	14.8%	0.39
Emerging Markets Equity 2	10.5%	20.9%	0.41
Global Small Cap Equity	8.5%	17.7%	0.37
Global Real Estate (FTSE)	8.6%	18.1%	0.36
Global Infrastructure	7.8%	14.1%	0.41
Trend	7.6%	13.7%	0.41
Emerging Market Debt	5.3%	9.4%	0.35
Emerging Market Debt Local	6.1%	12.3%	0.33
Global Equity Volatility Strategy	5.4%	8.9%	0.38
Global High Yield	5.4%	9.1%	0.37
Hedge Funds	3.6%	5.4%	0.30
GPS Tilts Fund	3.4%	8.0%	0.17
Global Equity 1	7.2%	13.7%	0.38
Global Equity 2	7.8%	14.4%	0.40
GS Alternative Beta Trend	3.7%	12.4%	0.14

All numbers reflect GSAM Global Portfolio Solutions strategic assumptions as of June 30, 2019. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns. Expected returns are estimates of hypothetical average returns of economic asset classes derived from statistical models. There can be no assurance that these returns can be achieved. Actual returns are likely to vary. Please see additional disclosures. The returns are gross and do not reflect the deduction of investment advisory fees, which will reduce returns. Our investment advisory fees are described in Part 2 of our Form ADV. See additional disclosures.

Additional Information

Strategic Long-Term Assumptions: Correlation Matrix



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Asset Class	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Custom Benchmark	1.0	-0.1	0.2	0.1	-0.1	-0.1	0.6	-0.1	-0.1	-0.1	0.1	0.1	-0.1	0.3	0.2	-0.1	-0.1	0.1	-0.1	-0.1	-0.1	0.4
2 Private Equity	-0.1	1.0	0.6	0.1	0.7	0.9	-0.2	1.0	0.7	0.9	0.7	0.7	1.0	0.5	0.5	0.9	0.6	0.8	1.0	1.0	1.0	-0.2
3 US Real Estate	0.2	0.6	1.0	0.3	0.5	0.7	0.0	0.7	0.5	0.7	1.0	0.7	0.7	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.7	-0.1
4 Global Equity FX	0.1	0.1	0.3	1.0	0.4	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.3	0.4	0.7	0.1	0.4	0.2	0.2	0.1	0.3	0.1
5 Emerging Markets Equity 1	-0.1	0.7	0.5	0.4	1.0	0.8	-0.1	0.8	1.0	0.8	0.7	0.8	0.8	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	-0.1
6 Global Small Cap Equity	-0.1	0.9	0.7	0.3	0.8	1.0	-0.2	0.9	0.8	1.0	0.8	0.8	0.9	0.6	0.6	0.8	0.7	0.8	0.9	0.9	0.9	-0.2
7 LIBOR Floors	0.6	-0.2	0.0	0.3	-0.1	-0.2	1.0	-0.2	-0.1	-0.2	0.0	0.0	-0.2	0.2	0.2	-0.3	-0.1	0.0	-0.3	-0.3	-0.2	0.5
8 Global Equity 1	-0.1	1.0	0.7	0.3	0.8	0.9	-0.2	1.0	0.8	0.9	0.8	0.8	1.0	0.6	0.6	0.9	0.7	0.8	1.0	1.0	1.0	-0.2
9 Emerging Markets Equity 2	-0.1	0.7	0.5	0.4	1.0	0.8	-0.1	0.8	1.0	0.8	0.7	0.8	0.8	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	-0.1
10 Global Small Cap Equity	-0.1	0.9	0.7	0.3	0.8	1.0	-0.2	0.9	0.8	1.0	0.8	0.8	0.9	0.6	0.6	0.8	0.7	0.8	0.9	0.9	0.9	-0.2
11 Global Real Estate (FTSE)	0.1	0.7	1.0	0.4	0.7	0.8	0.0	0.8	0.7	0.8	1.0	0.8	0.8	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	-0.1
12 Global Infrastructure	0.1	0.7	0.7	0.5	0.8	0.8	0.0	0.8	0.8	0.8	0.8	1.0	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	-0.1
13 Trend	-0.1	1.0	0.7	0.3	0.8	0.9	-0.2	1.0	0.8	0.9	0.8	0.8	1.0	0.6	0.6	0.9	0.7	0.8	1.0	1.0	1.0	-0.2
14 Emerging Market Debt	0.3	0.5	0.6	0.4	0.6	0.6	0.2	0.6	0.6	0.6	0.6	0.7	0.6	1.0	0.7	0.6	0.8	0.6	0.6	0.5	0.6	0.0
15 Emerging Market Debt Local	0.2	0.5	0.5	0.7	0.7	0.6	0.2	0.6	0.7	0.6	0.6	0.7	0.6	0.7	1.0	0.5	0.7	0.5	0.5	0.5	0.6	0.0
16 Global Equity Volatility Strategy	-0.1	0.9	0.6	0.1	0.7	0.8	-0.3	0.9	0.7	0.8	0.7	0.7	0.9	0.6	0.5	1.0	0.7	0.7	0.9	0.9	0.9	-0.3
17 Global High Yield	-0.1	0.6	0.6	0.4	0.7	0.7	-0.1	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	1.0	0.6	0.7	0.6	0.7	-0.2
18 Hedge Funds	0.1	0.8	0.6	0.2	0.7	0.8	0.0	0.8	0.7	0.8	0.7	0.7	0.8	0.6	0.5	0.7	0.6	1.0	0.8	0.8	0.8	0.3
19 GPS Tilts Fund	-0.1	1.0	0.6	0.2	0.8	0.9	-0.3	1.0	0.8	0.9	0.7	0.8	1.0	0.6	0.5	0.9	0.7	0.8	1.0	1.0	1.0	-0.2
20 Global Equity 1	-0.1	1.0	0.6	0.1	0.8	0.9	-0.3	1.0	0.8	0.9	0.7	0.8	1.0	0.5	0.5	0.9	0.6	0.8	1.0	1.0	0.98	-0.2
21 Global Equity 2	-0.1	1.0	0.7	0.3	0.8	0.9	-0.2	1.0	0.8	0.9	0.8	0.8	1.0	0.6	0.6	0.9	0.7	0.8	1.0	0.98	1.0	-0.2
22 GS Alternative Beta Trend	0.4	-0.2	-0.1	0.1	-0.1	-0.2	0.5	-0.2	-0.1	-0.2	-0.1	-0.1	-0.2	0.0	0.0	-0.3	-0.2	0.3	-0.2	-0.2	-0.2	1.0

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Period	Gross Return	Net Return	Differential
1 year	6.17%	4.61%	1.56%
2 years	12.72%	9.43%	3.29%
10 years	81.94%	56.89%	25.05%

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