Goldman Sachs Asset Management

Pension Solutions
October 2015

Seven is the New Eight

Return assumptions continue to move lower

Recent actions by some large pension plans to lower their expected return on assets (EROA) assumption have drawn the attention of investment professionals, the financial media and other constituents. But this is nothing new – both public and corporate defined benefit (DB) pension plans have been lowering these assumptions for years. Return assumptions of 8% or higher were fairly common in the past. Today, more begin with a seven handle versus an eight, and those beginning with a six are quickly gaining as well.

Multiple ramifications exist for pension plan sponsors

Since the EROA assumption is generally used as the discount rate for valuing public DB pension obligations, lower return assumptions generally increase reported pension liabilities and lower funded ratios. This often results in larger contribution requirements for public entities. Although not used to value pension obligations for corporate DB plans, lower assumed returns, all else equal, can raise the amount of pension expense recognized by plan sponsors. Lower future returns may also necessitate higher contributions, lower benefits, or some combination of both for some DB plans. In short, a decline in future return assumptions can impact plan sponsors in a number of ways.

A 60/40 portfolio may not get all plans there

In recent years, passive exposure to both equity and fixed income may have worked quite well for institutional investors. That may not be the case going forward. In order to meet even recently lowered return assumptions, institutional investors may want to look at the potential benefits of increasing the active risk in their portfolios as well as introducing asset classes outside of public equity and fixed income which have historically comprised a substantial portion of pension portfolios.

We find little variation in return assumptions across auditing firms

We have observed average asset-weighted expected return assumptions seem to vary little across clients of different auditing firms. Differences that do exist appear to be related to variances in the asset allocations of the underlying plans. It would appear that auditing firms, in general, may be focusing on return assumptions, which may also be contributing to the downward pressure on these metrics.

Diversification does not protect an investor from market risk and does not ensure a profit.

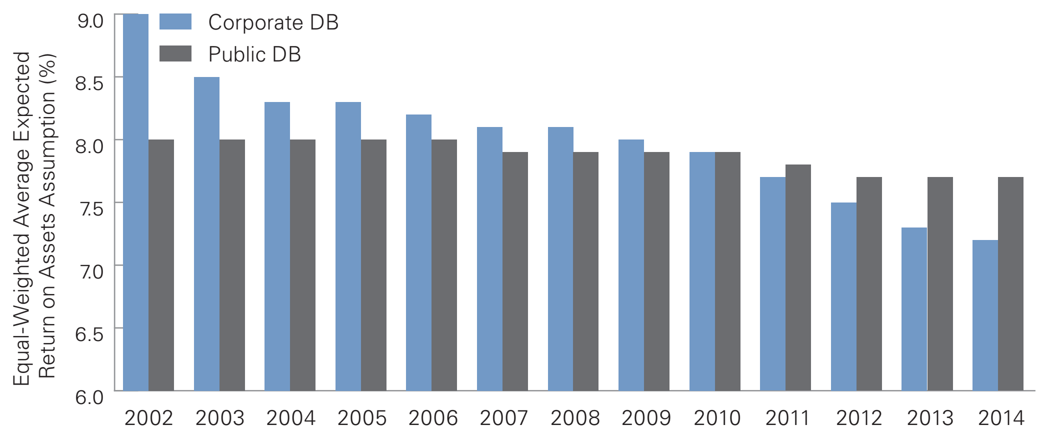
High-profile downward revisions to return assumptions

Lowering the long-term bar

In recent months several large, high-profile public DB pension plans have either lowered their strategic long-term EROA assumption or indicated a possible intention to do so. For example, the $184bn New York State Common Fund lowered its assumption to 7.0% from 7.5% in September of this year. More recently, the roughly $300bn California Public Employees' Retirement System (CalPERS) indicated it may lower its current 7.5% return assumption. Several corporate DB plans have also been lowering this assumption, such as Alcoa which reduced its long-term target this year to 7.75% from 8%. These actions have caught the attention of numerous observers including other institutional investors as well as the financial media.

However, reductions such as these are nothing new. Public and corporate DB plans have been lowering their return assumptions for years, albeit at a faster rate in the corporate universe than in the public space. As seen in Exhibit 1, the equal-weighted average EROA for both public and corporate DB plans in the US has been on a downward trajectory for over a decade.

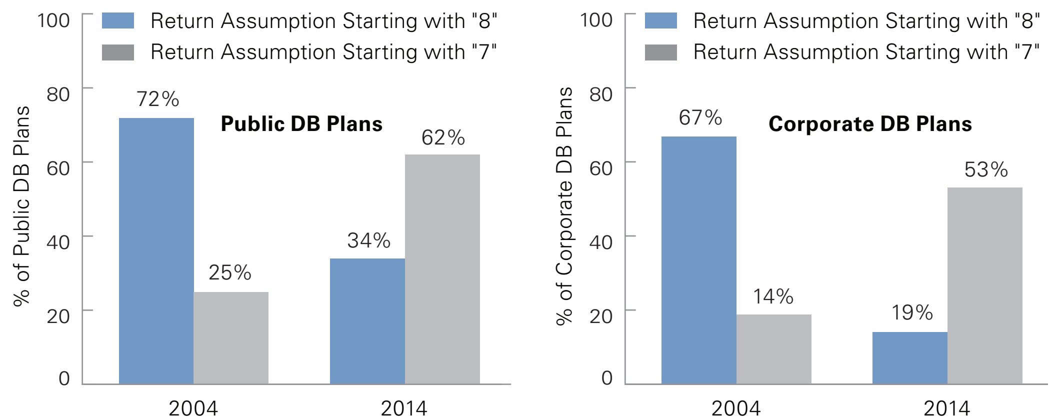
Exhibit 1: Return assumptions have been declining for years



Source: As of 2014; Goldman Sachs Asset Management; company reports; Center for Retirement Research at Boston College.

In the past, long-term return assumptions of 8% or higher were fairly common in both the public and corporate universe. Today, most return assumptions now begin with a seven and several plans have even re-set their expectations below 7%. This represents quite a dramatic shift over the past decade (see Exhibit 2).

Exhibit 2: Most return assumptions now start with a "7" rather than an "8"



Note: Percentages do not sum to 100% for any given year as analysis excludes plans with EROA assumptions of 9% and higher, and less than 7%.

Source: As of 2014; Goldman Sachs Asset Management; company reports; Corporate DB plan universe defined as the US plans (when specified) of S&P 500 companies; Public DB plan universe comprised of plans in the public plan database maintained by the Center for Retirement Research at Boston College.

We anticipate that further reductions to this assumption may continue. Corporate plans, for example, are only required to disclose in their annual reports the EROA assumption they used in the just completed year. Consequently, comprehensive data on this population is only available through 2014.

Insights into 2015 return assumptions

Nonetheless, some organizations voluntarily disclose the EROA assumption they are using in the current year. Exhibit 3 details over thirty corporate DB plans where we observed a public disclosure of the EROA assumption they are using in 2015 financial reporting. About half of those indicated they are using a lower EROA assumption in 2015 than they had used in 2014. We suspect that once all companies have filed their 2015 fiscal year annual reports by early 2016, the average EROA assumption in the corporate DB universe may likely have fallen once again.

Exhibit 3: Reductions to EROA assumptions continuing in 2015
Sorted by Plan Assets. Data for US Plans Only (when specified)

Ticker	Company Name	Industry	Month of Fiscal Year End	Expected Return on Plan Assets		Percentage Point Change	Change	Plan Assets ($ Millions)	Notes
				2015	2014				
BA	Boeing Co.	Aerospace and Defense	December	7.00%	7.50%	-0.50%	Lower	$61,119	
IBM	Intl Business Machines Corp.	IT Cons. and Other Services	December	7.50%	8.00%	-0.50%	Lower	55,772	
T	AT&T Inc.	Integrated Tele. Services	December	7.75%	7.75%	0.00%	Unchanged	54,184	
GE	General Electric Co.	Industrial Conglomerates	December	7.50%	7.50%	0.00%	Unchanged	48,280	
F	Ford Motor Co.	Automobile Manufacturers	December	6.75%	6.89%	-0.14%	Lower	44,844	
LMT	Lockheed Martin Corp.	Aerospace and Defense	December	8.00%	8.00%	0.00%	Unchanged	34,673	
NOC	Northrop Grumman Corp.	Aerospace and Defense	December	8.00%	8.00%	0.00%	Unchanged	25,063	
FDX	FedEx Corp.	Air Freight and Logistics	May	6.50%	7.75%	-1.25%	Lower	23,006	1
RTN	Raytheon Co.	Aerospace and Defense	December	8.00%	8.75%	-0.75%	Lower	19,352	
HON	Honeywell Intl Inc.	Aerospace and Defense	December	7.75%	7.75%	0.00%	Unchanged	17,066	
JNJ	Johnson & Johnson	Pharmaceuticals	December	8.53%	8.46%	0.07%	Higher	15,201	
EXC	Exelon Corp.	Electric Utilities	December	7.00%	7.00%	0.00%	Unchanged	14,874	
MMM	3M Co.	Industrial Conglomerates	December	7.75%	7.75%	0.00%	Unchanged	14,643	
JPM	JP Morgan Chase & Co.	Diversified Banks	December	6.50%	7.00%	-0.50%	Lower	14,623	
DOW	The Dow Chemical Co.	Diversified Chemicals	December	7.85%	7.82%	0.03%	Higher	13,937	
C	Citigroup Inc.	Diversified Banks	December	7.00%	7.00%	0.00%	Unchanged	13,071	
PFE	Pfizer Inc.	Pharmaceuticals	December	8.30%	8.50%	-0.20%	Lower	12,706	
CTL	CenturyLink Inc.	Integrated Tele. Services	December	7.50%	7.50%	0.00%	Unchanged	12,571	
CAT	Caterpillar Inc.	Constr. Mach. and Heavy Trucks	December	7.40%	7.80%	-0.40%	Lower	12,530	
PRU	Prudential Financial Inc.	Life and Health Insurance	December	6.25%	6.25%	0.00%	Unchanged	12,377	
PEP	PepsiCo Inc.	Soft Drinks	December	7.50%	7.50%	0.00%	Unchanged	12,224	
DE	Deere & Co.	Agricultural and Farm Machinery	October	7.30%	7.50%	-0.20%	Lower	11,447	2
IP	Intl Paper Co.	Paper Products	December	7.75%	7.75%	0.00%	Unchanged	10,918	
MET	MetLife, Inc.	Life and Health Insurance	December	6.24%	6.25%	-0.01%	Lower	8,750	
AA	Alcoa Inc.	Aluminum	December	7.75%	8.00%	-0.25%	Lower	8,576	
DUK	Duke Energy Corp.	Electric Utilities	December	6.50%	6.75%	-0.25%	Lower	8,498	
PNC	The PNC Fin. Svcs. Group, Inc.	Regional Banks	December	6.75%	7.00%	-0.25%	Lower	4,357	
M	Macy's, Inc.	Department Stores	January	7.00%	7.50%	-0.50%	Lower	3,636	3
JCI	Johnson Controls, Inc.	Auto Parts and Equipment	September	7.50%	8.00%	-0.50%	Lower	2,504	4
CNP	CenterPoint Energy, Inc.	Multi-Utilities	December	6.50%	7.00%	-0.50%	Lower	1,925	
CL	Colgate-Palmolive Co.	Household Products	December	6.80%	6.80%	0.00%	Unchanged	1,771	
MDLZ	Mondelez International, Inc.	Packaged Foods and Meats	December	7.25%	7.75%	-0.50%	Lower	1,216	
SCG	SCANA Corp.	Multi-Utilities	December	7.50%	8.00%	-0.50%	Lower	862	
MTOR	Meritor, Inc.	Constr. Mach. and Heavy Trucks	September	8.00%	8.00%	0.00%	Unchanged	832	4

[1] 2015 data represents fiscal year ended May 2016; 2014 data represents fiscal year ended May 2015.
[2] 2015 data represents fiscal year ended October 2015; 2014 data represents fiscal year ended October 2014.
[3] 2015 data represents fiscal year ended January 2016; 2014 data represents fiscal year ended January 2015.
[4] 2015 data represents fiscal year ended September 2015; 2014 data represents fiscal year ended September 2014.

Source: Goldman Sachs Asset Management; company reports; as of September 2015; Analysis represents companies where we observed a public disclosure of the Expected Return on Assets (EROA) assumption to be used in fiscal 2015 for its US DB plans. As disclosure of the EROA to be used in the current year is not required, we do not have this information for all plans. Rather, we have compiled these disclosures based on where we have observed them in the public domain.

Reductions often associated with LDI implementation

The more significant declines in return assumptions in the corporate space, as seen previously in Exhibit 1, are partly attributable to asset allocation shifts as many of these plans have adopted liability-driven investment (LDI) programs in recent years. As part of these programs, some plans have increased allocations to long duration fixed income at the expense of asset classes such as public and private equity. As long duration fixed income tends to have lower long-term return assumptions than other asset classes that were being reduced, the overall portfolio return assumption consequently declined.

Future returns below historical returns?

Part of the reduction is also due to lower long-term return assumptions across a wide variety of asset classes. This can be somewhat demonstrated by the reductions to public DB EROA assumptions. These plans have, generally, not adopted LDI programs and, in some cases, have even reduced allocations to fixed income in recent years while correspondingly increasing allocations to alternative asset classes, such as private equity and real estate.

Going through the annual process

Many corporations in the US utilize a fiscal year that corresponds with the calendar year. Consequently, many will be reviewing their EROA assumptions over the last few months of the year as they set their actuarial assumptions for valuing their DB plans at the end of 2015 and calculating the amount of pension expense or income they will recognize in 2016. We may expect to see continued downward pressure on these assumptions as they are set as part of this regular process.

In addition, downward moves by large, high-profile plans like CalPERS and the New York State Common Fund may likely be analyzed by other public funds in the context of evaluating their own assumption. These types of plans, given their size and sophistication, might be viewed as market leaders in this regard and could spur further downward adjustments by other public plans.

Lower assumed returns impact plan sponsors in many ways

Financial reporting implications for both corporate and public DB plans

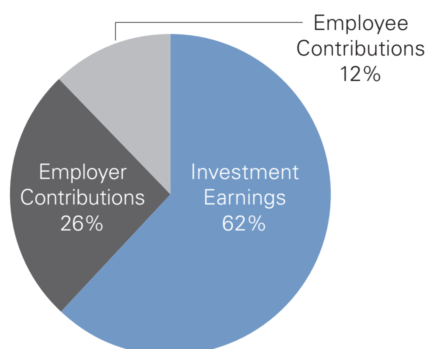
The setting of the EROA assumption is not just a theoretical exercise. This assumption, both directly and indirectly, impacts plan sponsors in multiple ways. For public plans, the EROA assumption is, generally, the discount rate that is used to value their pension obligations.[1] A lower assumed return assumption, all else equal, generally increases the pension obligation and lowers the reported funded status. This could result in the recognition of larger liabilities on the balance sheet for the public entity as well as potentially necessitating larger contributions.

For corporate plans, the EROA assumption does not function as the discount rate for valuing pension liabilities. Nonetheless, it can play an important role in the calculation of the amount of pension expense (or income) that gets recognized through the sponsor's income statement. Lowering the EROA assumption can, at times, result in the recognition of higher pension expense for the sponsor.

If future returns are actually lower than historical returns, and are in-line with the aforementioned lowered return assumptions, this could have broader ramifications beyond the financial reporting consequences outlined earlier. Lower actual investment returns in the future may necessitate higher contributions or lower benefits for plan participants. Investment earnings might finance a majority of the cost of a typical pension plan. Indeed, as seen in Exhibit 4, investment returns from the 1984-2013 period accounted for over 60% of public pensions' revenues.

[1] Under Governmental Accounting Standards Board rules, in some instances public plan discount rates may be a blend of the EROA and a municipal bond rate. For additional information, please see GSAM's December 2012 report "A 'Sea Change' in Public Pension Reporting on the Horizon."

Exhibit 4: Public pension sources of revenues, 1984-2013



Source: "NASRA Issue Brief: Employee Contributions to Public Pension Plans," February 2015; Compiled by NASRA based on US Census Bureau data.

Achieving even these lower return assumptions may be a challenging task

Historical returns have generally been higher than current long-term forecasts

Actual average annual historical returns for corporate and public DB plans have tended to fall in the 8%-10% range over long-term periods, generally defined as rolling 10-, 20- or 30-year periods. In more recent years, strong returns for both equities and fixed income meant that portfolios comprised of just these securities did well, irrespective of whether the allocation was 60/40 or 40/60.[2] If past was prologue, it would appear that generating future annual returns in the 6.5%-8.0% range, where many return assumptions fall today, might be somewhat readily achievable.

Unfortunately that may not be the case. As mentioned earlier, return assumptions across a wide variety of asset classes have come down in recent years. Indeed, based on an annual survey of investment advisors conducted by Horizon Actuarial Services, the average long-term expected return assumption for seven of eight commonly used asset classes was lower in 2015 than it had been in 2011.[3]

At the end of 2014, the asset-weighted aggregate asset allocation for US corporate DB pension plans of S&P 500 companies was 42% fixed income, 39% equity, 15% to alternatives, including such asset classes as hedge funds, private equity and commodities, and 4% to real estate.[4] When applying return assumptions that we observe in the market to that asset allocation, the overall portfolio return assumption generally falls into a band of around 5.5%-6.5%.[5] Including an alpha assumption on top of that might enable plans to meet their actuarially derived investment return assumptions.

Note, however, that some individual DB pension plans do not utilize asset classes such as private equity, real estate or high yield fixed income as represented in the overall aggregate corporate DB asset allocation referenced earlier. These asset classes generally have higher expected returns than some other asset classes, such as public equity and investment grade fixed income, commonly found in DB pension plans. For a plan that utilized a 60% allocation to public developed market equity and a 40% allocation to intermediate fixed income, it may potentially be challenging to achieve even recently reduced return assumptions. Plans may want to consider the potential benefits of using active management as well as some asset classes that may not have been utilized previously in order to seek to achieve adjusted return expectations.

[2] For additional information, please see GSAM's May 2015 report "Six Years Later and No Better Off: Difficult Choices Ahead for US Corporate Pension Plan Managers."

[3] For additional information please see "Survey of Capital Market Assumptions, 2015 Edition," July 2015, Horizon Actuarial Services, LLC; survey results included eleven advisors who participated in each survey from 2011 to 2015; average expected return assumptions for each year were compared for asset classes where at least nine of the eleven advisors had provided an expected return forecast.

[4] See "Pension Topics and Trends," October 2015, Goldman Sachs Asset Management.

[5] The granularity of corporate DB asset allocation disclosures varies greatly. As such, often times we may not have great insight into a plan's allocation to sub-asset classes, such as Emerging Market Debt or Small Cap Equities, or the breakout of an asset class between US and non-US holdings. When breaking down the major asset classes noted above into sub-asset classes in order to apply long-term expected return assumptions, we made judgments informed by information provided by those plans that do provide more granular disclosures.

Little variation in EROA assumptions by auditing firms

Are there variances by clients of different auditing firms?

Exhibit 5 details the average return assumption by clients of different auditing firms based upon the S&P 500 population of US-based plans. The results appear to suggest no significant differences in return assumptions by auditing firm. The difference between the highest EROA assumption (reported by clients of Ernst & Young) and the lowest (reported by clients of Deloitte & Touche) was less than 30 basis points. Further, Ernst & Young clients, in aggregate, had a higher allocation to equities and alternatives than Deloitte & Touche clients, which may be a factor in their higher long-term return assumptions.

Exhibit 5: Narrow range of differences in EROA assumptions by auditing firms

	Ernst & Young LLP	KPMG LLP	PricewaterhouseCoopers LLP	Deloitte & Touche LLP
Asset-weighted EROA	**7.63%**	**7.53%**	**7.47%**	**7.36%**
Equal-weighted EROA	7.16%	7.26%	7.15%	7.28%
# of Observations	84	50	104	63
	Equity 42%; Fixed Income 36%; Alts/Real Estate/Other 22%	Equity 42%; Fixed Income 37%; Alts/Real Estate/Other 21%	Equity 39%; Fixed Income 44%; Alts/Real Estate/Other 17%	Equity 35%; Fixed Income 45%; Alts/Real Estate/Other 20%

Source: Goldman Sachs Asset Management; company reports; Capital IQ; Analysis based upon the US plans (when specified) of S&P 500 companies; All data for fiscal year 2014; Asset allocations are asset-weighted; Firms are arrayed from highest asset-weighted EROA assumption to lowest.

This is, by definition, a rough analysis. There could be significant differences in the underlying sub-asset classes of the major asset classes noted above. For example, clients of one auditing firm may have a substantial allocation of alternatives in hedge funds while another may have private equity as the largest allocation in that bucket. Those asset classes tend to have notably different long-term return assumptions which could lead to material differences in overall portfolio return assumptions. Nonetheless, the analysis might suggest that, at a high level, there are no glaring differences in return assumptions by auditing firms. Based on this review, no individual firm appears to stand out as having clients with significantly higher or lower EROA assumptions.

While the analysis might suggest no significant difference in EROA assumptions by auditing firm, it does not address whether or not all auditing firms may have been scrutinizing these assumptions more closely, potentially contributing to the downward trend we outlined earlier. It might be that some sponsors' experiences with their auditors in this regard may mirror what could be the experience of many DB pension plan sponsors.

Conclusion

Some DB plan sponsors have been recently reducing EROA assumptions, continuing a trend that has been in place for the past decade. Return assumptions beginning with a seven are now more common than those which start with an eight. These reductions have multiple implications for plans both from a financial reporting as well as potentially a policy perspective. Achieving even recently lowered return expectations may be challenging.

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