Customized Buyout Price Monitoring

Summary

BCG Pension Risk Consultants | BCG Penbridge ("BCG") Customized Buyout Price Monitoring ("CBPM") empowers plan sponsors and advisors to continually measure the "Exit Liability" of a defined benefit ("DB") pension plan. The Exit Liability is the total cost a plan sponsor would be expected to pay via lump sum payments and annuities purchased[1] as part of a plan termination. After paying the Exit liability, reporting of benefit obligations on a plan sponsor's balance sheet ceases.

BCG CBPM Defined

BCG's approach to CBPM determines the future benefit payments expected from a DB pension plan, based on participant data supplied by the plan sponsor, and appropriate assumptions (e.g. mortality and age of retirement) for the plan. Various present values, or liabilities, are calculated by discounting a plan's cash flows at differing interest rates. These are interest rates currently in effect for various purposes, including minimum funding, lump sum, PBGC, market, and annuity purchase. Exit Liability combines a plan's Lump Sum Liability with its Annuity Purchase Liability, reflecting lump sum "take rate(s)". The lump sum take rate can be actively modelled on BCG's online client portal.

CBPM responds to changes in the market by collecting and utilizing monthly annuity pricing data from major insurers, as well as required (IRS) interest rates for valuing lump sums. Combining this information with plan specific data and relevant comparison markers creates a current snapshot of a plan's funded status. Data for the past 12 months is presented to allow monitoring of a plan's funding levels over time. BCG collects participant data at CBPM inception and annually thereafter, or after a significant plan change.

Plan sponsors can access CBPM for their plan on BCG's online client portal, www.bcgpension.com

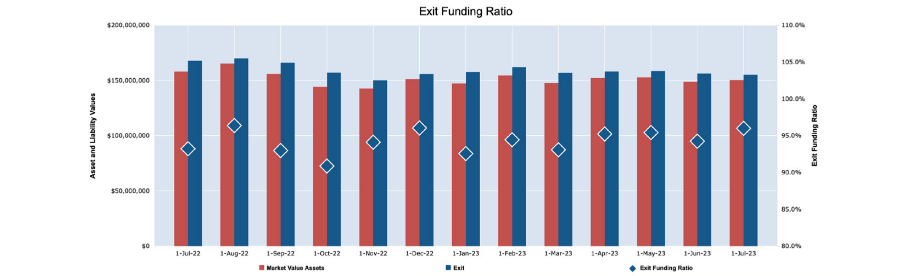
Choice of an Exit Liability

CBPM calculates a plan's liabilities on many different bases, including on an annuity purchase basis and a lump sum basis. The plan sponsor is able to generate various exit liabilities that represent the true cost of exiting a pension plan. The plan sponsor can do this by varying the percentage of participants in each status category (active, terminated vested, retired) anticipated to elect to receive their benefit as a lump sum. All participants not assumed to elect a lump sum are modelled to receive an annuity. The relationship between the cost of a lump sum and an annuity purchase varies based on plan characteristics and economic data (e.g. interest rates), though lump sums tend to be less expensive than annuity purchases, and thus higher lump sum take rates will drive down a plan's Exit Liability.

CBPM Charting *(CBPM provides the following charts for a specific DB plan)*

Exit Funding Ratio

Tracks a plan's market value of assets versus Exit Liability, as well as exit funding ratio.

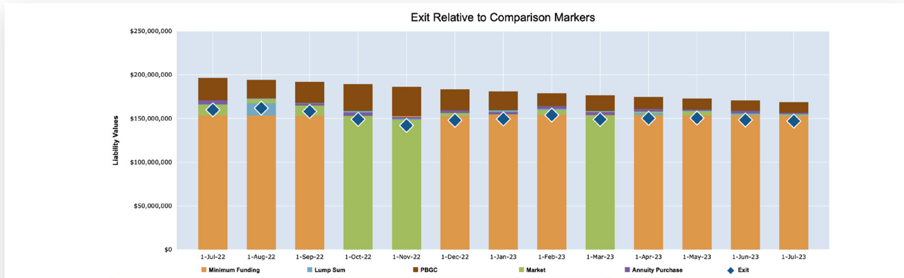


	Market Value Assets	Exit	Exit Funding Ratio
1-Jul-22	158,127,203	167,900,000	94.2%
1-Aug-22	165,351,249	169,890,000	97.3%
1-Sep-22	155,976,189	166,050,000	93.9%
1-Oct-22	144,188,370	157,020,000	91.8%
1-Nov-22	142,616,318	150,020,000	95.1%
1-Dec-22	151,221,581	155,900,000	97.0%
1-Jan-23	147,243,296	157,450,000	93.5%
1-Feb-23	154,453,068	161,910,000	95.4%
1-Mar-23	147,533,367	156,890,000	94.0%
1-Apr-23	152,146,211	158,190,000	96.2%
1-May-23	152,770,284	158,510,000	96.4%
1-Jun-23	148,771,017	156,270,000	95.2%
1-Jul-23	150,291,471	155,030,000	96.9%
One Month Change	1,520,454	-1,240,000	1.7%
Three Month Change	-1,854,740	-3,160,000	0.8%
Twelve Month Change	-7,835,732	-12,870,000	2.8%

1 Annuities are required to be purchased to provide for all remaining benefits after lump sum payments have been made.

Exit Relative to Comparison Markers

Tracks a plan's Exit Liability relative to comparison markers: minimum funding, lump sum, PBGC, market and annuity purchase, as well as tracks a plan's exit premium (discount) over its market value.

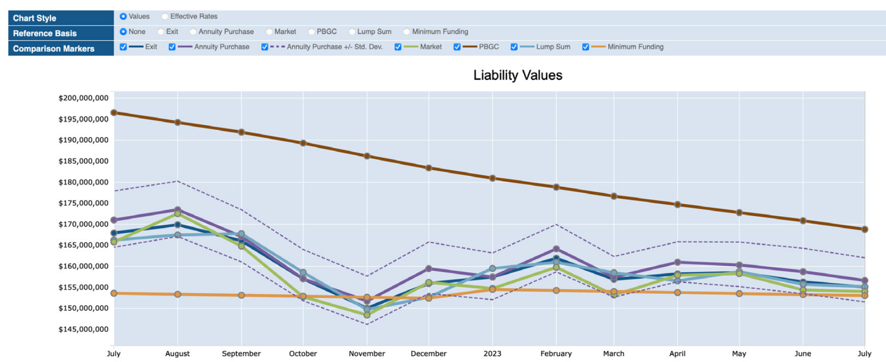


	Exit	Annuity Purchase	Market	PBGC	Lump Sum	Minimum Funding	Exit Premium (Discount) over Market
1-Jul-22	167,900,000	171,000,000	165,780,000	196,560,000	166,220,000	153,570,000	1.3%
1-Aug-22	169,890,000	173,460,000	172,530,000	194,220,000	167,460,000	153,330,000	-1.5%
1-Sep-22	166,050,000	167,060,000	164,790,000	191,900,000	167,750,000	153,090,000	0.8%
1-Oct-22	157,020,000	157,020,000	152,730,000	189,300,000	158,530,000	152,860,000	2.8%
1-Nov-22	150,020,000	151,720,000	148,390,000	186,220,000	149,690,000	152,620,000	1.1%
1-Dec-22	155,900,000	159,430,000	156,170,000	183,400,000	152,650,000	152,390,000	-0.2%
1-Jan-23	157,450,000	157,430,000	154,710,000	180,950,000	159,480,000	154,480,000	1.8%
1-Feb-23	161,910,000	164,140,000	159,750,000	178,820,000	160,940,000	154,240,000	1.4%
1-Mar-23	156,890,000	157,360,000	153,140,000	176,670,000	158,470,000	153,990,000	2.4%
1-Apr-23	158,190,000	160,960,000	157,850,000	174,680,000	156,520,000	153,750,000	0.2%
1-May-23	158,510,000	160,310,000	158,240,000	172,770,000	158,730,000	153,500,000	0.2%
1-Jun-23	156,270,000	158,700,000	154,360,000	170,830,000	155,690,000	153,260,000	1.2%
1-Jul-23	155,030,000	156,610,000	153,990,000	168,770,000	155,150,000	153,010,000	0.7%
One Month Change	-1,240,000	-2,090,000	-370,000	-2,060,000	-540,000	-250,000	-0.6%
Three Month Change	-3,160,000	-4,350,000	-3,860,000	-5,910,000	-1,370,000	-740,000	0.5%
Twelve Month Change	-12,870,000	-14,390,000	-11,790,000	-27,790,000	-11,070,000	-560,000	-0.6%

Liability Values

Tracks a plan's exit premium (discount) relative to all comparison markers and provides view of the current month's values alongside the 1-month, 3-month and 12-month changes in those values.

The user can toggle to Liability Effective Discount Rates[2] to track the differences in discount rates which give rise to differences in a plan's liability values and compare them to a plan's fixed income investment yield. This helps to better understand how close the investment yield tracks the various discount rates.

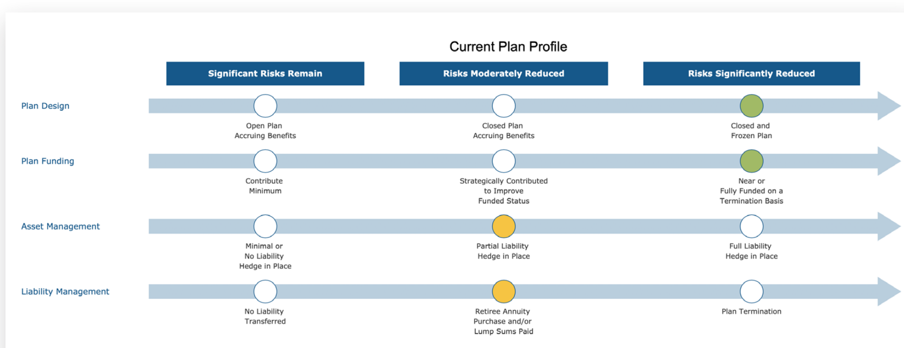


	July 1, 2023		June 1, 2023		April 1, 2023		July 1, 2022	
Exit	$155,030,000		$156,270,000		$158,190,000		$167,900,000	
Annuity Purchase	$156,610,000	-1.0%	$158,700,000	-1.5%	$160,960,000	-1.7%	$171,000,000	-1.8%
Market	$153,990,000	0.7%	$154,360,000	1.2%	$157,850,000	0.2%	$165,780,000	1.3%
PBGC	$168,770,000	-8.1%	$170,830,000	-8.5%	$174,680,000	-9.4%	$196,560,000	-14.6%
Lump Sum	$155,150,000	-0.1%	$155,690,000	0.4%	$156,520,000	1.1%	$166,220,000	1.0%
Minimum Funding	$153,010,000	1.3%	$153,260,000	2.0%	$153,750,000	2.9%	$153,570,000	9.3%

■ = Exit premium (discount) relative to comparison marker

Current Plan Profile "Stoplight" Schematic

Tracks a plan's current status of pension de-risking actions implemented for each of the major plan management categories: Plan Design, Plan Funding, Asset Management and Liability Management.



2 The effective discount rate is a single discount rate that is equivalent to a series of discount rates such as a spot curve or segment rates. When used to discount a cashflow, the effective discount rate produces the same present value as the series of rates.

Reconciling the Exit Liability for an Actual Plan Termination

It seems logical to try to compare a plan's Exit Liability against real-world Annuity Purchase and Lump Sum liabilities, as well as other comparison markers for an ongoing plan. While the CBPM Exit Liability is based on the appropriate underlying assumptions for both the Annuity Purchase Liability and the Lump Sum Liability, there are some considerations that are important to understand.

To estimate the Annuity Purchase portion of a plan's Exit Liability, CBPM utilizes the average of annuity pricing rates collected from participating insurers. These rates do not capture the higher rates (and lower liabilities) that result from a competitive bidding process, or from the selection of an insurer whose rates are higher than the average.

The annuity pricing rates used by insurers (and BCG's CBPM) are based upon current high quality corporate bond rates. However, these rates are then adjusted to be net of profit margins and expenses. Thus, the Annuity Purchase Liability will generally be slightly higher than a liability simply calculated using unadjusted high quality corporate bond rates (e.g. an ongoing plan's Market Liability).

To measure lump sums, most plans use interest rates that have a significant lag-time. The minimum required lump sum interest rates are set annually, quarterly, or monthly, as specified in a pension plan's plan document. If set annually, there could be more than a 12-month lag between the date the interest rates are set and the date that lump sums are paid. As a result, lump sums during a "stability period" – the year, quarter, or month when rates are held stable – can be accurately measured, but when a plan moves into a new stability period, there can be a large jump (or drop) in the value of liabilities. Lump sums are also calculated using a mandated mortality table. This table is unisex, and makes no distinction for characteristics (such as blue-collar, low benefits, etc.) that may be made for Annuity Purchase Liability and/or Market Liability.

	Market	Lump Sum	Annuity Purchase
Includes:	■ Current interest rates ■ Reasonable reflection of anticipated demographic experience	■ Lagged interest rates ■ Unisex, generic mortality	■ Current interest rates ■ Insurer profit margin ■ Administrative expenses
Does not reflect:	■ Ongoing expenses: ▪ Administrative ▪ Actuarial ▪ Investment Mgmt. ▪ Trust & Custody ■ PBGC premiums ■ Ongoing internal management cost	■ One-time transaction expenses	■ One-time transaction expenses

In order to make a full apples-to-apples cost comparison between maintaining an ongoing plan and terminating a plan, the plan sponsor must also account for the cost of future expenses that will be incurred with an ongoing plan[3]. These expenses are all eliminated to the extent the associated liability is removed via a plan termination.

3 Plan sponsors interested in getting a handle on their DB plan expenses may want to participate in the BCG Defined Benefit Expense Survey. For more information, click here.

Definitions

Exit	Exit Liability represents a plan sponsor's cost to transfer their obligation to pay retirement benefits to either the plan participants themselves in the form of single lump sum cash payments; or to an insurance company in the form of a premium/fee (Annuity Purchase Liability) to take over the payment of benefits. After paying Exit liability, reporting of benefit obligations on a plan sponsor's balance sheet ceases.
Annuity Purchase	Annuity Purchase Liability represents the premium/fee that an insurance company charges for a buyout of the portion of Exit Liability that remains after lump sum payments have been made. Annuity Purchase Liability is largely driven by annuity pricing rates assumed by participating insurers based on current and anticipated market conditions.
Annuity Purchase +/- Std. Dev	Annuity Purchase plus or minus one standard deviation liability represents the range of premiums insurance companies might charge after allowing for a range of annuity pricing rates that lie within plus or minus one standard deviation from the average of pricing rates used by multiple insurers.
Lump Sum	Lump Sum Liability represents the benefit obligation of a plan sponsor to participants who are eligible for and who affirmatively elect to receive a single lump sum cash payment in satisfaction of the plan's entire benefit obligation. A plan's assumed interest rates must result in a Lump Sum Liability that is at least as large as liability based on Applicable Interest Rates (AIRs). AIRs are interest rates based on a single corporate bond yield curve derived from a blending of corporate bonds rated AAA, AA and A.
Market	Market Liability represents the benefit obligation measured using current discount rates derived from a monthly yield curve of high quality bonds, combined with the appropriate mortality table and demographic assumptions.
PBGC	PBGC Liability represents the benefit obligation of a plan sponsor that, generally speaking, determines the size of the Variable Rate Premium (VRP) that the sponsor must pay to the Pension Benefit Guaranty Corporation each year. Assumed interest rates are based on either a single corporate bond yield curve derived from a blending of corporate bonds rated AAA, AA and A; or from a trailing 24-month average of such yield curves.
Minimum Funding	Minimum Funding Liability represents the benefit obligation of a plan sponsor that, generally speaking, determines the size of contribution that the sponsor must make to the plan each year. Under the Pension Protection Act of 2006, assumed interest rates are taken from either a single corporate bond yield curve derived from a blending of corporate bonds rated AAA, AA and A; or from a trailing 24-month average of such yield curves. Subsequent legislation allowed plan sponsors funding relief in the form of limiting the assumed interest rates to a corridor of rates based on a trailing 25-year average of such corporate bond yield curves.

CBPM is Now Available on BCG's Online Client Portal

Plan sponsors that engage BCG for CBPM services are able to access their plan's CBPM analysis on BCG's online client portal. As part of the CBPM installation process for a new plan, logon details for the portal are provided to designated plan sponsor personnel as well as any advisor(s) the plan sponsor wishes to have access.

Contact Us

If you have any questions on CBPM or how it may be used, please contact us.

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