Russell Investments

THIRD EDITION

WORKSHEETS FROM

A Corporate Pension Finance Handbook

A practical overview for Treasurers, CFOs and CIOs

Pension plans and the corporations that sponsor them have been stretched as never before. While the challenge is great, practical solutions do exist. In "A Corporate Pension Finance Handbook," we have set out to show plan sponsors how to:

› Navigate pension liabilities in the face of new Pension Protection Act (PPA) requirements and the Moving Ahead for Progress in the 21st Century Act (MAP-21),

› Manage pension expense on the income statement,

› Understand the impact of defined benefit (DB) plan closure or freezing,

› See how interest rate volatility impacts the plan, and

› Look ahead to future pension accounting potholes.

These accompanying worksheets are designed to help you see how your pension plan compares.

See pages 4–5 of *A Corporate Pension Finance Handbook*

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A comparison of key corporate pension statistics

PUT THE PENSION PLAN…

Your corporation's pension liability	(a)	____________
Shortfall of assets below liabilities	(b)	____________
Pension expense	(c)	____________
Service cost	(d)	____________

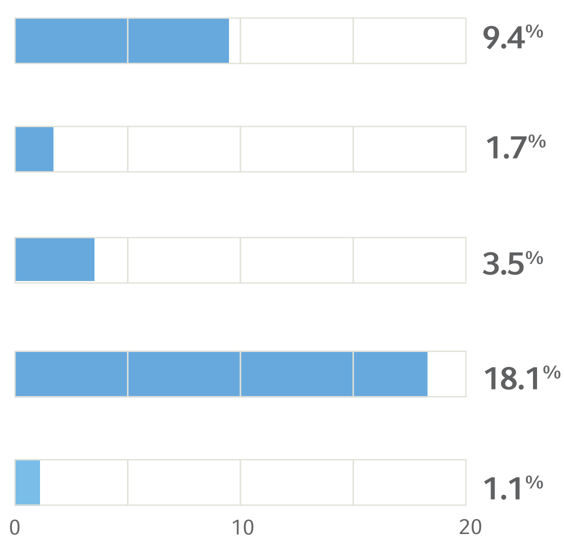
…ALONGSIDE THE CORPORATION.

Your corporation's market capitalization	(v)	____________
Cash flow from operations	(w)	____________
Net income	(x)	____________
Revenue	(y)	____________
Shareholders' equity	(z)	____________

SOME KEY RATIOS

Pension liability to market capitalization	(a) / (v)	____________
Pension shortfall to market capitalization	(b) / (v)	____________
Pension expense to net income	(c) / (x)	____________
Pension shortfall to cash flow from operations	(b) / (w)	____________
Service cost to pension liability	(d) / (a)	____________

MEDIAN VALUES*



This comparison is even more useful when it is made to other companies in the same industry rather than to the whole of the Russell 3000® Index.

*For Russell 3000 Index corporations, based on 2014 10-K filings, worldwide pension assets and liabilities.

See pages 4–5 of *A Corporate Pension Finance Handbook*

Volatility of corporate cash contributions

	THE $20 BN CLUB MADE COMBINED TOTAL CONTRIBUTIONS OF:	YOUR CORPORATION'S CASH CONTRIBUTIONS:
2005	$20.1 bn	______________
2006	$16.2 bn	______________
2007	$13.1 bn	______________
2008	$11.6 bn	______________
2009	$25.4 bn	______________
2010	$26.7 bn	______________
2011	$25.6 bn	______________
2012	$30.3 bn	______________
2013	$27.9 bn	______________
2014	$18.5 bn	______________
2015	$13.4 bn	______________
2016*	$15.4 bn	______________

* Expected contribution in 2016. This expectation was, in some cases, expressed as a minimum so the actual total may well be higher.

** As of financial year 2014. For more details see Collie (2016) "A lot going on behind the numbers for the $20 billion club in 2015"

Source for all figures on this page, corporate 10-K filings and Russell Investments.

The $20 Billion Club is the 20 U.S.-listed corporations with the largest worldwide pension liabilities.** They represent almost 40% of the total pension assets and liabilities on all U.S. corporate balance sheets, so are a useful indicator of what is happening across all DB plans.

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Adjusting pension expense

EXAMPLE			YOUR CORPORATION
UNADJUSTED NET PERIODIC BENEFIT COST CALCULATION			
Service cost	25	(a)	
Interest cost	65	(b)	
Expected return on assets	(80)	(c)	
Amortizations	15	(d)	
Other	0	(e)	
Total (a)+(b)+(c)+(d)+(e)	25	(f)	
ADJUSTED NET PERIODIC BENEFIT COST CALCULATION			
Projected Benefit Obligation (PBO) @ start of year	1000	(g)	
PBO @ end of year	1090	(h)	
Assets @ start of year	850	(i)	
Assets @ end of year	850	(j)	
Employer contributions	50	(k)	
Total (h)-(g)+(i)-(j)+(k)	140	(l)	
EFFECT ON EARNINGS			
Reported net income	750	(m)	
Adjusted expense (l)	140	(n)	
Reported expense (f)	25	(o)	
Increase (after tax @ 32.5%)	78	(p)	
Adjusted net income (m)–(p)	672	(q)	

The example is based on Gannon (2009) "Capital budgeting."

The Pension Benefit Guaranty Corporation—a safety net(?)

The PBGC takes over the assets and liabilities of plans whose sponsoring corporations fail.

It is funded by premiums paid by private corporations with DB plans.

The single employer plan premium payable in 2016 is the sum of:

- A per-participant premium of $64
- A variable rate premium of $30 per $1,000 of plan shortfall (i.e., unfunded vested benefits.) (The variable rate premium is capped at $500 per participant.)

Number of participants	________	X	$64	=	________
Unfunded vested benefits	________	X	$\frac{\$30}{1{,}000}$	=	________
			Total 2016 premium		________

EXAMPLE: A plan with 2,000 members and a $10 million funding shortfall would pay $428,000 in 2016.

Note that funding relief has not affected the calculation of unfunded vested benefits for the purposes of PBGC pension calculations.

See pages 30–32 of *A Corporate Pension Finance Handbook*

Asset allocation policy

YOUR POLICY		AVERAGE allocation (using Greenwich survey data)	RANGE of allocations among the largest plans (THE $20BN CLUB)
Equity allocation	________	46%	10–79%
(of which the domestic component is…)	________	57%	27–66%
Fixed income (liability hedging/ LDI plus broad market)	________	28%	21–69%
Real estate	________	7%	0–11%
Private equity	________	7%	0–19%
Hedge funds	________	6%	0–15%
Other	________	6%	0–12%

See Collie (2016) "The pension plan herd has broken up" and Owens (2016) "$20 billion club strategy: The largest DB plan sponsors make subtle shifts in strategy as funded status stagnates"

Source: Greenwich Associates Institutional Market Trends Survey 2015, Corporate 10-K filings, Russell Investments.

See page 46 of *A Corporate Pension Finance Handbook*

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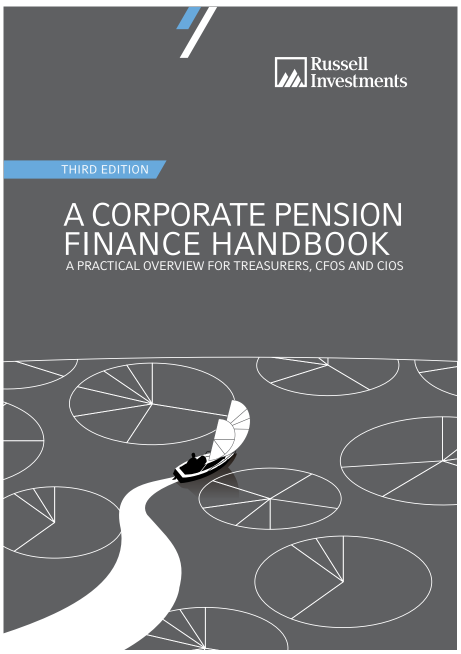
If you do not already have "A Corporate Pension Finance Handbook," please request a complimentary copy.



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