

# GLOBAL PENSION UNDERFUNDING CONCERNS

An Issue Brief

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## EXECUTIVE SUMMARY

There has been much written about a brewing crisis for both private and public pensions funds due to the gap between pension obligations and the resources set aside to fund them.<sup>1</sup> Large levels of underfunding are not just a concern for employees, but for investors as well, as the need for companies to replenish pension funds could negatively affect earnings.<sup>2</sup>

We examined the pension funding status of nearly 5,300 companies across four developed market regions – North America, Western Europe, Asia-Pacific, and Japan – that disclose defined benefits pension funds. We look at the ratio of Underfunded Pension Liabilities to Annual Revenues and flag as extreme the highest 20% of companies relative to their industry peer groups within each region.

- **The underfunded ratio is worst in North America at 9.2%**, followed by Europe at 4.7%, Japan at 3.7%, and Asia at only 1.8% (Figure 1).
- With a few country-level exceptions, **underfunding ratio increased across all four regions between 2015 and 2016** (Figure 2).
- Of the top ten companies with the highest underfunded ratios, six are US companies: **DuPont, Hess, Dun & Bradstreet, Delta Airlines, Centurylink, Entergy, and Raytheon** (US companies account for 24.5% of MSCI ACWI Index constituents). A full list of the companies in the MSCI ACWI with the highest ratio of underfunded pension liabilities to revenues is provided in Figure 6.
- On a sector-level basis, **Utilities and Banks exhibit the worst funding ratios in aggregate**, although there is some variation by region (Figure 5).

## EXPANDING GAP BETWEEN PROMISES AND ABILITIES

There is a great variation in asset allocations among pension plans globally depending on national pension regulations. Where defined benefit pension plans still survive in the corporate sector, concerns have been growing around the risk of pension shortfall. Some of the contributing factors to this problem include retirees living longer, very low interest rates globally, lower realized stock market returns relative to assumptions, and not having set aside sufficient funds to meet obligations.

The underfunded benefit ratio is just one of several metrics MSCI AGR tracks to assess the quality of a company's Balance Sheet alongside other indicators like high leverage and high goodwill. Ultimately, a weak Balance Sheet will limit a company's flexibility in taking

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<sup>1</sup> See for example "UK's Pension Funding Hole Hits 900bn after Brexit", Financial Times, June 26, 2016.

<sup>2</sup> See for example "Alcoa's Results Highlight Risk of Pension Underfunding," Barron's, October 12, 2016.

advantage of investment opportunities or weathering adversity. It also limits its ability to pay dividends or otherwise return capital to shareholders via share repurchases.

Falling bond yields contribute to underfunding even in liability driven strategies. The discounted present value of future liabilities is greater when the discount rate is lower, and returns on the portion of assets invested in fixed income securities are lower. Long-run returns on Equity investments are also a concern as they may prove to be lower over the next 20 years than they have been over the past 20 years reflecting changes in the global economic landscape. Moreover, with mainstream economists generally expecting lower growth over the next decade, some adjustment should be made to the higher investment targets that were based on the past few decades of higher economic growth. Even if investments in ‘alternative’ assets deliver on their promise, they cannot make up for these shortfalls in the much larger traditional investment classes.

Based on a self-selected sample of 5,296 companies that report pension funding status in Western Europe, North America, Asia Pacific, and Japan, we calculated the ratio of Underfunded Pension Liabilities to Annual Revenues, and flagged as extreme the highest 20% of companies relative to their industry peer groups within each region. Average underfunding ratios for flagged companies was the highest in North America, at 22.7%, followed by Western Europe (Figure 1).

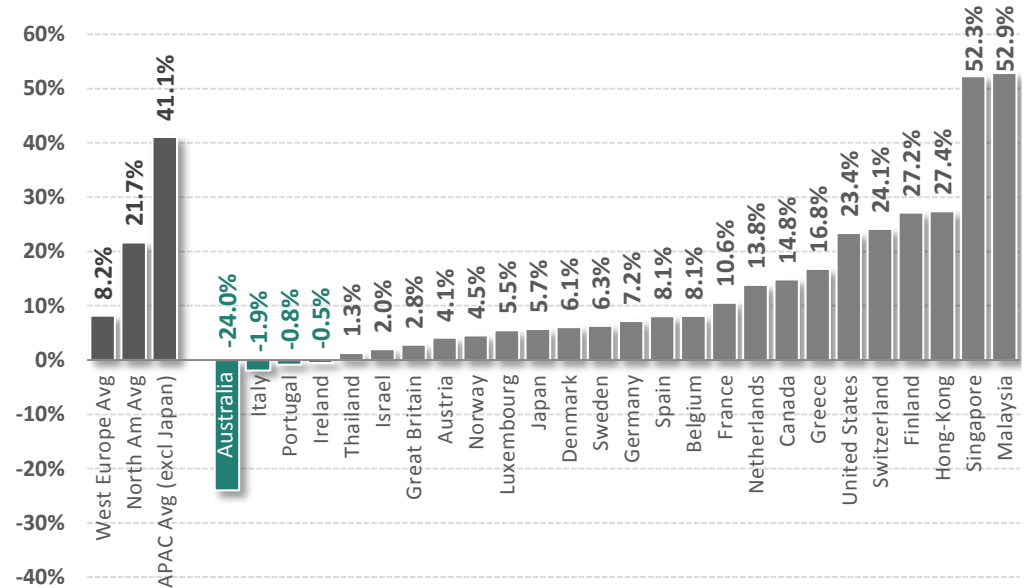
Our findings confirmed at least some of the short-term concerns over a widening gap between pension obligations and funds set aside to meet those obligations. With very few exceptions (Australia, Ireland, Portugal, and Italy) the average underfunding ratio for each country deteriorated in 2016 relative to 2015. The average year-over-year change was 21.7% in North America, 8.2% in Europe, and 5.7% in Japan. The 41% increase in Asia-Pacific ex Japan is from a very low base and still results in just a 1.8% underfunded ratio in 2016.

**Figure 1 – Average Underfunded Ratios by Region**

	Number of Companies			Average Underfunded Ratio		
	Not Flagged	Flagged	Total	Not Flagged	Flagged	Total
Western Europe	1194	263	1457	2.7%	14.0%	4.7%
North America	758	175	933	6.0%	22.7%	9.2%
Asia-Pacific	98	10	108	1.3%	6.6%	1.8%
Japan	2227	571	2798	2.2%	9.7%	3.7%

Source: MSCI Accounting and Governance Risk (AGR), September 2016

Figure 2 – Percentage Change in Underfunding Ratios 2015 vs 2016



Note: comparable data is not available for China, Indonesia, and New Zealand  
 Source: MSCI Accounting and Governance Risk (AGR), September 2016

### EUROPEAN PENSION CRISIS?

Some recent articles have highlighted concerns for European pension funds and for Great Britain in particular after the Brexit vote. We examined the pension funding status of the 1460 companies reporting this information within the Western European region. While the overall level of underfunded pension liabilities for the 18 countries in our sample is only 4.7%, on the basis of this single measure, Great Britain’s pension funding status is weaker than other European countries having the highest percentage of companies flagged and also the highest underfunded ratio relative to revenues.

Great Britain, Germany, Switzerland, and Luxembourg had the largest proportion of companies flagged for having the highest underfunding ratios ranging from 38% to 31% (Figure 3). Not surprisingly, these 4 countries were also among the 5 worst when measured by the overall average underfunding ratio for the country, with Belgium rounding out the set. Measured on a country level, the worst underfunding ratios ranged between 6.9% and 7.8%, as compared to the overall average of 4.7%. Of these, it is worth noting that Switzerland also had a very high 24% year-over-year increase in the underfunding ratio. Companies flagged as being in the worst quintile relative to peers, average an underfunding ratio of 14% across the region, versus an average of only 2.7% for those not flagged.

**Figure 3 – Underfunded Pension Statistics by Country**

WESTERN EUROPE	# of Companies			Average Underfunded Ratio		
	Not Flagged	Flagged	% Flagged	Not Flagged	Flagged	Total
Great Britain	64	39	38%	3.0%	15.6%	7.8%
Switzerland	18	9	33%	3.9%	12.9%	6.9%
Germany	152	68	31%	3.9%	15.0%	7.3%
Luxembourg	9	4	31%	2.7%	17.6%	7.3%
Sweden	55	20	27%	2.4%	10.4%	4.5%
Austria	25	9	26%	3.9%	14.1%	6.6%
Ireland	3	1	25%	4.1%	9.8%	5.5%
Netherlands	24	6	20%	2.9%	10.1%	4.3%
Portugal	12	3	20%	1.1%	14.4%	3.8%
Norway	57	13	19%	4.2%	9.2%	5.1%
Belgium	18	4	18%	4.0%	21.2%	7.1%
France	211	37	15%	2.4%	11.4%	3.8%
Greece	142	22	13%	2.1%	14.9%	3.9%
Spain	25	3	11%	2.2%	19.1%	4.0%
Finland	45	5	10%	2.4%	9.2%	3.0%
Italy	77	7	8%	2.8%	14.7%	3.8%
Israel	221	12	5%	1.8%	21.8%	2.8%
Denmark	36	1	3%	2.0%	4.6%	2.1%
<b>Total</b>	<b>1194</b>	<b>263</b>	<b>18%</b>	<b>2.7%</b>	<b>14.0%</b>	<b>4.7%</b>

NORTH AMERICA	# of Companies			Average Underfunded Ratio		
	Not Flagged	Flagged	% Flagged	Not Flagged	Flagged	Total
United States	552	149	21%	6.7%	23.8%	10.3%
Canada	141	18	11%	4.6%	17.2%	6.1%
<b>Total</b>	<b>693</b>	<b>167</b>	<b>19%</b>	<b>6.2%</b>	<b>22.5%</b>	<b>9.4%</b>

ASIA PACIFIC	# of Companies			Average Underfunded Ratio		
	Not Flagged	Flagged	% Flagged	Not Flagged	Flagged	Total
Australia	17	1	6%	0.7%	7.6%	1.1%
China	5		0%	0.5%		0.5%
Hong-Kong	13	3	19%	0.4%	5.5%	1.3%
Indonesia	1		0%	0.3%		0.3%
Malaysia	2		0%	1.1%		1.1%
New Zealand	2		0%	0.2%		0.2%
Singapore	53	4	7%	1.9%	9.2%	2.5%
Thailand	2		0%	1.2%		1.2%
<b>Total</b>	<b>95</b>	<b>8</b>	<b>8%</b>	<b>1.3%</b>	<b>7.2%</b>	<b>1.8%</b>
<b>Japan</b>	<b>2227</b>	<b>571</b>	<b>20%</b>	<b>2.2%</b>	<b>9.7%</b>	<b>2.5%</b>

Source: MSCI Accounting and Governance Risk (AGR), September 2016

## SECTOR FOCUS

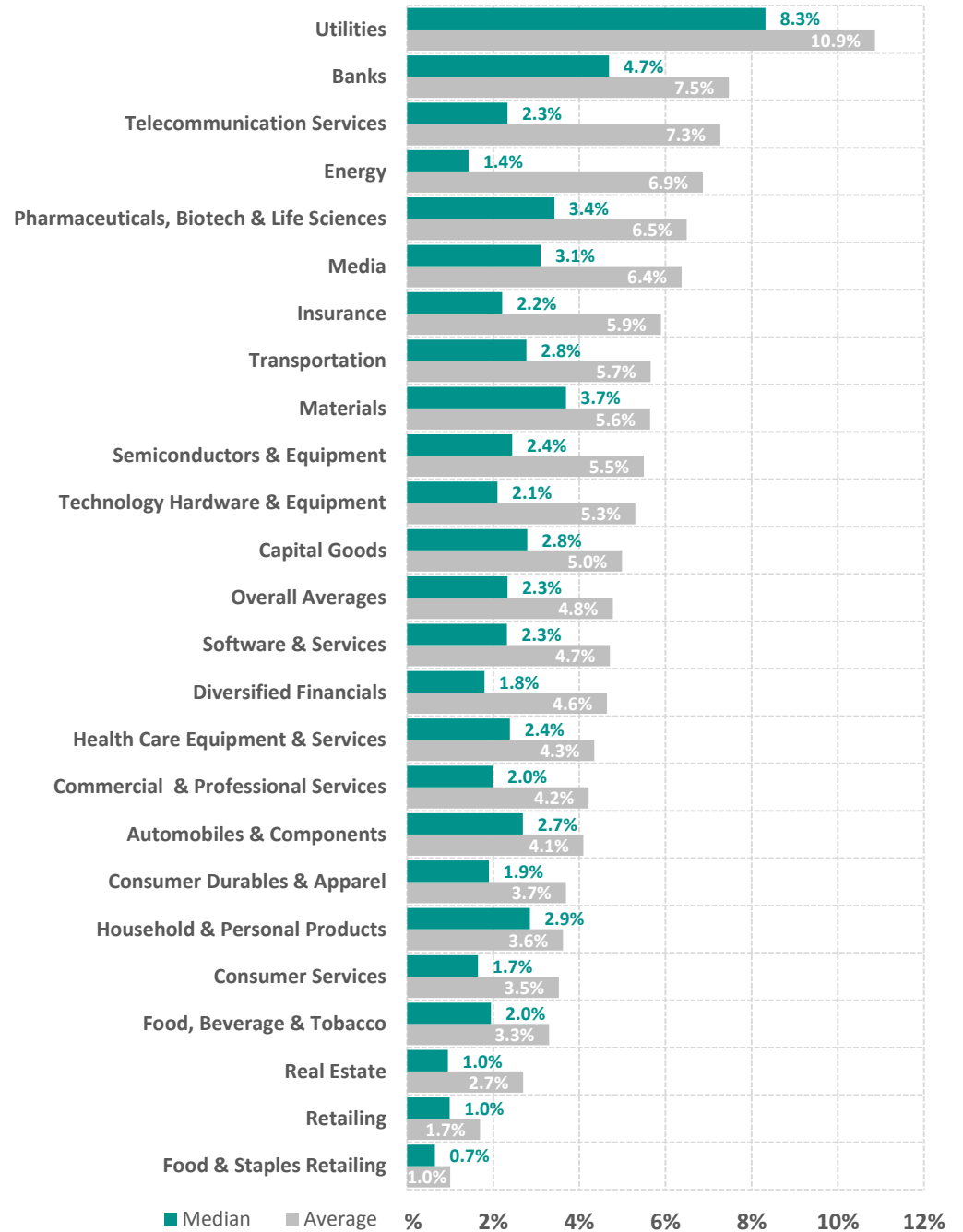
In addition to regional and country angles, we also analyzed the Underfunded Pension ratio by Industry Groups globally to see if high underfunding ratios were concentrated in certain sectors (Figure 4). For this analysis we considered all companies that reported data, ignored the flagging relative to Industry peers, and just reported the overall averages and medians of the entire group. Medians are included to enhance the analysis because a small number of high underfunding ratios skew most averages high. General Retailing, Food & Staples Retailing, Food, Beverage & Tobacco, and Real Estate exhibit the best funding ratios, while Utilities and Banks have the worst. Materials, Media, and Pharmaceuticals & Biotechnology have moderately high ratios under either measurement. Telecommunication Services and Energy sectors look poor on the basis of the average underfunded ratio, but not on the basis of the median value, indicating that some companies within these groups have very high underfunded ratios that pull up their averages.

**Figure 4 – Underfunded Pension Liabilities over Revenues by Industry Groups and Region**

	Averages by Region				Total # of Cos.
	AP	JP	NA	WE	
Automobiles & Components	0.6%	3.2%	6.9%	5.7%	195
Banks	2.2%	7.1%	12.0%	7.4%	183
Capital Goods	4.7%	4.1%	7.8%	5.1%	1632
Commercial & Professional Services	1.1%	3.7%	7.1%	5.0%	292
Consumer Durables & Apparel	0.6%	3.6%	3.4%	4.5%	315
Consumer Services	1.0%	3.4%	4.0%	4.4%	205
Diversified Financials	1.6%	3.9%	12.1%	4.7%	134
Energy	5.4%	1.8%	11.7%	6.2%	87
Food & Staples Retailing	0.4%	1.0%	1.0%	1.3%	151
Food, Beverage & Tobacco	2.2%	2.8%	5.3%	3.3%	300
Health Care Equipment & Services	1.5%	2.9%	7.7%	5.1%	190
Household & Personal Products	0.9%	3.3%	5.9%	3.0%	72
Insurance	5.6%	4.3%	7.3%	5.5%	61
Materials	2.2%	4.1%	9.7%	6.5%	499
Media	1.2%	4.2%	10.9%	6.9%	174
Pharmaceuticals, Biotech & Life Sciences	3.7%	3.2%	7.9%	9.6%	121
Real Estate	2.0%	2.4%	8.0%	2.7%	184
Retailing	0.4%	1.7%	5.0%	1.5%	283
Semiconductors & Semiconductor Equipment	2.1%	4.2%	4.0%	10.8%	99
Software & Services	2.2%	5.1%	7.3%	4.0%	351
Technology Hardware & Equipment	1.0%	4.8%	7.8%	5.1%	98
Telecommunication Services	2.7%	1.0%	14.6%	5.1%	59
Transportation	2.2%	4.8%	8.7%	6.9%	217
Utilities	3.2%	4.8%	13.5%	7.0%	146
<b>Overall Averages</b>	<b>2.6%</b>	<b>3.8%</b>	<b>8.3%</b>	<b>5.1%</b>	
<b>Number of Companies</b>	<b>462</b>	<b>2781</b>	<b>919</b>	<b>1886</b>	<b>6048</b>

Source: MSCI Accounting and Governance Risk (AGR), September 2016

Figure 5 – Underfunded Pension Liabilities Ratios by Industry, Average and Median



Source: MSCI Accounting and Governance Risk (AGR), September 2016

**Figure 6 – Top 25 MSCI ACWI Companies with Highest Underfunding Ratio**

Company Name	Country	Underfunded Pension Liability/Revenue
E I Du Pont De Nemours And Co	United States	42%
BT Group plc	Great Britain	36%
Hess Corp.	United States	36%
Dun & Bradstreet Corp	United States	34%
Delta Air Lines, Inc.	United States	34%
Bank of Kyoto Ltd	Japan	33%
Centurylink Inc	United States	31%
BAE Systems plc	Great Britain	30%
Electricite de France SA	France	30%
Entergy Corporation	United States	30%
Raytheon Company	United States	29%
Evonik Industries AG	Germany	29%
Motorola Solutions Inc	United States	28%
Solvay SA	Belgium	27%
FirstEnergy Corp.	United States	27%
Lockheed Martin Corporation	United States	26%
Bayer Aktiengesellschaft	Germany	26%
CaixaBank SA	Spain	26%
Consolidated Edison, Inc.	United States	26%
Harris Corporation	United States	26%
Swisscom AG	Switzerland	26%
Northrop Grumman Corporation	United States	25%
Boeing Co	United States	25%
West Japan Railway Company	Japan	25%
Alcoa Inc	United States	24%

Source: MSCI Accounting and Governance Risk (AGR), September 2016



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