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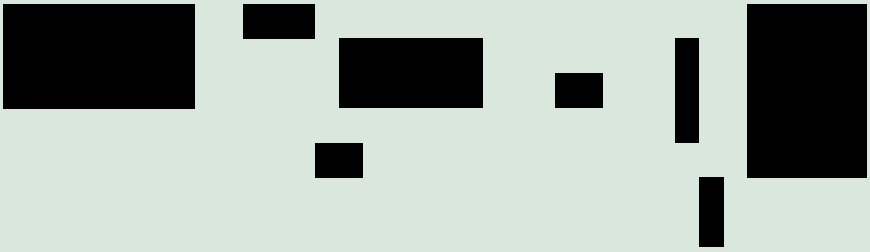


Insider

2017 asset allocations in *Fortune* 1000 pension plans

By Mercedes Aguirre and Brendan McFarland

Sponsors of pension plans have faced many challenges over the past decade, one of the biggest being the effects of market volatility on plan funding. This volatility has given rise to conflicting goals when managing plan investments. On the one hand, investment managers need to realize returns that, when combined with plan contributions, are high enough to cover their pension obligations, which may involve higher-return, higher-risk assets. On the other hand, risk mitigation generally calls for more conservative investments that reduce volatility and interest rate risk, and typically sacrifice some investment return gain. These challenges emphasize the integral role asset allocation plays in investment returns, funded status and funding volatility, as well as the sponsor's cash cost and accounting expense over time. Thus, plans' investment strategies and asset allocations are of special interest to all stakeholders: participants, creditors, investors and regulators.

The Financial Accounting Standards Board began requiring more detailed pension asset disclosures in 2009, and Willis Towers Watson has been analyzing asset allocations ever since.[1] These analyses track asset allocation trends and patterns over time in *Fortune* 1000 defined benefit (DB) plans. This ninth edition looks at fiscal year-end 2017 pension allocations by asset class, such as cash, equity, debt and alternatives, as well as by a variety of other attributes of both the assets and the plans.

The analysis is performed on both an aggregate- and average-sponsor basis as well as by plan size, plan status (open, frozen or closed) and funded status. We examine the prevalence and amount of pension assets invested in company securities. Finally, we compare asset holdings from 2009 through 2017 for a consistent sample of sponsors, and the relationship between risk-reduction strategies and asset allocations.

Analysis highlights

- On average, frozen pension plans invested half their assets (50.1%) in more conservative investments, such as cash and debt instruments, whereas sponsors of plans where workers were still accruing benefits (open and closed plans) opted for a less conservative mix of investments.
- The overall average funded status of *Fortune* 1000 DB plans was 86.1% at the end of fiscal year 2017, a significant jump from the previous year's 80.3%. The interest rates used to measure pension obligations continued their descent to historical lows in 2017, thereby increasing pension liabilities. Nevertheless, the higher liabilities were more than offset by higher-than-expected investment returns and larger plan contributions. These dynamics pushed funded ratios higher for most plan sponsors.
- Changes to average equity and debt holdings were minor among our consistent sample of companies over the past year. Since 2009, however, average equity holdings declined by roughly 11 percentage points, while allocations to debt increased by a similar amount. More strikingly, the percentage of plan sponsors with more than 50% fixed income and cash in their pension portfolios rose from 17% in 2009 to 40% in 2017.
- In 2017, around 9% of *Fortune* 1000 DB sponsors held pension assets in the form of company securities, and among that group, such securities averaged 6.5% of plan assets.

2017 aggregate and average asset allocations

Willis Towers Watson's analysis of 2017 fiscal year-end asset allocations takes a detailed look at 470 *Fortune* 1000 plan sponsors' pension disclosures.[2]

To enable investors and others to assess the way fair value of assets is measured, companies must disclose a valuation level for each major asset category, as described below:

- Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities (typical for Treasury securities and the common stock of large U.S. companies)
- Level 2: Unadjusted quoted prices for similar assets in active or inactive markets, or other observable inputs (common for corporate debt)

[1] See "**2016 Asset allocations in *Fortune* 1000 pension plans**," Willis Towers Watson *Insider*, January 2018.

[2] The analysis consists of those *Fortune* 1000 DB plan sponsors that provided comprehensive asset allocation disclosures in their annual report and that managed assets for domestic pensions.

Figure 1a. **Aggregate asset distribution by class and level, 2017 ($ thousands)**

	Level 1	Level 2	Level 3	NAV
Cash	2.1%	1.1%	0.0%	0.5%
Debt	5.0%	31.9%	0.6%	7.9%
Equity	20.5%	4.7%	0.1%	11.1%
Hedge funds	0.1%†	0.4%	0.2%	3.3%
Other	0.2%	0.5%	0.8%	1.9%
Private equity	0.1%†	0.1%†	0.4%	3.5%
Real estate	0.2%	0.1%	0.7%	2.1%
Total assets held ($ thousands)	$541,824,659 (28.1%)	$750,002,012 (38.9%)	$54,042,464 (2.8%)	$581,429,061 (30.2%)

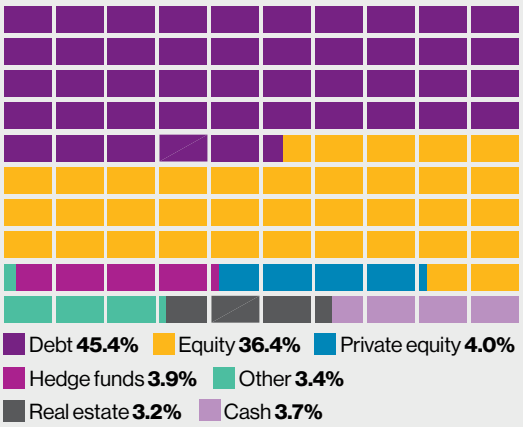
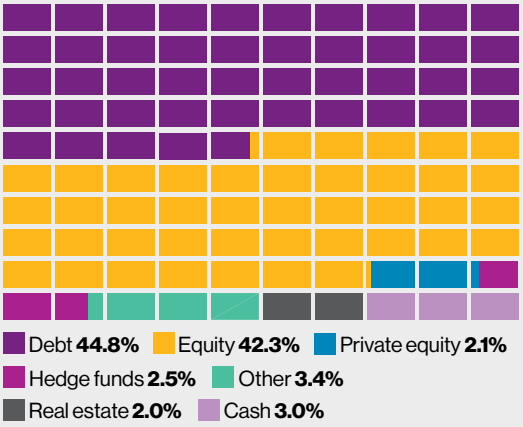


Figure 1b. **Average asset distribution by class and level, 2017 ($ thousands)**

	Level 1	Level 2	Level 3	NAV
Cash	1.8%	0.8%	0.0%	0.4%
Debt	8.8%	25.6%	1.2%	9.3%
Equity	20.6%	10.2%	0.1%	11.4%
Hedge funds	0.1%	0.3%	0.2%	1.9%
Other	0.5%	0.9%	0.6%	1.4%
Private equity	0.1%†	0.1%†	0.4%	1.7%
Real estate	0.2%	0.3%	0.4%	1.0%
Total assets held ($ thousands)	$1,152,818 (32.1%)	$1,595,749 (38.0%)	$114,984 (2.9%)	$1,237,083 (27.0%)



Notes: Cash includes cash equivalents and money market instruments, and debt includes insurance contracts. Hedge fund assets include derivatives and interest rate swaps.
† Value is less than 0.1%.
N = 470
Source: Willis Towers Watson

- Level 3: Unobservable inputs supported by little or no market activity, such as an expert appraisal of a real estate holding[3]
- NAV: Inputs measured at Net Asset Value, meaning the asset's value is calculated using a formula based on the number of outstanding shares

Since the standard of reporting under NAV became available to companies a couple of years ago, sponsors have increasingly been switching their valuation level to NAV. As of year-end 2017, 30% of aggregate assets surveyed were reported under NAV.

Figure 1a summarizes aggregate asset allocations weighted by the value of the sponsor's plan assets and shows total-dollar allocations. As of year-end 2017, these 470 *Fortune* 1000 companies held more than $1.9 trillion in pension assets, composed of cash, public equity, debt and alternative investments (real estate, private equity, hedge funds and other).

As shown in Figure 1a, at year-end 2017, 36.4% of pension assets were allocated to public equity and 45.4% were allocated to debt, with the remaining assets spread among the other categories.

Figure 1b depicts average asset allocations (not weighted by plan assets) for the same companies. The average *Fortune* 1000 pension plan sponsor in the analysis held roughly $4.1 billion in assets at year-end 2017.

The average allocation to public equity was 42.3% (versus an aggregate allocation of 36.4%), while the average debt allocation was 44.8%. As for alternative assets — real estate, private equity, hedge funds and other investments — allocations averaged 10.0%, while aggregate allocations were 14.5%. The difference between the aggregate and average reflects differences in plan size: Larger plans were more likely than smaller plans to invest in alternatives and less likely to invest in public equity.

[3] For Level 3 assets, a reconciliation of the beginning and ending balances is also required, reflecting the actual return on plan assets, purchases, sales and settlements.

Figure 2. **Average changes in equity and debt allocations in 2017**

Change magnitude (percentage points)	Equity allocations		Debt allocations	
	% of sponsors with change to equity allocations	Average change in equity allocations	% of sponsors with change to debt allocations	Average change in debt allocations
Increase of over 10%	2.0%	16.5%	8.2%	20.4%
5% – 9.9% increase	6.2%	7.3%	9.5%	7.4%
0% – 4.9% increase	43.5%	1.8%	34.3%	1.9%
No change	0.5%	0.0%	0.2%	0.0%
0% – 4.9% decrease	30.8%	–1.9%	39.1%	–1.6%
5% – 9.9% decrease	7.2%	–7.0%	6.5%	–7.2%
Decrease of over 10%	9.7%	–19.5%	2.2%	–19.2%

N= 402
Source: Willis Towers Watson

Asset allocations did not change much during 2017, with public equity holdings declining by 1.0 percentage point and debt holdings increasing by 1.0 percentage point. In a consistent sample of 402 plan sponsors from 2016 to 2017, equity holdings increased for 51.7% of these sponsors and decreased for 47.7% *(Figure 2)*. In roughly three out of four of these plans, the changes were between –4.9% and +4.9% — in line with generally stable target allocation policies over the year.

Ten percent of plan sponsors reduced their equity share by more than 10 percentage points (with an average decrease of 19.5%), while only 2% increased it by more than 10 percentage points (average increase of 16.5%).

[4] The eight largest plans held 27% of all plan assets.

Asset allocations by plan size

Aggregate and average asset allocations for smaller, medium and larger plan sponsors are shown in *Figures 3a* and *3b*. The analysis divides these sponsors into three equal groups by total pension assets: Smaller plan sponsors held less than $530 million, midsize plan sponsors held between $530 million and $2.2 billion, and larger plan sponsors held more than $2.2 billion. The largest sponsor held pension assets worth more than $93 billion. Weighting smaller, medium and larger sponsors by plan assets emphasizes the large share of pension assets held by very large plans,[4] as well as the pronounced differences in investing behavior between smaller and larger plans (Figure 3a).

Figure 3a. **Aggregate asset allocations by plan size, 2017**

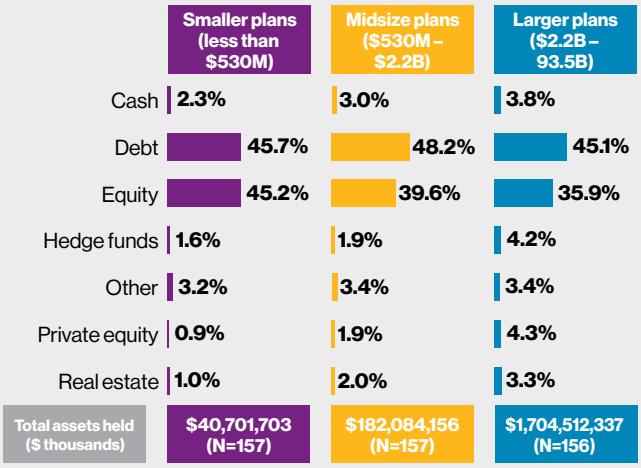
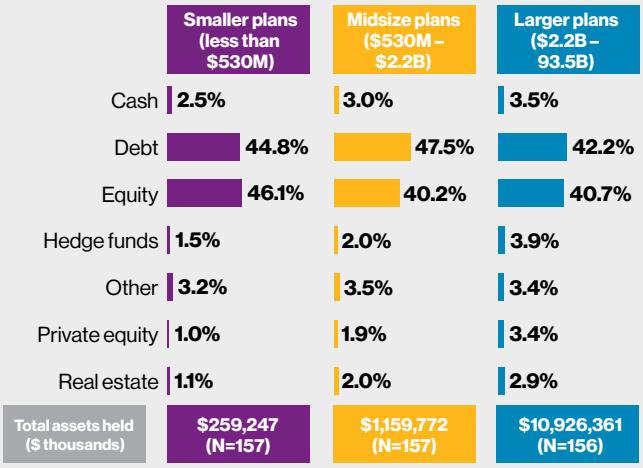


Figure 3b. **Average asset allocations by plan size, 2017**



Notes: Cash includes cash equivalents and money market instruments, and debt includes insurance contracts. Hedge fund assets include derivatives and interest rate swaps.
Source: Willis Towers Watson

The larger the plan, the lower the allocation to public equity, which averaged 40.7% for the largest plans versus 46.1% for the smallest. This difference is even more striking for aggregate allocations. These results are also consistent with those shown in Figures 1a and 1b, where public equity holdings were lower when assets were weighted by plan size. Although average allocations to return-seeking investments are similar for all plans, larger plans allocated less to public equities and more to other return-seeking investments (real estate, private equity and hedge funds). On average, larger plans allocated twice as much as smaller plans to other return-seeking investments, which might reflect larger plans' access to economies of scale and access to investment structures that enable them to effectively manage alternative assets.

Asset allocations by plan status

For this part of the analysis, we divided plan sponsors into three mutually exclusive categories by the current status of their primary pension plan: open, closed to new hires or frozen. Open DB plans are those still offered to newly hired employees, while closed plans stopped being offered to new hires after a fixed date. In frozen plans, accruals by service, pay or both have ceased for all or some plan participants. Seventy-five percent of the companies in our analysis sponsored either a closed or frozen pension plan, while 25% still offered open plans.

Figures 4a and *4b* show asset allocations by plan status and demonstrate a relationship between plan status and the portfolio's risk profile, with the correlation strongest on an aggregate basis

The larger the plan, the lower the allocation to public equity, which averaged 40.7% for the largest plans versus 46.1% for the smallest.

(Figure 4a). Frozen pensions held more risk-averse investments compared with plans — either open or closed — in which workers were still actively accruing pensions. In aggregate, sponsors of frozen plans held 54.2% of their assets in fixed income and cash, versus only 45.8% for sponsors of open plans.

Asset allocations by funded status

After the 2008 financial crisis, plan sponsors had to cope with volatile financial markets and low interest rate environments. In addition to escalating pension risk, these unstable conditions have been a drag on funding gains. Between 2014 and 2016, plan funding remained stuck at around 80%. During 2017, outstanding equity market performance coupled with significantly higher plan contributions more than offset the negative impact of falling interest rates, thereby boosting average funded status up to 86.1% by year-end, almost a six-percentage-point increase from 80.3% in 2016.

Our 2017 analysis shows a correlation between funded status and asset allocations (*Figure 5a*, next page). Plans whose funded status surpassed 80% generally held less in public equities and more in debt than their less well-funded counterparts, suggesting that higher-return/higher-risk investments become less attractive as a plan nears full funding. Further, among plans with a funded status between 90%

Figure 4a. **Aggregate asset allocations by plan status, 2017**

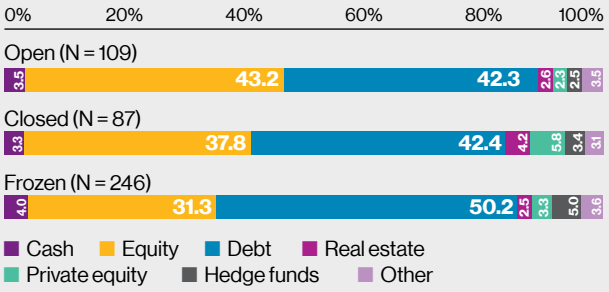
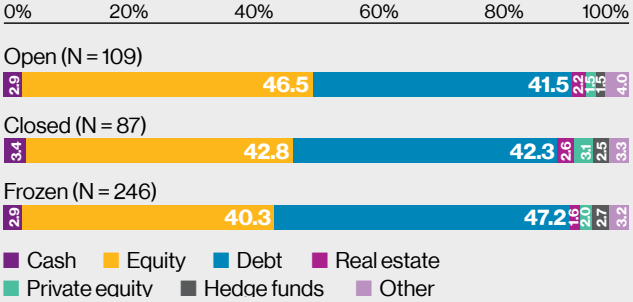


Figure 4b. **Average asset allocations by plan status, 2017**



Notes: Cash includes cash equivalents and money market instruments, and debt includes insurance contracts. Hedge fund assets include derivatives and interest rate swaps.
Source: Willis Towers Watson

Figure 5a. **Average asset allocations by plan funded status, 2017**

Asset class	Funded status				
	Less than 70%	70% to 79%	80% to 89%	90% to 99%	100% or more
Cash	2.9%	3.0%	3.0%	3.2%	3.4%
Debt	36.6%	41.4%	45.9%	49.7%	45.6%
Equity	47.0%	44.5%	39.7%	39.3%	44.8%
Hedge funds	4.8%	2.8%	2.8%	1.5%	0.2%
Other	5.2%	3.7%	3.4%	2.4%	3.0%
Private equity	1.6%	2.2%	2.8%	1.9%	1.8%
Real estate	1.9%	2.4%	2.4%	2.0%	1.2%
Total %	100%	100%	100%	100%	100%
N	55	99	95	92	42

Notes: Cash includes cash equivalents and money market instruments, and debt includes insurance contracts. Hedge fund assets include derivatives and interest rate swaps.

Figure 5b. **Average asset allocations to debt by funded status and benefit accrual rates, 2017**

Accrual rate	Funded status									
	Less than 70%		70% to 79%		80% to 89%		90% to 99%		100% or more	
	N	Debt %	N	Debt %	N	Debt %	N	Debt %	N	Debt %
Less than 0.5%	16	39.5%	33	46.6%	39	49.4%	30	59.3%	17	46.3%
0.5% to 0.99%	8	43.2%	23	39.6%	21	49.0%	14	52.3%	8	55.4%
1.0% to 1.9%	18	37.2%	33	40.5%	34	42.9%	37	48.3%	11	41.7%
2.0% to 2.9%	10	37.8%	12	39.1%	18	43.2%	15	37.0%	5	41.5%
3.0% or more	16	38.8%	12	36.1%	6	45.5%	11	41.6%	12	50.7%
N	68		113		118		107		53	

Source: Willis Towers Watson

and 99%, more than half the assets were invested in fixed income and cash. This result aligns with de-risking strategies, such as liability-driven investment (LDI) and asset glide paths.[5]

While plans tend to become more risk averse as their funded status approaches 100%, a closer look also uncovers a further link between debt allocations and benefit accruals.[6] *Figure 5b* depicts the relationship between higher allocations to debt and the plan's funded status and benefit accrual rate. In well-funded plans, lower benefit accrual rates are associated with higher allocations to fixed-income assets, while higher accrual rates (reflecting active pensions) correspond with higher allocations to return-seeking assets.

[5] LDI strategies typically use fixed-income assets as a hedge against interest-rate-driven movements in plan liabilities. In years when long-term, high-quality corporate bond interest rates decline, with corresponding increases in plan obligations, corporate bonds will produce positive returns and vice versa. In a glide path strategy, future target allocations are based on the plan's funded status, with the sponsor shifting assets from equities to debt as funding levels climb to mitigate risk and volatility.

[6] The accrual rate is the ratio between the pension's service cost and the year-end projected benefit obligation.

Figure 5c. **Average asset allocations by change in funded status, 2017**

Asset class	Annual change in funded status			
	More than –5%	–5% to 0%	0.01% to 5%	Greater than 5%
Cash	3.7%	3.8%	2.7%	3.3%
Debt	61.0%	44.7%	44.4%	43.2%
Equity	22.7%	37.0%	42.4%	45.2%
Hedge funds	4.6%	4.7%	2.5%	1.8%
Other	6.5%	5.2%	3.5%	2.6%
Private equity	0.9%	2.3%	2.3%	1.9%
Real estate	0.6%	2.4%	2.2%	2.0%
Average change in funded status	–12.6%	–1.4%	2.7%	13.5%
Return on investments	10.6%	11.0%	13.0%	14.1%
Employer contributions*	4.0%	2.4%	3.3%	16.2%
N	6	42	198	136

Notes: Cash includes cash equivalents and money market instruments; debt includes insurance contracts, and hedge fund assets include derivatives and interest rate swaps.
*Employer contributions are shown as a percentage of year-end plan assets.
Source: Willis Towers Watson

Figure 6. **Investment returns, 2009 – 2017**

Year	Equity index returns*			Bond index returns		
	S&P 500	Russell 2500	MSCI EAFE	Barclays Long Treasury	Barclays Long Credit	Barclays Aggregate
2009	26.5%	34.4%	32.5%	–12.9%	16.8%	5.9%
2010	15.1%	26.7%	8.2%	9.4%	10.7%	6.5%
2011	2.1%	–2.5%	–11.7%	29.9%	17.1%	7.8%
2012	16.0%	17.9%	17.9%	3.6%	12.7%	4.2%
2013	32.4%	36.8%	23.3%	–12.7%	–6.6%	–2.0%
2014	13.7%	7.1%	–4.5%	25.1%	16.4%	6.0%
2015	1.4%	–2.9%	–0.4%	–1.2%	–4.6%	0.5%
2016	11.9%	17.6%	1.5%	1.3%	10.2%	2.7%
2017	21.8%	16.8%	25.6%	8.5%	12.2%	3.5%

*Standard and Poor's 500 is an American stock market index based on the market capitalizations of 500 large companies listing common stock on the New York Stock Exchange or NASDAQ. The Russell 2500 is a subset of the Russell 3000® Index, which includes roughly 2,500 of the smallest securities based on a combination of their market cap and current index membership. The MSCI EAFE index measures the equity market performance of developed markets outside the U.S. and Canada.
Source: Bloomberg

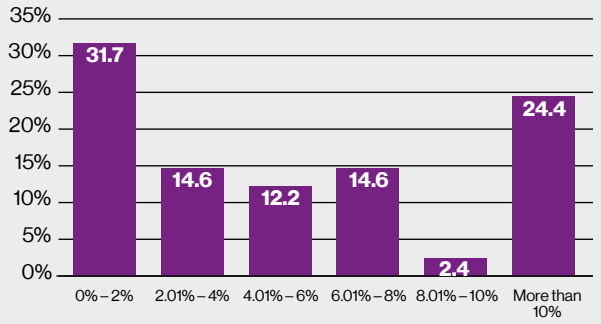
Asset allocations played a role in changing funding status during 2017 *(Figure 5c)*. As equities outperformed bonds in 2017 *(Figure 6)*, plans with larger allocations to equities realized higher overall investment returns and larger gains in funded status. On average, plans whose funded levels declined — especially where the declines were more than 5% — held larger fixed-income allocations in 2017.

Among plans whose funded status rose by more than 5%, plan contributions also played a part in the gain; these sponsors contributed roughly four times as much to their plans as other companies in this analysis (an average 16% of their assets).

Pension assets held in company securities

Around 9% of *Fortune* 1000 DB plan sponsors held company securities as pension assets in 2017, which is unchanged from last year. These allocations averaged 6.5% of pension assets in 2017, dropping to 3.0% when weighted by end-of-year plan assets. The weighted average is lower than the simple average because larger plans allocated lower percentages to company securities than smaller plans.

Figure 7. **Allocations to company stock, 2017**



N = 41
Source: Willis Towers Watson

Approximately 9% of Fortune 1000 DB plan sponsors held company securities as pension assets in 2017, unchanged from last year

Only one of the 42 sponsors that held company securities explicitly noted plan contributions in the form of company securities in 2017.

In 2017, company securities constituted 4% or less of pension assets in 46.3% of these plans and made up more than 10% of pension assets in 24.4% of them *(Figure 7)*.[7]

Trends in allocations since 2009

To track asset allocation trends from 2009 to 2017, this part of the analysis is based on a consistent sample of 240 pension sponsors that have been in the *Fortune* 1000 over the past nine years. *Figures 8a* and *8b* show asset allocations for these companies on an aggregate and average basis for 2009, 2012, 2015 and 2017.

Over the past nine years, the shift from equities to fixed-income investments has been gradual and consistent. Since 2009, average allocations to public equities declined by 10.6 percentage points, while allocations to debt increased by roughly the same amount.

Between 2009 and 2017, the number of these sponsors whose pensions held 50% or more in cash and fixed-income assets more than doubled, rising from 17% to 40% *(Figure 8c)*. On average, this group consistently maintained significant amounts of risk-averse investments: 61.3% of cash and debt in 2009, and 66.0% in 2017.

[7] To promote asset diversification, pension law does not allow U.S. DB plans to invest more than 10% of pension assets in company securities. Values can be greater than 10% if the original amount contributed increased in value over time relative to the rest of the plan assets.

Figure 8a. **Aggregate asset allocations by investment class for consistent sample of *Fortune* 1000 companies (%), 2009, 2012, 2015 and 2017**

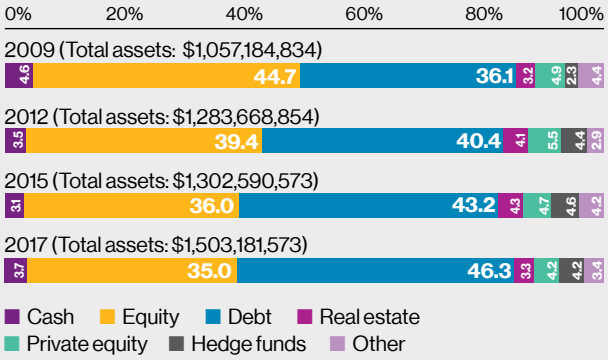


Figure 8b. **Average asset allocation by investment class for consistent sample of *Fortune* 1000 companies (%), 2009, 2012, 2015 and 2017**

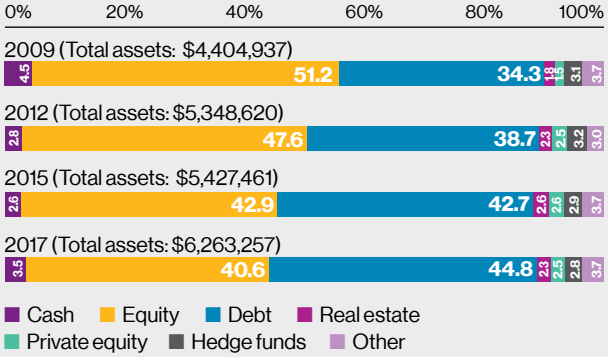
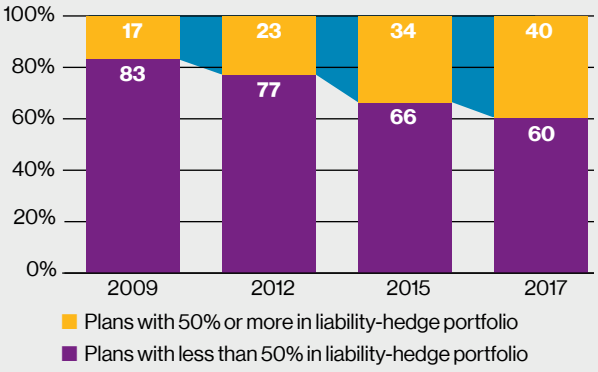


Figure 8c. **Prevalence of companies with more than 50% of pension assets in cash/debt instruments for consistent sample of *Fortune* 1000 companies, 2009, 2012, 2015 and 2017**



Notes: Cash includes cash equivalents and money market instruments, and debt includes insurance contracts. Hedge fund assets include derivatives and interest rate swaps.
N = 240
Source: Willis Towers Watson

Liability de-risking strategies and asset allocation

The analysis shows a clear de-risking trend, with plan sponsors focusing more on hedging liabilities and less on higher returns. Many sponsors have also implemented liability-reduction strategies, such as offering lump sum buyouts, purchasing annuities and terminating their plans. Thirty-seven percent of the plan sponsors in this year's analysis (470 plans) disclosed having implemented one or more of these strategies between 2012 and 2017. These companies were also modestly more inclined to de-risk their investments, with allocations to cash and fixed-income assets averaging 50.7% by year-end 2017, versus 46.1% for those that did not disclose de-risking actions.

Conclusion

During 2017, the funded status of DB plans sponsored by *Fortune 1000* companies increased for the first time in four years, closing out the year at 86.1% — up 5.8 percentage points from year-end 2016. Funding improvements were due to higher-than-expected equity returns, which offset lower interest rates and the resulting higher liabilities. Another factor was a year of exceptional contribution activity, driven by the new tax law and a desire to minimize Pension Benefit Guaranty Corporation premiums, among other factors.

Larger pension plans have consistently maintained more conservative portfolios than smaller plans over the years. Nevertheless, their alternative asset holdings are twice those of smaller plans — 13.6% versus 6.8% on average — possibly reflecting their greater negotiating power and access to economies of scale.

Frozen DB plans held more fixed-income assets, on average, compared with closed or open plans.

Risk management remains a top concern for plan sponsors that is being addressed via multiple and often concurrent approaches.

Since 2009, plan sponsors have been steadily shifting allocations away from public equities into debt and implementing LDI portfolios as part of a broader risk management strategy. In fact, sponsors employing other risk-reduction strategies — such as lump sum payouts or annuity offerings — also generally hold more conservative portfolios. Risk management remains a top concern for plan sponsors that is being addressed via multiple and often concurrent approaches.

Interest rates increased substantially over 2018, which reduced pension obligations. Unfortunately for plan sponsors, equity returns plummeted over the final months of 2018. Fixed-income returns were also low, thereby leaving most sponsors with negative investment returns at year-end and cancelling out the potential funding gain from the lower liabilities. Given volatile market conditions, especially over the last few months of 2018, investment strategy remains as important as ever to help improve and stabilize pension funding.

For comments or questions, contact Mercedes Aguirre at + 598 2 626 2510, mercedes.aguirre@willistowerswatson.com; or Brendan McFarland at +1 703 258 7560, brendan.mcfarland@willistowerswatson.com.

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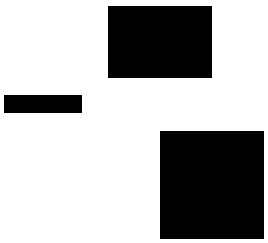

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