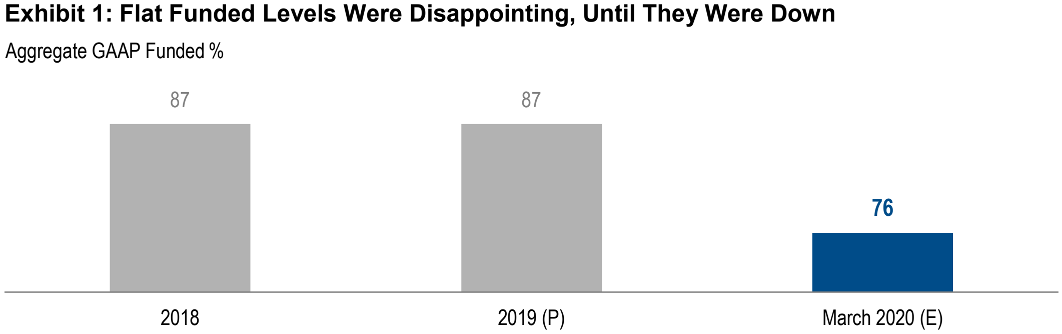
2019 Pension Review "First Take:" *From Flat to Down*

Executive Summary

Funded levels of US corporate defined benefit (DB) plans were essentially unchanged in 2019 as substantial declines in discount rates offset strong asset returns and, in some cases, voluntary contributions. Market volatility in early 2020 has contributed to a steep drop in funded status post year-end, leaving funded ratios around financial crisis levels. In the 18th iteration of our annual review of the US corporate DB system, we make five observations, outlined below, and also provide thoughts around strategies plan sponsors may wish to consider as they navigate both interest rate and equity market volatility this year.

1. **Aggregate funded status at the end of 2019 was 87%, basically in line with the 2018 year-end level.** This flat year-over-year result masked the volatility we experienced intra-year, which has continued into 2020.
2. **The average discount rate for calendar-year companies fell to 3.3%, the lowest we have observed in 18 years of the study.** Increases to liabilities from lower discount rates offset strong asset returns, which averaged over 19%, and, in some cases, voluntary contributions from sponsors.
3. **Return assumptions continue to grind lower due to not only shifts in asset allocation but also, at times, lowered capital markets forecasts.** We have already observed some plans announce notable reductions to the return assumptions they will be using in 2020.
4. **Aggregate asset allocation was essentially unchanged in 2019, which likely masks ongoing de-risking.** Unchanged funded levels may have left some plans stuck on their glidepaths, but strong equity markets in 2019 may also have bumped up actual allocations to that asset class.
5. **Changes to strategic target asset allocations highlight ongoing de-risking actions.** We observed several plans increase target allocations to fixed income as many march towards a higher hedged position.

Exhibit 1: Flat Funded Levels Were Disappointing, Until They Were Down



Source: Company reports, Goldman Sachs Asset Management; GAAP funded % based on US plans of S&P 500 companies; Thomson Reuters; MSCI; Barclays; Standard & Poor's. Proxy for int'l issues: MSCI EAFE, ACWI ex US. Proxy for fixed income: mix of Corporates (Barclays Agg), High Yield (iShares), Treasuries, EM Debt and Long Credit (JP Morgan). March figure estimated as of March 11, 2020.

GSAM’s 18th Annual Pension Review

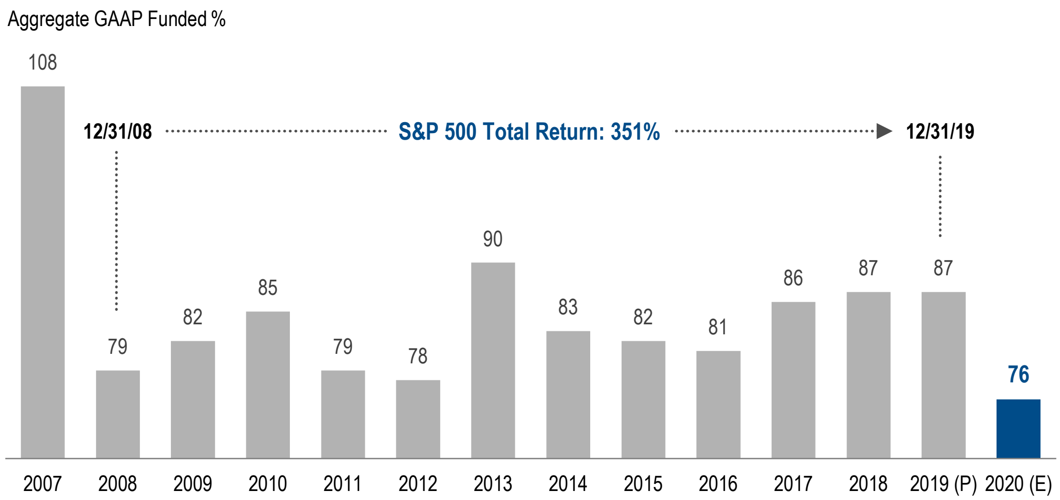
We are pleased to present the results of our 18th annual US corporate pension review. Each year, we perform a comprehensive review of the DB pension plans of every company in the S&P 500 based on the information they file in their annual 10-K reports with the Securities and Exchange Commission. As in previous years, we have focused our initial analysis on the 50 companies in the S&P 500 with the largest US DB plans by asset values. As this is the 18th year of our annual review, we have developed a robust and consistent data set of information that enables us to draw detailed analysis on a broad range of pension-related issues. Most of the preliminary 2019 information in this report is derived from the results of this “First Take” review. The company-specific data underlying this analysis, including information on funded levels, asset allocation and actuarial assumptions, are included in the appendix to this report.

Five Observations from GSAM’s First Take Annual Review

1. The aggregate funded status of the US corporate DB system rose only marginally in 2019.

In aggregate, the 50 plans in our first take sample posted a year-over-year increase in funded status of only around 40 basis points. As seen in Exhibit 2, funded levels have remained stubbornly low the past several years, and well below pre-financial crisis levels, despite robust equity markets through the end of 2019.

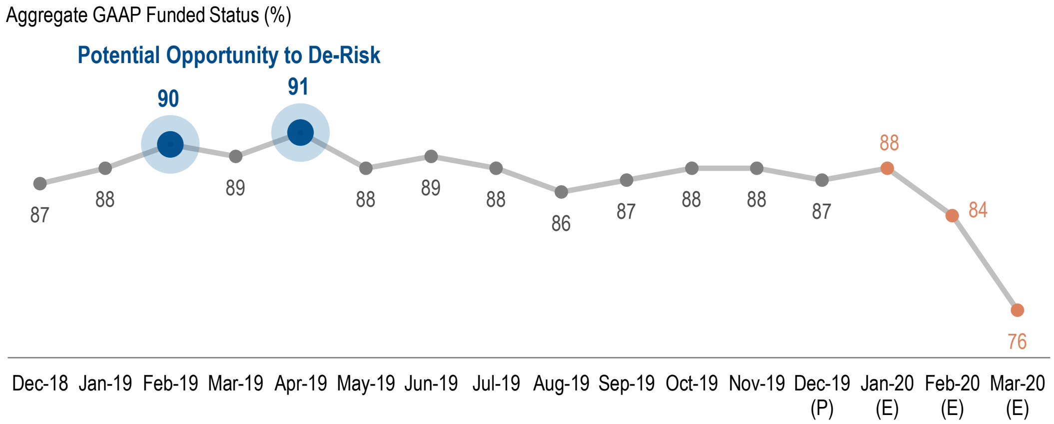
Exhibit 2: Funded Levels Had Failed to Break Out Despite Strong Equity Markets Post Financial Crisis



Source: Goldman Sachs Asset Management, company reports; based upon the US plans (when specified) of S&P 500 companies, for illustrative purposes only. The 2019 figures published here are estimated and unaudited as of March 2020, and are subject to potentially significant revisions over time. 2020 estimated figure is as of March 11, 2020. Actual returns may vary significantly from the performance information presented above. **Past performance does not guarantee future results, which may vary**.

This relatively flat year-over-year performance masked the intra-year volatility we saw in 2019, which has continued in 2020. As seen in Exhibit 3, we estimate the system reached a funded level of 91% in April before falling to an intra-year low of 86% in August. As we discuss later in this paper, through mid-March 2020, we estimate the aggregate funded level has fallen to 76%. This highlights the need for many plans to take de-risking actions when the markets present opportunities, which, when they appear, may be fleeting.

Exhibit 3: Funded Levels Bounced Around During 2019, Primarily Due to Interest Rate Volatility

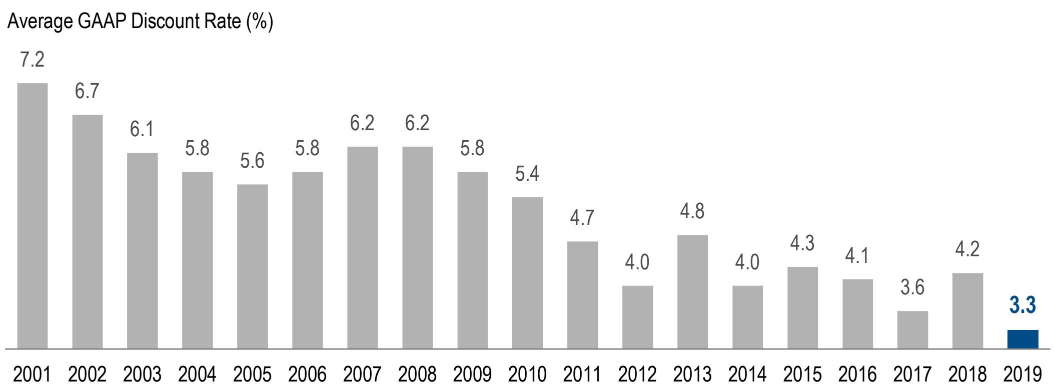


Source: Goldman Sachs Asset Management, company reports; based upon the US plans (when specified) of S&P 500 companies, for illustrative purposes only. All figures above, except for December 2018, are preliminary or estimated and unaudited as of March 11, 2020, and are subject to potentially significant revisions over time. **Past performance does not guarantee future results, which may vary.**

2. Lower discount rates offset strong asset returns and, in some cases, large contributions.

Most companies with a December fiscal year end posted a year-over-year decline in accounting discount rates of around 90 – 100 basis points as interest rates fell and credit spreads tightened. Some observations were certainly above and below that range. This resulted in the lowest average discount rate we have observed since we began our study back in 2002, which contributed to a notable rise in obligations for most plans (see Exhibit 4).

Exhibit 4: Historic Low in Accounting Discount Rates



Source: Company reports, Goldman Sachs Asset Management, Idaciti.

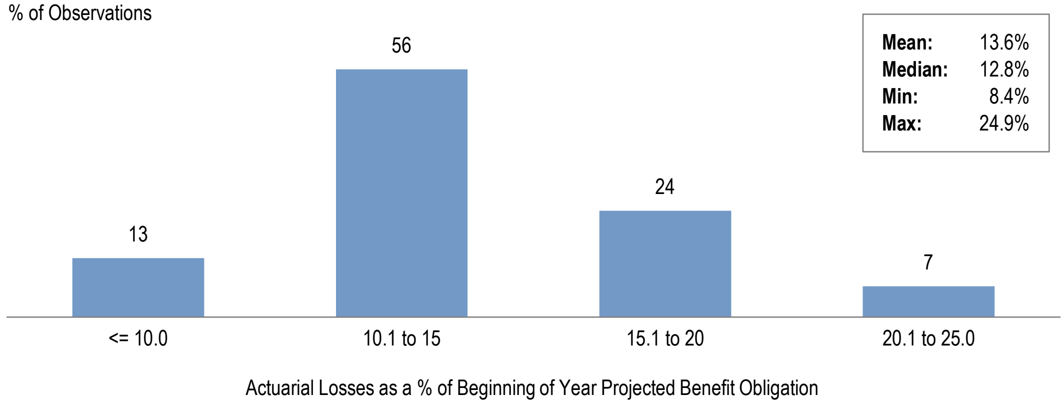
A year-over-year decline in discount rates leads to "actuarial losses" which increase the pension obligation. While other factors, such as changes to mortality assumptions, are also reflected in any net actuarial loss or gain figure, the bulk of the annual adjustment to that line item is generally due to a change to the discount rate.[1] The magnitude of that adjustment is dependent upon not only the amount of the change in the discount rate, but also the duration of a plan's liabilities. Holding all else constant, a frozen plan with a shorter liability duration would likely experience a smaller actuarial loss than an open plan with a longer duration given the same decline in the discount rate. As seen in

[1] For example, Lockheed Martin disclosed an $860 million increase to its pension obligation as a result of revisions to its mortality assumptions during 2019.

Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities.

Exhibit 5, the impact of actuarial losses for calendar-year companies varied wildly in 2019, which contributed to some plans recording an annual increase in funded levels and others posting a decline.

Exhibit 5: Actuarial Losses Resulted in Over a 20% Increase in Liabilities in Some Cases

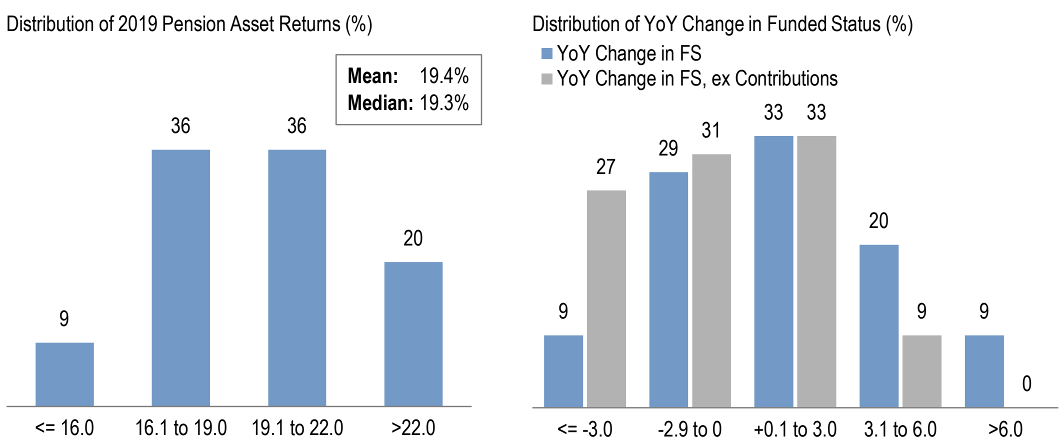


Source: Goldman Sachs Asset Management, company reports.

The increase to liabilities from, among other factors, lower discount rates offset strong asset returns and, at times, sizable voluntary contributions. As seen on the left side of Exhibit 6, companies with a December fiscal year end in our sample returned on average a little over 19% in 2019, with a number of companies' plan assets returning well in excess of 20%.

In addition, some plan sponsors made sizable contributions in 2019 which at times played a notable role in a year-over-year increase in funded status. In some cases, such as those involving Caterpillar, Delta and UPS for example, the contributions were of a voluntary nature. On the right side of Exhibit 6, we have displayed the distribution of the annual change in funded status as reported, and then recalculated those changes backing out all 2019 contributions. Absent contributions, over half of the plans in the sample would have recorded a decline in funded status in 2019.

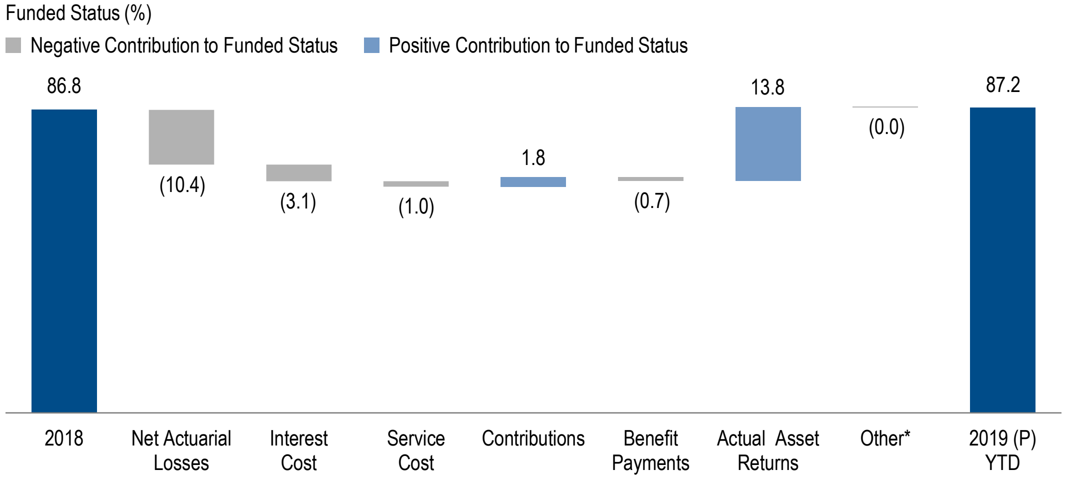
Exhibit 6: Funded Levels Struggled Even With Strong Asset Returns



Source: Goldman Sachs Asset Management; N= 45; as of March 2, 2020. **Represents sample of S&P 500 plans with December fiscal year ends.** In some cases where actual asset returns were not reported, they were estimated by reported actual dollar returns by assets adjusted for cash flows (benefit payments, contributions, etc.). Returns have been estimated based on US plan information, where available. Figures above may not sum to 100% due to rounding.

Pulling it all together, Exhibit 7 details the factors that resulted in the essentially unchanged funded levels in 2019. Each column represents the positive or negative contribution to funded levels. For example, net actuarial losses, which again represent largely the impact of lower year-over-year discount rates, provided a 10.4 percentage point headwind to the aggregate funded status in 2019.

Exhibit 7: Attribution Analysis Highlights the Impact of Various Factors on Funded Status in 2019



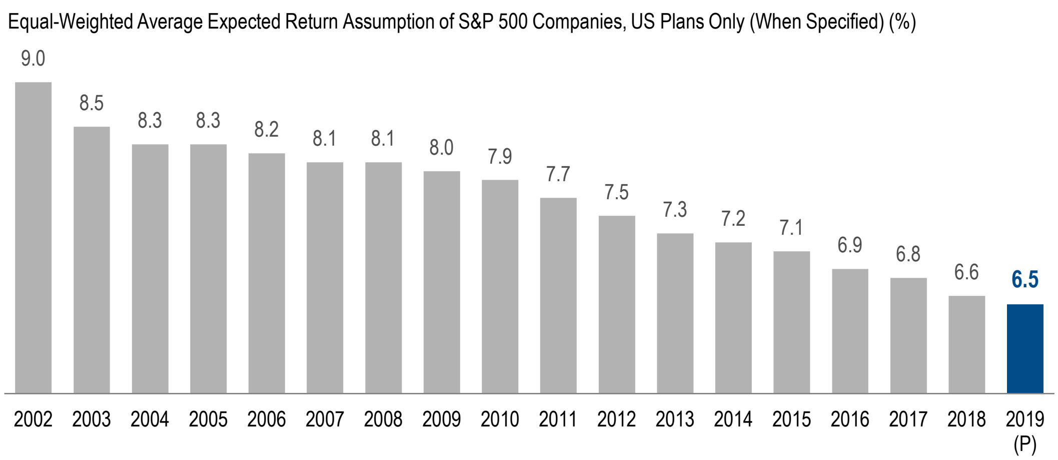
* Other includes amendments, divestitures, FX and settlements.

Source: Goldman Sachs Asset Management, company reports; analysis based on the US plans when specified) of S&P 500 companies. The 2019 estimate is subject to potentially significant revisions over time. Please see additional disclosures at the end of this presentation. Figure above does not sum due to rounding. **Past performance does not guarantee future results, which may vary.**

3. Return assumptions continue to move lower due to, at times, multiple factors.

The average expected return on assets (EROA) assumption fell about 10 basis points in 2019, a continuation of the trend we have seen over the past several years. As a result, we project that the average EROA across the entire US corporate DB system fell to 6.5% in 2019 (see Exhibit 8).

Exhibit 8: No End in Sight to Declining EROA Assumptions?



Source: Goldman Sachs Asset Management, company reports; based upon the US plans (when specified) of S&P 500 companies, as of March 2020.

Although plan sponsors are not required to disclose the EROA assumption for forward years, some plans do voluntarily disclose that information. In Exhibit 9 we have detailed all of the companies in our First Take sample where we observed a disclosure of the 2020 EROA assumption. In many cases the assumption has been lowered for 2020, in some instances by 50 basis points or more. This indicates to us that the trend of the system-wide EROA falling will continue this year.

Exhibit 9: Return Assumptions Continue to Move Lower, Despite (or Perhaps Influenced by) Stellar Returns in 2019

	Expected Return on Assets Assumption					Potential Factors Contributing to 2020 EROA Change	
Sponsor	**Month of FYE**	**FY'18 EROA (%)**	**FY'19 EROA (%)**	**FY'20 EROA (%)**	**Change from 2019 to 2020 (%)**	**Increase to Fixed Income (Target or Actual)**	**Explicit Reference to Change in Capital Market Assumptions**
JPMorgan Chase & Co.	Dec	5.50	5.50	4.00	(1.50)	●	
Altria Group, Inc.	Dec	7.80	7.80	6.60	(1.20)	●	
Merck & Co., Inc.	Dec	8.20	8.10	7.15	(0.95)	●	●
Caterpillar Inc.	Dec	6.30	5.90	5.10	(0.80)		
International Business Machines Corporation	Dec	5.25	5.25	4.50	(0.75)		
Honeywell International Inc.	Dec	7.75	6.75	6.15	(0.60)	●	●
CenturyLink, Inc.	Dec	6.50	6.50	6.00	(0.50)	●	
General Electric Company	Dec	6.75	6.75	6.25	(0.50)	●	
United Technologies Corporation	Dec	6.80	7.00	6.50	(0.50)	●	●
Raytheon Company	Dec	7.50	7.50	7.00	(0.50)		●
General Motors Company	Dec	6.61	6.37	5.90	(0.47)		●
PepsiCo, Inc.	Dec	7.20	7.10	6.80	(0.30)	●	
MetLife, Inc.	Dec	5.75	5.75	5.50	(0.25)		
Prudential Financial, Inc.	Dec	6.25	6.25	6.00	(0.25)		
Ford Motor Company	Dec	6.75	6.75	6.50	(0.25)	●	●
3M Company	Dec	7.25	7.00	6.75	(0.25)		
International Paper Company	Dec	7.50	7.25	7.00	(0.25)		
Pfizer Inc.	Dec	7.50	7.20	7.00	(0.20)		
Deere & Company	Nov	6.90	6.50	6.40	(0.10)	●	
Dominion Energy, Inc.	Dec	8.75	7.83	7.80	(0.03)		
The Boeing Company	Dec	6.80	6.80	6.80	0.00		
Lockheed Martin Corporation	Dec	7.50	7.00	7.00	0.00		
Exelon Corporation	Dec	7.00	7.00	7.00	0.00		
AT&T Inc.	Dec	7.00	7.00	7.00	0.00		
Consolidated Edison, Inc.	Dec	7.50	7.00	7.00	0.00		
Huntington Ingalls Industries, Inc.	Dec	7.25	7.25	7.25	0.00		
FirstEnergy Corp.	Dec	7.50	7.50	7.50	0.00		
Northrop Grumman Corporation	Dec	8.00	8.00	8.00	0.00		
Average:		**7.05**	**6.88**	**6.52**	**(0.36)**		

Source: FY'19 company 10-K; as of March 2020. For discussion purposes only. The above exhibit reflects US plan information, where disclosed. Population includes companies where we observed a disclosure of the 2020 EROA assumption; asset allocations and market assumption changes noted above denote explicit disclosures.
Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities.

On the far right side of the exhibit we have indicated whether we can ascertain why the assumption was lowered for 2020. In some cases, either the company specifically cited a shift in asset allocation as contributing to the decline, or we observed a notable increase in either the actual allocation to fixed income or the strategic target. In other situations, a change in capital markets assumptions was cited as a factor in lowering the EROA.

As indicated in the exhibit, there were instances where both factors were cited as well as instances where it was not readily apparent what drove the change. In any event, while the move to liability driven investment strategies has surely played a role in the reductions to many of these assumptions in recent years, it has not been the only factor.

4. Aggregate actual asset allocations were relatively unchanged.

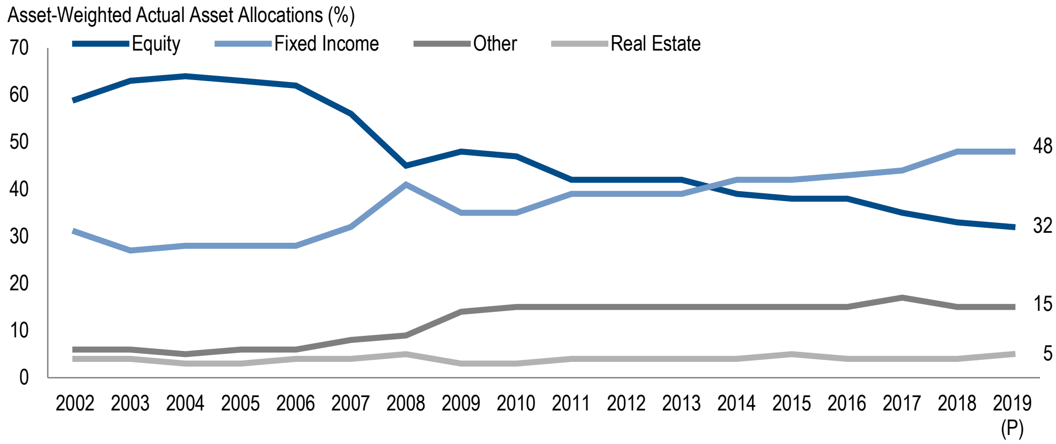
As is shown in Exhibit 10, this chart makes it appear as if nothing really happened last year. We believe this likely masks ongoing de-risking actions taken by some plans last year, even in an environment when funded levels were flat year-over-year. We cite three reasons:

First, equities outperformed fixed income in 2019. If a plan had not rebalanced by year-end, it may have been under-allocated to fixed income at that moment in time versus its intended target.

Second, the LIMRA Secure Retirement Institute reported that 2019 was the sixth consecutive year of rising group annuity sales based on total dollar amounts. For plans that annuitized a portion of their liabilities, and paid for the annuity through an in-kind transfer of securities (which is generally fixed income), the actual allocation to that asset class may have been depressed due to that delivery.

Third, changes to strategic target asset allocations, discussed below, highlight the ongoing actions many plans are taking to shift their actual asset allocations to reflect higher allocations to fixed income and more hedging.

Exhibit 10: On the Surface, It May Appear That Not Much Happened Last Year With Asset Allocation

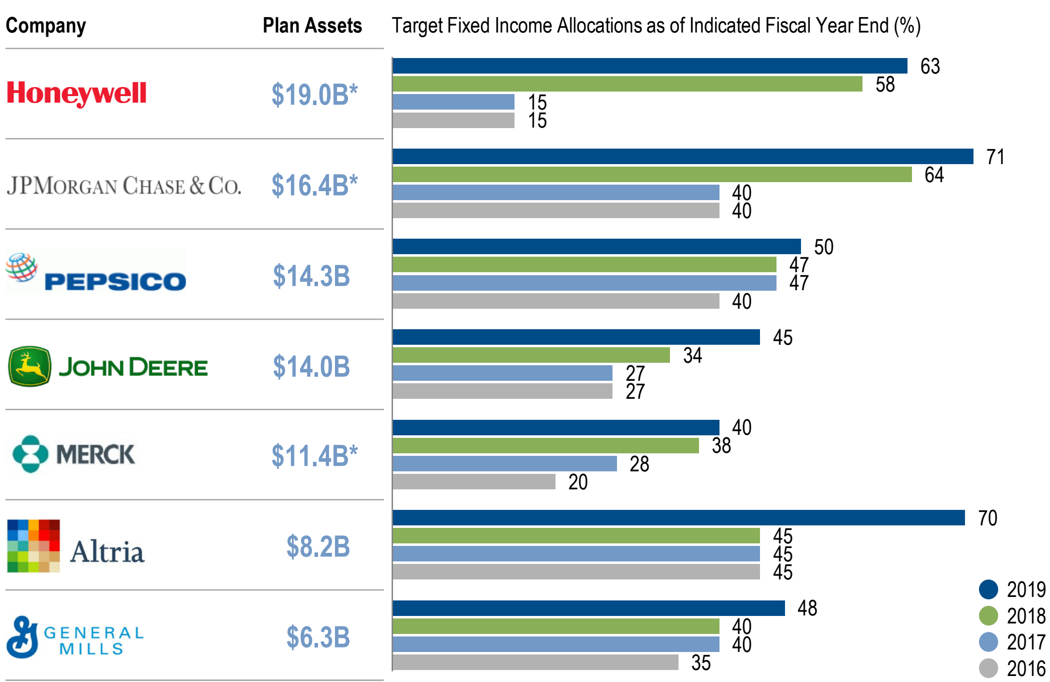


Source: Goldman Sachs Asset Management, company reports; based upon the US plans (when specified) of S&P 500 companies, as of March 3, 2020.

5. Fixed income targets continue to increase at varying paces.

The march towards higher fixed income allocations and increased hedge ratios will likely continue as foreshadowed by changes to strategic target allocations as detailed in Exhibit 11. As seen by the various examples in the exhibit, some are gravitating towards higher fixed income allocations through a methodical process. Others have made large adjustments in one given year. Either way, it is clear that more and more plans aspire to move to a higher allocation to this asset class over time, as we have long expected.

Exhibit 11: Target Allocations to Fixed Income Increased in the Face of Low Interest Rates



Note: All data for US plans only, where available.

* Fixed income targets disclosed as a range; exhibit figures represent the mid-point of those ranges for each year.

Source: Goldman Sachs Asset Management, company reports; plan asset figures as of FY'19; target allocation percentages as of indicated year. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities. Company names and logos, excluding those of Goldman Sachs and any of its affiliates, are trademarks or registered trademarks of their respective holders. Use by Goldman Sachs does not imply or suggest a sponsorship, endorsement or affiliation.

Navigating Market Volatility in 2020

Recent events have been disruptive to both the equity and fixed income markets, leading to a marked increase in volatility and a steep fall in funded levels. Our work suggests the aggregate funded status of the US corporate DB system fell to 76% as of mid-March. Below we make several observations around pension plan management that plan sponsors may wish to consider both as they navigate the current environment but also as they contemplate their longer-term strategy.

1. **Rebalance as appropriate.** Many plans likely find themselves under-allocated to equities and over-allocated to fixed income in comparison to their strategic targets. Our work would suggest that having some sort of rebalancing policy, almost irrespective of what it is, is often more advantageous than having no policy at all. For additional information, please see GSAM’s February 2016 note, “Pension Rebalancing in a Time of Market Volatility.”

2. **Long duration fixed income is not just for closed and frozen plans.** The dramatic fall in interest rates has highlighted, for some, the extent of the asset/liability mismatch inherent in their strategy. As demonstrated back in Exhibit 5, the impact of actuarial losses, primarily from lower discount rates, varied wildly in 2019. Open plans that are still accruing benefits likely have a longer liability duration than closed/frozen plans and are therefore potentially more exposed to a drop in interest rates. While long duration can be and often is a key component of the strategy for a plan that has gone down a de-risking path, it can also play an important role for a plan that is still open and accruing new benefits and, therefore, has a longer-duration liability.

   In addition, in the current environment some plan sponsors may be questioning whether now is the right time to be implementing a liability driven investment strategy or, if they have previously established one several years ago, if perhaps they should be terminating the strategy. Every plan’s situation is different, but we would note that while interest rates have fallen dramatically this year, there is still more room for them to potentially fall further, as has been demonstrated in Japan and Europe. Future policy actions may play a significant role in the future path of interest rates. In addition, widening credit spreads potentially increase the attractiveness of corporate bonds even if US Treasuries appear less attractive.

3. **Yes, equity risk still exists.** The dramatic fall in equity prices has been sharp and painful for many plans. Even as a number of plans have reduced their allocation to this asset class in recent years as part of a de-risking program, equity risk may still dominate the asset-only side of the portfolio. We note that there are several strategies that can be implemented to help change the distribution of equity returns without reducing the allocation to the asset class. While we would argue that many of these strategies are strategic as opposed to tactical, and therefore may be applicable in any market regime, we acknowledge that some plans may be more receptive at this moment given recent volatility. For additional information, please see GSAM’s May 2019 report, “US Corporate Pension De-Risking: More Than Just Bonds.”

4. **Consider making low interest rates work for you.** While the severe fall in interest rates and, therefore, pension accounting discount rates, has been the biggest headwind to funded levels as previously detailed in Exhibit 7, plan sponsors can make low interest rates work for them by potentially borrowing in the capital markets, contributing the proceeds to the plan, and investing in a liability-matching portfolio. This essentially swaps one debt (pension debt) for another (issued debt), but may enable a sponsor to minimize or eliminate PBGC variable-rate premiums, which equate to 4.5% of any deficit in 2020. We note that increases to PBGC premiums in recent years have led many plan sponsors to incorporate the goal of minimizing premiums into their contribution strategy. For additional information, please see GSAM’s October 2016 report, “Pension Plan Management: Should Sponsors Borrow to Fund and De-risk Their Plans?”

5. **Cash flow matching may help a plan weather volatility.** While markets are always uncertain, for DB plan sponsors, one thing that is certain are the monthly outflows due to participants for benefit payments. During times of market volatility, a plan may need to liquidate holdings at depressed levels to fund outflows, perhaps disrupting a longer term strategy that is in place. By dedicating a certain portion of a plan’s assets to fund benefit payments over a predetermined time period, sponsors may be able to ride out short term volatility without adjusting their long-term strategy. For additional information, please see GSAM’s February 2020 report, “Cash Flow Matching: The Next Phase of Pension Plan Management.”

6. **Have a holistic plan that ties it all together - benefit structure, contribution strategy, asset allocation and investment strategy.** In last year’s “First Take” report, we observed that many plan sponsors have effectively paid for benefits twice by contributing into their plans but then failing to lock in gains in funded status when the opportunity arose. This ultimately led to the need for further contributions when funded status fell, effectively resulting in them paying for the same benefits twice. We believe any asset allocation and investment strategy, including the determination of an appropriate interest rate hedging ratio, should be a holistic one that reflects an understanding of benefit structure factors in addition to a sponsor’s views on the relative attractiveness of various asset classes. These factors might include whether the plan is open or closed/frozen, the magnitude of upcoming outflows for benefit payments and lump sums and the materiality of the plan to the sponsor. In addition, ensuring that sizable contributions are allocated to a liability-hedging strategy can help to minimize the risk that the plan may need those contributions again.

Conclusion

Funded levels were relatively flat in 2019 despite strong asset returns as historic lows in discount rates notably increased plan liabilities. Forward looking return assumptions continue to fall due to not only changes in strategic asset allocations, but also lowered financial market expectations. Equity and interest rate volatility in early 2020 has been painful and has contributed to a steep drop off in the funded status of the US corporate DB system. Now is an opportune time for plan sponsors to consider actions they may wish to undertake both in the short as well as longer term.

Appendix

Largest US DB Plans in S&P 500

All data for FY'19, Sorted by 2019 Plan Assets.
All obligations, assets and dollar funded statuses are specified in $MM.

				US plans only (when specified)									
				US Plans - 2018				US Plans - 2019				YoY Funded Status	
Ticker	Company Name	Industry	Month of Fiscal Year end	Obligation	Assets	GAAP Funded Status	GAAP Funded %	Obligation	Assets	GAAP Funded Status	GAAP Funded %	$ Change	% Change
BA	The Boeing Company	Aerospace and Defense	Dec	71,424	56,102	(15,322)	79	77,645	61,711	(15,934)	79	(612)	1
GM	General Motors Company	Automobiles	Dec	61,190	56,102	(5,088)	92	64,684	59,239	(5,445)	92	(357)	(0)
T	AT&T Inc.	Diversified Telecommunication	Dec	57,836	51,681	(6,155)	89	62,478	53,530	(8,948)	86	(2,793)	(4)
GE	General Electric Company	Industrial Conglomerates	Dec	68,500	50,009	(18,491)	73	71,756	52,633	(19,123)	73	(632)	0
IBM	International Business Machines Corporation	IT Services	Dec	47,812	48,213	401	101	50,232	51,784	1,552	103	1,151	2
UPS	United Parcel Service, Inc.	Air Freight and Logistics	Dec	45,333	39,554	(5,779)	87	54,039	46,172	(7,867)	85	(2,088)	(2)
F	Ford Motor Company	Automobiles	Dec	42,269	39,774	(2,495)	94	45,672	44,253	(1,419)	97	1,076	3
UTX	United Technologies Corporation	Aerospace and Defense	Dec	37,795	35,253	(2,542)	93	41,831	39,689	(2,142)	95	400	2
LMT	Lockheed Martin Corporation	Aerospace and Defense	Dec	43,305	32,002	(11,303)	74	48,674	35,442	(13,232)	73	(1,929)	(1)
NOC	Northrop Grumman Corporation	Aerospace and Defense	Dec	32,231	27,150	(5,081)	84	36,914	30,646	(6,268)	83	(1,187)	(1)
FDX	FedEx Corporation	Air Freight and Logistics	May	22,653	22,057	(596)	97	26,554	23,320	(3,234)	88	(2,638)	(10)
BAC	Bank of America Corporation	Banks	Dec	16,923	20,762	3,839	123	18,280	22,941	4,661	125	822	3
JNJ	Johnson & Johnson	Pharmaceuticals	Dec	20,785	17,725	(3,060)	85	24,578	21,398	(3,180)	87	(120)	2
RTN	Raytheon Company	Aerospace and Defense	Dec	24,656	18,488	(6,168)	75	28,108	20,366	(7,742)	72	(1,574)	(3)
VZ	Verizon Communications Inc.	Diversified Telecommunication Services	Dec	19,567	17,816	(1,751)	91	21,248	19,451	(1,797)	92	(46)	0
HON	Honeywell International Inc.	Industrial Conglomerates	Dec	16,141	17,109	968	106	17,283	18,995	1,712	110	744	4
EXC	Exelon Corporation	Electric Utilities	Dec	20,692	16,678	(4,014)	81	22,868	18,590	(4,278)	81	(264)	1
BRK.B	Berkshire Hathaway Inc.	Diversified Financial Services	Dec	16,922	14,959	(1,963)	88	18,706	16,496	(2,210)	88	(247)	(0)
JPM	JPMorgan Chase & Co.	Banks	Dec	12,212	14,552	2,340	119	13,269	16,373	3,104	123	764	4
MMM	3M Company	Industrial Conglomerates	Dec	15,948	14,803	(1,145)	93	17,935	16,099	(1,836)	90	(691)	(3)
CAT	Caterpillar Inc.	Machinery	Dec	15,953	12,697	(3,256)	80	17,773	15,994	(1,779)	90	1,477	10
DAL	Delta Air Lines, Inc.	Airlines	Dec	19,809	13,459	(6,350)	68	21,199	15,845	(5,354)	75	996	7
ED	Consolidated Edison, Inc.	Multi-Utilities	Dec	14,449	13,450	(999)	93	16,792	15,608	(1,184)	93	(185)	(0)
DIS	The Walt Disney Company	Movies and Entertainment	Sep	14,500	12,728	(1,772)	88	18,531	14,878	(3,653)	80	(1,881)	(7)
PFE	Pfizer Inc.	Pharmaceuticals	Dec	16,421	13,051	(3,370)	79	17,886	14,586	(3,300)	82	70	2
PEP	PepsiCo, Inc.	Beverages	Dec	13,807	12,258	(1,549)	89	15,230	14,302	(928)	94	621	5
SO	The Southern Company	Electric Utilities	Dec	12,763	11,611	(1,152)	91	14,788	14,057	(731)	95	421	4
DE	Deere & Company	Machinery	Nov	12,108	12,602	494	104	14,250	14,024	(226)	98	(720)	(6)
XOM	Exxon Mobil Corporation	Oil, Gas and Consumable Fuels	Dec	18,174	11,134	(7,040)	61	20,959	13,636	(7,323)	65	(283)	4
PRU	Prudential Financial, Inc.	Insurance	Dec	11,207	12,167	959	109	12,588	13,211	623	105	(337)	(4)
GD	General Dynamics Corporation	Aerospace and Defense	Dec	15,720	11,532	(4,188)	73	18,107	13,177	(4,930)	73	(742)	(1)
AAL	American Airlines Group Inc.	Airlines	Dec	16,378	10,053	(6,325)	61	18,358	12,897	(5,461)	70	864	9
C	Citigroup Inc.	Banks	Dec	12,655	11,490	(1,165)	91	13,453	12,717	(736)	95	429	4
HPQ	HP Inc.	Technology Hardware, Storage and Peripherals	Oct	11,167	10,018	(1,149)	90	13,191	12,017	(1,174)	91	(25)	1
MRK	Merck & Co., Inc.	Pharmaceuticals	Dec	10,620	9,648	(972)	91	13,003	11,361	(1,642)	87	(670)	(3)
WFC	Wells Fargo & Company	Banks	Dec	10,686	9,477	(1,209)	89	11,688	10,763	(925)	92	284	3
CTL	CenturyLink, Inc.	Diversified Telecommunication Services	Dec	11,594	10,033	(1,561)	87	12,217	10,493	(1,724)	86	(163)	(1)
LLY	Eli Lilly and Company	Pharmaceuticals	Dec	10,246	8,851	(1,395)	86	12,188	10,286	(1,902)	84	(507)	(2)
ABT	Abbott Laboratories	Health Care Equipment and Supplies	Dec	9,093	8,553	(540)	94	11,238	10,277	(961)	91	(421)	(3)
CVX	Chevron Corporation	Oil, Gas and Consumable Fuels	Dec	11,726	8,532	(3,194)	73	14,465	10,177	(4,288)	70	(1,094)	(2)
IP	International Paper Company	Containers and Packaging	Dec	10,467	8,735	(1,732)	83	11,699	10,165	(1,534)	87	198	3
MET	MetLife, Inc.	Insurance	Dec	9,580	8,615	(965)	90	10,824	9,742	(1,082)	90	(117)	0
D	Dominion Energy, Inc.	Multi-Utilities	Dec	8,500	7,197	(1,303)	85	10,446	9,631	(815)	92	488	8
DUK	Duke Energy Corporation	Electric Utilities	Dec	8,173	8,233	60	101	8,639	8,910	271	103	211	2
FE	FirstEnergy Corp.	Electric Utilities	Dec	9,462	6,984	(2,478)	74	11,050	8,395	(2,655)	76	(177)	2
MO	Altria Group, Inc.	Tobacco	Dec	7,726	7,138	(588)	92	8,659	8,167	(492)	94	96	2
TXT	Textron Inc.	Aerospace and Defense	Dec	7,901	7,122	(779)	90	8,938	8,129	(809)	91	(30)	1
HII	Huntington Ingalls Industries, Inc.	Aerospace and Defense	Dec	6,519	5,726	(793)	88	7,742	6,733	(1,009)	87	(216)	(1)
CVS	CVS Health Corporation	Health Care Providers and Services	Dec	5,841	5,663	(178)	97	6,239	6,395	156	103	334	6
GIS	General Mills, Inc.	Food Products	May	6,416	6,177	(239)	96	6,751	6,292	(459)	93	(220)	(3)
			Totals	$ 1,043,856	$ 905,723	$(138,132)	87	$ 1,161,645	$ 1,011,993	$(149,652)	87	($11,520)	0

Source: Company reports; all data through fiscal year 2019; population includes the 50 largest DB plans in the S&P 500, Goldman Sachs Asset Management, Idaciti.

Largest US DB Plans in S&P 500

All data for FY'19, Sorted by 2019 Plan Assets (All Asset Allocations Expressed in %)
NA - Data not available or not disclosed

				US Plans Only (When Specified)										
				Target Asset Allocation				Actual Asset Allocation – 2019						
Ticker	Company Name	Industry	Month of Fiscal Year end	Equity	Fixed Income	Real Estate	Other	Equity	Fixed Income	Real Estate	Other	Total	2019 Expected Return on Plan Assets (%)	Discount Rate as of year-end 2019 (%)
BA	The Boeing Company	Aerospace and Defense	Dec	29	47	9	15	29	49	8	14	100	6.80	3.30
GM	General Motors Company	Automobiles	Dec	12	64	0	24	11	65	6	18	100	6.37	3.20
T	AT&T Inc.	Diversified Telecommunication	Dec	35 - 65	29 - 39	4 - 14	2 - 17	46	35	9	10	100	7.00	3.40
GE	General Electric Company	Industrial Conglomerates	Dec	30 - 47	21 - 65	4 - 14	6 - 16	41	42	7	10	100	6.75	3.36
IBM	International Business Machines Corporation	IT Services	Dec	12	80	4	4	4	76	0	20	100	5.25	3.10
UPS	United Parcel Service, Inc.	Air Freight and Logistics	Dec	25 - 55	35 - 55	1 - 10	10 - 55	36	42	4	18	100	7.75	3.60
F	Ford Motor Company	Automobiles	Dec	0 - 20	80	0 - 20	0 - 20	6	85	3	7	100	6.75	3.32
UTX	United Technologies Corporation	Aerospace and Defense	Dec	45 - 50	50 - 55	0	0	31	51	5	13	100	7.00	3.00
LMT	Lockheed Martin Corporation	Aerospace and Defense	Dec	15 - 65	10 - 60	0 - 10	0 - 70	44	30	7	19	100	7.00	3.25
NOC	Northrop Grumman Corporation	Aerospace and Defense	Dec	30 - 50	20 - 40	0	18 - 50	42	29	7	22	100	8.00	3.39
FDX	FedEx Corporation	Air Freight and Logistics	May	30 - 50	50 - 70	0	0 - 20	34	55	0	11	100	6.75	3.85
BAC	Bank of America Corporation	Banks	Dec	15 - 50	45 - 80	0 - 10	0 - 5	24	61	4	12	100	6.00	3.32
JNJ	Johnson & Johnson	Pharmaceuticals	Dec	69	31	0	0	74	26	0	0	100	8.31	2.91
RTN	Raytheon Company	Aerospace and Defense	Dec	30 - 60	20 - 45	0 - 4	15 - 45	44	29	8	19	100	7.50	3.29
VZ	Verizon Communications Inc.	Diversified Telecommunication Services	Dec	48 - 68	35 - 55	0	48 - 68	25	48	4	23	100	6.80	3.30
HON	Honeywell International Inc.	Industrial Conglomerates	Dec	25 - 40	55 - 70	5 - 10	10 - 20	22	64	3	11	100	6.75	3.22
EXC	Exelon Corporation	Electric Utilities	Dec	33	44	0	23	33	40	6	21	100	7.00	3.34
BRK.B	Berkshire Hathaway Inc.	Diversified Financial Services	Dec	NA	NA	NA	NA	67	14	0	19	100	6.40	3.10
JPM	JPMorgan Chase & Co.	Banks	Dec	0 - 40	42 - 100	0 - 6	0 - 24	16	74	1	9	100	5.50	3.30
MMM	3M Company	Industrial Conglomerates	Dec	23	47	0	30	22	49	0	29	100	7.00	3.25
CAT	Caterpillar Inc.	Machinery	Dec	30	70	0	0	30	65	0	5	100	5.90	3.20
DAL	Delta Air Lines, Inc.	Airlines	Dec	30 - 50	25 - 35	0	30 - 40	10	28	5	58	100	8.97	3.40
ED	Consolidated Edison, Inc.	Multi-Utilities	Dec	45 - 55	33 - 43	10 - 14	0	51	38	11	0	100	7.00	3.35
DIS	The Walt Disney Company	Movies and Entertainment	Sep	30 - 60	20 - 40	0	10 - 40	40	28	0	32	100	7.25	3.22
PFE	Pfizer Inc.	Pharmaceuticals	Dec	35 - 55	28 - 53	0	5 - 30	32	49	0	20	100	7.20	3.30
PEP	PepsiCo, Inc.	Beverages	Dec	46	50	4	0	45	48	4	2	100	7.10	3.30
SO	The Southern Company	Electric Utilities	Dec	51	23	14	12	51	29	12	8	100	7.75	3.41
DE	Deere & Company	Machinery	Nov	32	45	5	18	30	38	5	27	100	6.50	3.00
XOM	Exxon Mobil Corporation	Oil, Gas and Consumable Fuels	Dec	30	70	0	0	27	69	0	5	100	5.30	3.50
PRU	Prudential Financial, Inc.	Insurance	Dec	4 - 18	54 - 66	2 - 16	6 - 39	8	64	11	17	100	6.25	3.30
GD	General Dynamics Corporation	Aerospace and Defense	Dec	48 - 68	20 - 48	0	0 - 21	58	33	4	5	100	7.46	3.19
AAL	American Airlines Group Inc.	Airlines	Dec	50	30	0	20	45	29	0	26	100	8.00	3.40
C	Citigroup Inc.	Banks	Dec	0 - 26	35 - 82	0 - 7	0 - 40	17	58	4	21	100	6.70	3.25
HPQ	HP Inc.	Technology Hardware, Storage and Peripherals	Oct	29	71	0	0	6	76	0	18	100	6.00	3.20
MRK	Merck & Co., Inc.	Pharmaceuticals	Dec	45 - 75	35 - 45	0 - 5	0 - 5	62	35	0	2	100	8.10	3.40
WFC	Wells Fargo & Company	Banks	Dec	20 - 40	50 - 70	0 - 10	0 - 10	28	64	2	6	100	6.24	3.21
CTL	CenturyLink, Inc.	Diversified Telecommunication Services	Dec	0 - 50	50	0 - 50	0 - 50	20	46	6	28	100	6.50	3.25
LLY	Eli Lilly and Company	Pharmaceuticals	Dec	0 - 70	30	0	0 - 70	25	21	4	50	100	7.40	3.00
ABT	Abbott Laboratories	Health Care Equipment and Supplies	Dec	54	24	0	22	54	24	0	22	100	7.50	3.00
CVX	Chevron Corporation	Oil, Gas and Consumable Fuels	Dec	30 - 60	20 - 40	0 - 15	0 - 40	47	30	11	12	100	6.75	3.10
IP	International Paper Company	Containers and Packaging	Dec	32 - 43	44 - 56	5 - 11	3 - 8	37	50	8	5	100	7.25	3.40
MET	MetLife, Inc.	Insurance	Dec	15	82	0 - 3	0 - 3	12	81	0	7	100	5.75	3.30
D	Dominion Energy, Inc.	Multi-Utilities	Dec	46	35	3	16	54	32	1	12	100	7.83	3.55
DUK	Duke Energy Corporation	Electric Utilities	Dec	28	62	6	4	27	62	7	4	100	6.85	3.30
FE	FirstEnergy Corp.	Electric Utilities	Dec	38	30	10	22	29	36	7	28	100	7.50	3.34
MO	Altria Group, Inc.	Tobacco	Dec	30	70	0	0	35	65	0	0	100	7.80	3.40
TXT	Textron Inc.	Aerospace and Defense	Dec	30 - 69	27 - 38	7 - 13	5 - 11	53	26	9	12	100	7.75	3.36
HII	Huntington Ingalls Industries, Inc.	Aerospace and Defense	Dec	25 - 65	25 - 50	0	10 - 25	51	35	5	10	100	7.25	3.39
CVS	CVS Health Corporation	Health Care Providers and Services	Dec	33	54	6	7	24	56	6	14	100	6.50	3.20
GIS	General Mills, Inc.	Food Products	May	29	48	14	9	33	47	12	8	100	7.25	3.91
		Equal Weighted Average		35	47	4	14	34	47	4	15	100	6.97	3.30
		Asset Weighted Average		33	48	4	15	32	48	5	15	100		

Source: Company reports; all data through fiscal year 2019; population includes the 50 largest DB plans in the S&P 500, Goldman Sachs Asset Management, Idaciti.

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