# Callan

July 31, 2020

The North Carolina Supplemental Retirement Plans

Investment Measurement Service Monthly Review

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# **Investment Manager Asset Allocation**

The table below contrasts the distribution of assets across the Fund's investment managers as of July 31, 2020, with the distribution as of June 30, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### **Asset Distribution Across Investment Managers**

	July 31, 2020 Market Value	Net New Inv.	Inv. Return	June 30, 2020 Market Value
North Carolina SRP 401k & 457				
Tier II Passive	\$3,689,670,028	\$(16,466,137)	\$177,485,508	\$3,528,650,657
Fixed Income Passive	110,283,743	2,171,090	1,604,914	106,507,739
Treasury Inflation Protected	270,824,592	322,827	3,829,096	266,672,670
Large Cap Passive	2,940,893,740	(13,853,123)	157,585,885	2,797,160,977
SMID Cap Passive	292,317,205	(4,710,512)	11,220,053	285,807,664
International Passive	75,350,748	(396,418)	3,245,559	72,501,607
Tier II Active	\$9,341,861,628	\$(14,638,941)	\$285,203,929	\$9,071,296,640
Stable Value Fund	2,246,224,563	4,146,419	4,789,453	2,237,288,691
Fixed Income Fund	1,955,390,595	1,704,401	41,734,014	1,911,952,179
Inflation Responsive Fund	426,677,276	129,217	13,359,944	413,188,114
Large Cap Core Equity Fund	1,939,282,084	(15,804,066)	92,038,579	1,863,047,571
Small/Mid Cap Equity Fund	841,367,924	(2,866,242)	36,226,178	808,007,988
International Equity Fund	1,932,919,186	(1,948,671)	97,055,760	1,837,812,097
Total Fund	\$13,031,531,656	\$(31,105,078)	\$462,689,437	\$12,599,947,297

# **Investment Manager Returns**

The table below details the rates of return for the fund's investment managers over various time periods ended July 31, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns	for	Periods	Ended	July	31.	2020
Returns	101	i chous	LIIGCO	oury	· • · ,	LOLO

		Year		Last	Last
	Last	to	Last	3	5
	Month	Date	Year	Years	Years
Tier 2: Passive (Net of Fee)					
Fixed Income Passive	1.49%	7.69%	10.07%	5.63%	4.42%
Blmbg Barclays Aggregate	1.49%	7.72%	10.12%	5.69%	4.47%
Treasury Inflation Protected Securities	1.43%	5.63%	7.17%	-	-
Blmbg US TIPS 1-10 Yr	1.43%	5.57%	7.10%	4.26%	3.28%
Large Cap Passive	5.64%	2.41%	11.98%	12.03%	11.47%
S&P 500 Index	5.64%	2.38%	11.96%	12.01%	11.49%
SMID Cap Passive	3.96%	(7.64%)	(2.06%)	4.96%	6.22%
Russell 2500 Index	3.98%	(7.51%)	(1.92%)	5.08%	6.28%
International Passive	4.44%	(6.88%)	1.57%	1.63%	3.45%
MSCI ACWI ex US	4.46%	(7.03%)	0.66%	1.39%	3.22%

### **Investment Manager Returns**

The table below details the rates of return for the fund's investment managers over various time periods ended July 31, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### **Returns for Periods Ended July 31, 2020**

		Year		Last	Last
	Last	to	Last	3	5
	Month	Date	Year	Years	Years
Tier 2: Active (Net of Fee)					
Stable Value Fund	0.21%	1.44%	2.56%	2.40%	2.21%
3 Yr Constant Maturity Yield	0.01%	0.27%	0.91%	1.82%	1.56%
T-Bill + 1.5%	0.14%	1.49%	2.96%	3.24%	2.70%
Fixed Income Fund	2.18%	8.04%	10.80%	6.54%	5.34%
Blmbg Barclays Aggregate	1.49%	7.72%	10.12%	5.69%	4.47%
TCW Core Plus	1.66%	8.79%	11.35%	6.39%	-
Blmbg Barclays Aggregate	1.49%	7.72%	10.12%	5.69%	4.47%
Prudential Core Plus	2.70%	7.36%	10.34%	6.73%	5.93%
Blmbg Barclays Aggregate	1.49%	7.72%	10.12%	5.69%	4.47%
Inflation Responsive Fund	3.23%	(5.55%)	(1.91%)	2.08%	2.99%
Inflation Responsive Fund Inflation Responsive Benchmark	<b>3.23%</b> 3.24%	(5.73%)	(1.91%) (2.28%)	<b>2.08%</b> 1.16%	<b>2.99%</b> 1.62%
BlackRock Strategic Completion	3.24%	(5.49%)	(2.28%) (1.85%)	1.10%	
BlackRock Strategic Completion BlackRock Custom Benchmark	3.23%	(5.49%)		- 1.36%	-
BIACKROCK Custom Benchmark	3.24%	(5.73%)	(2.28%)	1.30%	-
Large Cap Core Equity Fund	4.95%	3.94%	11.09%	-	-
Russell 1000 Index	5.86%	2.88%	12.03%	12.02%	11.31%
Hotchkis & Wiley Large Cap Value	2.33%	(19.36%)	(13.81%)	(0.61%)	3.44%
Russell 1000 Value Index	3.95%	(12.95%)	(6.01%)	2.70%	5.36%
Macquarie Large Cap Value	2.28%	(12.28%)	(6.17%)	4.02%	5.85%
Russell 1000 Value Index	3.95%	(12.95%)	(6.01%)	2.70%	5.36%
Sands Capital Large Cap Growth	8.25%	37.34%	42.61%	27.38%	19.62%
Russell 1000 Growth Index	7.69%	18.26%	29.84%	20.91%	16.84%
Loomis SaylesLarge Cap Growth	5.10%	16.07%	24.28%	18.17%	16.84%
Russell 1000 Growth Index	7.69%	18.26%	29.84%	20.91%	16.84%
BlackRock Russell 1000 Index	5.89%	2.82%	11.84%	-	-
Russell 1000 Index	5.86%	2.88%	12.03%	12.02%	11.31%
Small/Mid Cap Equity Fund	4.49%	(6.74%)	(3.07%)	_	_
Russell 2500 Index	3.98%	(7.51%)	(1.92%)	- 5.08%	- 6.28%
Earnest Partners Small/Mid Cap Value	6.05%	(4.03%)	1.93%	5.99%	8.02%
Russell 2500 Value Index	3.01%	(18.81%)	(13.52%)	(1.89%)	2.76%
Wedge Small/Mid Cap Value	2.42%	(19.75%)	(16.28%)	(4.08%)	1.08%
Russell 2500 Value Index	3.01%	(18.81%)	(13.52%)	(1.89%)	2.76%
Brown Advisory Small/Mid Cap Growth	5.47%	5.63%	6.55%	13.08%	12.10%
Russell 2500 Growth Index	5.47%	7.60%	13.42%	13.61%	10.48%
BlackRock Russell 2500 Index	3.95%	(6.78%)	(1.12%)	-	-
Russell 2500 Index	3.98%	(7.51%)	(1.92%)	5.08%	6.28%
International Equity Fund	5.27%	(4.41%)	5.28%	3.59%	5.12%
Mondrian ACWI ex-US Value	3.58%	(14.74%)	(6.62%)	(1.44%)	0.72%
Baillie Gifford ACWI ex-US Growth	3.58% 6.93%				0.72% 9.82%
MSCI ACWI ex US		6.31%	17.67%	8.93% 1.39%	9.82%
IVISULAUVILEX US	4.46%	(7.03%)	0.66%	1.39%	3.22%

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June 30, 2020

The North Carolina Supplemental Retirement Plans Executive Summary

Investment Measurement Service Quarterly Review

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### **U.S. EQUITY**

U.S. equity markets bounced back from March lows in 2Q20 (Russell 1000: +21.8%). The S&P 500 (+20.5%) recorded its best quarterly performance since 1998. Three sectors (Technology, Consumer Discretionary, and Energy) posted returns in excess of 30%. Technology (+30.5%) continues to be a top performer with "FAAMG" stocks up 35% in the quarter. Many Technology stocks benefited from the "stay at home" environment. Energy stocks (+30.5%) rebounded after OPEC+ and non-OPEC production cuts buoyed crude prices.

### Small cap (Russell 2000: +25.4%) outgained large cap

- From the first to the second quarter, the Russell 2000 swung from its worst quarterly performance to one of its three best quarterly returns since the inception of the index.
- The Russell 2000 still lags the Russell 1000 on a year to date and trailing one-year basis, exemplifying the extreme dislocation between large and small cap performance in the first quarter.
- Better-than-expected economic data and Fed actions helped shift investment sentiment in favor of small cap.

### Growth outpaced value across market capitalizations

- Value indices underperformed their growth counterparts across the market cap spectrum during the first quarter decline as well as during the second quarter recovery (Russell 1000 Growth: +27.8%; Russell 1000 Value: +14.3%; Russell 2000 Growth: +30.6%; Russell 2000 Value: +18.9%).
- Persistently low interest rates, a flatter yield curve, and slower economic growth are some of the headwinds for the value factor.

### U.S. Equity: Quarterly Returns



### **U.S. Equity: One-Year Returns**



Sources: FTSE Russell, S&P Dow Jones Indices



### S&P Sector Returns, Quarter Ended June 30, 2020

Source: S&P Dow Jones Indices



### **GLOBAL/GLOBAL EX-U.S. EQUITY**

Accommodative monetary policies coupled with massive fiscal stimulus helped fuel the second quarter market recovery after the first quarter's declines.

### Global/Developed ex-U.S.

- Developed markets with the most success at mitigating the coronavirus led; Australia (+28.9%), New Zealand (+28.1%), and Germany (+26.5%) were the top performers.
- Countries' inability to "flatten the curve" acted as headwinds to their equity markets, namely the U.K. (+7.8%).
- Every sector in MSCI EAFE except Energy (-0.03%) posted positive returns, led by cyclicals; Information Technology (+23.4%) companies also provided strong returns as working-from-home trends continued to support the sector.
- Factor performance in developed ex-U.S. markets was led by momentum and quality, reflecting the cyclical rebound (momentum) coupled with continued pandemic uncertainty (quality, flight to safety); growth continued to outperform value (EAFE Growth: +17.0% vs. EAFE Value: +12.4%).

### **Emerging Markets**

- Emerging markets produced their strongest quarterly gains in over a decade as fiscal and monetary stimulus from countries aided the second quarter rebound across all countries and sectors.
- Most EM countries ended lockdowns during the period, but Latin America, India, and some parts of Southeast Asia ended the second quarter with cases surging.
- Commodity-linked economies such as South Africa (+27.2%), Brazil (+22.9%), and Russia (+18.7%) recovered on the strength of metals, mining, and oil-related securities after being some of the worst-performing countries in 1Q20.
- China (+15.6%) lagged the index as U.S.-China trade tensions reignited and additional sanctions were imposed.
- Every sector posted positive returns, most in double digits.
- Factor performance reflected a risk-on mentality. Growth outperformed value (EM Growth: +22.1% vs. EM Value: +13.8%)

#### Global ex-U.S. Small Cap

- Global ex-U.S. small caps rallied during the second quarter as lockdowns eased and economies reopened.
- A risk-on mindset pervaded the global ex-U.S. small cap market that fueled double-digit returns for every sector in the MSCI ACWI ex-USA Small Cap Index.
- Australia (+47.1%) was the top-performing country; Japan (+12.8%) and the U.K. (+14.8%) were two of the worst-performing countries.





### **Global Equity: One-Year Returns**



Source: MSCI

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### **U.S. FIXED INCOME**

### U.S. Treasury yields were range-bound

- The 10-year U.S. Treasury yield reached a high of 0.91% in June before closing the quarter at 0.66%, down slightly from the 1Q20 quarter-end level of 0.70%.
- After strong performance in 1Q20, U.S. Treasury returns lagged other "spread" sectors as risk appetites rebounded, fueled by massive Fed stimulus programs as well as improved liquidity.
- The Fed left rates on hold at 0% 0.25% for the foreseeable future, anchoring the low end of the yield curve.
- TIPS outperformed nominal Treasuries as expectations for inflation rose. The 10-year breakeven spread ended the quarter at 1.34%, up from 0.87% as of the end of 1Q20.

### Corporate credit rallied due to spread widening

- Corporate credit rebounded amid improving investor confidence and economic data. However, fallen angels continued to spark concern with nearly half the investment grade bond market now rated BBB.
- Investment grade corporate spreads narrowed by 122 bps to 150 bps despite companies issuing record amounts of debt totaling \$1.4 trillion (+9.0%); the Fed provided continued support through the announcements of the Primary and Secondary Market Corporate Credit Facilities.
- In a reversal from 1Q20, lower quality outperformed as BBBrated credit (+11.2%) outperformed single A (+7.0%), AA (+5.0%), and AAA (+1.7%).
- High yield corporates also posted sharp returns (+10.2%).
   CCC-rated high yield corporates (+9.1%) lagged BB-rated corporates (+11.5%).
- The high yield default rate reached a 10-year high (6.2%).
- Energy (+40.0%) was the highest-performing high yield bond sub-sector, reflecting sharply higher oil prices.

### **U.S. Fixed Income: Quarterly Returns**



### U.S. Fixed Income: One-Year Returns



### **U.S. Treasury Yield Curves**



Sources: Bloomberg, Bloomberg Barclays, Credit Suisse

### **GLOBAL FIXED INCOME**

### Global ex-U.S. fixed income rose amid rate cuts

- Developed market sovereign bond yields ended the quarter lower amid rate cuts overseas, and the unhedged Bloomberg Barclays Global Aggregate ex-US benchmark posted positive returns (+3.4%)
- The ECB expanded the stimulus program announced in March from €750 billion to €1.35 trillion.
- The U.S. dollar depreciated modestly against a basket of developed market currencies, most notably the Australian and New Zealand dollars (-12.5%; -8.4% respectively). The dollar was roughly flat versus the yen.

### Emerging market debt made up ground

- The J.P. Morgan EMBI Global Diversified dollardenominated benchmark posted strong returns (+12.3%) as oil prices rose and central bank liquidity measures took effect. However, the index remains slightly below year-end 2019 levels.
- Higher-yielding countries led the way in 2Q20 (+16.6%); however they remain down (-12.7%) relative to investment grade constituents year-to-date, according to index data from J.P. Morgan.
- Within the J.P. Morgan GBI-EM Global Diversified local currency-denominated benchmark (+9.8%), returns were positive for the vast majority of constituents. Oil-sensitive economies such as Mexico, Colombia, and South Africa rebounded to some degree, but remained down year-to-date.

### **Global Fixed Income: Quarterly Returns**



### **Global Fixed Income: One-Year Returns**



### Change in 10-Year Global Government Bond Yields



Sources: Bloomberg, Bloomberg Barclays, JP Morgan

А	В	С	D	E	F	G	н	I
					C+D+E	B*F	Callan	F-H
			Custodial		Total Estimated	Total Estimated	Median	
Funds and Sub-Advisors	Assets*	Inv. Mgmt. Fee	Expenses <sup>1</sup>	NC Budget <sup>2</sup>	Expense (%)	Expenses (\$) <sup>3</sup>	Expense 4	Difference
NorthCarolina Stable Value Fund	\$2,237,288,691	0.275%	0.0018%	0.025%	0.30%	\$6,758,849	0.33%	-0.03%
Galliard	\$2,242,487,337	0.275%	0.0000%			\$6,173,568	0.27%	0.01%
North Carolina Fixed Income Passive Fund	\$106,507,739	0.020%	0.0255%	0.025%	0.07%	\$75,088	0.15%	-0.08%
Blackrock	\$106,507,739	0.020%	0.0100%			\$21,302	0.02%	0.00%
North Carolina Fixed Income Fund	\$1,911,952,179	0.126%	0.0103%	0.025%	0.16%	\$3,083,979	0.39%	-0.23%
50% TCW	\$954,184,666	0.142%	0.0000%			\$1,353,988	0.21%	-0.07%
50% Prudential	\$957,767,535	0.110%	0.0100%			\$1,053,544	0.21%	-0.10%
North Carolina Inflation Sensitive Fund	\$413,188,114	0.090%	0.0153%	0.025%	0.13%	\$538,384	0.85%	-0.72%
Blackrock	\$413,188,100	0.090%	0.0100%			\$371,869	0.75%	-0.66%
North Carolina Large Cap Passive Fund	\$2,797,160,977	0.005%	0.0115%	0.025%	0.04%	\$1,160,822	0.17%	-0.13%
Blackrock	\$2,797,160,977	0.005%	0.0100%			\$139,858	0.03%	-0.03%
North Carolina Large Cap Core Fund	\$1,863,047,571	0.287%	0.0081%	0.025%	0.32%	\$5,965,478	0.65%	-0.33%
18.75% Hotchkis & Wiley	\$318,712,384	0.400%	0.0000%			\$1,274,850	0.42%	-0.02%
18.75% Macquarie Large Cap Value	\$336,455,374	0.282%	0.0000%			\$947,795	0.41%	-0.13%
18.75% Sands Capital Management	\$384,051,389	0.450%	0.0000%			\$1,728,231	0.43%	0.02%
18.75% Loomis Sayles	\$361,544,551	0.380%	0.0000%			\$1,374,592	0.43%	-0.05%
25% BlackRock Advisors Inc., Large Cap Index*	\$462,283,862	0.005%	0.0100%			\$23,114	0.03%	-0.03%
North Carolina SMID Cap Passive Fund	\$285,807,664	0.005%	0.0146%	0.025%	0.04%	\$127,470	0.20%	-0.16%
Blackrock	\$285,807,664	0.005%	0.0100%			\$14,290	0.03%	-0.03%
North Carolina SMID Cap Core Fund	\$808,007,988	0.322%	0.0154%	0.025%	0.36%	\$2,930,645	0.87%	-0.51%
23.75% Earnest Partners	\$191,347,330	0.470%	0.0000%			\$899,332	0.67%	-0.20%
23.75% Wedge	\$179,322,646	0.484%	0.0000%			\$867,204	0.67%	-0.19%
23.75% Brown Advisory	\$201,910,341	0.408%	0.0000%			\$823,592	0.74%	-0.33%
28.75% BlackRock Advisors Inc., SMID Index*	\$234,878,760	0.005%	0.0100%			\$11,744	0.03%	-0.03%
North Carolina International Passive Fund	\$72,501,607	0.021%	0.0359%	0.025%	0.08%	\$59,379	0.17%	-0.09%
Blackrock	\$72,501,607	0.021%	0.0200%			\$15,225	0.08%	-0.06%
North Carolina International Equity	\$1,837,812,097	0.331%	0.0258%	0.025%	0.38%	\$7,016,767	0.81%	-0.43%
50% Baillie Gifford Growth	\$933,741,047	0.274%	0.0000%			\$2,560,318	0.52%	-0.25%
50% Mondrian Investment Partners Value	\$902,934,260	0.388%	0.0000%			\$3,501,579	0.52%	-0.13%
North Carolina TIPS Fund	\$266,672,670	0.025%	0.0127%	0.025%	0.06%	\$167,204	0.26%	-0.20%
Blackrock	\$266,672,670	0.025%	0.0000%			\$66,668	0.14%	-0.12%
Total	\$12,599,947,297	0.184%	0.0161%	0.025%	0.22%	\$27,884,065	0.33%	

\*Individual Manager Assets do not sum to Fund asset class totals due to residual/closing accounts.

<sup>1</sup> Based on annualized monthly fee accruals as of 06/30/2020

<sup>2</sup>The cost of the budget associated with the management of the Supplemental Retirement Plans, borne by each investment option in proportion to the pro-rate share of the applicable assets in that fund.

<sup>3</sup>Manager fee estimates reflect investment management fee only, does not include \$31 per participant record-keeping fee.

<sup>4</sup>The median expenses for White Label composites are compared against their respective Callan Mutual Fund Institutional Universe, while the individual managers are compared to peers with the same vehicle and strategy assets. The total fund median represents asset-weighted investment management fees for plans greater than \$1 billion in the Callan DC index.

			Larg	e Cap Equity					
	3 Years to	06/31/2020	3 Years to	o 03/31/2020 3 Years to 1		12/31/2019	3 Years to	09/30/2019	
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
Hotchkis & Wiley Large Cap Value									
Macquarie Large Cap Value									
Sands Capital Large Cap Growth									
Loomis Large Cap Growth									
			Sma	all/Mid Cap					
	3 Years to	06/31/2020	3 Years to	03/31/2020	3 Years to	12/31/2019	3 Years to	09/30/2019	
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
EARNEST Partners SMID Cap Value									
WEDGE SMID Cap Value									
Brown Advisory									
				ational Equity					
		06/31/2020		03/31/2020		12/31/2019		09/30/2019	
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
Baillie Gifford ACWI ex US Growth									
Mondrian ACWI ex US Value									
				ed Income					
		06/31/2020		03/31/2020		12/31/2019		09/30/2019	
	Above	Above Peer	Above	Above Peer	Above	Above Peer	Above	Above Peer	
	Benchmark	Median	Benchmark	Median	Benchmark	Median	Benchmark	Median	5 Year Risk
TCW Core Plus*									
Prudential Core Plus									
				able Value					
		06/31/2020		03/31/2020		12/31/2019		09/30/2019	
	Above	Above Peer	Above	Above Peer	Above	Above Peer	Above	Above Peer	
	Benchmark	Median	Benchmark	Median	Benchmark	Median	Benchmark	Median	5 Year Risk
Stable Value									

# North Carolina Supplemental Retirement Plans Active Management Scorecard - Rolling 3 Years

\*Composite returns used to populate history

				e Cap Equity					
	5 Years to	06/31/2020	5 Years to	03/31/2020	5 Years to 12/31/2019		5 Years to	09/30/2019	
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
Hotchkis & Wiley Large Cap Value									
Macquarie Large Cap Value*									
Sands Capital Large Cap Growth									
Loomis Large Cap Growth*									
0 1			Sma	all/Mid Cap					
	5 Years to	06/31/2020	5 Years to	03/31/2020	5 Years to	12/31/2019	5 Years to	09/30/2019	
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
EARNEST Partners SMID Cap Value									
WEDGE SMID Cap Value									
Brown Advisory									
				ational Equity					
		06/31/2020		03/31/2020	5 Years to	12/31/2019		09/30/2019	
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
Baillie Gifford ACWI ex US Growth									
Mondrian ACWI ex US Value									
				ed Income					
		06/31/2020		03/31/2020		12/31/2019		09/30/2019	
	Above	Above Peer	Above	Above Peer	Above	Above Peer	Above	Above Peer	
	Benchmark	Median	Benchmark	Median	Benchmark	Median	Benchmark	Median	5 Year Risk
TCW Core Plus*									
Prudential Core Plus									
				able Value					
		06/31/2020		03/31/2020		12/31/2019		09/30/2019	
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
Stable Value									

# North Carolina Supplemental Retirement Plans Active Management Scorecard - Rolling 5 Years

\*Composite returns used to populate history

2<sup>nd</sup> Quarter 2020



Positive status; no issues
 Notable status; noteworthy item with no concerns
 Cautionary status; noteworthy item & monitoring closely
 Inder Review status; noteworthy item with concerns

Product Dynamics: reflects noteworthy highlights of the portfolio and strategy including assets and portfolio characteristics.

Short-Term Performance: reflects periods of three years and under with a focus on whether or not the manager is performing within expectations. Long-Term Performance: reflects periods of five years and longer with a focus on whether or not the manager is performing within expectations.



2<sup>nd</sup> Quarter 2020

			N	lanage	er Asse	essmen	t		
	Organization	People	Process and Philosophy	Product Dynamics	Short Term Performance	Long Term Performance	Overall	<u>OVERALL</u> <u>STATUS</u>	NOTES
Wedge Capital US SMID Cap Value	•	•	•	•	•	•	•	Satisfactory (on NC watch list)	Stable team and process; firm is focused on value investing utilizing a combination of quantitative tools and fundamental research. Portfolio trails benchmark over the trailing 3-, 5-, and 7-year periods due to a combination of poor stock selection (PG&E), cyclical exposure, and value style headwinds.
SMID CAP GROWTH								1	
Brown Advisory US SMID Cap Growth	•	•	•	•	•	•	•	Satisfactory	Portfolio trails benchmark over one-year period due to results lagging benchmark in Q3 and Q4 2019; Q1 and Q2 2020 results outpaced index. Long- term results remain ahead of benchmark. Strategy AUM near \$5.0 billion; holdings (71) near all-time high of 75 - notable but not actionable.
INTERNATIONAL EQUIT	Y								
Baillie Gifford ACWI Ex-US Alpha	•	•	•	•	•	•	•	Satisfactory	The depth and breadth of the team enabled a seamless transition after the retirements of PMs Andrew Strathdee and Jonathan Bates in 2019. The strategy is expected to perform well in up markets while protecting on the downside due to the quality growth process. Team's long-term investment horizon shown to add significant alpha over time.
BlackRock								Satisfactory	
Mondrian Investment Partners Focused ACWI Ex-US	•	•	•	•	•	•	٠	Satisfactory (on NC watch list)	Liz Desmond appointed Deputy CEO in 2018; Desmond manages the International Equity group and portfolios. The process and its ability to protect in down markets are still intact as witnessed by the outperformance in 2018; but performance in 2019 and year to date (through June 30) 2020 has lagged the broad benchmark as growth continues to outperform value. Strategy is outperforming the value index in all annualized time periods.

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2<sup>nd</sup> Quarter 2020

### Manager Assessment



Satisfactory Satisf	
Satisfactory on the Agency MB announced his reti May 2020. Notable actionable. Fund AUM has mo doubled since 2014 conservative appro Core Plus peers, d posture fared well 2020 volatility; Hea Research, Jamie F replaced by specia analyst Steve Pure	
doubled since 201 conservative appro Core Plus peers, d posture fared well 2020 volatility; Hea Research, Jamie F replaced by specia analyst Steve Puro	S Team, rement in
transition has beer received by team	4; more bach versus lefensive during Q1 ad of Credit Farnham, was al situations dy in 2018 –

NOTES

TCW Core Plus	•	•	•	•	•	•	•	Satisfactory	posture fared well during Q1 2020 volatility; Head of Credit Research, Jamie Farnham, was replaced by special situations analyst Steve Purdy in 2018 – transition has been well received by team
INFLATION SENSITIVE	1	1	1	1	1	1		I	
BlackRock Strategic Completion Fund	•	•	•	•	•		•	Satisfactory	
STABLE VALUE					-				
Galliard Stable Value		•	•	•	•	•	•	Under Review (on NC watch list)	Some concerns over key executive turnover, however, Galliard had spent several years planning for succession; recent organizational changes including the founding partners' retirements, appointment of Andrew Owen as co-president, and the sale of WF's recordkeeping business warrant continued monitoring of the firm's stability; renegotiation of long-term compensation arrangements was a positive in regards to retaining talent and assets; recently hired two portfolio specialists, replacing two that departed in October 2019.

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**CORE & CORE PLUS FIXED INCOME** 

BlackRock

PGIM Core Plus Bond

### Wedge Smid Cap

WEDGE Capital Management was founded in 1984 and based in North Carolina. The organization is 100% employee owned by eight partners. WEDGE employs a well-resourced investment team with significant experience in the industry and at the firm. The Smid Value strategy is a 50/50 blend of WEDGE Small Cap Value and Mid Cap Value portfolio. The investment approach is a fundamentally based, value-oriented discipline, employing up front quantitative screens and qualitative analysis. Quantitative screens search for attractive value and quality characteristics to define a pool of candidates; fundamental research is then applied to identify attractive unrecognized value opportunities. WEDGE believes they can produce superior long term returns by employing rigorous quantitative research and independent qualitative analysis.

The WEDGE Smid Value strategy has produced competitive performance results, outperforming the Russell 2500 Value Index on a long-term basis. WEDGE significantly underperformed in fourth quarter 2016 when higher risk, lower quality securities performed very well post-election; this time period negatively impacts shorter term results. Underperformance over the last year is also influenced by an underweight to REITs as well as stock selection in consumer durables and utilities. A notable detractor within utilities was PG&E, which was sold in mid-January prior to the bankruptcy filing.

Effective August 31, 2019, Wedge has agreed to a new fee schedule that lowered the investment management fee from 0.61% to 0.52%. With the proceeds from the Hotchkis and Wiley termination, the effective fee schedule is 0.47%.

The typical performance pattern would suggest Wedge to lag vertical up markets with narrow leadership and typically protects in down markets. The first and second quarter of 2020 is a notable exception, largely a result of style themes overwhelming stock selection dynamics in the first half of the year. The Small/Mid Cap Value composite return for the most recent quarter was 21.88% (21.64% net of fee) versus the benchmark Russell 2500 Value Index return of 20.60%. Year-to-date, the composite return was -24.10% (-24.44% net of fee) and the benchmark return was -21.18%. Relative to the value index, the portfolio remains balanced between cyclical and defensive exposures.

### Mondrian International

Mondrian's value driven investment philosophy is based on the belief that investments need to be evaluated in terms of their fundamental long-term value. In the management of international equity assets, they invest in securities where rigorous dividend discount analysis identifies value in terms of the long term flow of income.

Mondrian's fundamental approach employs a combination of top-down and bottom-up processes to identify quality businesses trading at favorable valuation defined by four-stage dividend discount model. The strategy offers defensive-value characteristics with an absolute-return performance pattern. As such, the strategy has delivered long-term outperformance relative to the index and peers by consistently compounding excess returns garnered from downside protection.

Outperformance in fourth quarter of 2018 relative to the MSCI ACWI ex-US index confirms the consistency of the process and ability to protect in down markets. However, the strategy continues to lag on a 3-year basis due to the underperformance in 2017. The strategy was challenged in 2017 given the narrow, growth market. Mondrian's value oriented and defensive style, understandably did not capture the upside in 2017. Markets have been remarkably strong since the global financial crisis in 2008, which tends to be a headwind for all of their strategies on a relative basis. Callan is cautionary in light of the recent performance and modest AUM decline.

During the second quarter of 2020, Mondrian underperformed the benchmark with a return of 10.91% versus the benchmark return of 16.12%. While the portfolio benefitted from the underweight position in the Swiss equity market, this was more than offset by the impact of the overweight positions in the UK and Singapore, which lagged the broader index. Uncertainty about ongoing Brexit negotiations and the high weighting to the relatively weak energy sector weighed on the UK market. Stock selection in Asia Pacific also weighed on relative returns. From a sector perspective, the overweight to the weak energy sector weaker the underweight position in the strong materials sector also held back relative performance for the quarter.

## **Investment Fund Balances**

The table below compares the fund's investment fund balances as of June 30, 2020 with that of March 31, 2020. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### **Asset Distribution Across Investment Funds**

	June 3	0, 2020			March 31, 2020		
	Market	Net New		Invest.	Market		
	Value	Weight	Invest.	Return	Value	Weight	
North Carolina SRP 401k & 457							
Tier II Passive	\$3,528,650,657	28.01%	\$(62,300,378)	\$575,482,417	\$3,015,468,618	27.24%	
Fixed Income Passive	106,507,739	0.85%	7,634,137	2,899,667	95,973,936	0.87%	
Treasury Inflation Protected	266,672,670	2.12%	12,457,909	9,357,246	244,857,515	2.21%	
Large Cap Passive	2,797,160,977	22.20%	(79,558,560)	492,735,729	2,383,983,808	21.54%	
International Passive	72,501,607	0.58%	(546,974)	10,177,852	62,870,728	0.57%	
SMID Cap Passive	285,807,664	2.27%	(2,286,890)	60,311,923	227,782,631	2.06%	
Tier II Active	\$9,071,296,640	71.99%	\$57,613,990	\$959,348,041	\$8,054,334,609	72.76%	
Stable Value Fund	2,237,288,691	17.76%	7,387,341	13,523,593	2,216,377,757	20.02%	
Fixed Income Fund	1,911,952,179	15.17%	54,169,422	103,007,810	1,754,774,947	15.85%	
Inflation Responsive Fund	413,188,114	3.28%	29,333,147	24,323,457	359,531,511	3.25%	
Large Cap Core Equity Fund	1,863,047,571	14.79%	(22,489,986)	365,680,890	1,519,856,667	13.73%	
International Equity Fund	1,837,812,097	14.59%	11,515,833	277,466,323	1,548,829,941	13.99%	
Small/Mid Cap Equity Fund	808,007,988	6.41%	(22,301,767)	175,345,969	654,963,785	5.92%	
Total Fund	\$12,599,947,297	100.0%	\$(4,686,388)	\$1,534,830,458	\$11,069,803,227	100.0%	

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Small/Mid Cap Equity Fund	808,007,988	6.41%	(22,301,767)	175,345,969	654,963,785	5.92%
Total Fund	\$12,599,947,297	100.0%	\$(4,686,388)	\$1,534,830,458	\$11,069,803,227	100.0%

# **Investment Fund Balances**

The table below compares the fund's investment fund balances as of June 30, 2020 with that of March 31, 2020.

	June 30, 2	2020	March 3	1, 2020
	Market		Market	
	Value	Weight	Value	Weight
lorth Carolina SRP 401k & 457				
ier I: GoalMaker				
Post Retirement Conservative 11+	18,208,656	0.30%	14,730,038	0.28%
Post Retirement Conservative 6-10	89,420,794	1.49%	80,923,720	1.53%
Post Retirement Conservative 0-5	330,180,975	5.49%	302,062,697	5.72%
Pre Retirement Conservative 0-5	283,137,635	4.71%	270,192,709	5.11%
Pre Retirement Conservative 6-10	166,917,322	2.77%	154,055,598	2.91%
Pre Retirement Conservative 11-15	118,465,820	1.97%	110,266,736	2.09%
Pre Retirement Conservative 16-20	90,834,913	1.51%	83,721,923	1.58%
Pre Retirement Conservative 21-25	67,179,386	1.12%	60,868,274	1.15%
Pre Retirement Conservative 26+	87,106,720	1.45%	76,145,040	1.44%
Post Retirement Moderate 11+	21,454,078	0.36%	18,198,162	0.34%
Post Retirement Moderate 6-10	87,566,053	1.46%	76,015,536	1.44%
Post Retirement Moderate 0-5	347,639,825	5.78%	314,689,637	5.95%
Pre Retirement Moderate 0-5	540,855,011	8.99%	481,874,051	9.12%
Pre Retirement Moderate 6-10	536,220,139	8.91%	472,949,304	8.95%
Pre Retirement Moderate 11-15	414,914,511	6.90%	360,426,939	6.82%
Pre Retirement Moderate 16-20	330,276,105	5.49%	288,569,619	5.46%
Pre Retirement Moderate 21-25	230,203,221	3.83%	197,686,367	3.74%
Pre Retirement Moderate 26+	256,898,426	4.27%	216,549,392	4.10%
Post Retirement Aggressive 11+	9,944,140	0.17%	8,155,577	0.15%
Post Retirement Aggressive 6-10	29,473,062	0.49%	25,958,957	0.49%
Post Retirement Aggressive 0-5	127,937,825	2.13%	110,720,999	2.09%
Pre Retirement Aggressive 0-5	272,545,577	4.53%	232,915,837	4.41%
Pre Retirement Aggressive 6-10	378,336,320	6.29%	326,106,983	6.17%
Pre Retirement Aggressive 11-15	372,932,278	6.20%	317,520,633	6.01%
Pre Retirement Aggressive 16-20	350,697,882	5.83%	298,139,750	5.64%
Pre Retirement Aggressive 21-25	237,638,819	3.95%	199,701,615	3.78%
Pre Retirement Aggressive 26+	218,134,175	3.63%	186,026,623	3.52%
ier I: GoalMaker Total	\$6,015,119,668	100.0%	\$5,285,172,716	100.0%

### **Asset Distribution Across Investment Funds**

### Changes in Investment Fund Balances Period Ended June 30, 2020

### **Allocation Across Investment Options**

The chart below illustrates the allocation of the aggregate fund assets across the various investment options for the quarter ended June 30, 2020.



### **Changes in Fund Values**

The chart below shows the net change in fund values across the various investment options for the quarter ended June 30, 2020. The change in value for each fund is the result of a combination of 3 factors: 1) market movements; 2) contributions or disbursements into or out of the funds by the participants (and any matching done by the company); and 3) transfers between funds by the participants.



Callan

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended June 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns a	nd Rankin	gs fo	r Periods E	indec	d June 30, 2	2020			
	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception
Tier 2: Passive (Net of Fee)									
Fixed Income Passive	2.92%	93	8.69%	43	5.26%	59	4.25%	60	3.57% (10/10)
Blmbg Barclays Aggregate	2.90%	93	8.74%	42	5.32%	48	4.30%	57	3.66% (10/10
Callan Core Bond MFs	4.89%		8.53%		5.31%		4.39%		-
Treasury Inflation Protected Securities	3.75%	85	5.80%	58	-		-		5.24% (7/18)
Blmbg US TIPS 1-10 Yr	3.76%	85	5.75%	58	3.94%	66	2.97%	66	5.21% (7/18)
Callan TIPS MFs	4.94%		7.11%		4.61%		3.26%		-
Large Cap Passive	20.54%	43	7.54%	31	10.75%	22	10.71%	19	15.12% (4/09)
S&P 500 Index	20.54%	43	7.51%	31	10.73%	23	10.73%	19	15.20% (4/09)
Callan Large Cap Core MFs	20.38%		4.00%		8.88%		9.00%		-
International Passive	16.19%	70	(4.62%)	58	1.38%	49	2.49%	48	7.71% (4/09)
MSCI ACWI ex US	16.12%	70	(4.80%)	59	1.14%	50	2.26%	52	7.64% (4/09)
Callan Non US Equity MFs	17.85%		(2.32%)		1.04%		2.36%		-
SMID Cap Passive	26.49%	17	(4.83%)	16	3.97%	19	5.36%	21	14.04% (4/09)
Russell 2500 Index	26.56%	17	(4.70%)	16	4.08%	19	5.41%	17	14.11% (4/09)
Callan SMID Core MFs	23.08%		(9.54%)		0.96%		3.16%		-

### Returns and Rankings for Periods Ended June 30, 2020

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended June 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Last		Last		Last 3		Last 5		Since	
	Quarter		Year		Years		Years		Inception	1
Tier 2: Active (Net of Fee)										
Stable Value Fund	0.61%	1	2.57%	1	2.38%	3	2.20%	4	2.53%	(7/09)
3 Yr US Treas Rolling	0.05%	100	1.05%	99	1.86%	59	1.57%	83	1.15%	(7/09)
T-Bill + 1.5% Callan Stable Value CT	0.39% 0.46%	91	3.13% 2.07%	1	3.27% 1.90%	1	2.69% 1.71%	1	2.09% -	(7/09)
Fixed Income Fund	5.84%	53	8.74%	26	5.93%	4	5.04%	14	5.20%	(4/09)
Bimbg Barclays Aggregate	2.90%	98	8.74%	26	5.32%	43	4.30%	65	4.39%	(4/09)
Callan Core Plus MFs	5.91%		7.92%		5.12%		4.49%		-	
TCW Core Plus	4.48%	82	9.74%	9	5.94%	4	-		5.69%	(1/17)
Blmbg Barclays Aggregate	2.90%	98	8.74%	26	5.32%	43	4.30%	65	5.22%	(1/17)
Callan Core Plus MFs	5.91%		7.92%		5.12%		4.49%		-	
Prudential Core Plus	7.27%	17	7.84%	54	5.97%	4	5.54%	5	5.04%	(1/15)
Blmbg Barclays Aggregate	2.90%	98	8.74%	26	5.32%	43	4.30%	65	3.89%	(1/15)
Callan Core Plus MFs	5.91%		7.92%		5.12%		4.49%		-	
nflation Responsive Fund	6.88%	85	(4.99%)	50	1.58%	35	1.90%	37	0.88%	(9/11)
Inflation Responsive Benchmark	6.77%	85	(5.24%)	51	0.48%	59	0.46%	56	(0.70%)	(9/11)
Callan Real Assets MFs	9.47%		(5.01%)		0.92%		0.73%		-	
BlackRock Strategic Completion	6.88%	85	(4.94%)	48	-		-		0.27%	
BlackRock Custom Benchmark	6.77%	85	(5.24%)	51	0.76%	57	0.98%	41	(0.03%)	(12/18
Callan Real Assets MFs	9.47%		(5.01%)		0.92%		0.73%		-	
arge Cap Core Equity Fund	24.14%	37	7.23%	48	-		-		10.46%	(10/17
Russell 1000 Index	21.82%	46	7.48%	47	10.64%	47	10.47%	45	9.90%	(10/17
Callan Lg Cap Broad MF	20.75%		6.71%		10.00%		9.58%		-	
Hotchkis & Wiley Large Cap Value	20.31%	10	(14.53%)	94	(0.91%)	87	3.11%	74	13.26%	(4/09)
Russell 1000 Value Index	14.29%	70	(8.84%)	56	1.82%	61	4.64%	53	12.26%	(4/09)
Callan Lg Cap Value MF	16.13%		(8.17%)		2.32%		4.76%		-	
Macquarie Large Cap Value	15.55%	55	(6.97%)	38	3.80%	30	5.61%	29	4.74%	(6/15)
Russell 1000 Value Index	14.29%	70	(8.84%)	56	1.82%	61	4.64%	53	4.15%	(6/15)
Callan Lg Cap Value MF	16.13%		(8.17%)		2.32%		4.76%		-	
Sands Capital Large Cap Growth	39.01%	1	32.88%	1	26.08%	1	18.43%	1	22.25%	
Russell 1000 Growth Index Callan Large Cap Grwth MF	27.84%	55	23.28%	28	18.99% 18.03%	49	15.89%	34	18.07%	(4/09)
Gandri Large Cap Grwitt MF	28.02%		21.48%		18.93%		14.80%		-	
Loomis SaylesLarge Cap Growth	24.35%	86	19.61%	64	17.46%	60	17.08%	9	16.51%	
Russell 1000 Growth Index	27.84%	55	23.28%	28	18.99%	49	15.89%	34	15.51%	(8/14)
Callan Large Cap Grwth MF	28.02%		21.48%		18.93%		14.80%		-	
BlackRock Russell 1000 Index	21.80%	30	7.29%	32	-	_	-	_	9.14%	
Russell 1000 Index	21.82%	30	7.48%	31	10.64%	25	10.47%	21	9.29%	(11/1
Callan Large Cap Core MFs	20.38%		4.00%		8.88%		9.00%		-	

# Callan

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended June 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns a		y3 10							
	Last		Last		Last 3		Last 5		Since
	Quarter		Year		Years		Years		Inception
Tier 2: Active (Net of Fee)									
International Equity Fund	17.81%	51	(1.24%)	45	2.95%	38	4.07%	31	<b>8.85%</b> (4/09)
MSCI ACWI ex US	16.12%	70	(4.80%)	59	1.14%	50	2.26%	52	7.64% (4/09)
Callan Non US Equity MFs	17.85%		(2.32%)		1.04%		2.36%		-
Mondrian ACWI ex-US Value	10.82%	98	(11.80%)	84	(1.66%)	77	0.37%	74	6.20% (4/09)
MSCI ACWI ex US	16.12%	70	(4.80%)	59	1.14%	50	2.26%	52	7.64% (4/09)
Callan Non US Equity MFs	17.85%		(2.32%)		1.04%		2.36%		-
Baillie Gifford ACWI ex-US Growth	24.94%	9	9.67%	7	7.86%	4	8.03%	4	11.98% (4/09)
MSCI ACWI ex US	16.12%	70	(4.80%)	59	1.14%	50	2.26%	52	7.64% (4/09)
Callan Non US Equity MFs	17.85%		(2.32%)		1.04%		2.36%		-
Small/Mid Cap Equity Fund	26.43%	49	(6.61%)	59	-		-		<b>1.76%</b> (10/17
Russell 2500 Index	26.56%	46	(4.70%)	57	4.08%	58	5.41%	54	2.71% (10/17
Callan SMID Broad MFs	25.92%		0.94%		8.13%		7.44%		-
Earnest Partners Small/Mid Cap Value	24.17%	20	(3.36%)	3	4.44%	3	6.42%	1	13.86% (4/09)
Russell 2500 Value Index	20.60%	44	(15.50%)	71	(2.60%)	57	1.85%	34	11.76% (4/09)
Callan SMID Value MFs	19.80%		(11.99%)		(1.90%)		1.40%		-
Wedge Small/Mid Cap Value	22.90%	23	(16.95%)	79	(4.74%)	89	0.40%	71	7.94% (1/12)
Russell 2500 Value Index	20.60%	44	(15.50%)	71	(2.60%)	57	1.85%	34	7.83% (1/12)
Callan SMID Value MFs	19.80%		(11.99%)		(1.90%)		1.40%		-
Brown Advisory Small/Mid Cap Growth		58	2.38%	72	12.13%	48	11.22%	40	16.73% (4/09)
Russell 2500 Growth Index	32.87%	52	9.21%	48	12.10%	48	9.57%	44	16.74% (4/09)
Callan SMID Growth MFs	32.97%		7.96%		12.03%		9.15%		-
BlackRock Russell 2500 Index	27.63%	9	(3.90%)	13	-		-		2.45% (11/1
Russell 2500 Index	26.56%	17	(4.70%)	16	4.08%	19	5.41%	17	2.21% (11/17
Callan SMID Core MFs	23.08%		(9.54%)		0.96%		3.16%		-

# Callan

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	3 Years Ended 6/2020		3 Years Ended 3/2020		3 Years Ended 12/2019		3 Years Ended 9/2019	
lier 2: Passive (Net of Fee)								
Fixed Income Passive	5.26%	59	4.77%	14	3.99%	70	2.87%	72
Blmbg Barclays Aggregate	5.32%	48	4.82%	9	4.03%	64	2.92%	70
Callan Core Bond MFs	5.31%		4.27%		4.17%		3.12%	
Large Cap Passive	10.75%	22	5.12%	28	15.28%	20	13.40%	22
S&P 500 Index	10.73%	23	5.10%	28	15.27%	20	13.39%	22
Callan Large Cap Core MFs	8.88%		3.07%		13.63%		12.11%	
International Passive	1.38%	49	(1.71%)	48	10.18%	49	6.60%	40
MSCI ACWI ex US	1.14%	50	(1.96%)	49	9.87%	50	6.33%	45
Callan Non US Equity MFs	1.04%		(2.03%)		9.96%		5.94%	
SMID Cap Passive	3.97%	19	(3.20%)	29	10.23%	25	9.44%	35
Russell 2500 Index	4.08%	19	(3.10%)	28	10.33%	24	9.51%	35
Callan SMID Core MFs	0.96%		(5.16%)		8.56%		8.59%	

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	3 Years Ended 6/2020		3 Years Ended 3/2020		3 Years Ended 12/2019		3 Years Ended 9/2019	
Tier 2: Active (Net of Fee)								
Stable Value Fund 3 Yr US Treas Rolling T-Bill + 1.5% Callan Stable Value CT	<b>2.38%</b> 1.86% 3.27% 1.90%	<b>3</b> 59 1	<b>2.34%</b> 1.97% 3.33% 1.88%	<b>6</b> 38 1	<b>2.29%</b> 2.03% 3.17% 1.82%	<b>6</b> 21 1	<b>2.24%</b> 2.00% 3.04% 1.79%	<b>7</b> 17 1
Fixed Income Fund Bimbg Barclays Aggregate Callan Core Plus MFs	<b>5.93%</b> 5.32% 5.12%	<b>4</b> 43	<b>4.57%</b> 4.82% 3.80%	<b>8</b> 3	<b>5.03%</b> 4.03% 4.39%	<b>13</b> 81	<b>3.90%</b> 2.92% 3.45%	<b>18</b> 85
Prudential Core Plus Blmbg Barclays Aggregate Callan Core Plus MFs	5.97% 5.32% 5.12%	4 43	4.28% 4.82% 3.80%	25 3	5.79% 4.03% 4.39%	4 81	4.65% 2.92% 3.45%	4 85
Inflation Responsive Fund Inflation Responsive Benchmark Callan Real Assets MFs	<b>1.58%</b> 0.48% 0.92%	<b>35</b> 59	<b>(0.62%)</b> (1.83%) (2.03%)	<b>31</b> 48	<b>5.45%</b> 3.99% 4.98%	<b>43</b> 67	<b>4.27%</b> 2.39% 3.15%	<b>21</b> 71
Large Cap Core Equity Fund								
Hotchkis & Wiley Large Cap Value Russell 1000 Value Index Callan Lg Cap Value MF	<mark>(0.91%)</mark> 1.82% 2.32%	87 61	(5.70%) (2.18%) (2.23%)	86 50	10.22% 9.68% 10.14%	47 57	10.83% 9.43% 10.12%	37 69
Macquarie Large Cap Value Russell 1000 Value Index Callan Lg Cap Value MF	3.80% 1.82% 2.32%	30 61	(1.17%) (2.18%) (2.23%)	39 50	10.33% 9.68% 10.14%	46 57	9.39% 9.43% 10.12%	69 69
Sands Capital Large Cap Growth Russell 1000 Growth Index Callan Large Cap Grwth MF	26.08% 18.99% 18.93%	1 49	15.63% 11.32% 11.33%	3 50	24.52% 20.49% 20.50%	3 50	17.41% 16.89% 16.24%	30 35
Loomis SaylesLarge Cap Growth Russell 1000 Growth Index Callan Large Cap Grwth MF	17.46% 18.99% 18.93%	60 49	12.26% 11.32% 11.33%	37 50	20.17% 20.49% 20.50%	57 50	14.76% 16.89% 16.24%	73 35
International Equity Fund MSCI ACWI ex US Callan Non US Equity MFs	<b>2.95%</b> 1.14% 1.04%	<b>38</b> 50	<b>(0.47%)</b> (1.96%) (2.03%)	<b>38</b> 49	<b>11.57%</b> 9.87% 9.96%	<b>34</b> 50	<b>6.77%</b> 6.33% 5.94%	<b>37</b> 45
Mondrian ACWI ex-US Value MSCI ACWI ex US Callan Non US Equity MFs	<mark>(1.66%)</mark> 1.14% 1.04%	77 50	(3.76%) (1.96%) (2.03%)	69 49	8.91% 9.87% 9.96%	62 50	5.06% 6.33% 5.94%	66 45
Baillie Gifford ACWI ex-US Growth MSCI ACWI ex US Callan Non US Equity MFs	7.86% 1.14% 1.04%	4 50	3.09% (1.96%) (2.03%)	3 49	14.68% 9.87% 9.96%	4 50	8.87% 6.33% 5.94%	7 45
Small/Mid Cap Equity Fund								
Earnest Partners Small/Mid Cap Value Russell 2500 Value Index Callan SMID Value MFs	4.44% (2.60%) (1.90%)	3 57	(2.24%) (8.40%) (8.53%)	6 45	10.97% 6.12% 6.63%	3 55	11.01% 6.87% 7.18%	6 54
Wedge Small/Mid Cap Value Russell 2500 Value Index Callan SMID Value MFs	(4.74%) (2.60%) (1.90%)	89 57	(10.57%) (8.40%) (8.53%)	87 45	5.13% 6.12% 6.63%	64 55	5.99% 6.87% 7.18%	62 54
Brown Advisory Small/Mid Cap Growth Russell 2500 Growth Index Callan SMID Growth MFs	12.13% 12.10% 12.03%	48 48	3.71% 3.35% 3.35%	47 50	15.63% 15.17% 15.64%	50 62	12.28% 12.33% 13.13%	69 67

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended June 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Retui	rns and Rankin	igs fo	r Periods I	Endec	d June 30,	2020				
	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inceptior	ı
Tier 2: Active (Gross of Fee) Stable Value Fund										
Galliard Stable Value 3 Yr US Treas Rolling T-Bill + 1.5% Callan Stable Value SA	0.64% 0.05% 0.39% 0.59%	19 99 96	2.70% 1.05% 3.13% 2.54%	17 98 3	2.54% 1.86% 3.27% 2.41%	24 92 4	2.38% 1.57% 2.69% 2.29%	18 94 12	2.53% 1.13% 2.16% -	(1/11) (1/11) (1/11)
Fixed Income Fund										
TCW Core Plus Blmbg Barclays Aggregate Callan Core Bond Fl	4.51% 2.90% 4.31%	35 98	9.88% 8.74% 9.22%	15 74	6.12% 5.32% 5.69%	8 87	- 4.30% 4.68%	98	5.85% 5.22% -	(1/17) (1/17)
Prudential Core Plus Blmbg Barclays Aggregate Callan Core Bond Fl	7.27% 2.90% 4.31%	1 98	7.84% 8.74% 9.22%	96 74	6.10% 5.32% 5.69%	9 87	5.72% 4.30% 4.68%	2 98	5.23% 3.89% -	(1/15) (1/15)
Inflation Responsive Fund										
BlackRock Strategic Completion BlackRock Custom Benchmark Callan Real Assets	6.90% 6.77% 10.31%	89 89	(4.85%) (5.24%) (4.98%)	47 57	- 0.76% 1.88%	75	- 0.98% 1.39%	59	1.08% 0.68% -	
Large Cap Core Equity Fund										
Hotchkis & Wiley Large Cap Value Russell 1000 Value Index Callan Large Cap Value	20.40% 14.29% 16.70%	10 75	(14.19%) (8.84%) (7.63%)	91 60	<mark>(0.52%)</mark> 1.82% 2.33%	85 62	3.56% 4.64% 4.90%	72 56	13.79% 12.26% -	(4/09) (4/09)
Macquarie Large Cap Value Russell 1000 Value Index Callan Large Cap Value	15.61% 14.29% 16.70%	62 75	(6.70%) (8.84%) (7.63%)	36 60	4.09% 1.82% 2.33%	21 62	5.91% 4.64% 4.90%	24 56	5.04% 4.15% -	(6/15) (6/15)
Sands Capital Large Cap Growth Russell 1000 Growth Index Callan Large Cap Growth	39.10% 27.84% 27.60%	2 46	33.44% 23.28% 21.14%	2 31	26.63% 18.99% 18.27%	2 42	18.98% 15.89% 14.82%	3 31	22.85% 18.07% -	(4/09) (4/09)
Loomis SaylesLarge Cap Growth Russell 1000 Growth Index Callan Large Cap Growth	24.43% 27.84% 27.60%	80 46	20.05% 23.28% 21.14%	59 31	17.89% 18.99% 18.27%	54 42	17.52% 15.89% 14.82%	13 31	16.95% 15.51% -	(8/14) (8/14)
BlackRock Russell 1000 Index Russell 1000 Index Callan Large Cap Core	21.81% 21.82% 20.73%	21 21	7.30% 7.48% 6.23%	38 37	- 10.64% 9.86%	36	- 10.47% 9.98%	34	9.14% 9.29% -	(11/17) (11/17)
International Equity Fund										
Mondrian ACWI ex-US Value MSCI ACWI ex US Callan NonUS Eq	10.91% 16.12% 17.13%	97 66	(11.46%) (4.80%) (2.48%)	91 58	<mark>(1.28%)</mark> 1.14% 1.93%	75 57	0.78% 2.26% 2.92%	81 58	6.68% 7.64% -	(4/09) (4/09)
Baillie Gifford ACWI ex-US Growth MSCI ACWI ex US Callan NonUS Eq	25.01% 16.12% 17.13%	4 66	9.98% (4.80%) (2.48%)	6 58	8.17% 1.14% 1.93%	9 57	8.41% 2.26% 2.92%	5 58	12.45% 7.64% -	(4/09) (4/09)
Small/Mid Cap Equity Fund										
Earnest Partners Small/Mid Cap Value Russell 2500 Value Index Callan Small/MidCap Value	24.28% 20.60% 21.22%	17 62	(2.94%) (15.50%) (16.56%)	8 43	4.91% (2.60%) (3.01%)	7 39	6.93% 1.85% 1.58%	7 43	14.45% 11.76% -	(4/09) (4/09)
Wedge Small/Mid Cap Value Russell 2500 Value Index Callan Small/MidCap Value	23.00% 20.60% 21.22%	30 62	(16.57%) (15.50%) (16.56%)	50 43	(4.21%) (2.60%) (3.01%)	70 39	1.02% 1.85% 1.58%	58 43	8.66% 7.83% -	(1/12) (1/12)
Brown Advisory Small/Mid Cap Growth Russell 2500 Growth Index Callan Sm/MidCap Growth	32.15% 32.87% 35.12%	70 61	2.90% 9.21% 12.70%	78 55	12.70% 12.10% 13.86%	65 67	11.81% 9.57% 11.96%	52 67	17.36% 16.74% -	(4/09) (4/09)
BlackRock Russell 2500 Index Russell 2500 Index Callan Small/MidCap Core	27.63% 26.56% 23.19%	9 12	(3.90%) (4.70%) (7.25%)	26 32	- 4.08% 2.94%	35	- 5.41% 4.67%	42	2.45% 2.21% -	(11/17) (11/17)

### Returns and Rankings for Periods Ended June 30, 2020



The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	3 Years Ended 6/2020		3 Years Ended 3/2020		3 Years Ended 12/2019		3 Years Ended 9/2019	
Tier 2: Active (Gross of Fee) Stable Value Fund								
Galliard Stable Value	2.54%	24	2.50%	20	2.45%	20	2.40%	25
3 Yr US Treas Rolling	1.86%	92	1.97%	85	2.03%	83	2.00%	82
T-Bill + 1.5%	3.27%	4	3.33%	3	3.17%	4	3.04%	11
Callan Stable Value SA	2.41%		2.37%		2.34%		2.31%	
Fixed Income Fund								
Prudential Core Plus	6.10%	9	4.43%	84	5.96%	1	4.84%	1
Blmbg Barclays Aggregate	5.32%	87	4.82%	41	4.03%	89	2.92%	94
Callan Core Bond FI	5.69%		4.77%		4.38%		3.32%	
Large Cap Core Equity Fund								
Hotchkis & Wiley Large Cap Value	(0.52%)	85	(5.31%)	84	10.67%	35	11.30%	24
Russell 1000 Value Index	1.82%	62	(2.18%)	52	9.68%	67	9.43%	70
Callan Large Cap Value	2.33%		(1.99%)		10.28%		10.02%	
Macquarie Large Cap Value	4.09%	21	(0.89%)	32	10.63%	37	9.70%	60
Russell 1000 Value Index	1.82%	62	(2.18%)	52	9.68%	67	9.43%	70
Callan Large Cap Value	2.33%		(1.99%)		10.28%	0.	10.02%	
Sands Capital Large Cap Growth	26.63%	2	16.16%	6	25.08%	6	17.94%	34
Russell 1000 Growth Index	18.99%	42	11.32%	48	20.49%	51	16.89%	48
Callan Large Cap Growth	18.27%		11.11%		20.60%		16.62%	
Loomis SaylesLarge Cap Growth	17.89%	54	12.69%	32	20.62%	50	15.19%	67
Russell 1000 Growth Index	18.99%	42	11.32%	48	20.49%	51	16.89%	48
Callan Large Cap Growth	18.27%		11.11%		20.60%		16.62%	
International Equity Fund								
Mondrian ACWI ex-US Value	(1.28%)	75	(3.38%)	72	9.33%	69	5.48%	72
MSCI ACWI ex US	1.14%	57	(1.96%)	62	9.87%	58	6.33%	54
Callan NonUS Eq	1.93%		(1.23%)		10.22%		6.62%	
Baillie Gifford ACWI ex-US Growth	8.17%	9	3.41%	13	15.03%	10	9.22%	12
MSCI ACWI ex US	1.14%	57	(1.96%)	62	9.87%	58	6.33%	54
Callan NonUS Eq	1.93%		(1.23%)		10.22%		6.62%	
Small/Mid Cap Equity Fund								
Earnest Partners Small/Mid Cap Value	4.91%	7	(1.78%)	9	11.48%	9	11.53%	10
Russell 2500 Value Index	(2.60%)	39	(8.40%)	48	6.12%	51	6.87%	60
Callan Small/MidCap Value	(3.01%)		(8.62%)		6.25%		7.39%	
Wedge Small/Mid Cap Value	(4.21%)	70	(10.05%)	72	5.75%	53	6.66%	63
Russell 2500 Value Index	(2.60%)	39	(8.40%)	48	6.12%	51	6.87%	60
Callan Small/MidCap Value	(3.01%)		(8.62%)		6.25%		7.39%	
Brown Advisory Small/Mid Cap Growth	12.70%	65	4.26%	57	16.22%	58	12.86%	63
Russell 2500 Growth Index	12.10%	67	3.35%	68	15.17%	70	12.33%	77
							14.25%	

# Callan

The table below details the rates of return for the Fund's investment funds over various time periods ended June 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

R	eturns for Peri	ods Ended Jun	e 30, 2020		
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception
er 1: GoalMaker Funds (Net of Fee)					
Post Retirement Conservative 11+	6.69%	5.66%	-	-	5.78% (7/1
Post Ret Conservative 11+ Index	5.56%	5.03%	-	-	5.23% (7/1
Post Retirement Conservative 6-10	7.11%	5.81%	-	-	5.98% (7/1
Post Ret Conservative 6-10 Index	5.85%	5.17%	-	-	5.40% (7/1
Post Retirement Conservative 0-5	7.92%	5.75%	-	-	6.07% (7/1
Post Ret Conservative 0-5 Index	6.59%	5.24%	-	-	5.53% (7/1
Pre Retirement Conservative 0-5	8.94%	5.98%	5.60%	4.90%	5.98% (7)
Pre Ret Conservative 0-5 Index	7.44%	5.45%	5.14%	4.44%	5.02% (7/0
Pre Retirement Conservative 6-10	10.34%	5.67%	5.95%	5.33%	6.86% (7/0
Pre Ret Conservative 6-10 Index	8.77%	5.15%	5.42%	4.81%	5.81% (7/0
Pre Retirement Conservative 11-15	11.71%	5.35%	6.54%	6.10%	8.13% (7/0
Pre Ret Conservative 11-15 Index	10.16%	4.92%	5.97%	5.60%	7.44% (7/0
Pre Retirement Conservative 16-20	13.27%	4.76%	7.08%	6.81%	9.47% (7/0
Pre Ret Conservative 16-20 Index	11.74%	4.15%	6.37%	6.24%	8.87% (7/0
Pre Retirement Conservative 21-25	14.85%	4.09%	-	-	5.59% (7/1
Pre Ret Conservative 21-25 Index	13.47%	3.49%	-	-	4.77% (7/1
Pre Retirement Conservative 26+	16.19%	3.05%	-	-	4.88% (7/1
Pre Ret Conservative 26+ Index	15.04%	2.28%	-	-	3.95% (7/1

# Returns for Periods Ended June 30, 2020

The table below details the rates of return for the Fund's investment funds over various time periods ended June 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	<b>Returns for Peri</b>	ods Ended Jun	e 30, 2020		
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception
er 1: GoalMaker Funds (Net of Fee	)				
Post Retirement Moderate 11+	8.58%	5.35%	-	-	5.68% (7/1
Post Ret Moderate 11+ Index	7.58%	4.68%	-	-	5.10% (7/1
Post Retirement Moderate 6-10	9.40%	5.37%	-	-	5.86% (7/1
Post Ret Moderate 6-10 Index	9.99%	3.01%	-	-	3.95% (7/1
Post Retirement Moderate 0-5	10.64%	5.52%	-	-	6.18% (7/1
Post Ret Moderate 0-5 Index	9.31%	5.00%	-	-	5.58% (7/1
Pre Retirement Moderate 0-5	11.57%	5.33%	6.08%	5.54%	7.19% (7/0
Pre Ret Moderate 0-5 Index	10.13%	4.76%	5.52%	5.01%	6.32% (7/0
Pre Retirement Moderate 6-10	13.15%	4.68%	6.27%	5.94%	7.95% (7)0
Pre Ret Moderate 6-10 Index	11.75%	4.05%	5.60%	5.37%	7.33% (7/0
Pre Retirement Moderate 11-15	14.69%	3.93%	6.52%	6.37%	9.00% (7/
Pre Ret Moderate 11-15 Index	13.39%	3.25%	5.77%	5.76%	8.31% (7/0
Pre Retirement Moderate 16-20	16.19%	3.05%	6.92%	6.96%	10.25% (7/0
Pre Ret Moderate 16-20 Index	15.04%	2.28%	6.09%	6.33%	9.71% (7/0
Pre Retirement Moderate 21-25	17.12%	2.28%	-	-	4.36% (7/
Pre Ret Moderate 21-25 Index	16.14%	1.29%	-	-	3.29% (7/1
Pre Retirement Moderate 26+	18.21%	1.50%	-	-	3.85% (7/2
Pre Ret Moderate 26+ Index	17.41%	0.43%	-	-	2.72% (7/

# Returns for Periods Ended June 30, 2020

The table below details the rates of return for the Fund's investment funds over various time periods ended June 30, 2020. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	Returns for Peri	ods Ended Jun	e 30, 2020		
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception
er 1: GoalMaker Funds (Net of Fee)					
Post Retirement Aggressive 11+	10.98%	5.08%	-	-	5.70% (7/18
Post Ret Aggressive 11+ Index	10.05%	4.36%	-	-	5.05% (7/18
Post Retirement Aggressive 6-10	12.00%	5.00%	-	-	5.76% (7/18
Post Ret Aggressive 6-10 Index	11.03%	4.23%	-	-	5.05% (7/18
Post Retirement Aggressive 0-5	13.13%	4.95%	-	_	5.95% (7/1)
Post Ret Aggressive 0-5 Index	11.97%	4.35%	-	-	5.27% (7/18
Pre Retirement Aggressive 0-5	14.58%	4.38%	6.34%	6.05%	8.35% (7/0
Pre Ret Aggressive 0-5 Index	13.37%	3.83%	5.69%	5.50%	7.58% (7/0
Pre Retirement Aggressive 6-10	15.84%	3.43%	6.32%	6.25%	9.03% (7/0
Pre Ret Aggressive 6-10 Index	14.69%	2.59%	5.50%	5.60%	8.23% (7/0
Pre Retirement Aggressive 11-15	17.12%	2.28%	6.41%	6.57%	9.84% (7/0
Pre Ret Aggressive 11-15 Index	16.14%	1.29%	5.48%	5.88%	9.29% (7/0
Pre Retirement Aggressive 16-20	18.07%	1.56%	6.80%	7.15%	11.08% (7/0
Pre Ret Aggressive 16-20 Index	17.23%	0.49%	5.85%	6.46%	10.66% (7/0
Pre Retirement Aggressive 21-25	18.61%	1.03%	-	-	3.53% (7/1
Pre Ret Aggressive 21-25 Index	17.89%	(0.18%)	-	-	2.31% (7/18
Pre Retirement Aggressive 26+	18.61%	1.03%	-	-	3.53% (7/1
Pre Ret Aggressive 26+ Index	17.89%	(0.18%)	-	-	2.31% (7/1

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The table below details the rates of return for the Fund's investment funds over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	3 Years Ended 6/2020	3 Years Ended 3/2020	3 Years Ended 12/2019	3 Years Ended 9/2019	
Tier 1: GoalMaker Funds (Net of Fee)					
Pre Retirement Conservative 0-5	5.60%	3.23%	6.41%	5.20%	
Pre Ret Conservative 0-5 Index	5.14%	3.19%	5.85%	4.79%	
Pre Retirement Conservative 6-10	5.95%	3.25%	7.39%	6.04%	
Pre Ret Conservative 6-10 Index	5.42%	3.14%	6.70%	5.56%	
Pre Retirement Conservative 11-15	6.54%	3.61%	8.85%	7.38%	
Pre Ret Conservative 11-15 Index	5.97%	3.42%	8.05%	6.86%	
Pre Retirement Conservative 16-20	7.08%	3.86%	10.49%	8.87%	
Pre Ret Conservative 16-20 Index	6.37%	3.50%	9.53%	8.29%	

The table below details the rates of return for the Fund's investment funds over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	3 Years Ended 6/2020	3 Years Ended 3/2020	3 Years Ended 12/2019	3 Years Ended 9/2019	
Tier 1: GoalMaker Funds (Net of Fee)					
Pre Retirement Moderate 0-5	6.08%	3.06%	8.02%	6.48%	
Pre Ret Moderate 0-5 Index	5.52%	2.87%	7.32%	6.01%	
Pre Retirement Moderate 6-10	6.27%	2.91%	9.06%	7.25%	
Pre Ret Moderate 6-10 Index	5.60%	2.57%	8.21%	6.71%	
Pre Retirement Moderate 11-15	6.52%	2.85%	10.26%	8.28%	
Pre Ret Moderate 11-15 Index	5.77%	2.38%	9.31%	7.69%	
Pre Retirement Moderate 16-20	6.92%	3.00%	11.83%	9.76%	
Pre Ret Moderate 16-20 Index	6.09%	2.38%	10.78%	9.15%	

The table below details the rates of return for the Fund's investment funds over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	3 Years Ended 6/2020	3 Years Ended 3/2020	3 Years Ended 12/2019	3 Years Ended 9/2019	
Tier 1: GoalMaker Funds (Net of Fee)					
Pre Retirement Aggressive 0-5	6.34%	2.58%	9.52%	7.50%	
Pre Ret Aggressive 0-5 Index	5.69%	2.19%	8.68%	6.97%	
Pre Retirement Aggressive 6-10	6.32%	2.31%	10.43%	8.18%	
Pre Ret Aggressive 6-10 Index	5.50%	1.73%	9.44%	7.59%	
Pre Retirement Aggressive 11-15	6.41%	2.18%	11.56%	9.22%	
Pre Ret Aggressive 11-15 Index	5.48%	1.42%	10.48%	8.60%	
Pre Retirement Aggressive 16-20	6.80%	2.49%	12.99%	10.66%	
Pre Ret Aggressive 16-20 Index	5.85%	1.64%	11.87%	10.07%	

# The North Carolina Supplemental Retirement Plans Investment Manager Performance Monitoring Summary Report June 30, 2020

Investment Manager		Last Quarter Return	Last Year Return	3 Year Return	5 Year Return (	3 Year Return Consistency	5 Year Sharpe Ratio	5 Year Excess Rtn Ratio	5 Year Tracking Error	
Tier 2: Passive vs. Net of Fee G	roups									
Fixed Income Passive (i) Callan Core Bond MFs Blmbg Barclays Aggregate		<b>2.9</b> 93 2.9 93	<ul><li>8.7 43</li><li>8.7 42</li></ul>	<b>5.3</b> 59 5.3 48	<b>4.3</b> 60 4.3 57		<b>0.9</b> 44	<b>-0.8</b> 99	<b>0.1</b> 100	
Treasury Inflation Protected (i) Callan TIPS MFs		<b>3.7</b> 85	<b>5.8</b> 58	<b>5.0</b> 19	<b>3.8</b> 23		<b>0.7</b> 18		<b>1.1</b> 92	
BImbg US TIPS 1-10 Yr Large Cap Passive (i) Callan Large Cap Core MFs S&P 500 Index		3.8 85 <b>20.5</b> 43 20.5 43	5.7 58 <b>7.5</b> 31 7.5 31	3.9 66 <b>10.7</b> 22 10.7 23	<ul><li>3.0 66</li><li>10.7 19</li><li>10.7 19</li></ul>		0.6 32 0.6 21 0.6 21	<b>-0.4</b> 36	<b>0.0</b> 100	
International Passive (i) Callan Non US Equity MFs MSCI ACWI ex US		<b>16.2</b> 70	-4.6 58 -4.8 59	<b>1.4</b> 49	<b>2.3</b> 52		0.0 21 0.1 48 0.1 52	<b>0.4</b> 31	<b>0.5</b> 100	
SMID Cap Passive (i) Callan SMID Core MFs Russell 2500 Index		<b>26.5</b> 17 26.6 17	<b>-4.8</b> 16 -4.7 16	<b>4.0</b> 19 4.1 19	<b>5.4</b> 21		0.2 20 0.2 20	<b>-0.6</b> 54	0.1 99	
Tier 2: Active vs. Net of Fee Gro	oups									
Stable Value Fund Callan Stable Value CT		<b>0.6</b> 1	<b>2.6</b> 1 3.1 1	<b>2.4</b> 3 3.3 1	<b>2.2</b> 4 2.7 1		<b>7.2</b> 18 3.3 52	<b>-1.4</b> 8	<b>0.3</b> 27	
T-Bill + 1.5% Fixed Income Fund Callan Core Plus MFs		0.4 91 <b>5.8</b> 53	<b>8.7</b> 26	<b>5.9</b> 4	<b>5.0</b> 14		<b>1.0</b> 20	<b>0.4</b> 12	<b>2.1</b> 76	
Blmbg Barclays Aggregate TCW Core Plus Callan Core Plus MFs		2.9 98 4.5 82	8.7 26 9.7 9	5.3 43 5.9 4	4.3 65		0.9 26			
Blmbg Barclays Aggregate Prudential Core Plus		2.9 98 7.3 17	8.7 26 <b>7.8</b> 54	5.3 43 6.0 4	4.3 65 <b>5.5</b> 5		0.9 26 0.9 36	<b>0.4</b> 12	<b>3.5</b> 24	
Callan Core Plus MFs Blmbg Barclays Aggregate		2.9 98	8.7 26	5.3 43	4.3 65		0.9 26			
Returns: above median third quartile fourth quartile	Return Consistency: above median third quartile fourth quartile	Sharpe Ratio: above median third quartile fourth quartile			Excess Return Ratio: above median third quartile fourth quartile			Tracking Error: below median second quartile first quartile		

(i) - Indexed scoring method used. Green: manager & index ranking differ by <= +/- 10%tile. Yellow: manager & index ranking differ by <= +/- 20%tile. Red: manager & index ranking differ by > +/- 20%tile.


Investment Manager	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return (	3 Year Return Consistency	5 Year Sharpe Ratio	5 Year Excess Rtn Ratio	5 Year Tracking Error	
Inflation Responsive Fund	<b>6.9</b> 85	<b>-5.0</b> 50	<b>1.6</b> 35	<b>1.9</b> 37		<b>0.1</b> 22	<b>1.0</b> 1	<b>1.5</b> 100	
Callan Real Assets MFs Inflation Responsive Benchmark	<b>6.8</b> 85	-5.2 51	0.5 59	0.5 56		-0.1 44			
BlackRock Strategic Completion Callan Real Assets MFs	<b>6.9</b> 85	<b>-4.9</b> 48							
BlackRock Custom Benchmark	<b>6.8</b> 85	-5.2 51	0.8 57	1.0 41		-0.0 41			
Large Cap Core Equity Fund Callan Lg Cap Broad MF Russell 1000 Index	<b>24.1</b> 37 21.8 46	<b>7.2</b> 48 7.5 47	10.6 47	10.5 45		0.5 47			
Hotchkis & Wiley Large Cap Value Callan Lg Cap Value MF	<b>20.3</b> 10	<b>-14.5</b> 94	<b>-0.9</b> 87	<b>3.1</b> 74		<b>0.1</b> 81	<b>-0.2</b> 64	<b>6.7</b> 8	
Russell 1000 Value Index	14.3 70	<b>-8.8</b> 56	1.8 61	4.6 53		0.2 49			
Macquarie Large Cap Value Callan Lg Cap Value MF Russell 1000 Value Index	<b>15.5</b> 55 14.3 70	<b>-7.0</b> 38	<b>3.8</b> 30	<b>5.6</b> 29 4.6 53		<b>0.3</b> 29 0.2 49	<b>0.2</b> 29	<b>4.1</b> 30	
Sands Capital Large Cap Growth	<b>39.0</b> 1	<b>32.9</b> 1	<b>26.1</b> 1	<b>18.4</b> 1		<b>0.2</b> 49 <b>0.7</b> 58	<b>0.2</b> 8	11.4 1	
Callan Large Cap Growth MF Russell 1000 Growth Index	27.8 55	23.3 28	19.0 49	15.9 34		0.8 21	0.2 0		
Loomis SaylesLarge Cap Growth Callan Large Cap Grwth MF	<b>24.3</b> 86	<b>19.6</b> 64	<b>17.5</b> 60	<b>17.1</b> 9		<b>0.9</b> 3	<b>0.2</b> 9	<b>5.6</b> 26	
Russell 1000 Growth Index	27.8 55	23.3 28	19.0 49	15.9 34		0.8 21			
BlackRock Russell 1000 Index (i) Callan Large Cap Core MFs	<b>21.8</b> 30	<b>7.3</b> 32							
Russell 1000 Index	21.8 30	7.5 31	10.6 25	10.5 21		0.5 32			
International Equity Fund Callan Non US Equity MFs	<b>17.8</b> 51	<b>-1.2</b> 45	<b>3.0</b> 38	<b>4.1</b> 31		<b>0.2</b> 31	<b>1.1</b> 1	<b>1.7</b> 98	
MSCI ACWI ex US	<b>16.1</b> 70	-4.8 59	1.1 50	2.3 52		0.1 52			
Mondrian ACWI ex-US Value Callan Non US Equity MFs	<b>10.8</b> 98	<b>-11.8</b> 84	<b>-1.7</b> 77	<b>0.4</b> 74		<b>-0.0</b> 74	<b>-0.5</b> 75	<b>3.8</b> 65	
MSCI ACWI ex US	16.1 70	-4.8 59	1.1 50	2.3 52		0.1 52			
Returns:Return Consistency:above medianabove medianthird quartilethird quartilefourth quartilefourth quartile		Sharpe Rat above m third qua fourth qu	edian rtile		Excess R above third qu fourth o	uartile	:		w median nd quartile

(i) - Indexed scoring method used. Green: manager & index ranking differ by <= +/- 10%tile. Yellow: manager & index ranking differ by <= +/- 20%tile. Red: manager & index ranking differ by > +/- 20%tile.



Investment Manager		Last Quarter Return	Last Year Return	3 Year Return	5 Year Return C	3 Year Return Consistency	5 Year Sharpe Ratio	5 Year Excess Rtn Ratio	5 Year Tracking Error		
Baillie Gifford ACWI ex- Callan Non US Equity MFs	US Growth	<b>24.9</b> 9	<b>9.7</b> 7	<b>7.9</b> 4	<b>8.0</b> 4		<b>0.3</b> 3	<b>1.1</b> 1	<b>5.0</b> 37		
MSCI ACWI ex US		16.1 70	-4.8 59	1.1 50	2.3 52		0.1 52				
Small/Mid Cap Equity Fun Callan SMID Broad MFs	ld	<b>26.4</b> 49	<b>-6.6</b> 59								
Russell 2500 Index		26.6 46	-4.7 57	4.1 58	5.4 54		0.2 55				
Earnest Partners Small/ Callan SMID Value MFs	Mid Cap Value	<b>24.2</b> 20	<b>-3.4</b> 3	<b>4.4</b> 3	<b>6.4</b> 1		<b>0.2</b> 1	<b>0.8</b> 7	<b>5.8</b> 26		
Russell 2500 Value Index		20.6 44	<b>-15.5</b> 71	-2.6 57	1.8 34		0.0 34				
Wedge Small/Mid Cap V Callan SMID Value MFs	alue	<b>22.9</b> 23	<b>-16.9</b> 79	<b>-4.7</b> 89	<b>0.4</b> 71		<b>-0.0</b> 71	<b>-0.6</b> 86	<b>2.3</b> 98		
Russell 2500 Value Index		20.6 44	<b>-15.5</b> 71	-2.6 57	1.8 34		0.0 34				
Brown Advisory Small/M Callan SMID Growth MFs	/lid Cap Growth	<b>32.1</b> 58	<b>2.4</b> 72	<b>12.1</b> 48	<b>11.2</b> 40		<b>0.4</b> 41	<b>0.3</b> 38	<b>5.3</b> 37		
Russell 2500 Growth Inde	ex	32.9 52	9.2 48	12.1 48	9.6 44		0.3 53				
BlackRock Russell 2500 Callan SMID Core MFs	Index (i)	<b>27.6</b> 9	<b>-3.9</b> 13								
Russell 2500 Index		26.6 17	-4.7 16	<b>4.1</b> 19	5.4 17		0.2 20				
Returns: above median	Return Consistency: above median	Sharpe Ratio: above median bind quartile			Excess Return Ratio: above median			belo	g Error: w median		
<ul> <li>third quartile</li> <li>fourth quartile</li> <li>fourth quartile</li> </ul>			third quartile fourth quartile			third quartile fourth quartile				second quartile first quartile	

(i) - Indexed scoring method used. Green: manager & index ranking differ by <= +/- 10%tile. Yellow: manager & index ranking differ by <= +/- 20%tile. Red: manager & index ranking differ by > +/- 20%tile.



Investment Manager	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	3 Year Return Consistency	5 Year Sharpe Ratio	5 Year Excess Rtn Ratio	5 Year Tracking Error	
Tier 2: Active vs. Gross of Fee Groups									
Stable Value Fund									
Galliard Stable Value Callan Stable Value SA	<b>0.6</b> 19	<b>2.7</b> 17	<b>2.5</b> 24	<b>2.4</b> 18		<b>9.4</b> 30	<b>-0.9</b> 17	<b>0.4</b> 29	
T-Bill + 1.5%	0.4 96	<b>3.1</b> 3	3.3 4	2.7 12	:	3.3 90			
Fixed Income Fund									
TCW Core Plus Callan Core Bond Fl	<b>4.5</b> 35	<b>9.9</b> 15	<b>6.1</b> 8	<b>4.8</b> 36	;	<b>1.1</b> 8	<b>0.6</b> 31	<b>0.8</b> 61	
BImbg Aggregate	2.9 98	8.7 74	5.3 87	4.3 98	s	0.9 86			
Prudential Core Plus Callan Core Bond Fl	<b>7.3</b> 1	<b>7.8</b> 96	<b>6.1</b> 9	<b>5.7</b> 2		<b>1.0</b> 83	<b>0.4</b> 50	3.5 1	
Blmbg Aggregate	2.9 98	8.7 74	5.3 87	4.3 98		0.9 86			
Inflation Responsive Fund									
BlackRock Strategic Completion Callan Real Assets	<b>6.9</b> 89	<b>-4.9</b> 47	<b>1.1</b> 68	<b>1.3</b> 52		<b>0.0</b> 52	<b>3.0</b> 4	<b>0.1</b> 96	
BlackRock Custom Benchmark	<b>6.8</b> 89	<b>-5.2</b> 57	0.8 75	1.0 59		-0.0 60			
Large Cap Core Equity Fund									
Hotchkis & Wiley Large Cap Value Callan Large Cap Value	<b>20.4</b> 10	<b>-14.2</b> 91	<b>-0.5</b> 85	<b>3.6</b> 72		<b>0.1</b> 80	<b>-0.2</b> 65	<b>6.7</b> 11	
Russell 1000 Value Index	14.3 75	-8.8 60	1.8 62	4.6 56		0.2 53			
Macquarie Large Cap Value Callan Large Cap Value	<b>15.6</b> 62	<b>-6.7</b> 36	<b>4.1</b> 21	<b>5.9</b> 24		<b>0.3</b> 19	<b>0.3</b> 31	<b>4.1</b> 38	
Russell 1000 Value Index	14.3 75	-8.8 60	1.8 62	4.6 56	;	0.2 53			
Sands Capital Large Cap Growth Callan Large Cap Growth	<b>39.1</b> 2	<b>33.4</b> 2	<b>26.6</b> 2	<b>19.0</b> 3		<b>0.7</b> 55	<b>0.3</b> 19	<b>11.4</b> 2	
Russell 1000 Growth Index	27.8 46	23.3 31	19.0 42	<b>15.9</b> 31		0.8 26			
Loomis SaylesLarge Cap Growth Callan Large Cap Growth	<b>24.4</b> 80	<b>20.1</b> 59	<b>17.9</b> 54	<b>17.5</b> 13		<b>1.0</b> 4	<b>0.3</b> 19	<b>5.6</b> 22	
Russell 1000 Growth Index	27.8 46	<b>23.3</b> 31	19.0 42	<b>15.9</b> 31		0.8 26			

Returns: above median third quartile fourth quartile Return Consistency: above median third quartile fourth quartile Sharpe Ratio: above median third quartile fourth quartile Excess Return Ratio: above median third quartile fourth quartile Tracking Error: below median second quartile first quartile



Investment Manager		Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	3 Year Return Consistency	5 Year Sharpe Ratio	5 Year Excess Rtn Ratio	5 Year Tracking Error	
BlackRock Russell 1000 Index Callan Large Cap Core	: (i)	<b>21.8</b> 21	<b>7.3</b> 38	<b>10.7</b> 35	<b>10.5</b> 32		<b>0.5</b> 34	<b>1.9</b> 1	<b>0.0</b> 99	
Russell 1000 Index		<b>21.8</b> 21	7.5 37	10.6 36	10.5 34		0.5 35			
International Fund										
Mondrian ACWI ex-US Value Callan NonUS Eq		<b>10.9</b> 97	<b>-11.5</b> 91	<b>-1.3</b> 75	<b>0.8</b> 81		<b>-0.0</b> 82	<b>-0.4</b> 81	<b>3.8</b> 57	
MSCI ACWI ex US		16.1 66	-4.8 58	1.1 57	2.3 58		0.1 57			
Baillie Gifford ACWI ex-US Gro Callan NonUS Eq	owth	<b>25.0</b> 4	<b>10.0</b> 6	<b>8.2</b> 9	<b>8.4</b> 5		<b>0.3</b> 10	<b>1.2</b> 4	<b>5.0</b> 29	
MSCI ACWI ex US		16.1 66	-4.8 58	1.1 57	2.3 58		0.1 57			
Small/Mid Cap Equity Fund										
Earnest Partners Small/Mid Ca Callan Small/MidCap Value	ap Value	<b>24.3</b> 17	<b>-2.9</b> 8	<b>4.9</b> 7	<b>6.9</b> 7		<b>0.3</b> 7	<b>0.9</b> 10	<b>5.8</b> 26	
Russell 2500 Value Index		20.6 62	<b>-15.5</b> 43	-2.6 39	<b>1.8</b> 43		0.0 43			
Wedge Small/Mid Cap Value Callan Small/MidCap Value		<b>23.0</b> 30	<b>-16.6</b> 50	<b>-4.2</b> 70	<b>1.0</b> 58		<b>-0.0</b> 58	<b>-0.4</b> 74	<b>2.3</b> 97	
Russell 2500 Value Index		20.6 62	<b>-15.5</b> 43	<b>-2.6</b> 39	1.8 43		0.0 43			
Brown Advisory Small/Mid Ca Callan Sm/MidCap Growth	p Growth	<b>32.2</b> 70	<b>2.9</b> 78	<b>12.7</b> 65	<b>11.8</b> 52		<b>0.4</b> 50	<b>0.4</b> 50	<b>5.4</b> 36	
Russell 2500 Growth Index		32.9 61	9.2 55	12.1 67	9.6 67		0.3 65			
BlackRock Russell 2500 Index Callan Small/MidCap Core	: (i)	<b>27.6</b> 9	<b>-3.9</b> 26	<b>4.2</b> 34	<b>5.5</b> 42		<b>0.2</b> 41	<b>0.5</b> 20	<b>0.2</b> 100	
Russell 2500 Index		26.6 12	-4.7 32	4.1 35	5.4 42		0.2 42			
Returns:	Return Consistency:		Sharpe Rat			Excess Re	eturn Ratio	:		g Error:

above median
third quartile

fourth quartile

above median
 third quartile
 fourth quartile

Sharpe Ratio: above median third quartile fourth quartile Excess Return Ratio above median third quartile fourth quartile Tracking Error: below median second quartile first quartile

(i) - Indexed scoring method used. Green: manager & index ranking differ by <= +/- 10%tile. Yellow: manager & index ranking differ by <= +/- 20%tile. Red: manager & index ranking differ by > +/- 20%tile.



#### Galliard Stable Value Period Ended June 30, 2020

#### **Investment Philosophy**

Galliard's primary emphasis in managing the stable value is safety of principal. Investment strategies and security selection are designed and implemented with this primary objective in mind. Liquidity is another key concern, for it must be sufficient to accommodate participant changes and provide plan sponsor flexibility.

#### **Quarterly Summary and Highlights**

- Galliard Stable Value's portfolio posted a 0.64% return for the quarter placing it in the 19 percentile of the Callan Stable Value SA group for the quarter and in the 17 percentile for the last year.
- Galliard Stable Value's portfolio outperformed the 3 Yr Constant Maturity Yield by 0.59% for the quarter and outperformed the 3 Yr Constant Maturity Yield for the year by 1.65%.









Callan Stable Value SA (Gross) Annualized Five Year Risk vs Return



### Galliard Stable Value Stable Value Characteristics Analysis Summary

#### **Portfolio Characteristics**

This graph compares the stable value fund's portfolio characteristics with the range of characteristics for the portfolios which make up the fund's style group. This analysis illustrates whether the fund's current structure is consistent with other funds employing the same style.

#### Portfolio Characteristics Percentile Rankings Rankings Against Callan Stable Value SA as of June 30, 2020



#### Wrap Structure and Diversification

The graph below represents the stable value fund's wrap contract structure as of the most recent reporting period. The fund's overall wrap structure may include exposure to constant duration or maturing synthetic GIC contracts, traditional GIC contracts, cash, or other exposures. These contracts allow stable value portfolios to maintain book value accounting practices and a stable net asset value.



### **Galliard Stable Value Stable Value Portfolio Characteristics Summary** As of June 30, 2020

#### **Portfolio Structure Comparison**

The charts below compare the structure of the portfolio to that of the index from two perspectives that have the greatest influence on return. The first chart compares the portfolio's duration distribution versus the benchmark, and the second chart compares the distributions across quality ratings.





#### Market-to-Book Ratio Over Time

The chart below depicts the historical movement of the stable value portfolio's market-to-book ratio over time. This statistic measures the overall "health" of the underlying portfolio. Portfolios with market-to-book ratios closer to 100% will be better positioned to absorb flows and should offer greater return stability over time. As a backdrop the range (from 10th to 90th percentile) is shown along with a white median line for the Callan Stable Value SA Universe.



#### Market-to-Book Ratio

#### Guidance on Substantial Workforce Cuts and Partial Plan Terminations – April 2, 2020

Employers that reduce their workforce or discontinue defined contribution (DC) plan eligibility for certain employee groups may experience an inadvertent "partial plan termination." If not properly managed, this event could result in a disqualification of the entire plan.

A partial plan termination is typically triggered by a distinct event or series of events (e.g., reductions in force, sales of subsidiaries). The determination of a partial plan termination is based on the facts and circumstances of the situation.

When a partial termination occurs, all participants who left employment during the applicable period must be fully vested. This includes participants who terminated service prior to when the plan sponsor identified that the partial plan termination had taken place. In that case, plan sponsors may have to restore previously forfeited balances and locate those former participants to inform them of the restored balances. To the extent forfeited assets have been used for other purposes (e.g., reducing employer contributions or paying plan expenses), the employer will be responsible for making the affected participants whole.

Vesting does not need to be accelerated for participants not affected by the event.

Generally, if the employer's turnover rate is at least 20% during the applicable time period, there is a presumption that a partial termination of the plan has occurred. The time period in question depends on the facts and circumstances of a situation, and legal counsel may help determine the appropriate period to be considered. According to IRS Rev. Rul. 2007-43, the turnover rate is determined by "dividing the number of participating employees who had an employer-initiated severance from employment during the applicable period by the sum of all of the participating employees at the start of the applicable period and the employees who became participants during the applicable period." Routine turnover during the year does not generally generate a partial termination. To understand what constitutes routine turnover, plan sponsors should consider how the current turnover compares to the turnover rate in other periods and if the employees were replaced.

### Example:

ABC Company typically experiences 6% annual turnover. In July 2019 the company closed a division resulting in a 10% reduction in staff. In April 2020, the company experienced financial hardship due to the coronavirus pandemic and had to let go another 10% of its workforce. Although this situation spans plan years, a partial termination may have occurred. Legal counsel should weigh in and a plan sponsor can request a determination from the Internal Revenue Service (IRS). If it is determined that a partial termination occurred, the plan would need to fully vest participants who were terminated beginning in July and any forfeited account balances would need to be restored.

Definitions:

- · Participating employees: active participants and eligible employees
- Applicable period: usually the plan year, although it can be cumulative if the terminations occurred over several years. If a short plan year is involved, it would include the year prior to the current one
- Employer-initiated severance: generally includes any turnover, with the exception of death, disability, or retirement

A partial termination of a qualified plan can also occur for reasons other than turnover. For example, it can occur if a group of employees who had been covered by the plan was later excluded.

Identifying a partial plan termination is important since the failure to recognize and act on it can cause disqualification of the entire plan. Plan sponsors that are uncomfortable relying on their own calculations can request a determination letter from the IRS to see whether a partial plan termination occurred. Legal counsel should also be consulted in determining the status of a partial plan termination.

Because partial plan terminations are generally determined at or after the end of a year, plan sponsors should continue to apply the current vesting schedule to mid-year distributions, but be prepared for the possibility of a partial plan termination at year-end and continue to monitor the plan status as the economic implications of the coronavirus pandemic continue to unfold.

### Freezing or Suspending Matching Contributions: Requirements and Timing – April 14, 2020

Plan sponsors hit hard by the recent economic environment are evaluating if reducing or suspending matching contributions is prudent.

The presence of an employer match both supplements and encourages employee retirement savings. Historically, plan sponsors are more likely to decrease or suspend matching contributions during periods of economic hardship. This was seen in the 2001 recession and during the Global Financial Crisis (GFC). The Center for Retirement Research at Boston College estimated that almost 5% of plan participants were impacted by reduced or suspended matching contributions between January 2008 and November 2009. Another industry survey focused on large plans found that 11% of surveyed employers, with average assets of \$580M, suspended their matching contributions during the GFC.

The decision to freeze or suspend a contribution may be complicated by whether it is a safe harbor or a non-safe harbor match. Safe harbor plans can reduce or suspend employer contributions if the safe harbor notice previously distributed indicated that such contributions could be reduced or suspended, or the employer is operating at an economic loss for the plan year. Safe harbor plans must provide notice 30-60 days in advance. Also, the plan cannot make the change if it is three months prior to a plan year end.

Non-safe harbor plans can suspend the match generally, but they should refer to how the plan document is written and how much discretion is given. The plan document may describe a set formula or timing, which means the plan sponsor would be required to amend the plan document and update the Summary Plan Description and/or Summary of Material Modifications. However, if the plan document grants discretion, the employer may have greater ability to make changes without a formal plan amendment.

There is some evidence that suspending or decreasing the matching contribution may have a negative impact on plan participation and savings rates. However, the prevalence of automatic enrollment has increased dramatically over time and may mute the impact on participation.

Plan sponsors exploring contribution reductions should consider the flexibility of the plan design and plan document. Other important considerations are employee perception and retirement readiness.

### Alphabet Soup: IRS Answers CARES Act FAQ - May 8, 2020

Earlier this week, the Internal Revenue Service (IRS) answered a series of 14 frequently asked questions related to the Coronavirus Aid, Relief, and Economic Security (CARES) Act, which permits special distribution options and liberalized loan options from eligible retirement plans.

While the IRS has not yet issued formal guidance on DC plan provisions in the CARES Act, it stated that it intends to "in the near future." In the meantime, the IRS sought to provide employers with additional clarity by answering some of the following questions.

### What is a coronavirus-related distribution (CRD) and who is eligible?

A CRD is a distribution to a qualified individual from an eligible retirement plan between January 1 and December 30, 2020. The total amount of CRDs across all DC plans may not exceed \$100,000.

According to the IRS, individuals qualified to receive a CRD are those who:

- Have been diagnosed with the virus by a test approved by the Centers for Disease Control and Prevention (CDC)
- Have a spouse or dependent diagnosed with the virus by a CDC-approved test
- Have experienced "adverse financial consequences" due to being quarantined, laid off, furloughed, or having work hours reduced; being unable to work on account of lack of child care; or having to reduce hours for a business owned or operated by the individual

The IRS indicated that a plan administrator may rely on an individual's self-certification, unless the administrator possesses "actual knowledge to the contrary." Importantly, the CARES Act gave the Treasury the ability to expand the definition of a qualified individual, and the IRS said it is currently reviewing comments from the public.

How do plans and individuals report CRDs for tax purposes?

Eligible retirement plans must report CRDs on their Form 1099-R, even if the CRD is fully repaid in the same year as it is received.

The IRS stated that qualified individuals may treat any distribution as a CRD regardless of whether the plan treats it as such, so long as the total amount received does not exceed the \$100,000 limit. Regardless of whether an individual files a federal income tax return, they would file a Form 8915-E to report any repayment of a CRD and to determine the amount of the distribution included in taxable income for a year.

#### How do repayments of CRDs work?

Participants may repay CRDs to an eligible retirement plan if the plan accepts rollover contributions. Repayment must occur within three years from the date the CRD was received.

If a plan does not accept rollover contributions, the IRS stated that it is not required to modify its terms or procedures to accept such repayments.

What is the tax treatment of CRDs?

The 10% tax on early distributions does not apply to CRDs.

Individuals who receive a CRD may choose between the following options:

- Include the entire amount within taxable income for the year the CRD was taken
- Ratably include the amount within taxable income over a three-year period (e.g., if a participant receives a \$21,000 CRD in 2020, they may report \$7,000 in income on their tax return in each of 2020, 2021, and 2022)

If an individual repays a CRD in a year later than the year in which the distribution was received, they may claim a refund for the taxes paid on the CRD that was previously included in taxable income.

#### What plan loan relief is provided?

The CARES Act permits certain loan repayments to be delayed by up to a year and allows eligible plans to increase the maximum loan amount for qualified individuals to the lesser of \$100,000, or 100% of the vested balance. Importantly, plans may elect to implement a smaller maximum loan amount.

The IRS's answers provide clarity around certain provisions of the CARES Act. Plans that do not permit rollovers but have elected to offer CRDs should examine their plan rules, as this may impact repayment.

Plan sponsors should remain vigilant, however, as the IRS indicated that it will release additional information throughout the year. We will continue to monitor the legislative and regulatory landscape and provide updates as necessary.

#### Callan Survey Reveals DC Plan Response to CARES Act - May 28, 2020

The response of defined contribution (DC) plan sponsors to the CARES Act was primarily influenced by the industry they are in and the actions taken by their recordkeeper.

Callan conducted a survey in mid-April to assess what DC plan sponsors have done in response to the CARES Act and the recent economic turmoil spurred by the COVID-19 pandemic. The survey includes responses from 63 non-government plan sponsors. In addition to the plan sponsor survey, Callan surveyed 15 DC recordkeepers to understand their capabilities and how they were responding.

#### Among our findings:

- 21% of the DC plan respondents had taken some type of workforce action, including salary reductions, layoffs, or furloughs.
- A third of recordkeepers added the capability for coronavirus-related distributions (CRDs) across all the plans they served, and required sponsors to opt out if they did not want to offer this option.
- The other recordkeepers required sponsors to opt in.
- 53% of recordkeepers automatically waived minimum required distributions, which the CARES Act permitted for calendar year 2020.
- 64% of recordkeepers had already instituted DC plan loan deferment provisions permitted by the CARES Act.
- The vast majority of sponsors said they had no plans to suspend or reduce their matching contribution. This was especially so for plan sponsors with a union population.
- But sponsors that had taken some sort of workforce action were more likely to have either suspended or reduced the match.

Aside from the grave threat to public health and the resulting impact on economic conditions, one of the greatest challenges COVID-19 presents is the lack of a clear timeline and endpoint. Plan sponsors and participants are seeking to make decisions based on circumstances that cannot be anticipated. Plan sponsors should seek to support their participants' current needs, balanced with the long-term objectives of the DC plan as required by ERISA, while documenting their fiduciary decisions and the process to implement those decisions.

### DOL Issues Common Sense Information Letter about Private Equity in DC Plans – June 3, 2020

The DOL's letter reiterated that DC plan sponsors considering the inclusion of private equity in their plan (in a multi-asset framework) must adhere to the same standards and weigh the same considerations that they would for other asset

classes. Namely, the plan's fiduciaries, "have duties to prudently select and monitor any designated investment alternative under the plan."

The DOL's June 3rd letter came in response to a request from the Groom Law Group (on behalf of Pantheon Ventures (US) L.P. and Partners Group (USA), Inc.), which inquired about the DOL's views on DC plans' employment of private equity within designated investment alternatives.

The letter concludes that, "a plan fiduciary would not violate the fiduciary's duties under section 403 and 404 of ERISA solely because the fiduciary offers a professionally managed asset allocation fund with a private equity component as a designated investment alternative for an ERISA covered individual account plan in the manner described in this letter."

The letter reminds plan sponsors that the inclusion of private equity must stem from a prudent selection and monitoring process. The fiduciary must engage in an objective, thorough, and analytical process that considers all relevant facts. Specific to private equity though, fiduciaries should also consider:

- Liquidity and valuation: the sizing of the positions should take into consideration the cost and liquidity of the asset class. With regard to valuation, the letter mentions that plans may require independent valuation according to Financial Accounting Standards Board Accounting Standards Codification (ASC) 820, "Fair Value Measurements and Disclosures"
- Diversification: the diversification of risks over a multi-year period
- Capacity and ability: those in a fiduciary position should have the capabilities, experience, and stability to manage an asset allocation fund that includes private equity investments effectively given the nature, size, and complexity of the asset class

For participant-directed plans, the fiduciary must also determine whether plan participants will be provided adequate information regarding the characteristics and risks of the investment alternative to enable them to make an informed assessment regarding making or continuing an investment in the fund.

While not a ringing endorsement, the letter does provide clarity around appropriate steps and considerations for DC plans weighing the inclusion of private equity.

#### Department of Labor Fiduciary Rule Back from the Dead – June 4, 2020

On June 1 the Department of Labor (DOL) sent their revised Fiduciary rule to the White House's Office of Budget and Management (OMB) for review. The previous Obama-era Fiduciary rule was vacated following a challenge in the 5th Circuit Court of Appeals in 2018. While the exact text of the new proposal, entitled "Improving Investment Advice for Workers & Retirees Exemption", is anybody's guess, it is expected to closely match the language contained in the Securities and Exchange Commission's Regulation Best Interest (which is currently also under a legal challenge), particularly as it pertains to participant rollovers.

In terms of timing, the OMB has 90 days to review the proposal and send it back to the DOL, though often the review only takes 60 days. After that period, the contents will be made public and subject to a comment period.

Once the contents of the proposal are made public, more conclusions may be drawn, but it is clear the parties involved want to wrap up the Fiduciary rule prior to the next election. For plan sponsors, the proposed rule could have implications for how advice is treated, particularly as it involves rollover conversations.

### Regulatory Action Following the SECURE Act – June 19, 2020

On June 18 the Employee Benefits Security Administration (EBSA) issued a request for information (RFI) on prohibited transactions involving Pooled Employer Plans (PEPs).

When the SECURE Act was signed into law in December 2019, the legislation paved the way for PEPs, among other sweeping changes to the retirement system. A PEP is a multiple employer plan sponsored and governed by a pooled plan provider, who is a named fiduciary of the plan and its 3(16) plan administrator, and can be a service provider (e.g., recordkeeper, TPA, bank). Much of the legislation required further clarification from various government agencies, including this provision outlining new plan types. The issuance of this RFI marks another step toward the government providing further clarification around the specifics of setting up PEPs.

Specifically, this RFI looks to ascertain the various parties, their business models, and the various conflicts of interest anticipated to arise in formation and ongoing operation of PEPs. The information EBSA gathers may help determine whether there is a need for a new prohibited transaction class exemption in order for this market to continue to develop.

Due to the global pandemic and the attention to the subsequent CARES Act, the SECURE Act has largely been absent as a discussion point during 2020. This RFI marks another stage toward more clarity on a key tenet of the SECURE Act. The industry can look forward to additional clarifications in the coming months, including language pertaining to the SECURE Act's lifetime income disclosures.

### DOL Calls for Stricter Rules Around ESG Investing in Retirement Plans – June 26, 2020

The Department of Labor (DOL) issued a proposed rule on June 23 that provides guidance on consideration of environmental, social, and governance (ESG) factors in the investment duties of fiduciaries for ERISA plans—applying to both defined benefit and defined contribution plans subject to ERISA.

The DOL previously provided guidance on ESG in 1994 (then called economically targeted investments), 2008, 2015, and 2018.

In the proposed rule—Notice of Proposed Rulemaking: Financial Factors in Selecting Plan Investments Amending "Investment duties" Regulation at 29 CFR 2550.404a-1—the DOL states it is attempting to achieve the following (excerpted from the DOL's summary on its website):

- New regulatory text to codify the Department's longstanding position articulated in interpretive bulletins (IBs) published in 1994, 2008, and 2015 that ERISA requires plan fiduciaries to select investments and investment courses of action based on financial considerations relevant to the risk-adjusted economic value of a particular investment or investment course of action.
- An express regulatory provision stating that compliance with the exclusive purpose (loyalty) duty in ERISA section 404(a)(1)(A) prohibits fiduciaries from subordinating the interests of plan participants and beneficiaries in retirement income and financial benefits under the plan to non-pecuniary goals.
- 3. A new provision that requires fiduciaries to consider other available investments to meet their prudence and loyalty duties under ERISA in furthering the purposes of the plan.
- 4. The proposal acknowledges that ESG factors can be pecuniary factors, but only if they present economic risks or opportunities that qualified investment professionals would treat as material economic considerations under generally accepted investment theories. New regulatory text sets forth required investment analysis and documentation requirements in the rare circumstances when fiduciaries are choosing among economically "indistinguishable" investments (related to the so-called "tiebreaker rule" in the 1994, 2008, and 2015 IBs).
- 5. A new provision on selecting designated investment alternatives for 401(k)-type plans. The proposal states the Department's view that the prudence and loyalty standards set forth in ERISA apply to a fiduciary's selection of an investment alternative to be offered to plan participants and beneficiaries in an individual account plan (commonly referred to as a 401(k)-type plan). The proposal describes the requirements for the selection of investment alternatives for such plans that purport to pursue one or more environmental, social, and corporate governance-oriented objectives in their investment mandates or that include such parameters in the fund name.

The DOL reiterates the duties of prudence and loyalty to beneficiaries in selecting and monitoring investments that will not be news to any fiduciaries. Along these lines, consideration of financially material ESG factors would appear to still be deemed prudent, though the proposal narrowly defines material ESG factors.

However, this DOL guidance assigns a higher level of burden on plan sponsors to determine and document when investments are economically indistinguishable from one another and, thus, non-financial matters can be considered as tiebreakers (the so-called tiebreaker rule), stating that these circumstances are "very rare." The proposal also provides new guidance on selection of investment options for defined contribution plans where proposed options incorporate ESG considerations.

This proposed rule explicitly states that the QDIA in an ERISA defined contribution plan should not incorporate ESG considerations, applying a higher standard to investments that serve as a default and stating that incorporation of ESG factors in the QDIA could violate the duty of loyalty. The document states that "this requirement in the proposal is intended

to help ensure that the financial interests of plan participants and beneficiaries in retirement benefits remain paramount by removing ESG considerations in cases in which participant's retirement savings in individual accounts designed for participant direction are being automatically invested by a plan fiduciary."

In general, this DOL rule seems intended to create a larger hurdle to incorporation of ESG factors into ERISA plan investments.

It is important to understand that this document is a proposal and that the next step of the process is to enter a 30-day comment period once published. Early indications show there will be considerable response to this proposal.

# APPENDIX



# Asset Allocation

#### U.S. Fixed Income and Stable Value Lose Assets

The percentage of assets allocated to stable value increased by more than 2 percentage points, bringing the overall allocation to 11.8%. Both inflows and better performance relative to equity drove the increase. The allocations to U.S. fixed income (7.5%) and money market (1.5%) also significantly increased from the previous quarter.

On the other hand, U.S. equity experienced a large decrease in allocation as the allocations to large cap equity (23.8%) and small/mid cap equity (7.0%) both decreased by more than 1.4 percentage points. Following U.S. equity, global ex-U.S. equity (4.6%) and company stock (1.8%) had the next-largest decreases in allocation.



## Prevalence

#### More Plans Offer High Yield

In the prevalence of funds table, the green bars indicate the prevalence of asset classes within DC plans, while the blue bars show the average allocation to that particular asset class when offered as an option.

The prevalence of a high yield offering (4.8%) increased by nearly a percentage point from the previous quarter and now sits at its highest mark since 2017. On the other hand, the percentage of plans offering U.S. small/mid-cap equity dipped for the second straight quarter following six consecutive quarters of 100% prevalence. However, the prevalence figure (96.2%) still remains very high.

The presence of company stock (20.0%) decreased by more than a percentage point from the previous quarter. Similarly, the percentage of plans offering a brokerage window (40.0%) also fell by more than a percentage point.



**Total Pure Equity -** The sum of "pure" equity across the glide path. Pure equity is composed of large-cap domestic equity, small/mid-cap domestic equity, international equity, emerging market equity and global equity. Excluded are REIT exposures.

**Total Target Date Family Performance -** The weighted performance across all of the underlying target date vintages. Family performance can be weighted equally, according to client assets within each vintage or according to manager assets within each vintage.

**Callan Consensus -** An equally weighted index of the universe of available TDF "series" or "families" (currently 44) – including both mutual funds and collective trusts. The funds' glidepaths are mapped into 26 asset classes. The CAI Consensus Glidepath Index is created as an equal-weighted average of all the provider glidepaths, and will change dynamically over time as provider glidepaths evolve and/or the provider universe expands.

Definitions

### **Equity Market Indicators**

The market indicators included in this report are regarded as measures of equity or fixed income performance results. The returns shown reflect both income and capital appreciation.

**Russell 1000 Growth** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 1000 Value** measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**Russell 2000 Value** contains those Russell 2000 securities with a less than average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earning ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

Russell 2500 Growth Index measures the performance of those Russell 2500 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell Mid Cap Growth** measures the performance of those Russell Mid Cap Companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth Index.

Standard & Poor's 500 Index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The index is capitalization-weighted, with each stock weighted by its proportion of the total market value of all 500 issues. Thus, larger companies have a greater effect on the index.

### **Fixed Income Market Indicators**

**90-Day U.S. Treasury Bills** provide a measure of riskless return. The rate of return is the average interest rate available on the beginning of each month for a Treasury Bill maturing in ninety days.

**Bloomberg Barclays Aggregate Bond Index** is a combination of the Mortgage Backed Securities Index and the intermediate and long-term components of the Government/Credit Bond Index.



# **International Equity Market Indicators**

**Morgan Stanley Capital International (MSCI) EAFE Index** is composed of approximately 1000 equity securities representing the stock exchanges of Europe, Australia, New Zealand and the Far East. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

#### **Callan Databases**

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

#### **Equity Funds**

Equity funds concentrate their investments in common stocks and convertible securities. The funds included maintain well-diversified portfolios.

**Core Equity** - Mutual funds whose portfolio holdings and characteristics are similar to that of the broader market as represented by the Standard & Poor's 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection. The core portfolio exhibits similar risk characteristics to the broad market as measured by low residual risk with Beta and R-Squared close to 1.00.

Large Cap Growth - Mutual Funds that invest mainly in large companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. Invests in companies with P/E ratios, Price-to-Book values, Return-on-Assets values, Growth-in-Earnings values above the broader market. The companies typically have zero dividends or dividend yields below the broader market. Invests in securities which exhibit greater volatility than the broader market as measured by the securities' Beta and Standard Deviation.

**Large Cap Value** - Mutual funds that invest in predominantly large capitalization companies believed to be currently undervalued in the general market. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. Valuation issues take precedence over near-term earnings prospects in the stock selection process. Invests in companies with P/E rations and Price-to-Book values below the broader market. Usually exhibits lower risk than the broader market as measured by the Beta and Standard Deviation.

**Non-U.S. Equity Style Mutual Funds** - Mutual funds that invest their assets only in non-U.S. equity securities but exclude regional and index funds.

**Small Capitalization (Value)** - Mutual funds that invest in small capitalization companies that are believed to be currently undervalued in the general market. Valuation issues take precedence over near-term earnings prospects in the stock selection process. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. Invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book values below the broader market as well as the small capitalization market segment. The companies typically have dividend yields in the high range for the small capitalization market. Invests in securities with risk/reward profiles in the lower risk range of the small capitalization market.

**Small/Middle Capitalization** - Managers who invest primarily in small to middle capitalization range companies with market capitalization below core equity companies. The market capitalization is about the upper quartile of the Small Cap group and the lower decile of the Mid Cap group. The Small/Mid Cap Broad style invests in securities with greater volatility than the broader market as measured by the risk statistics Beta and Standard Deviation. This style consists of the Small/Mid Cap Growth and the Small/Mid Cap Value Style Groups and other funds classified strictly as Small/Mid Cap Broad.



### **Callan Databases**

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

#### **Fixed Income Funds**

Fixed Income funds concentrate their investments in bonds, preferred stocks, and money market securities. The funds included maintain well-diversified portfolios.

**Core Bond** - Mutual Funds that construct portfolios to approximate the investment results of the Bloomberg Barclays Capital Government/Credit Bond Index or the Bloomberg Barclays Capital Aggregate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector and/or issue selection.

**Stable Value** - The Stable Value database group is comprised of funds that invest primarily in Guaranteed Investment Contracts (GICs) and Synthetic Investment Contracts (SICs) to provide principal protection, stable book value and a guaranteed rate of return over a contractually specified time period. Common benchmarks for the universe include but not limited to, are the Ryan Labs GIC Master indices and the Hueler Stable Value Index.

#### **Risk/Reward Statistics**

The risk statistics used in this report examine performance characteristics of a manager or a portfolio relative to a benchmark (market indicator) which assumes to represent overall movements in the asset class being considered. The main unit of analysis is the excess return, which is the portfolio return minus the return on a risk free asset (3 month T-Bill).

**Alpha** measures a portfolio's return in excess of the market return adjusted for risk. It is a measure of the manager's contribution to performance with reference to security selection. A positive alpha indicates that a portfolio was positively rewarded for the residual risk which was taken for that level of market exposure.

**Beta** measures the sensitivity of rates of portfolio returns to movements in the market index. A portfolio's beta measures the expected change in return per 1% change in the return on the market. If a beta of a portfolio is 1.5, a 1 percent increase in the return on the market will result, on average, in a 1.5 percent increase in the return on the portfolio. The converse would also be true.

**Downside Risk** stems from the desire to differentiate between "good risk" (upside volatility) and "bad risk" (downside volatility). Whereas standard deviation punishes both upside and downside volatility, downside risk measures only the standard deviation of returns below the target. Returns above the target are assigned a deviation of zero. Both the frequency and magnitude of underperformance affect the amount of downside risk.

**Excess Return Ratio** is a measure of risk adjusted relative return. This ratio captures the amount of active management performance (value added relative to an index) per unit of active management risk (tracking error against the index.) It is calculated by dividing the manager's annualized cumulative excess return relative to the index by the standard deviation of the individual quarterly excess returns. The Excess Return Ratio can be interpreted as the manager's active risk/reward tradeoff for diverging from the index when the index is mandated to be the "riskless" market position.

**Information Ratio** measures the manager's market risk-adjusted excess return per unit of residual risk relative to a benchmark. It is computed by dividing alpha by the residual risk over a given time period. Assuming all other factors being equal, managers with lower residual risk achieve higher values in the information ratio. Managers with higher information ratios will add value relative to the benchmark more reliably and consistently.

**R-Squared** indicates the extent to which the variability of the portfolio returns are explained by market action. It can also be thought of as measuring the diversification relative to the appropriate benchmark. An r-squared value of .75 indicates that 75% of the fluctuation in a portfolio return is explained by market action. An r-squared of 1.0 indicates that a portfolio's returns are entirely related to the market and it is not influenced by other factors. An r-squared of zero indicates that no relationship exists between the portfolio's return and the market.

**Relative Standard Deviation** is a simple measure of a manager's risk (volatility) relative to a benchmark. It is calculated by dividing the manager's standard deviation of returns by the benchmark's standard deviation of returns. A relative standard deviation of 1.20, for example, means the manager has exhibited 20% more risk than the benchmark over that time period. A ratio of .80 would imply 20% less risk. This ratio is especially useful when analyzing the risk of investment grade fixed-income products where actual historical durations are not available. By using this relative risk measure over rolling time periods one can illustrate the "implied" historical duration patterns of the portfolio versus the benchmark.

**Residual Portfolio Risk** is the unsystematic risk of a fund, the portion of the total risk unique to the fund (manager) itself and not related to the overall market. This reflects the "bets" which the manager places in that particular asset market. These bets may reflect emphasis in particular sectors, maturities (for bonds), or other issue specific factors which the manager considers a good investment opportunity. Diversification of the portfolio will reduce or eliminate the residual risk of that portfolio.

#### **Risk/Reward Statistics**

**Rising Declining Periods** refer to the sub-asset class cycles vis-a-vis the broader asset class. This is determined by evaluating the cumulative relative sub-asset class index performance to that of the broader asset class index. For example, to determine the Growth Style cycle, the S&P 500 Growth Index (sub-asset class) performance is compared to that of the S&P 500 Index (broader asset class).

**Sharpe Ratio** is a commonly used measure of risk-adjusted return. It is calculated by subtracting the "risk-free" return (usually 3 Month Treasury Bill) from the portfolio return and dividing the resulting "excess return" by the portfolio's risk level (standard deviation). The result is a measure of return gained per unit of risk taken.

**Sortino Ratio** is a downside risk-adjusted measure of value-added. It measures excess return over a benchmark divided by downside risk. The natural appeal is that it identifies value-added per unit of truly bad risk. The danger of interpretation, however, lies in these two areas: (1) the statistical significance of the denominator, and (2) its reliance on the persistence of skewness in return distributions.

**Standard Deviation** is a statistical measure of portfolio risk. It reflects the average deviation of the observations from their sample mean. Standard deviation is used as an estimate of risk since it measures how wide the range of returns typically is. The wider the typical range of returns, the higher the standard deviation of returns, and the higher the portfolio risk. If returns are normally distributed (ie. has a bell shaped curve distribution) then approximately 2/3 of the returns would occur within plus or minus one standard deviation from the sample mean.

**Total Portfolio Risk** is a measure of the volatility of the quarterly excess returns of an asset. Total risk is composed of two measures of risk: market (non-diversifiable or systematic) risk and residual (diversifiable or unsystematic) risk. The purpose of portfolio diversification is to reduce the residual risk of the portfolio.

**Tracking Error** is a statistical measure of a portfolio's risk relative to an index. It reflects the standard deviation of a portfolio's individual quarterly or monthly returns from the index's returns. Typically, the lower the Tracking Error, the more "index-like" the portfolio.

**Treynor Ratio** represents the portfolio's average excess return over a specified period divided by the beta relative to its benchmark over that same period. This measure reflects the reward over the risk-free rate relative to the systematic risk assumed.

Note: Alpha, Total Risk, and Residual Risk are annualized.

Disclosures

# Callan

# List of Callan's Investment Manager Clients

Confidential - For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance department.

nager Name	Manager Name
een Standard Investments	Barrow, Hanley, Mewhinney & Strauss, LLC
n Asset Management LLC	BlackRock
N USA Investment Management Inc.	BMO Global Asset Management
apital Management	BNP Paribas Asset Management
Bernstein	BNY Mellon Asset Management
	Boston Partners
an Century Investments	Brandes Investment Partners, L.P.
i Pioneer Asset Management	Brandywine Global Investment Management, LLC
apital Management	BrightSphere Investment Group
nagement LLC	Brown Brothers Harriman & Company
estments, LLC	Cambiar Investors, LLC
e Capital Management, LLC	CapFinancial Partners, LLC
Capital Management Co., LLC	Capital Group
vestors Americas	Carillon Tower Advisers
vestment Managers	CastleArk Management, LLC
Sifford International, LLC	Causeway Capital Management LLC
dvisors	Chartwell Investment Partners
Capital Management, Inc.	ClearBridge Investments, LLC

#### Manager Name

Cohen & Steers Capital Management, Inc. **Columbia Management Investments Columbus Circle Investors** Credit Suisse Asset Management D.E. Shaw Investment Management, L.L.C. DePrince, Race & Zollo, Inc. Diamond Hill Capital Management, Inc. Dimensional Fund Advisors LP Doubleline Duff & Phelps Investment Management Co. DWS EARNEST Partners, LLC Eaton Vance Management Epoch Investment Partners, Inc. Fayez Sarofim & Company Federated Hermes, Inc. Fidelity Institutional Asset Management Fiera Capital Corporation First Hawaiian Bank Wealth Management Division First State Investments Fisher Investments Fortress Investment Group Franklin Templeton Fred Alger Management, Inc. GAM (USA) Inc. GCM Grosvenor Glenmeade Investment Management, LP GlobeFlex Capital, L.P. **Goldman Sachs** Green Square Capital Advisors, LLC **Guggenheim Investments GW&K** Investment Management Harbor Capital Group Trust Hartford Investment Management Co. Heitman LLC Hotchkis & Wiley Capital Management, LLC HPS Investment Partners, LLC Income Research + Management, Inc. Insight Investment Management Limited Intech Investment Management, LLC

Manager Name Intercontinental Real Estate Corporation Invesco Investec Asset Management North America, Inc. Ivy Investments J.P. Morgan Janus Jennison Associates LLC Jobs Peak Advisors KeyCorp Lazard Asset Management Legal & General Investment Management America Lincoln National Corporation Longview Partners Loomis, Sayles & Company, L.P. Lord Abbett & Company Los Angeles Capital Management LSV Asset Management MacKay Shields LLC Macquarie Investment Management (MIM) Manulife Investment Management Marathon Asset Management, L.P. McKinley Capital Management, LLC Mellon MetLife Investment Management MFS Investment Management MidFirst Bank Mondrian Investment Partners Limited Montag & Caldwell, LLC Morgan Stanley Investment Management Mountain Pacific Advisors. LLC MUFG Union Bank, N.A. Natixis Investment Managers Neuberger Berman Newton Investment Management Nikko Asset Management Co., Ltd. Nile Capital Group LLC Northern Trust Asset Management Nuveen **P/E Investments** 

Pacific Investment Management Company

Callan

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Manager Name	Manager Name
Parametric Portfolio Associates LLC	Strategic Global Advisors
Pathway Capital Management	T. Rowe Price Associates, Inc.
Peregrine Capital Management, LLC	The TCW Group, Inc.
Perkins Investment Management	Thompson, Siegel & Walmsley LLC
PFM Asset Management LLC	Thornburg Investment Management, Inc.
PGIM Fixed Income	Tri-Star Trust Bank
PineBridge Investments	UBS Asset Management
PNC Capital Advisors, LLC	USAA Real Estate
Polen Capital Management	VanEck
Principal Global Investors	Versus Capital Group
Putnam Investments, LLC	Victory Capital Management Inc.
QMA LLC	Virtus Investment Partners, Inc.
RBC Global Asset Management	Vontobel Asset Management, Inc.
Regions Financial Corporation	Voya
Robeco Institutional Asset Management, US Inc.	WCM Investment Management
Rothschild & Co. Asset Management US	WEDGE Capital Management
S&P Dow Jones Indices	Wellington Management Company LLP
Schroder Investment Management North America Inc.	Wells Fargo Asset Management
SLC Management	Western Asset Management Company LLC
Smith Graham & Co. Investment Advisors, L.P.	Westfield Capital Management Company, LP
State Street Global Advisors	William Blair & Company LLC
Stone Harbor Investment Partners L.P.	