

November 30, 2019



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 November 30, 2019, with the distribution as of October 31, 2019. 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

	November 30, 2019 Market Value	Net New Inv.	Inv. Return	October 31, 2019 Market Value
North Carolina SRP 401k & 457				
Tier II Passive	\$3,623,975,034	\$(4,263,276)	\$125,443,201	\$3,502,795,110
Fixed Income Passive	87,789,771	1,814,940	(1,211,368)	87,186,199
Treasury Inflation Protected	225,577,358	3,214,609	(417,506)	222,780,255
Large Cap Passive	2,906,660,107	(6,173,900)	110,449,333	2,802,384,674
SMID Cap Passive	323,338,032	(2,798,239)	15,080,076	311,056,195
International Passive	80,609,767	(320,686)	1,542,667	79,387,787
Tier II Active	\$9,047,448,928	\$(1,226,507)	\$141,435,998	\$8,907,239,437
Stable Value Fund	2,119,091,624	6,619,489	(8,296,299)	2,120,768,433
Fixed Income Fund	1,780,518,651	6,354,427	3,906,862	1,770,257,362
Inflation Responsive Fund	413,402,486	751,540	(1,220,971)	413,871,917
Large Cap Core Equity Fund	1,920,050,454	(13,720,197)	74,750,840	1,859,019,811
Small/Mid Cap Equity Fund	885,863,126	(1,487,609)	35,523,401	851,827,334
International Equity Fund	1,928,522,587	255,841	36,772,165	1,891,494,580
Total Fund	\$12,671,423,962	\$(5,489,783)	\$266,879,199	\$12,410,034,547

Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended November 30, 2019. 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 November 30, 2019

	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years
Tier 2: Passive (Net of Fee)					
Fixed Income Passive	(0.05%)	8.77%	10.76%	4.05%	3.03%
Blmbg Barclays Aggregate	(0.05%)	8.79%	10.79%	4.10%	3.08%
Treasury Inflation Protected Securities*	(0.02%)	6.20%	6.58%	-	-
Blmbg US TIPS 1-10 Yr	0.02%	6.11%	6.55%	2.59%	1.90%
Large Cap Passive	3.63%	27.68%	16.15%	14.89%	10.93%
S&P 500 Index	3.63%	27.63%	16.11%	14.88%	10.98%
SMID Cap Passive	4.28%	25.03%	11.33%	10.17%	8.74%
Russell 2500 Index	4.29%	25.12%	11.41%	10.27%	8.77%
International Passive	0.90%	16.74%	11.47%	9.52%	4.06%
MSCI ACWI ex US	0.88%	16.47%	11.20%	9.24%	3.85%

* November performance is preliminary.

Investment Manager Returns


The table below details the rates of return for the fund's investment managers over various time periods ended November 30, 2019. 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 November 30, 2019

	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years
Tier 2: Active (Net of Fee)					
Stable Value Fund	0.22%	2.37%	2.57%	2.28%	2.12%
3 Yr Constant Maturity Yield	0.13%	1.74%	1.95%	2.02%	1.60%
T-Bill + 1.5%	0.25%	3.51%	3.82%	3.13%	2.55%
Fixed Income Fund	0.02%	10.34%	12.18%	5.14%	3.96%
Blmbg Barclays Aggregate	(0.05%)	8.79%	10.79%	4.10%	3.08%
TCW Core Plus	(0.04%)	9.30%	11.27%	-	-
Blmbg Barclays Aggregate	(0.05%)	8.79%	10.79%	4.10%	3.08%
Prudential Core Plus	0.09%	11.40%	13.13%	6.02%	-
Blmbg Barclays Aggregate	(0.05%)	8.79%	10.79%	4.10%	3.08%
Inflation Responsive Fund	(0.90%)	11.44%	8.07%	5.31%	3.12%
Inflation Responsive Benchmark	(0.89%)	11.28%	7.91%	3.73%	1.39%
BlackRock Strategic Completion	(0.90%)	11.46%	8.09%	-	-
BlackRock Custom Benchmark	(0.89%)	11.28%	7.91%	-	-
Large Cap Core Equity Fund	4.05%	26.02%	14.95%	-	-
Russell 1000 Index	3.78%	27.74%	16.10%	14.67%	10.80%
Hotchkis & Wiley Large Cap Value	3.90%	27.01%	11.85%	10.13%	8.01%
Russell 1000 Value Index	3.09%	23.15%	11.33%	9.59%	7.83%
Macquarie Large Cap Value	2.66%	16.63%	7.73%	9.73%	-
Russell 1000 Value Index	3.09%	23.15%	11.33%	9.59%	7.83%
Sands Capital Large Cap Growth	5.23%	29.81%	20.01%	22.75%	12.13%
Russell 1000 Growth Index	4.44%	32.40%	21.01%	19.79%	13.71%
Loomis Sayles Large Cap Growth	4.74%	28.52%	18.37%	18.99%	14.47%
Russell 1000 Growth Index	4.44%	32.40%	21.01%	19.79%	13.71%
BlackRock Russell 1000 Index*	3.81%	27.52%	15.92%	-	-
Russell 1000 Index	3.78%	27.74%	16.10%	14.67%	10.80%
Small/Mid Cap Equity Fund	3.87%	23.91%	9.57%	-	-
Russell 2500 Index	4.29%	25.12%	11.41%	10.27%	8.77%
Hotchkis & Wiley Mid Cap Value	2.35%	7.54%	(8.31%)	(0.57%)	0.80%
Russell 2500 Value Index	2.45%	19.94%	6.68%	6.06%	6.85%
Earnest Partners Small/Mid Cap Value	3.51%	28.70%	14.16%	10.74%	9.11%
Russell 2500 Value Index	2.45%	19.94%	6.68%	6.06%	6.85%
Wedge Small/Mid Cap Value	1.34%	18.68%	4.95%	4.83%	5.71%
Russell 2500 Value Index	2.45%	19.94%	6.68%	6.06%	6.85%
Brown Advisory Small/Mid Cap Growth	6.40%	34.34%	20.49%	14.99%	13.23%
Russell 2500 Growth Index	6.81%	31.43%	17.17%	15.16%	10.92%
BlackRock Russell 2500 Index	4.28%	24.88%	11.15%	-	-
Russell 2500 Index	4.29%	25.12%	11.41%	10.27%	8.77%
International Equity Fund	1.36%	20.83%	15.10%	10.72%	5.53%
Mondrian ACWI ex-US Value	0.47%	14.61%	10.32%	8.68%	3.45%
Baillie Gifford ACWI ex-US Growth	2.23%	27.26%	20.08%	13.16%	8.03%
MSCI ACWI ex US	0.88%	16.47%	11.20%	9.24%	3.85%

* November performance is preliminary.

September 30, 2019



The North Carolina Supplemental Retirement Plans Executive Summary

**Investment Measurement Service
Quarterly Review**

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Table of Contents
The North Carolina Supplemental Retirement Plans
September 30, 2019

Capital Markets Summary	1
Stoplight Report	10
Asset Allocation	14
Performance Across Investment Managers	17
Investment Manager Performance Monitoring Summary Report	30
DC Trends	38
Appendix	40
Definitions	43
Disclosures	50

U.S. EQUITY

U.S. equity markets posted mixed results amid a market that saw 30-year Treasury yields hit historic lows and the most meaningful, albeit short-lived, factor rotation among equities since the Global Financial Crisis (GFC). Large cap (+1.4%) and mid cap stocks (+0.5%) posted modest gains for the quarter while small caps declined (Russell 2000: -2.4%). Ongoing U.S.-China trade tension, earnings and interest rate uncertainty, and the global political landscape continued to drive investor uncertainty.

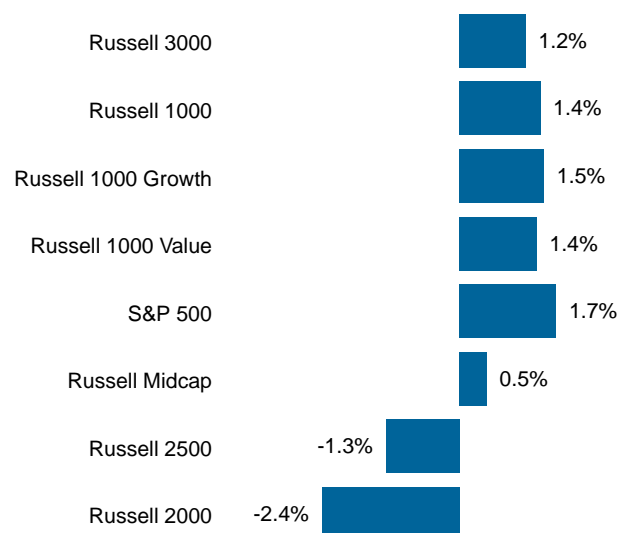
Large Cap U.S. Equity (S&P 500: +1.7%; Russell 1000: +1.4%)

- Top sectors were in defensive areas including Utilities (+9.3%), Real Estate (+7.7%), and Consumer Staples (+6.1%) in response to investors' continued flight to quality.
- Energy, hurt by falling oil prices, fell 6.3%; Health Care lagged (-2.2%) amid discussions around price transparency and pricing reform by U.S. presidential candidates.
- Cyclical sector exposure has been volatile given uncertainty around the trade deal (and continued sideways movement of markets) along with slowed global growth.
- Up to September, momentum stocks (which have shifted to include many of the market's least volatile stocks) outperformed as investors shunned the cheapest quintile of value (and more volatile) stocks. This trend sharply reversed in early September as the 10-year Treasury yield rose from 1.46% to 1.73% and momentum stocks fell precipitously while value stocks traded up over the course of two days. The magnitude of the reversal gave a boost to value stocks across market capitalizations for the quarter.

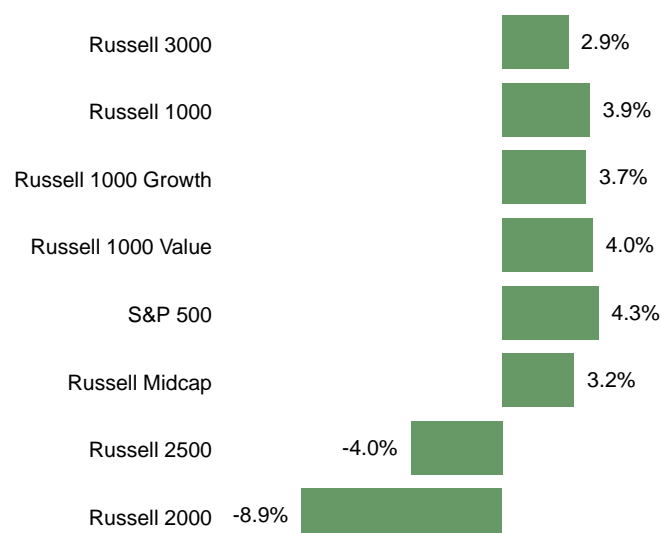
Growth vs. Value (Russell 1000 Value: +1.4%, Russell 1000 Growth: +1.5%; Russell 2000 Value: -0.6%, Russell 2000 Growth: -4.2%)

- While value continues to trail growth year-to-date, it gained ground during September's factor reversal, finishing the quarter essentially in line with growth within large caps.
- Within small cap, value benefited as investors favored the cheapest 20% of small caps while the most expensive quintile within the Russell 2000 declined double digits.

U.S. Equity: Quarterly Returns

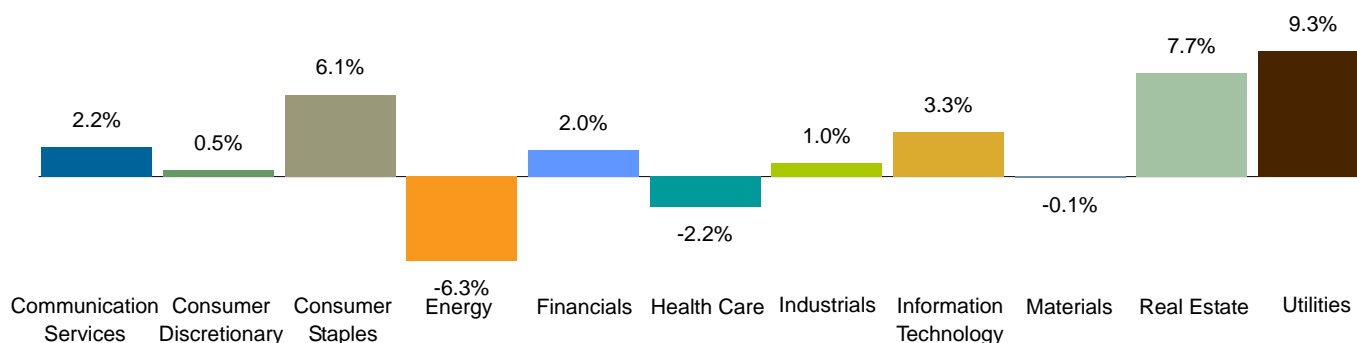


U.S. Equity: One-Year Returns



Sources: FTSE Russell, Standard & Poor's

S&P Sector Returns, Quarter Ended September 30, 2019



Source: Standard & Poor's

NON-U.S./GLOBAL EQUITY

Global equity markets turned negative in the third quarter. After more modest positive results in the second quarter, fears over continued trade war impacts, a no-deal Brexit, and a potential global slowdown impacted investor behavior. Given this backdrop, more defensive areas of the market outperformed.

Global/Non-U.S. Developed (MSCI EAFE: -1.1%; MSCI World ex USA: -0.9%; MSCI ACWI ex USA: -1.8%; MSCI Hong Kong: -11.9%; MSCI Japan: +3.1%)

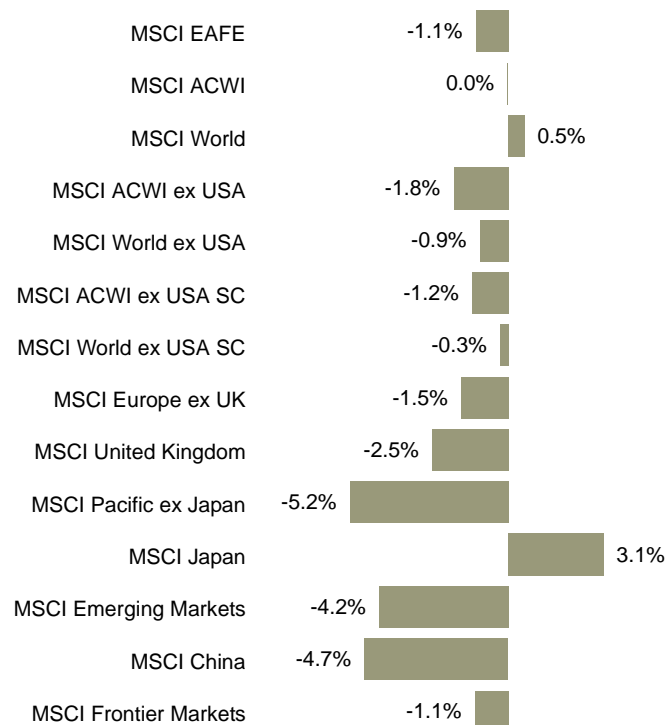
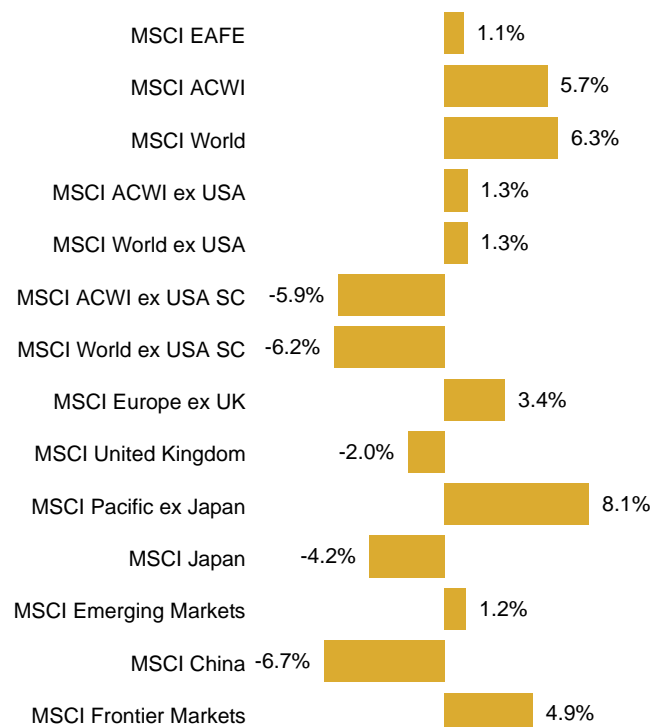
- Boris Johnson's attempted suspension of Parliament and no-deal Brexit proclamations weighed on U.K. stocks (-2.5%).
- Germany (-4.0%) experienced recession fears; industrial production dropped 1.5% in June from the prior month, while the estimate was -0.5%.
- Hong Kong protests proved to be a headwind as the market fell -11.9% over the three-month period.
- Japan was one of the few bright spots within developed markets as low short-term interest rates remain unchanged and a resolution to the Japan/South Korea trade war looked more promising.
- Cyclical sectors trailed as investors were positioned defensively; Energy (-6.5%) had the worst performance.
- For the quarter, factor performance reflected cautious investor behavior as quality and low volatility did well. However, the month of September saw a brief recovery in value across all markets as trade talks improved and central banks eased.

Emerging Markets (MSCI Emerging Markets Index: -4.2%)

- Emerging markets fared worst among global markets; uncertainty weighed heavily on these volatile countries.
- Though most emerging market countries fell during the quarter, Turkey (+11.7%) had strong results as its central bank cut rates two times in less than two months.
- Factor performance in emerging markets favored quality and price momentum as investors moved toward safe assets.

Non-U.S. Small Cap (MSCI World ex USA Small Cap: -0.3%; MSCI EM Small Cap: -4.6%; MSCI ACWI ex USA Small Cap: -1.2%)

- Small cap marginally outperformed large cap, both in developed and all country ex-U.S. markets; despite overall defensive posturing, idiosyncratic businesses pushed past global market issues.
- Japan (+4.0%) helped drive developed returns as small cap companies also benefited from low rates and resolved trade tensions; Hong Kong (-7.6%) detracted as local businesses were hurt by the protests.

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

Source: MSCI

FIXED INCOME

The Federal Open Market Committee (FOMC) cut short-term interest rates by 25 basis points twice in the third quarter amid an economic backdrop that has been supported by strong consumer spending and a solid labor market, but challenged by weakening manufacturing data and business investment. The Fed chair stated that the FOMC would act as “appropriate to sustain the expansion,” and the European Central Bank and other central banks around the world also moved in the direction of easing monetary policy. Yields fell in the U.S. and abroad given global growth headwinds fueled by mounting trade tensions as well as geopolitical uncertainty.

U.S. Fixed Income (Bloomberg Barclays US Aggregate Bond Index: +2.3%)

- Treasuries returned 2.4% as rates fell across the yield curve.
- While the widely monitored 2- and 10-year key rates remained positive, the spread between the 3-month and 10-year key rates remained inverted.
- Long Treasuries soared (+7.9%) as 30-year yields fell roughly 40 bps.
- Nominal Treasuries outperformed TIPS as inflation expectations continued to fall; 10-year breakeven spreads were 1.53% as of quarter-end, down from 1.69% as of June 30. The 10-year real yield dipped briefly into negative territory in early September.

Investment Grade Corporates (Bloomberg Barclays Corporate: +3.1%)

- Investment grade corporate credit spreads were range-bound, but their yield advantage was enough to generate positive excess returns versus like-duration Treasuries.
- Issuance in the corporate bond market was \$320 billion in the quarter, \$50 billion higher than a year ago; demand remained solid. BBB-rated corporates (+3.1%) modestly outperformed A-rated or higher corporates (+3.0%).

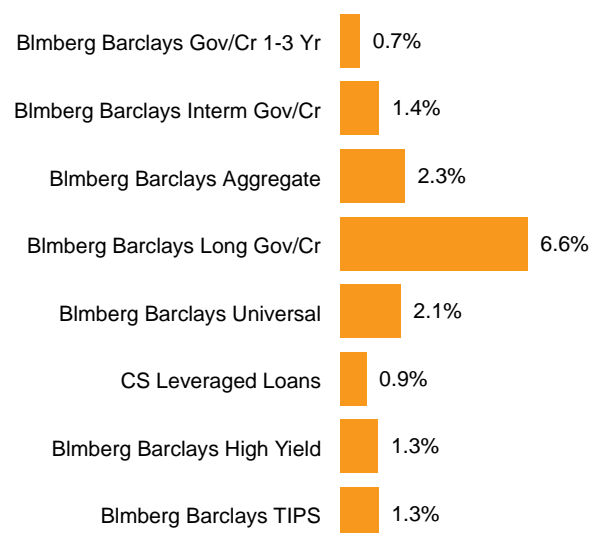
High Yield (Bloomberg Barclays Corporate High Yield: +1.3%)

- BB-rated corporates (+2.0%) outperformed CCC-rated corporates (-1.8%). BB- and B-rated spreads narrowed slightly, but the rally in rates helped drive outperformance as a result of higher quality bonds' greater sensitivity to interest rate movements.
- CCC-rated bond spreads widened significantly, representing some concern about deteriorating quality at the lower-end of the spectrum.

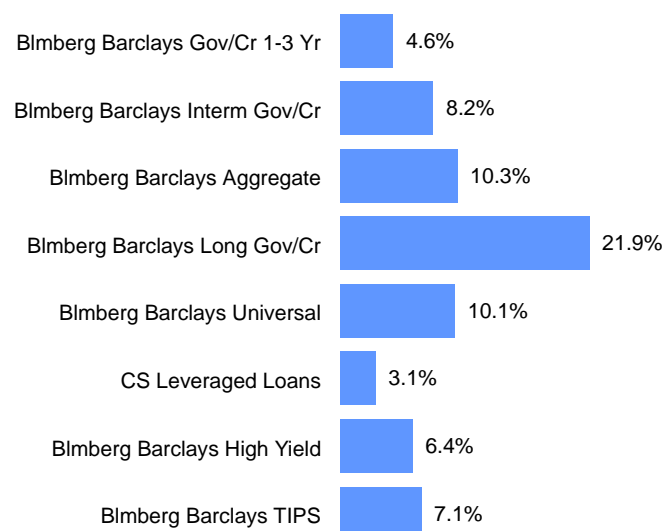
Leveraged Loans (CS Leveraged Loans: +0.9%)

- Bank loans, which have floating rate coupons, underperformed high yield bonds as rates rallied and investors worried about deteriorating credit quality.
- CLO issuance continued to exceed expectations, providing positive technical support to the leveraged loan market.

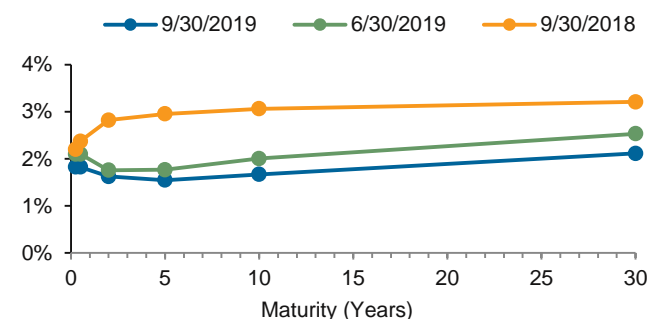
U.S. Fixed Income: Quarterly Returns



U.S. Fixed Income: One-Year Returns



U.S. Treasury Yield Curves



Sources: Bloomberg, Bloomberg Barclays, Credit Suisse

NON-U.S. FIXED INCOME

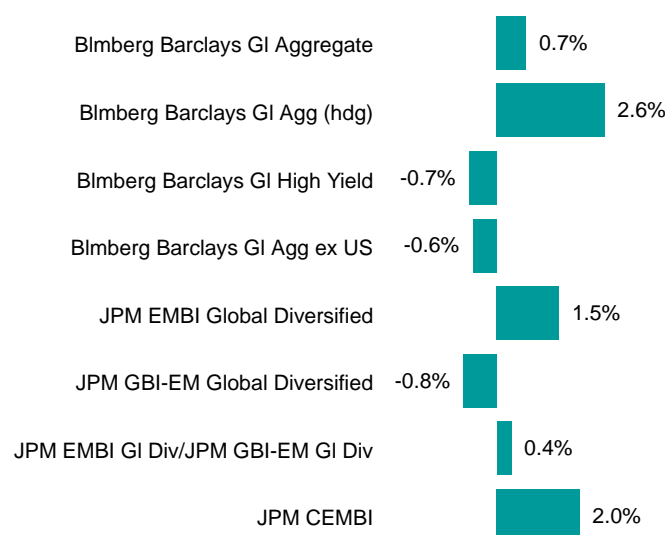
Global Fixed Income (Bloomberg Barclays Global Aggregate (unhedged): +0.7%; (hedged): +2.6%)

- Developed market sovereign bond yields rallied, pushing European sovereigns further into negative territory as the ECB reduced its deposit rate and announced a new bond purchasing stimulus program.
- Negative yielding debt totals nearly \$17 trillion, a record high.
- The U.S. dollar was up 3.4% versus a basket of trade partner currencies and up 4.3% vs the beleaguered euro.

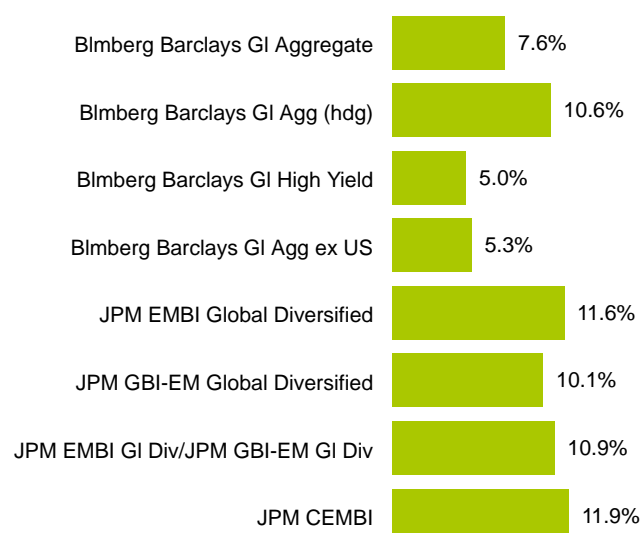
US\$ EMD (JPM EMBI Global Diversified: +1.5%), **Local Currency EMD** (JPM GBI-EM Global Diversified: -0.8%)

- Broadly, emerging market currencies depreciated versus the U.S. dollar, hampering local currency returns.
- Within the dollar-denominated benchmark, Argentina (-42%) and Venezuela (-51%) were among the few to post negative returns. Conversely, returns in the local debt benchmark were more mixed with Turkey (+19%) and Argentina (-60%) being outliers.

Global Fixed Income: Quarterly Returns

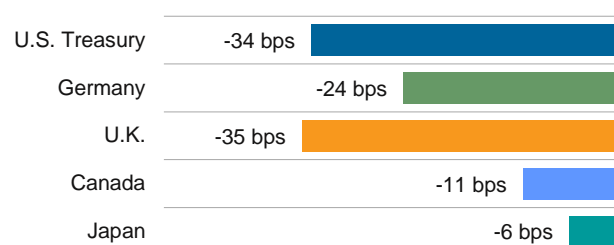


Global Fixed Income: One-Year Returns



Change in 10-Year Global Government Bond Yields

2Q19 to 3Q19



Sources: Bloomberg, Bloomberg Barclays, JP Morgan

Summary Expectations – 4Q2019

Macro

Outlook for U.S. economy and expected rate hikes (next 3-9 mos.)

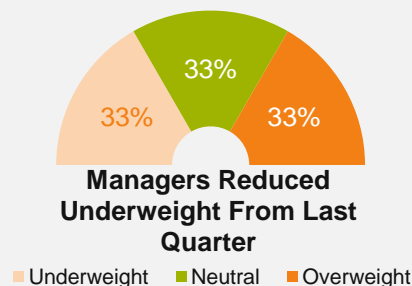
Consensus: **Consistent with market expectations**

6% Expect 1 cut in 4Q2019

19% 1-2 cuts

75% 2 cuts

Relative Portfolio Duration



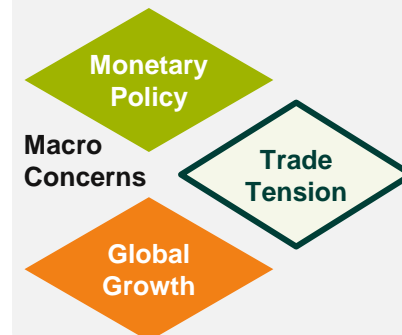
Shape of the Yield Curve (next 3-9 mos.)

Consensus: **Non-directional**

37% Expect Flatteners

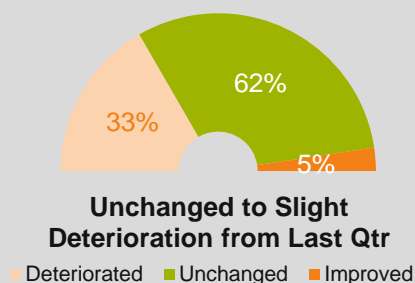
21% Neutral

42% Steepener

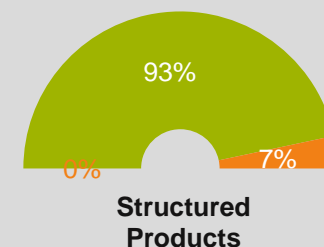
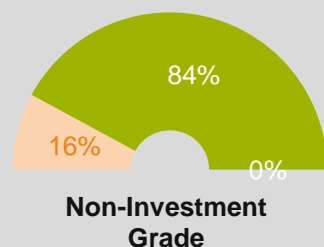
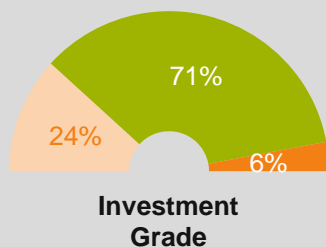


Fundamentals

Corporate Fundamentals Q/Q

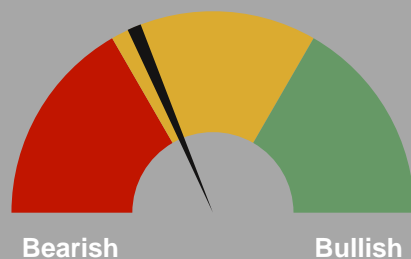


Sector Outlooks – Stable with lowered optimism, unchanged from a quarter ago



Positioning*

Current Active Risk Budget



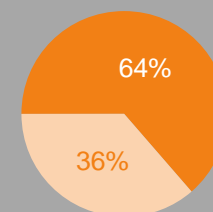
Top 3 Sector Overweights*

- 1 – CMBS/ABS
- 2 – MBS/NRMBS
- 3 – IG Corporates

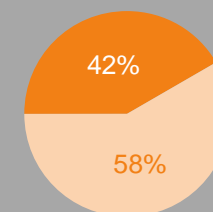
Top 3 Sector Underweights

- 1 – US Treasuries
- 2 – Gov't Agencies
- 3 – HY Corp (Out of Index)

Favor TIPS



Favor DM vs EM



*Sector over/underweights compiled mainly from multi-sector respondents; multiple sectors listed within rankings denote ties

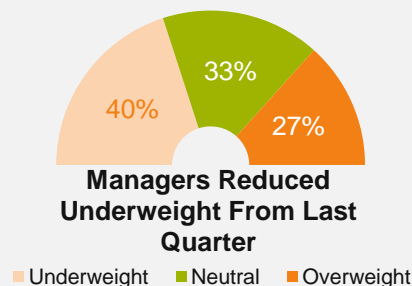
Summary Expectations – 3Q2019

Macro

Outlook for U.S. economy and expected rate hikes (next 3-9 mos.)

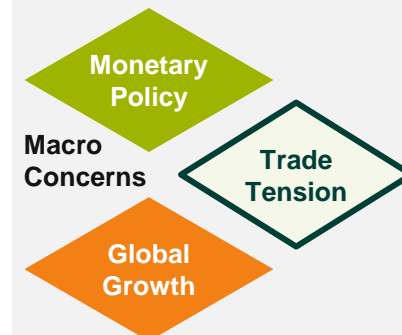
Consensus: **Stark contrast from a quarter ago, now 69% for 2 cuts**
15% Expect 1-2 cuts in 2019
69% 2 cuts
15% 2-3 cuts

Relative Portfolio Duration



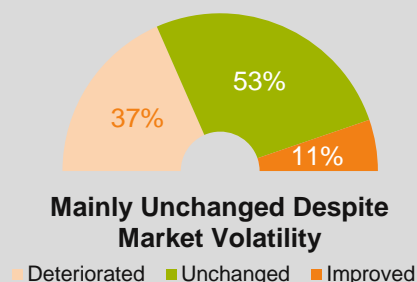
Shape of the Yield Curve (next 3-9 mos.)

Consensus: **Non-directional**
18% Expect Flattener
12% Neutral
71% Steepener

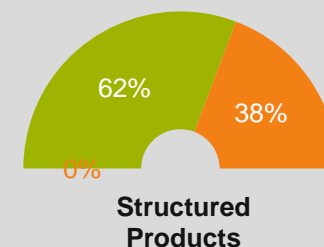
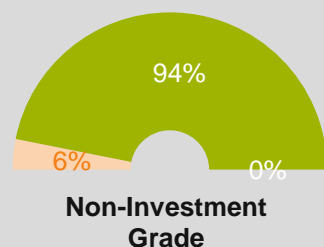
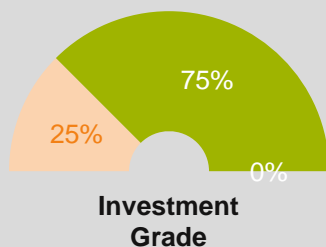


Fundamentals

Corporate Fundamentals Q/Q

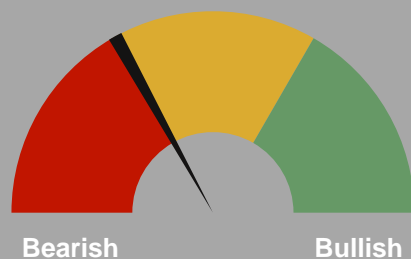


Sector Outlooks – Stable with lowered optimism from a quarter ago



Positioning*

Current Active Risk Budget



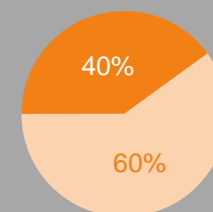
Top 3 Sector Overweights*

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- 3 – HY Corporates

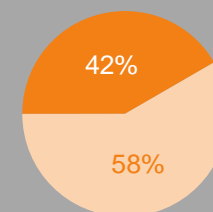
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Favor TIPS



Favor DM vs EM



*Sector over/underweights compiled mainly from multi-sector respondents; multiple sectors listed within rankings denote ties

Disclosure

This report provides forward-looking insights on market conditions from several respected money management firms with the objective of providing Callan with a broad perspective of key market drivers. Over 20 managers complete a quarterly questionnaire on their 3-9 month forward-looking views on the US economy, health of corporate fundamentals, market valuations and technicals, and how these views translate to their portfolio positioning.

This report is for informational purposes only and should not be construed as legal or tax advice on any matter. Any decision you make on the basis of the content is your sole responsibility. You should consult with legal and tax advisers before applying any of this information to your particular situation. Reference to or inclusion in this report of any product, service or entity should not be construed as a recommendation, approval, affiliation or endorsement of such product, service or entity by Callan. Past performance is no guarantee of future results.

Fees

A	B	C	D	E	F C+D+E	G B*F	H	I F-H
Funds and Sub-Advisors	Assets*	Inv. Mgmt. Fee	Custodial Expenses ¹	NC Budget ²	Total Estimated Expense (%)	Total Estimated Expenses (\$) ³	Callan Median Expense ⁴	Difference
NorthCarolina Stable Value Fund	\$2,118,979,704	0.299%	0.0018%	0.025%	0.326%	\$6,903,636	0.36%	-0.03%
Galliard	\$2,125,309,766	0.299%	0.0000%			\$6,354,676	0.30%	0.00%
North Carolina Fixed Income Passive Fund	\$86,328,656	0.020%	0.0255%	0.025%	0.071%	\$60,862	0.15%	-0.08%
Blackrock	\$86,328,656	0.020%	0.0100%			\$17,266	0.05%	-0.03%
North Carolina Fixed Income Fund	\$1,759,033,402	0.128%	0.0103%	0.025%	0.163%	\$2,868,983	0.40%	-0.24%
50% TCW	\$878,562,300	0.146%	0.0000%			\$1,278,308	0.22%	-0.07%
50% Prudential	\$880,471,091	0.110%	0.0100%			\$968,518	0.22%	-0.11%
North Carolina Inflation Sensitive Fund	\$405,676,874	0.090%	0.0153%	0.025%	0.130%	\$528,597	0.85%	-0.72%
Blackrock	\$405,676,884	0.090%	0.0100%			\$365,109	0.58%	-0.49%
North Carolina Large Cap Passive Fund	\$2,743,702,618	0.005%	0.0115%	0.025%	0.042%	\$1,138,637	0.08%	-0.04%
Blackrock	\$2,743,702,618	0.005%	0.0100%			\$137,185	0.03%	-0.03%
North Carolina Large Cap Core Fund	\$1,842,344,898	0.286%	0.0156%	0.025%	0.326%	\$6,009,729	0.73%	-0.40%
18.75% Hotchkis & Wiley	\$350,169,386	0.400%	0.0000%			\$1,400,678	0.40%	0.00%
18.75% Macquarie Large Cap Value	\$351,687,555	0.278%	0.0000%			\$978,395	0.40%	-0.12%
18.75% Sands Capital Management	\$342,167,418	0.450%	0.0000%			\$1,539,753	0.44%	0.01%
18.75% Loomis Sayles	\$343,488,361	0.384%	0.0000%			\$1,320,369	0.44%	-0.06%
25% BlackRock Advisors Inc., Large Cap Index*	\$454,832,175	0.005%	0.0100%			\$22,742	0.03%	-0.03%
North Carolina SMID Cap Passive Fund	\$306,804,766	0.005%	0.0146%	0.025%	0.045%	\$136,835	0.20%	-0.16%
Blackrock	\$306,804,766	0.005%	0.0100%			\$15,340	0.06%	-0.06%
North Carolina SMID Cap Core Fund	\$841,952,775	0.358%	0.0226%	0.025%	0.406%	\$3,417,486	0.92%	-0.51%
15.80% Hotchkis & Wiley	\$133,816,872	0.500%	0.0000%			\$669,084	0.62%	-0.12%
15.80% Earnest Partners	\$133,753,805	0.470%	0.0000%			\$628,643	0.71%	-0.24%
15.80% Wedge	\$134,853,539	0.511%	0.0000%			\$689,371	0.71%	-0.20%
23.80% Brown Advisory	\$196,088,122	0.519%	0.0000%			\$1,017,305	0.75%	-0.23%
28.80% BlackRock Advisors Inc., SMID Index*	\$243,440,426	0.005%	0.0100%			\$12,172	0.06%	-0.06%
North Carolina International Passive Fund	\$76,922,142	0.025%	0.0359%	0.025%	0.085%	\$65,692	0.25%	-0.16%
Blackrock	\$76,922,142	0.025%	0.0200%			\$18,846	0.08%	-0.06%
North Carolina International Equity	\$1,801,176,448	0.335%	0.0258%	0.025%	0.385%	\$6,941,734	0.82%	-0.43%
50% Baillie Gifford Growth	\$890,506,749	0.282%	0.0000%			\$2,512,120	0.52%	-0.24%
50% Mondrian Investment Partners Value	\$909,267,784	0.387%	0.0000%			\$3,518,866	0.52%	-0.13%
North Carolina TIPS Fund	\$220,814,670	0.025%	0.0127%	0.025%	0.063%	\$138,451	0.26%	-0.20%
Blackrock	\$220,814,670	0.025%	0.0000%			\$55,204	0.14%	-0.12%
Total	\$12,203,736,954	0.193%	0.0174%	0.025%	0.231%	\$28,210,641	0.33%	

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

¹ Based on annualized monthly fee accruals as of 06/30/2019

² 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.

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

⁴ 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.

Performance Watch List Score Card

North Carolina Supplemental Retirement Plans Active Management Scorecard

Large Cap Equity									
	3 Years to 9/30/2019		3 Years to 6/30/2019		3 Years to 03/31/2019		3 Years to 12/31/2018		
	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									
Small/Mid Cap									
	3 Years to 9/30/2019		3 Years to 6/30/2019		3 Years to 03/31/2019		3 Years to 12/31/2018		
	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 SMID Cap Value									
EARNEST Partners SMID Cap Value									
WEDGE SMID Cap Value									
Brown Advisory									
International Equity									
	3 Years to 9/30/2019		3 Years to 6/30/2019		3 Years to 03/31/2019		3 Years to 12/31/2018		
	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									
Fixed Income									
	3 Years to 9/30/2019		3 Years to 6/30/2019		3 Years to 03/31/2019		3 Years to 12/31/2018		
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	5 Year Risk
TCW Core Plus*									
Prudential Core Plus									
Stable Value									
	3 Years to 9/30/2019		3 Years to 6/30/2019		3 Years to 03/31/2019		3 Years to 12/31/2018		
	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									

*TCW Core Plus first full quarter was 1Q 2017. Prior performance is that of the composite.

North Carolina Supplemental Retirement Plans Quarterly Manager Review Spotlight Report

3rd Quarter 2019

Manager Assessment

	Organization	People	Process and Philosophy	Product Dynamics	Short Term Performance	Long Term Performance	Overall	OVERALL STATUS	NOTES
LARGE CAP CORE									
BlackRock	●	●	●	●	●	●	●	Satisfactory	
LARGE CAP VALUE									
Hotchkis & Wiley Large Cap Fundamental Value	●	●	●	●	●	●	●	Satisfactory	Trailing one-year results notable but within expectations
Macquarie Large Cap Value Focus	●	●	●	●	●	●	●	Cautionary	Concern over Lead PM Ty Nutt's retirement in July 2019; monitoring transition to Nik Lalvani closely and additional planned junior PM hire. Performance in line with expectations.
LARGE CAP GROWTH									
Loomis Sayles Large Cap Growth	●	●	●	●	●	●	●	Satisfactory	Trails benchmark over three-year period but within expectations
Sands Capital Management Select Growth	●	●	●	●	●	●	●	Satisfactory	
SMID CAP CORE									
BlackRock	●	●	●	●	●	●	●	Satisfactory	
SMID CAP VALUE									
Wedge Capital US SMID Cap Value	●	●	●	●	●	●	●	Satisfactory (on NC watch list)	Trails benchmark over three-year period but within expectations.
SMID CAP GROWTH									
Brown Advisory US SMID Cap Growth	●	●	●	●	●	●	●	Satisfactory	AUM near \$4 billion; holdings at an all-time high of 75 - notable but not actionable.
EARNEST Partners US SMID Cap Growth	●	●	●	●	●	●	●	Satisfactory	
MID CAP VALUE									
Hotchkis & Wiley Mid Cap Value	●	●	●	●	●	●	●	Cautionary (on NC watch list)	Meaningful underperformance in recent time periods due to deep-value process. In September 2019, Hunter Doble was elevated to co-PM, joining the team of Stan Majcher and George Davis.

● Positive status; no issues ● Cautionary status; noteworthy item but no concerns ● Under 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.

North Carolina Supplemental Retirement Plans Quarterly Manager Review Spotlight Report

3rd Quarter 2019

Manager Assessment

	Organization	People	Process and Philosophy	Product Dynamics	Short Term Performance	Long Term Performance	Overall	OVERALL STATUS	NOTES
INTERNATIONAL EQUITY									
Baillie Gifford ACWI Ex-US Alpha	●	●	●	●	●	●	●	Satisfactory	Depth and breadth of team enabled seamless transition after retirement of PM Andrew Strathdee in June 2019.
BlackRock	●	●	●	●	●	●	●	Satisfactory	
Mondrian Investment Partners Focused ACWI Ex-US	●	●	●	●	●	●	●	Satisfactory (on NC watch list)	Liz Desmond appointed Deputy CEO; Desmond's day to day responsibilities are not changing and she continues to manage the International Equity group and portfolios. Process and ability to protect in down markets are still intact, as demonstrated by 2018 outperformance; but performance continues to lag on an intermediate term basis as growth continues to outperform value.
CORE & CORE PLUS FIXED INCOME									
BlackRock	●	●	●	●	●	●	●	Satisfactory	
PGIM Core Plus Bond	●	●	●	●	●	●	●	Satisfactory	
TCW Core Plus	●	●	●	●	●	●	●	Satisfactory	Cautionary on Team due to resignation of Head of Credit Research, Jamie Farnham; replaced by special situations analyst Steve Purdy.
INFLATION SENSITIVE									
BlackRock Strategic Completion Fund	●	●	●	●	●	●	●	Satisfactory	
STABLE VALUE									
Galliard Stable Value	●	●	●	●	●	●	●	Under Review (on NC watch list)	Concern over key executive turnover, however, Galliard has spent several years planning for succession. Remaining founding partners Richard Merriam and Karl Tourville have formally announced their retirements. Monitoring integration with parent company Wells Fargo and renegotiation of long-term compensation arrangements which may impact Galliard's ability to retain talent and assets. Two portfolio specialists departed for competitor in October 2019.

● Positive status; no issues ● Cautionary status; noteworthy item but no concerns ● Under 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.

Hotchkis & Wiley MidCap

Hotchkis and Wiley (H&W) utilizes a disciplined equity approach that seeks to determine the present value of a company's future cash flows in order to maximize long-term performance with below-market volatility.

Underperformance is notable for the high magnitude but within expectations of the strategy and market conditions. Callan remains cautious of the risk-adjusted return profile. The firm has not changed the investment process and we would expect results to trail the benchmark when defensive stocks and sectors are in favor. Future portfolio results will continue to be tied to the performance within Energy and Financials sectors, areas currently overweight in the portfolio and differentiated from the benchmark.

The investment philosophy of H&W is rooted in exploiting the behavioral biases of the broader stock market. H&W invests in companies where, in their analysis, the present value of future cash flows exceeds the current market price. They believe these opportunities emerge because other investors ("the market") extrapolates the most recent trends of earnings and margin changes into the future, which leads to favoring "popular" investments and shunning unglamorous investments—regardless of the market valuation. Sell decisions are based on valuation, risk and portfolio guidelines.

The portfolio holds 50 to 80 securities at a given time. Lead portfolio manager Stan Majcher does consider benchmark weights when constructing the portfolio. Risk is managed through limits to individual sectors, industries and securities, which are limited to a maximum of 35%, 15% and 5% of total portfolio assets at market, respectively.

The portfolio underperformed the Russell Midcap Value Index benchmark and peers over trailing one- and three-year periods. The performance profile remains volatile: during Q4 2018, the fund fell (15.2%) versus the index (10.5%) and during Q3 2019, the fund fell (7%) while the index returned +0.13%. The portfolio has historically bounced back in small/mid cap rallies. The portfolio ranked in the bottom decile in 2018 as the cyclical and deeper value exposure sharply declined during the market sell-off in Q4 2018. The magnitude of underperformance in over the last four quarters has impacted all of the longer term time frames.

Portfolio manager Majcher is indifferent to sector weights relative to the benchmark – the portfolio is underweight Real Estate (2.8% vs. 15% index), Industrials (8.9% vs. 13.3% index), Materials (0% vs. 6.2% index), Health Care (0.7% vs. 5.6% index), and Staples (2.2% vs. 3.3% index). These sectors comprise more than 40% of the benchmark but less than 15% of the portfolio. Not being exposed to Real Estate, Utilities, and Staples was a major headwind to results in 2018 as investors sought defensive and safety stocks amidst the heightened uncertainty regarding tariffs, global growth, and interest rates. Conversely, Majcher determined that the Energy sector remains the most attractive and is the largest overweight in the portfolio; other overweight sectors include Financials, Technology, Consumer Discretionary, and Industrials. The overweight to Energy, as well as stock selection in Energy and Industrials sectors were the largest detractors from performance in the third quarter.

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.

This strategy should not perform well in vertical up markets with narrow leadership and typically protects in down markets. Effective August 31, 2019, Wedge has agreed to a new fee schedule that will lower the investment management fee from 0.61% to 0.52%.

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. However, history has shown over the long term, and especially in periods of stress, Mondrian is able to beat their benchmark by playing superior defense.

Investment Fund Balances

The table below compares the fund's investment fund balances as of September 30, 2019 with that of June 30, 2019. 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

	September 30, 2019			June 30, 2019		
	Market Value	Weight	Net New Invest.	Invest. Return	Market Value	Weight
North Carolina SRP 401k & 457						
Tier II Passive	\$3,434,572,852	28.14%	\$(24,994,569)	\$44,136,192	\$3,415,431,230	28.04%
Fixed Income Passive	86,328,656	0.71%	3,893,934	1,868,931	80,565,791	0.66%
Treasury Inflation Protected	220,814,670	1.81%	11,982,081	1,182,593	207,649,996	1.70%
Large Cap Passive	2,743,702,618	22.48%	(34,776,402)	46,585,439	2,731,893,581	22.43%
International Passive	76,922,142	0.63%	6,441	(1,423,486)	78,339,187	0.64%
SMID Cap Passive	306,804,766	2.51%	(6,100,624)	(4,077,284)	316,982,674	2.60%
Tier II Active	\$8,769,164,102	71.86%	\$11,066,411	\$(5,992,353)	\$8,764,090,044	71.96%
Stable Value Fund	2,118,979,704	17.36%	10,617,263	13,763,044	2,094,599,397	17.20%
Fixed Income Fund	1,759,033,402	14.41%	7,855,233	42,865,861	1,708,312,307	14.03%
Inflation Responsive Fund	405,676,874	3.32%	3,183,147	6,995,085	395,498,642	3.25%
Large Cap Core Equity Fund	1,842,344,898	15.10%	(40,178,616)	(10,433,277)	1,892,956,791	15.54%
International Equity Fund	1,801,176,448	14.76%	21,356,545	(35,631,652)	1,815,451,555	14.91%
Small/Mid Cap Equity Fund	841,952,775	6.90%	8,232,839	(23,551,415)	857,271,351	7.04%
Total Fund	\$12,203,736,955	100.0%	\$(13,928,158)	\$38,143,839	\$12,179,521,274	100.0%

Investment Fund Balances

The table below compares the fund's investment fund balances as of September 30, 2019 with that of June 30, 2019.

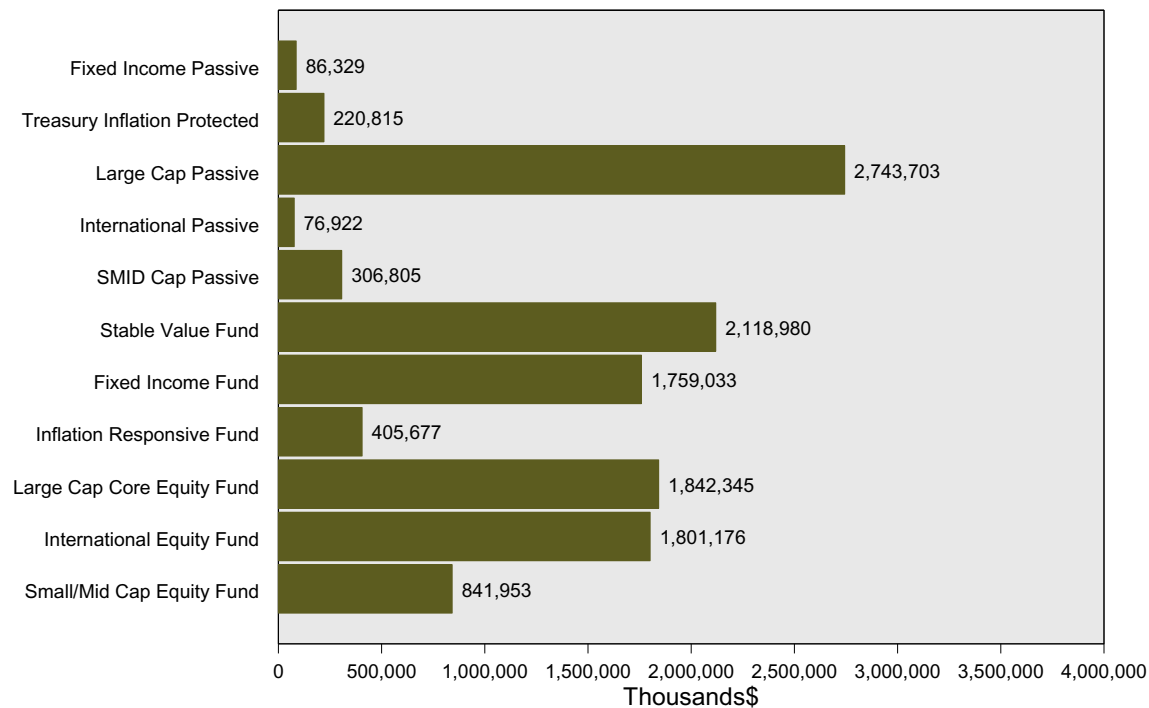
Asset Distribution Across Investment Funds

	September 30, 2019		June 30, 2019	
	Market Value	Weight	Market Value	Weight
North Carolina SRP 401k & 457				
Tier I: GoalMaker				
Post Retirement Conservative 11+	12,859,817	0.22%	11,311,875	0.20%
Post Retirement Conservative 6-10	76,124,851	1.32%	68,246,245	1.19%
Post Retirement Conservative 0-5	295,909,611	5.11%	283,304,034	4.95%
Pre Retirement Conservative 0-5	258,305,918	4.46%	249,501,866	4.36%
Pre Retirement Conservative 6-10	151,059,352	2.61%	149,188,199	2.61%
Pre Retirement Conservative 11-15	105,813,406	1.83%	103,617,655	1.81%
Pre Retirement Conservative 16-20	83,343,092	1.44%	82,581,937	1.44%
Pre Retirement Conservative 21-25	62,129,665	1.07%	61,183,006	1.07%
Pre Retirement Conservative 26+	82,991,359	1.43%	83,301,701	1.46%
Post Retirement Moderate 11+	16,090,813	0.28%	15,554,977	0.27%
Post Retirement Moderate 6-10	75,564,264	1.31%	68,123,381	1.19%
Post Retirement Moderate 0-5	322,926,233	5.58%	314,072,174	5.49%
Pre Retirement Moderate 0-5	527,546,029	9.11%	515,065,617	9.00%
Pre Retirement Moderate 6-10	523,622,486	9.05%	520,642,190	9.09%
Pre Retirement Moderate 11-15	408,529,340	7.06%	410,529,469	7.17%
Pre Retirement Moderate 16-20	327,685,363	5.66%	325,986,224	5.69%
Pre Retirement Moderate 21-25	229,554,769	3.97%	232,551,793	4.06%
Pre Retirement Moderate 26+	253,853,732	4.39%	255,239,759	4.46%
Post Retirement Aggressive 11+	9,092,275	0.16%	8,455,755	0.15%
Post Retirement Aggressive 6-10	24,931,449	0.43%	24,357,242	0.43%
Post Retirement Aggressive 0-5	124,917,430	2.16%	120,541,808	2.11%
Pre Retirement Aggressive 0-5	260,239,408	4.50%	254,320,661	4.44%
Pre Retirement Aggressive 6-10	363,311,783	6.28%	366,391,339	6.40%
Pre Retirement Aggressive 11-15	370,379,156	6.40%	367,407,688	6.42%
Pre Retirement Aggressive 16-20	358,836,490	6.20%	365,186,930	6.38%
Pre Retirement Aggressive 21-25	237,191,699	4.10%	240,753,862	4.21%
Pre Retirement Aggressive 26+	225,750,539	3.90%	227,691,596	3.98%
Tier I: GoalMaker Total	\$5,788,560,329	100.0%	\$5,725,108,983	100.0%

Changes in Investment Fund Balances Period Ended September 30, 2019

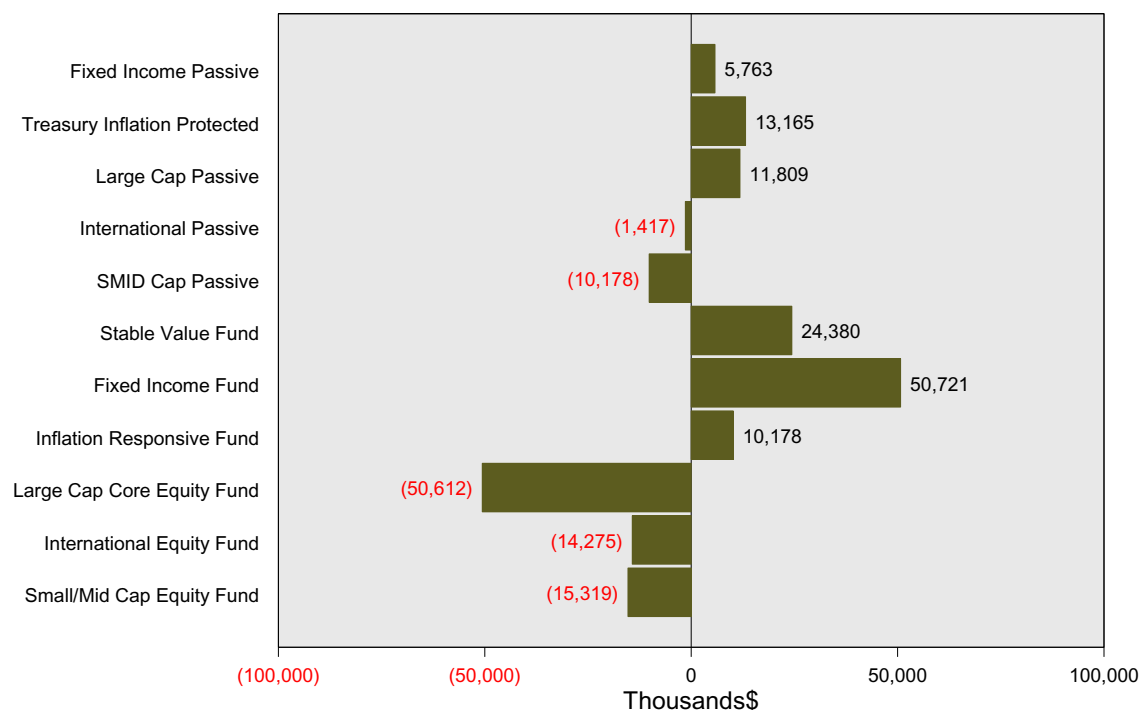
Allocation Across Investment Options

The chart below illustrates the allocation of the aggregate fund assets across the various investment options for the quarter ended September 30, 2019.



Changes in Fund Values

The chart below shows the net change in fund values across the various investment options for the quarter ended September 30, 2019. 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.



Investment Fund Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended September 30, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns and Rankings for Periods Ended September 30, 2019

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
Tier 2: Passive (Net of Fee)										
Fixed Income Passive	2.27%	45	10.18%	47	2.87%	72	3.31%	54	3.17%	(10/10)
Blmbg Barclays Aggregate	2.27%	44	10.30%	43	2.92%	70	3.38%	47	3.27%	(10/10)
Callan Core Bond MFs	2.25%		10.14%		3.12%		3.36%		-	
Treasury Inflation Protected Securities	0.60%	72	5.78%	63	-		-		4.22%	(7/18)
Blmbg US TIPS 1-10 Yr	0.60%	72	5.75%	64	1.94%	62	1.95%	53	4.22%	(7/18)
Callan TIPS MFs	1.10%		6.16%		2.14%		1.99%		-	
Large Cap Passive	1.71%	22	4.28%	28	13.40%	22	10.79%	21	15.67%	(4/09)
S&P 500 Index	1.70%	23	4.25%	28	13.39%	22	10.84%	20	15.76%	(4/09)
Callan Large Cap Core MFs	0.99%		2.30%		12.11%		9.42%		-	
International Passive	(1.80%)	65	(1.03%)	36	6.60%	40	3.10%	51	8.59%	(4/09)
MSCI ACWI ex US	(1.80%)	65	(1.23%)	37	6.33%	45	2.90%	54	8.53%	(4/09)
Callan Non US Equity MFs	(1.29%)		(2.22%)		5.94%		3.16%		-	
SMID Cap Passive	(1.27%)	80	(4.08%)	51	9.44%	35	8.55%	38	15.52%	(4/09)
Russell 2500 Index	(1.28%)	80	(4.04%)	50	9.51%	35	8.57%	37	15.58%	(4/09)
Callan SMID Core MFs	(0.35%)		(3.84%)		8.59%		7.81%		-	

Investment Fund Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended September 30, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns and Rankings for Periods Ended September 30, 2019

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
Tier 2: Active (Net of Fee)										
Stable Value Fund	0.66%	7	2.53%	4	2.24%	8	2.10%	8	2.53%	(7/09)
3 Yr US Treas Rolling	0.40%	99	2.16%	48	2.00%	19	1.58%	53	1.17%	(7/09)
T-Bill + 1.5%	0.93%	4	3.89%	1	3.04%	1	2.48%	1	2.03%	(7/09)
Callan Stable Value CT	0.55%		2.15%		1.81%		1.61%		-	
Fixed Income Fund	2.50%	10	11.50%	7	3.90%	18	4.25%	16	4.99%	(4/09)
Blmbg Barclays Aggregate	2.27%	39	10.30%	43	2.92%	85	3.38%	69	4.10%	(4/09)
Callan Core Plus MFs	2.17%		10.06%		3.45%		3.62%		-	
TCW Core Plus	2.23%	44	10.77%	20	-		-		4.56%	(1/17)
Blmbg Barclays Aggregate	2.27%	39	10.30%	43	2.92%	85	3.38%	69	4.33%	(1/17)
Callan Core Plus MFs	2.17%		10.06%		3.45%		3.62%		-	
Prudential Core Plus	2.77%	1	12.28%	1	4.65%	4	-		4.80%	(1/15)
Blmbg Barclays Aggregate	2.27%	39	10.30%	43	2.92%	85	3.38%	69	3.17%	(1/15)
Callan Core Plus MFs	2.17%		10.06%		3.45%		3.62%		-	
Inflation Responsive Fund	1.76%	10	6.96%	10	4.27%	21	3.04%	21	1.82%	(9/11)
Inflation Responsive Benchmark	1.73%	10	7.15%	9	2.39%	71	1.29%	47	0.12%	(9/11)
Callan Real Assets MFs	0.22%		2.13%		3.15%		0.77%		-	
BlackRock Strategic Completion	1.76%	10	-		-		-		7.50%	(12/18)
BlackRock Custom Benchmark	1.73%	10	5.92%	18	2.81%	68	2.11%	37	7.31%	(12/18)
Callan Real Assets MFs	0.22%		2.13%		3.15%		0.77%		-	
Large Cap Core Equity Fund	(0.56%)	76	2.02%	54	-		-		10.42%	(10/17)
Russell 1000 Index	1.42%	31	3.87%	32	13.19%	45	10.62%	40	10.60%	(10/17)
Callan Lg Cap Broad MF	0.76%		2.27%		12.67%		9.74%		-	
Hotchkis & Wiley Large Cap Value	(0.24%)	85	(1.94%)	75	10.83%	37	7.61%	51	15.96%	(4/09)
Russell 1000 Value Index	1.36%	51	4.00%	32	9.43%	69	7.79%	47	14.34%	(4/09)
Callan Lg Cap Value MF	1.39%		0.74%		10.12%		7.66%		-	
Macquarie Large Cap Value	2.16%	33	0.91%	47	9.39%	69	-		7.89%	(6/15)
Russell 1000 Value Index	1.36%	51	4.00%	32	9.43%	69	7.79%	47	7.48%	(6/15)
Callan Lg Cap Value MF	1.39%		0.74%		10.12%		7.66%		-	
Sands Capital Large Cap Growth	(5.23%)	95	(0.26%)	81	17.41%	30	11.61%	67	20.09%	(4/09)
Russell 1000 Growth Index	1.49%	14	3.71%	33	16.89%	35	13.39%	27	17.29%	(4/09)
Callan Large Cap Grwth MF	(0.46%)		2.98%		16.24%		12.62%		-	
Loomis SaylesLarge Cap Growth	(1.41%)	72	6.40%	18	14.76%	73	14.53%	10	14.75%	(8/14)
Russell 1000 Growth Index	1.49%	14	3.71%	33	16.89%	35	13.39%	27	13.59%	(8/14)
Callan Large Cap Grwth MF	(0.46%)		2.98%		16.24%		12.62%		-	
BlackRock Russell 1000 Index	1.33%	34	3.64%	32	-		-		9.62%	(11/17)
Russell 1000 Index	1.42%	33	3.87%	30	13.19%	24	10.62%	23	9.78%	(11/17)
Callan Large Cap Core MFs	0.99%		2.30%		12.11%		9.42%		-	

Investment Fund Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended September 30, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns and Rankings for Periods Ended September 30, 2019

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception
Tier 2: Active (Net of Fee)									
International Equity Fund	(1.96%)	67	1.14%	26	6.77%	37	4.58%	28	9.43% (4/09)
MSCI ACWI ex US	(1.80%)	65	(1.23%)	37	6.33%	45	2.90%	54	8.53% (4/09)
Callan Non US Equity MFs	(1.29%)		(2.22%)		5.94%		3.16%		-
Mondrian ACWI ex-US Value	(2.23%)	73	0.38%	31	5.06%	66	2.56%	66	7.71% (4/09)
MSCI ACWI ex US	(1.80%)	65	(1.23%)	37	6.33%	45	2.90%	54	8.53% (4/09)
Callan Non US Equity MFs	(1.29%)		(2.22%)		5.94%		3.16%		-
Baillie Gifford ACWI ex-US Growth	(1.76%)	64	1.82%	17	8.87%	7	7.03%	6	11.71% (4/09)
MSCI ACWI ex US	(1.80%)	65	(1.23%)	37	6.33%	45	2.90%	54	8.53% (4/09)
Callan Non US Equity MFs	(1.29%)		(2.22%)		5.94%		3.16%		-
Small/Mid Cap Equity Fund	(2.75%)	59	(4.91%)	62	-		-		4.53% (10/17)
Russell 2500 Index	(1.28%)	48	(4.04%)	46	9.51%	60	8.57%	50	5.59% (10/17)
Callan SMID Broad MFs	(1.77%)		(4.42%)		10.81%		8.51%		-
Hotchkis & Wiley Mid Cap Value	(7.12%)	99	(22.24%)	98	1.19%	87	0.64%	86	15.01% (4/09)
Russell 2500 Value Index	0.13%	52	(4.35%)	42	6.87%	54	6.98%	29	14.48% (4/09)
Callan SMID Value MFs	0.36%		(4.73%)		7.18%		6.14%		-
Earnest Partners Small/Mid Cap Value	(0.15%)	53	2.36%	9	11.01%	6	9.28%	9	15.28% (4/09)
Russell 2500 Value Index	0.13%	52	(4.35%)	42	6.87%	54	6.98%	29	14.48% (4/09)
Callan SMID Value MFs	0.36%		(4.73%)		7.18%		6.14%		-
Wedge Small/Mid Cap Value	0.23%	51	(5.45%)	58	5.99%	62	6.69%	35	11.41% (1/12)
Russell 2500 Value Index	0.13%	52	(4.35%)	42	6.87%	54	6.98%	29	11.02% (1/12)
Callan SMID Value MFs	0.36%		(4.73%)		7.18%		6.14%		-
Brown Advisory Small/Mid Cap Growth	(5.26%)	71	2.23%	17	12.28%	69	13.40%	7	17.16% (4/09)
Russell 2500 Growth Index	(3.18%)	41	(4.11%)	44	12.33%	67	10.22%	55	16.69% (4/09)
Callan SMID Growth MFs	(3.74%)		(4.48%)		13.13%		10.48%		-
BlackRock Russell 2500 Index	(1.23%)	77	(4.29%)	51	-		-		4.91% (11/17)
Russell 2500 Index	(1.28%)	80	(4.04%)	50	9.51%	35	8.57%	37	4.99% (11/17)
Callan SMID Core MFs	(0.35%)		(3.84%)		8.59%		7.81%		-

Investment Fund Returns and Peer Group Rankings

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 9/2019			3 Years Ended 6/2019		3 Years Ended 3/2019		3 Years Ended 12/2018	
Tier 2: Passive (Net of Fee)									
Fixed Income Passive	2.87%	72	2.26%	80	1.98%	86	2.01%	72	
Blmbg Barclays Aggregate	2.92%	70	2.31%	77	2.03%	85	2.06%	68	
Callan Core Bond MFs	3.12%		2.53%		2.33%		2.20%		
Large Cap Passive	13.40%	22	14.18%	26	13.50%	21	9.24%	10	
S&P 500 Index	13.39%	22	14.19%	26	13.51%	21	9.26%	10	
Callan Large Cap Core MFs	12.11%		13.33%		12.50%		7.94%		
International Passive	6.60%	40	9.67%	31	8.36%	24	4.95%	10	
MSCI ACWI ex US	6.33%	45	9.39%	33	8.09%	29	4.48%	15	
Callan Non US Equity MFs	5.94%		8.51%		6.50%		2.23%		
SMID Cap Passive	9.44%	35	12.24%	29	12.47%	13	7.29%	26	
Russell 2500 Index	9.51%	35	12.34%	28	12.56%	13	7.32%	26	
Callan SMID Core MFs	8.59%		10.54%		10.16%		5.73%		

Investment Fund Returns and Peer Group Rankings

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 9/2019		3 Years Ended 6/2019		3 Years Ended 3/2019		3 Years Ended 12/2018	
Tier 2: Active (Net of Fee)								
Stable Value Fund	2.24%	8	2.19%	7	2.13%	8	2.08%	8
3 Yr US Treas Rolling	2.00%	19	1.94%	20	1.85%	22	1.73%	36
T-Bill + 1.5%	3.04%	1	2.88%	1	2.69%	1	2.52%	1
Callan Stable Value CT	1.81%		1.73%		1.65%		1.59%	
Fixed Income Fund	3.90%	18	3.38%	30	3.12%	43	2.98%	40
Blmbg Barclays Aggregate	2.92%	85	2.31%	95	2.03%	95	2.06%	81
Callan Core Plus MFs	3.45%		3.25%		2.99%		2.63%	
Prudential Core Plus	4.65%	4	4.24%	11	4.11%	13	3.92%	15
Blmbg Barclays Aggregate	2.92%	85	2.31%	95	2.03%	95	2.06%	81
Callan Core Plus MFs	3.45%		3.25%		2.99%		2.63%	
Inflation Responsive Fund	4.27%	21	4.22%	31	5.54%	35	4.64%	28
Inflation Responsive Benchmark	2.39%	71	1.72%	84	2.99%	78	2.08%	76
Callan Real Assets MFs	3.15%		3.85%		4.85%		2.85%	
Large Cap Core Equity Fund								
Hotchkis & Wiley Large Cap Value	10.83%	37	13.20%	13	12.22%	19	7.51%	42
Russell 1000 Value Index	9.43%	69	10.19%	73	10.45%	61	6.95%	55
Callan Lg Cap Value MF	10.12%		11.17%		11.08%		7.06%	
Macquarie Large Cap Value	9.39%	69	8.63%	89	11.56%	33	8.55%	16
Russell 1000 Value Index	9.43%	69	10.19%	73	10.45%	61	6.95%	55
Callan Lg Cap Value MF	10.12%		11.17%		11.08%		7.06%	
Sands Capital Large Cap Growth	17.41%	30	23.82%	1	21.95%	2	10.25%	35
Russell 1000 Growth Index	16.89%	35	18.07%	59	16.53%	52	11.15%	21
Callan Large Cap Grwth MF	16.24%		18.85%		16.80%		9.78%	
Loomis SaylesLarge Cap Growth	14.76%	73	18.47%	53	17.63%	37	11.69%	10
Russell 1000 Growth Index	16.89%	35	18.07%	59	16.53%	52	11.15%	21
Callan Large Cap Grwth MF	16.24%		18.85%		16.80%		9.78%	
International Equity Fund	6.77%	37	9.99%	26	8.55%	21	5.07%	9
MSCI ACWI ex US	6.33%	45	9.39%	33	8.09%	29	4.48%	15
Callan Non US Equity MFs	5.94%		8.51%		6.50%		2.23%	
Mondrian ACWI ex-US Value	5.06%	66	7.23%	68	6.80%	43	4.20%	19
MSCI ACWI ex US	6.33%	45	9.39%	33	8.09%	29	4.48%	15
Callan Non US Equity MFs	5.94%		8.51%		6.50%		2.23%	
Baillie Gifford ACWI ex-US Growth	8.87%	7	13.23%	3	10.76%	3	6.41%	3
MSCI ACWI ex US	6.33%	45	9.39%	33	8.09%	29	4.48%	15
Callan Non US Equity MFs	5.94%		8.51%		6.50%		2.23%	
Small/Mid Cap Equity Fund								
Hotchkis & Wiley Mid Cap Value	1.19%	87	7.21%	79	7.18%	75	2.38%	81
Russell 2500 Value Index	6.87%	54	8.98%	46	9.85%	39	6.59%	35
Callan SMID Value MFs	7.18%		8.83%		9.12%		5.65%	
Earnest Partners Small/Mid Cap Value	11.01%	6	13.08%	1	12.71%	5	7.69%	19
Russell 2500 Value Index	6.87%	54	8.98%	46	9.85%	39	6.59%	35
Callan SMID Value MFs	7.18%		8.83%		9.12%		5.65%	
Wedge Small/Mid Cap Value	5.99%	62	7.80%	77	8.07%	59	4.69%	57
Russell 2500 Value Index	6.87%	54	8.98%	46	9.85%	39	6.59%	35
Callan SMID Value MFs	7.18%		8.83%		9.12%		5.65%	
Brown Advisory Small/Mid Cap Growth	12.28%	69	17.53%	33	17.04%	34	8.21%	51
Russell 2500 Growth Index	12.33%	67	16.14%	59	15.60%	55	8.11%	52
Callan SMID Growth MFs	13.13%		16.44%		16.11%		8.34%	

Investment Fund Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment funds over various time periods ended September 30, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns and Rankings for Periods Ended September 30, 2019

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
Tier 2: Active (Gross of Fee)										
Stable Value Fund										
Galliard Stable Value	0.69%	10	2.68%	14	2.40%	16	2.29%	15	2.52%	(1/11)
3 Yr US Treas Rolling	0.40%	99	2.16%	90	2.00%	85	1.58%	92	1.16%	(1/11)
T-Bill + 1.5%	0.93%	1	3.89%	1	3.04%	1	2.48%	1	2.10%	(1/11)
Callan Stable Value SA	0.64%		2.54%		2.31%		2.21%		-	
Fixed Income Fund										
TCW Core Plus	2.26%	86	10.91%	18	-		-		4.73%	(1/17)
Blmbg Barclays Aggregate	2.27%	83	10.30%	69	2.92%	94	3.38%	93	4.33%	(1/17)
Callan Core Bond FI	2.36%		10.52%		3.32%		3.71%		-	
Prudential Core Plus	2.77%	1	12.35%	1	4.84%	1	-		5.01%	(1/15)
Blmbg Barclays Aggregate	2.27%	83	10.30%	69	2.92%	94	3.38%	93	3.17%	(1/15)
Callan Core Bond FI	2.36%		10.52%		3.32%		3.71%		-	
Inflation Responsive Fund										
BlackRock Strategic Completion	1.78%	14	-		-		-		8.90%	(11/18)
BlackRock Custom Benchmark	1.73%	15	5.92%	31	2.81%	79	2.11%	44	8.59%	(11/18)
Callan Real Assets	0.19%		2.09%		4.38%		1.77%		-	
Large Cap Core Equity Fund										
Hotchkis & Wiley Large Cap Value	(0.14%)	86	(1.57%)	80	11.30%	24	8.10%	43	16.52%	(4/09)
Russell 1000 Value Index	1.36%	55	4.00%	28	9.43%	71	7.79%	55	14.34%	(4/09)
Callan Large Cap Value	1.49%		1.02%		10.02%		7.93%		-	
Macquarie Large Cap Value	2.24%	25	1.19%	49	9.70%	61	-		8.19%	(6/15)
Russell 1000 Value Index	1.36%	55	4.00%	28	9.43%	71	7.79%	55	7.48%	(6/15)
Callan Large Cap Value	1.49%		1.02%		10.02%		7.93%		-	
Sands Capital Large Cap Growth	(5.12%)	96	0.17%	82	17.94%	33	12.15%	74	20.69%	(4/09)
Russell 1000 Growth Index	1.49%	25	3.71%	58	16.89%	47	13.39%	43	17.29%	(4/09)
Callan Large Cap Growth	0.30%		4.09%		16.59%		13.05%		-	
Loomis SaylesLarge Cap Growth	(1.32%)	80	6.80%	29	15.19%	67	14.97%	14	15.19%	(8/14)
Russell 1000 Growth Index	1.49%	25	3.71%	58	16.89%	47	13.39%	43	13.59%	(8/14)
Callan Large Cap Growth	0.30%		4.09%		16.59%		13.05%		-	
BlackRock Russell 1000 Index	1.33%	44	3.64%	35	-		-		9.62%	(11/17)
Russell 1000 Index	1.42%	38	3.87%	33	13.19%	33	10.62%	37	9.78%	(11/17)
Callan Large Cap Core	1.21%		2.34%		12.80%		10.28%		-	
International Equity Fund										
Mondrian ACWI ex-US Value	(2.13%)	51	0.76%	6	5.48%	50	3.00%	38	8.20%	(4/09)
MSCI ACWI ex US	(1.80%)	36	(1.23%)	10	6.33%	33	2.90%	43	8.53%	(4/09)
Callan NonUS AC Value Eq	(2.10%)		(4.54%)		5.45%		2.77%		-	
Baillie Gifford ACWI ex-US Growth	(1.69%)	53	2.10%	33	9.22%	27	7.43%	19	12.19%	(4/09)
MSCI ACWI ex US	(1.80%)	60	(1.23%)	73	6.33%	79	2.90%	96	8.53%	(4/09)
Callan NonUS AC Gr Eq	(1.64%)		0.45%		7.81%		5.37%		-	
Small/Mid Cap Equity Fund										
Hotchkis & Wiley Mid Cap Value	(7.01%)	99	(21.86%)	100	1.70%	97	1.17%	88	15.66%	(4/09)
Russell 2500 Value Index	0.13%	58	(4.35%)	54	6.87%	58	6.98%	48	14.48%	(4/09)
Callan Small/MidCap Value	0.47%		(3.83%)		7.33%		6.93%		-	
Earnest Partners Small/Mid Cap Value	(0.03%)	59	2.82%	10	11.53%	10	9.82%	12	15.89%	(4/09)
Russell 2500 Value Index	0.13%	58	(4.35%)	54	6.87%	58	6.98%	48	14.48%	(4/09)
Callan Small/MidCap Value	0.47%		(3.83%)		7.33%		6.93%		-	
Wedge Small/Mid Cap Value	0.38%	56	(4.89%)	59	6.66%	61	7.42%	38	12.18%	(1/12)
Russell 2500 Value Index	0.13%	58	(4.35%)	54	6.87%	58	6.98%	48	11.02%	(1/12)
Callan Small/MidCap Value	0.47%		(3.83%)		7.33%		6.93%		-	
Brown Advisory Small/Mid Cap Growth	(5.13%)	62	2.73%	16	12.86%	62	14.01%	11	17.80%	(4/09)
Russell 2500 Growth Index	(3.18%)	43	(4.11%)	57	12.33%	76	10.22%	73	16.69%	(4/09)
Callan Sm/MidCap Growth	(3.60%)		(3.07%)		14.21%		11.16%		-	
BlackRock Russell 2500 Index	(1.23%)	84	(4.28%)	65	-		-		4.92%	(11/17)
Russell 2500 Index	(1.28%)	85	(4.04%)	62	9.51%	60	8.57%	70	4.99%	(11/17)
Callan Small/MidCap Core	0.13%		(2.02%)		10.03%		9.49%		-	

Investment Fund Returns and Peer Group Rankings

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 9/2019		3 Years Ended 6/2019		3 Years Ended 3/2019		3 Years Ended 12/2018	
Tier 2: Active (Gross of Fee)								
Stable Value Fund								
Galliard Stable Value	2.40%	16	2.35%	30	2.30%	25	2.25%	19
3 Yr US Treas Rolling	2.00%	85	1.94%	88	1.85%	88	1.73%	88
T-Bill + 1.5%	3.04%	1	2.88%	15	2.69%	16	2.52%	12
Callan Stable Value SA	2.31%		2.29%		2.24%		2.21%	
Fixed Income Fund								
Prudential Core Plus	4.84%	1	4.45%	1	4.34%	1	4.18%	1
Blmbg Barclays Aggregate	2.92%	94	2.31%	92	2.03%	90	2.06%	88
Callan Core Bond FI	3.32%		2.73%		2.49%		2.46%	
Large Cap Core Equity Fund								
Hotchkis & Wiley Large Cap Value	11.30%	24	13.69%	10	12.71%	11	7.99%	33
Russell 1000 Value Index	9.43%	71	10.19%	76	10.45%	68	6.95%	59
Callan Large Cap Value	10.02%		11.16%		11.18%		7.27%	
Macquarie Large Cap Value	9.70%	61	8.93%	92	11.88%	31	8.86%	13
Russell 1000 Value Index	9.43%	71	10.19%	76	10.45%	68	6.95%	59
Callan Large Cap Value	10.02%		11.16%		11.18%		7.27%	
Sands Capital Large Cap Growth	17.94%	33	24.39%	3	22.53%	4	10.79%	41
Russell 1000 Growth Index	16.89%	47	18.07%	56	16.53%	56	11.15%	35
Callan Large Cap Growth	16.59%		18.34%		16.74%		10.41%	
Loomis SaylesLarge Cap Growth	15.19%	67	18.91%	45	18.08%	34	12.12%	19
Russell 1000 Growth Index	16.89%	47	18.07%	56	16.53%	56	11.15%	35
Callan Large Cap Growth	16.59%		18.34%		16.74%		10.41%	
International Equity Fund								
Mondrian ACWI ex-US Value	5.48%	50	7.66%	65	7.24%	55	4.63%	46
MSCI ACWI ex US	6.33%	33	9.39%	45	8.09%	40	4.48%	50
Callan NonUS AC Value Eq	5.45%		8.67%		7.58%		4.50%	
Baillie Gifford ACWI ex-US Growth	9.22%	27	13.62%	18	11.15%	22	6.80%	17
MSCI ACWI ex US	6.33%	79	9.39%	75	8.09%	63	4.48%	50
Callan NonUS AC Gr Eq	7.81%		10.86%		9.14%		4.43%	
Small/Mid Cap Equity Fund								
Hotchkis & Wiley Mid Cap Value	1.70%	97	7.76%	83	7.73%	82	2.92%	91
Russell 2500 Value Index	6.87%	58	8.98%	72	9.85%	39	6.59%	41
Callan Small/MidCap Value	7.33%		10.08%		9.32%		5.93%	
Earnest Partners Small/Mid Cap Value	11.53%	10	13.62%	19	13.25%	21	8.22%	26
Russell 2500 Value Index	6.87%	58	8.98%	72	9.85%	39	6.59%	41
Callan Small/MidCap Value	7.33%		10.08%		9.32%		5.93%	
Wedge Small/Mid Cap Value	6.66%	61	8.49%	77	8.77%	70	5.38%	55
Russell 2500 Value Index	6.87%	58	8.98%	72	9.85%	39	6.59%	41
Callan Small/MidCap Value	7.33%		10.08%		9.32%		5.93%	
Brown Advisory Small/Mid Cap Growth	12.86%	62	18.15%	41	17.66%	40	8.79%	53
Russell 2500 Growth Index	12.33%	76	16.14%	70	15.60%	63	8.11%	55
Callan Sm/MidCap Growth	14.21%		17.23%		17.26%		10.03%	

Investment Fund Returns

The table below details the rates of return for the Fund's investment funds over various time periods ended September 30, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2019

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception
Tier 1: GoalMaker Funds (Net of Fee)					
Post Retirement Conservative 11+	1.02%	6.05%	-	-	5.55% ^(7/18)
Post Ret Conservative 11+ Index	0.92%	5.46%	-	-	5.10% ^(7/18)
Post Retirement Conservative 6-10	1.08%	6.26%	-	-	5.80% ^(7/18)
Post Ret Conservative 6-10 Index	0.98%	5.61%	-	-	5.30% ^(7/18)
Post Retirement Conservative 0-5	1.09%	6.34%	-	-	6.00% ^(7/18)
Post Ret Conservative 0-5 Index	1.02%	5.69%	-	-	5.49% ^(7/18)
Pre Retirement Conservative 0-5	1.13%	6.63%	5.20%	4.49%	5.94% ^(7/09)
Pre Ret Conservative 0-5 Index	1.06%	5.88%	4.79%	4.01%	4.96% ^(7/09)
Pre Retirement Conservative 6-10	1.00%	6.46%	6.04%	5.05%	6.90% ^(7/09)
Pre Ret Conservative 6-10 Index	0.98%	5.65%	5.56%	4.51%	5.83% ^(7/09)
Pre Retirement Conservative 11-15	0.90%	6.20%	7.38%	6.04%	8.30% ^(7/09)
Pre Ret Conservative 11-15 Index	0.93%	5.39%	6.86%	5.49%	7.59% ^(7/09)
Pre Retirement Conservative 16-20	0.69%	5.73%	8.87%	6.99%	9.77% ^(7/09)
Pre Ret Conservative 16-20 Index	0.75%	4.80%	8.29%	6.41%	9.19% ^(7/09)
Pre Retirement Conservative 21-25	0.48%	5.09%	-	-	6.06% ^(7/18)
Pre Ret Conservative 21-25 Index	0.60%	4.18%	-	-	5.33% ^(7/18)
Pre Retirement Conservative 26+	0.17%	4.06%	-	-	5.51% ^(7/18)
Pre Ret Conservative 26+ Index	0.34%	3.16%	-	-	4.78% ^(7/18)

Investment Fund Returns

The table below details the rates of return for the Fund's investment funds over various time periods ended September 30, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2019

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception
Tier 1: GoalMaker Funds (Net of Fee)					
Post Retirement Moderate 11+	0.80%	5.45%	-	-	5.46% ^(7/18)
Post Ret Moderate 11+ Index	0.77%	4.88%	-	-	5.03% ^(7/18)
Post Retirement Moderate 6-10	0.85%	5.67%	-	-	5.77% ^(7/18)
Post Ret Moderate 6-10 Index	0.29%	3.53%	-	-	4.15% ^(7/18)
Post Retirement Moderate 0-5	0.91%	5.94%	-	-	6.21% ^(7/18)
Post Ret Moderate 0-5 Index	0.91%	5.25%	-	-	5.66% ^(7/18)
Pre Retirement Moderate 0-5	0.87%	5.98%	6.48%	5.36%	7.28% ^(7/09)
Pre Ret Moderate 0-5 Index	0.88%	5.18%	6.01%	4.82%	6.40% ^(7/09)
Pre Retirement Moderate 6-10	0.65%	5.48%	7.25%	5.96%	8.14% ^(7/09)
Pre Ret Moderate 6-10 Index	0.71%	4.61%	6.71%	5.40%	7.55% ^(7/09)
Pre Retirement Moderate 11-15	0.43%	4.83%	8.28%	6.61%	9.32% ^(7/09)
Pre Ret Moderate 11-15 Index	0.54%	3.94%	7.69%	6.01%	8.66% ^(7/09)
Pre Retirement Moderate 16-20	0.17%	4.06%	9.76%	7.51%	10.74% ^(7/09)
Pre Ret Moderate 16-20 Index	0.34%	3.16%	9.15%	6.91%	10.25% ^(7/09)
Pre Retirement Moderate 21-25	(0.04%)	3.35%	-	-	5.13% ^(7/18)
Pre Ret Moderate 21-25 Index	0.16%	2.41%	-	-	4.37% ^(7/18)
Pre Retirement Moderate 26+	(0.26%)	2.57%	-	-	4.75% ^(7/18)
Pre Ret Moderate 26+ Index	(0.01%)	1.65%	-	-	4.02% ^(7/18)

Investment Fund Returns

The table below details the rates of return for the Fund's investment funds over various time periods ended September 30, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2019

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Since Inception
Tier 1: GoalMaker Funds (Net of Fee)					
Post Retirement Aggressive 11+	0.60%	4.87%	-	-	5.53% ^(7/18)
Post Ret Aggressive 11+ Index	0.63%	4.29%	-	-	5.09% ^(7/18)
Post Retirement Aggressive 6-10	0.56%	4.78%	-	-	5.66% ^(7/18)
Post Ret Aggressive 6-10 Index	0.59%	4.14%	-	-	5.18% ^(7/18)
Post Retirement Aggressive 0-5	0.62%	5.10%	-	-	6.05% ^(7/18)
Post Ret Aggressive 0-5 Index	0.68%	4.39%	-	-	5.50% ^(7/18)
Pre Retirement Aggressive 0-5	0.53%	4.91%	7.50%	6.13%	8.59% ^(7/09)
Pre Ret Aggressive 0-5 Index	0.65%	4.15%	6.97%	5.58%	7.82% ^(7/09)
Pre Retirement Aggressive 6-10	0.24%	4.23%	8.18%	6.55%	9.39% ^(7/09)
Pre Ret Aggressive 6-10 Index	0.38%	3.31%	7.59%	5.95%	8.63% ^(7/09)
Pre Retirement Aggressive 11-15	(0.04%)	3.35%	9.22%	7.22%	10.35% ^(7/09)
Pre Ret Aggressive 11-15 Index	0.16%	2.41%	8.60%	6.61%	9.88% ^(7/09)
Pre Retirement Aggressive 16-20	(0.25%)	2.64%	10.66%	8.09%	11.75% ^(7/09)
Pre Ret Aggressive 16-20 Index	(0.00%)	1.72%	10.07%	7.51%	11.43% ^(7/09)
Pre Retirement Aggressive 21-25	(0.36%)	2.23%	-	-	4.54% ^(7/18)
Pre Ret Aggressive 21-25 Index	(0.10%)	1.28%	-	-	3.78% ^(7/18)
Pre Retirement Aggressive 26+	(0.36%)	2.23%	-	-	4.54% ^(7/18)
Pre Ret Aggressive 26+ Index	(0.10%)	1.28%	-	-	3.78% ^(7/18)

Investment Fund Returns

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 9/2019	3 Years Ended 6/2019	3 Years Ended 3/2019	3 Years Ended 12/2018
Tier 1: GoalMaker Funds (Net of Fee)				
Pre Retirement Conservative 0-5	5.20%	5.45%	4.92%	3.36%
Pre Ret Conservative 0-5 Index	4.79%	4.99%	4.51%	3.10%
Pre Retirement Conservative 6-10	6.04%	6.53%	5.93%	4.00%
Pre Ret Conservative 6-10 Index	5.56%	5.97%	5.45%	3.71%
Pre Retirement Conservative 11-15	7.38%	8.23%	7.65%	5.36%
Pre Ret Conservative 11-15 Index	6.86%	7.59%	7.11%	5.05%
Pre Retirement Conservative 16-20	8.87%	10.15%	9.51%	6.72%
Pre Ret Conservative 16-20 Index	8.29%	9.44%	8.91%	6.41%

Investment Fund Returns

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 9/2019	3 Years Ended 6/2019	3 Years Ended 3/2019	3 Years Ended 12/2018
Tier 1: GoalMaker Funds (Net of Fee)				
Pre Retirement Moderate 0-5	6.48%	7.12%	6.51%	4.28%
Pre Ret Moderate 0-5 Index	6.01%	6.57%	6.03%	3.98%
Pre Retirement Moderate 6-10	7.25%	8.18%	7.58%	4.96%
Pre Ret Moderate 6-10 Index	6.71%	7.52%	7.00%	4.63%
Pre Retirement Moderate 11-15	8.28%	9.56%	8.90%	5.84%
Pre Ret Moderate 11-15 Index	7.69%	8.83%	8.27%	5.49%
Pre Retirement Moderate 16-20	9.76%	11.54%	10.84%	7.24%
Pre Ret Moderate 16-20 Index	9.15%	10.76%	10.18%	6.92%

Investment Fund Returns

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 9/2019	3 Years Ended 6/2019	3 Years Ended 3/2019	3 Years Ended 12/2018
Tier 1: GoalMaker Funds (Net of Fee)				
Pre Retirement Aggressive 0-5	7.50%	8.53%	7.88%	4.93%
Pre Ret Aggressive 0-5 Index	6.97%	7.85%	7.29%	4.60%
Pre Retirement Aggressive 6-10	8.18%	9.53%	8.84%	5.53%
Pre Ret Aggressive 6-10 Index	7.59%	8.78%	8.19%	5.16%
Pre Retirement Aggressive 11-15	9.22%	10.98%	10.29%	6.53%
Pre Ret Aggressive 11-15 Index	8.60%	10.17%	9.61%	6.18%
Pre Retirement Aggressive 16-20	10.66%	12.92%	12.22%	8.06%
Pre Ret Aggressive 16-20 Index	10.07%	12.12%	11.55%	7.75%

**The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2019**

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 Groups								
Fixed Income Passive (i)								
Callan Core Bond MFs	2.3 45	10.2 47	2.9 72	3.3 54		0.7 65	-1.1 93	0.1 99
Blmbg Barclays Aggregate	2.3 44	10.3 43	2.9 70	3.4 47		0.7 51		
Treasury Inflation Protected (i)								
Callan TIPS MFs	0.6 72	5.8 63	2.2 38	2.3 28		0.4 22	0.3 25	1.1 83
Blmbg US TIPS 1-10 Yr	0.6 72	5.7 64	1.9 62	2.0 53		0.4 31		
Large Cap Passive (i)								
Callan Large Cap Core MFs	1.7 22	4.3 28	13.4 22	10.8 21		0.9 17	-1.0 84	0.0 99
S&P 500 Index	1.7 23	4.3 28	13.4 22	10.8 20		0.9 16		
International Passive (i)								
Callan Non US Equity MFs	-1.8 65	-1.0 36	6.6 40	3.1 51		0.2 52	0.3 30	0.7 100
MSCI ACWI ex US	-1.8 65	-1.2 37	6.3 45	2.9 54		0.2 54		
SMID Cap Passive (i)								
Callan SMID Core MFs	-1.3 80	-4.1 51	9.4 35	8.5 38		0.6 39	-0.3 52	0.1 99
Russell 2500 Index	-1.3 80	-4.0 50	9.5 35	8.6 37		0.6 39		
Tier 2: Active vs. Net of Fee Groups								
Stable Value Fund								
Callan Stable Value CT	0.7 7	2.5 4	2.2 8	2.1 8		8.5 45	-1.2 37	0.3 48
T-Bill + 1.5%	0.9 4	3.9 1	3.0 1	2.5 1		3.3 99		
Fixed Income Fund								
Callan Core Plus MFs	2.5 10	11.5 7	3.9 18	4.2 16		0.9 12	1.7 1	0.5 96
Blmbg Barclays Aggregate	2.3 39	10.3 43	2.9 85	3.4 69		0.7 69		
TCW Core Plus								
Callan Core Plus MFs	2.2 44	10.8 20						
Blmbg Barclays Aggregate	2.3 39	10.3 43	2.9 85	3.4 69		0.7 69		
Prudential Core Plus								
Callan Core Plus MFs	2.8 1	12.3 1	4.7 4					
Blmbg Barclays Aggregate	2.3 39	10.3 43	2.9 85	3.4 69		0.7 69		

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.

**The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2019**

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 Callan Real Assets MFs Inflation Responsive Benchmark	1.8 10	7.0 10	4.3 21	3.0 21		0.3 36	1.0 8	1.8 97
BlackRock Strategic Completion Callan Real Assets MFs BlackRock Custom Benchmark	1.8 10							
	1.7 10	5.9 18	2.8 68	2.1 37		0.2 34		
Large Cap Core Equity Fund Callan Lg Cap Broad MF Russell 1000 Index	-0.6 76	2.0 54						
	1.4 31	3.9 32	13.2 45	10.6 40		0.9 25		
Hotchkis & Wiley Large Cap Value Callan Lg Cap Value MF Russell 1000 Value Index	-0.2 85	-1.9 75	10.8 37	7.6 51		0.5 80	-0.0 49	4.9 9
	1.4 51	4.0 32	9.4 69	7.8 47		0.7 35		
Macquarie Large Cap Value Callan Lg Cap Value MF Russell 1000 Value Index	2.2 33	0.9 47	9.4 69					
	1.4 51	4.0 32	9.4 69	7.8 47		0.7 35		
Sands Capital Large Cap Growth Callan Large Cap Grwth MF Russell 1000 Growth Index	-5.2 95	-0.3 81	17.4 30	11.6 67		0.6 91	-0.2 48	10.2 1
	1.5 14	3.7 33	16.9 35	13.4 27		1.0 24		
Loomis Sayles Large Cap Growth Callan Large Cap Grwth MF Russell 1000 Growth Index	-1.4 72	6.4 18	14.8 73	14.5 10		1.1 9	0.2 12	5.2 18
	1.5 14	3.7 33	16.9 35	13.4 27		1.0 24		
BlackRock Russell 1000 Index Callan Large Cap Core MFs Russell 1000 Index	1.3 34	3.6 32						
	1.4 33	3.9 30	13.2 24	10.6 23		0.9 21		
International Equity Fund Callan Non US Equity MFs MSCI ACWI ex US	-2.0 67	1.1 26	6.8 37	4.6 28		0.3 25	1.0 1	1.7 97
	-1.8 65	-1.2 37	6.3 45	2.9 54		0.2 54		
Mondrian ACWI ex-US Value Callan Non US Equity MFs MSCI ACWI ex US	-2.2 73	0.4 31	5.1 66	2.6 66		0.2 57	-0.1 66	2.9 82
	-1.8 65	-1.2 37	6.3 45	2.9 54		0.2 54		

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

The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2019

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
Baillie Gifford ACWI ex-US Growth Callan Non US Equity MFs MSCI ACWI ex US	-1.8 64 -1.8 65	1.8 17 -1.2 37	8.9 7 6.3 45	7.0 6 2.9 54	<div></div> <div></div> <div></div>	0.4 10 0.2 54	1.1 1	3.7 56
Small/Mid Cap Equity Fund Callan SMID Broad MFs Russell 2500 Index	-2.7 59 -1.3 48	-4.9 62 -4.0 46			<div></div> <div></div>	0.6 39		
Hotchkis & Wiley Mid Cap Value Callan SMID Value MFs Russell 2500 Value Index	-7.1 99 0.1 52	-22.2 98 -4.4 42	1.2 87 6.9 54	0.6 86 7.0 29	<div></div> <div></div> <div></div>	-0.0 86 0.5 23	-0.9 79	7.1 8
Earnest Partners Small/Mid Cap Value Callan SMID Value MFs Russell 2500 Value Index	-0.1 53 0.1 52	2.4 9 -4.4 42	11.0 6 6.9 54	9.3 9 7.0 29	<div></div> <div></div>	0.6 12 0.5 23	0.5 11	4.8 34
Wedge Small/Mid Cap Value Callan SMID Value MFs Russell 2500 Value Index	0.2 51 0.1 52	-5.4 58 -4.4 42	6.0 62 6.9 54	6.7 35 7.0 29	<div></div> <div></div>	0.4 25 0.5 23	-0.1 36	2.5 94
Brown Advisory Small/Mid Cap Growth Callan SMID Growth MFs Russell 2500 Growth Index	-5.3 71 -3.2 41	2.2 17 -4.1 44	12.3 69 12.3 67	13.4 7 10.2 55	<div></div> <div></div> <div></div>	0.7 13 0.6 42	0.6 12	5.1 9
BlackRock Russell 2500 Index Callan SMID Core MFs Russell 2500 Index	-1.2 77 -1.3 80	-4.3 51 -4.0 50			<div></div>	0.6 39		

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

The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2019

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	0.7 10	2.7 14	2.4 16	2.3 15		11.3 30	-0.6 32	0.3 31
Callan Stable Value SA								
T-Bill + 1.5%	0.9 1	3.9 1	3.0 1	2.5 1		3.3 96		
Fixed Income Fund								
TCW Core Plus	2.3 86	10.9 18						
Callan Core Bond FI								
Bimbg Aggregate	2.3 83	10.3 69	2.9 94	3.4 93		0.7 93		
Prudential Core Plus	2.8 1	12.4 1	4.8 1					
Callan Core Bond FI								
Bimbg Aggregate	2.3 83	10.3 69	2.9 94	3.4 93		0.7 93		
Inflation Responsive Fund								
BlackRock Strategic Completion	1.8 14	6.2 22	3.1 76	2.4 42		0.2 33	1.9 4	0.1 96
Callan Real Assets								
BlackRock Custom Benchmark	1.7 15	5.9 31	2.8 79	2.1 44		0.2 40		
Large Cap Core Equity Fund								
Hotchkis & Wiley Large Cap Value	-0.1 86	-1.6 80	11.3 24	8.1 43		0.5 73	0.1 45	4.9 9
Callan Large Cap Value								
Russell 1000 Value Index	1.4 55	4.0 28	9.4 71	7.8 55		0.7 39		
Macquarie Large Cap Value	2.2 25	1.2 49	9.7 61					
Callan Large Cap Value								
Russell 1000 Value Index	1.4 55	4.0 28	9.4 71	7.8 55		0.7 39		
Sands Capital Large Cap Growth	-5.1 96	0.2 82	17.9 33	12.2 74		0.6 95	-0.1 53	10.2 2
Callan Large Cap Growth								
Russell 1000 Growth Index	1.5 25	3.7 58	16.9 47	13.4 43		1.0 41		
Loomis Sayles Large Cap Growth	-1.3 80	6.8 29	15.2 67	15.0 14		1.1 10	0.3 23	5.2 21
Callan Large Cap Growth								
Russell 1000 Growth Index	1.5 25	3.7 58	16.9 47	13.4 43		1.0 41		

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

The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2019

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 Russell 1000 Index	1.3 44 1.4 38	3.6 35 3.9 33						
			13.2 33	10.6 37		0.9 27		
International Fund								
Mondrian ACWI ex-US Value Callan NonUS AC Value Eq MSCI ACWI ex US	-2.1 51 -1.8 36	0.8 6 -1.2 10	5.5 50 6.3 33	3.0 38 2.9 43		0.2 21 0.2 48	0.0 38	2.9 60
Baillie Gifford ACWI ex-US Growth Callan NonUS AC Gr Eq MSCI ACWI ex US	-1.7 53 -1.8 60	2.1 33 -1.2 73	9.2 27 6.3 79	7.4 19 2.9 96		0.5 19 0.2 95	1.2 8	3.8 60
Small/Mid Cap Equity Fund								
Hotchkis & Wiley Mid Cap Value Callan Small/MidCap Value Russell 2500 Value Index	-7.0 99 0.1 58	-21.9 100 -4.4 54	1.7 97 6.9 58	1.2 88 7.0 48		0.0 88 0.5 44	-0.8 88	7.1 8
Earnest Partners Small/Mid Cap Value Callan Small/MidCap Value Russell 2500 Value Index	-0.0 59 0.1 58	2.8 10 -4.4 54	11.5 10 6.9 58	9.8 12 7.0 48		0.6 16 0.5 44	0.6 19	4.8 33
Wedge Small/Mid Cap Value Callan Small/MidCap Value Russell 2500 Value Index	0.4 56 0.1 58	-4.9 59 -4.4 54	6.7 61 6.9 58	7.4 38 7.0 48		0.5 31 0.5 44	0.2 33	2.6 92
Brown Advisory Small/Mid Cap Growth Callan Sm/MidCap Growth Russell 2500 Growth Index	-5.1 62 -3.2 43	2.7 16 -4.1 57	12.9 62 12.3 76	14.0 11 10.2 73		0.8 20 0.6 59	0.7 12	5.1 30
BlackRock Russell 2500 Index Callan Small/MidCap Core Russell 2500 Index	-1.2 84 -1.3 85	-4.3 65 -4.0 62						
			9.5 60	8.6 70		0.6 68		

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

Galliard Stable Value Period Ended September 30, 2019

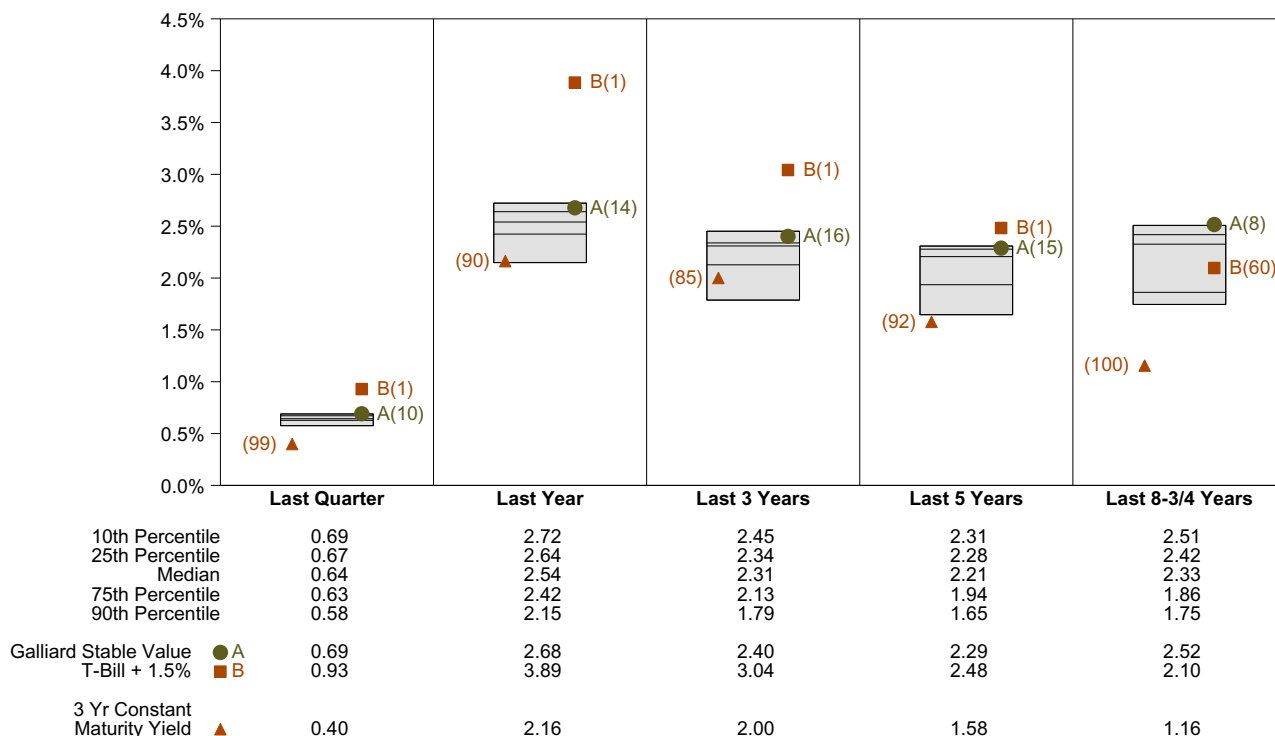
Investment Philosophy

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.

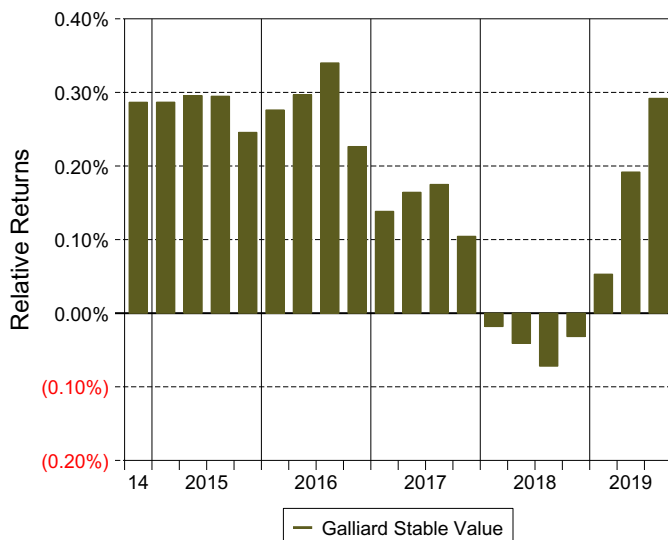
Quarterly Summary and Highlights

- Galliard Stable Value's portfolio posted a 0.69% return for the quarter placing it in the 10 percentile of the Callan Stable Value SA group for the quarter and in the 14 percentile for the last year.
- Galliard Stable Value's portfolio outperformed the 3 Yr Constant Maturity Yield by 0.29% for the quarter and outperformed the 3 Yr Constant Maturity Yield for the year by 0.51%.

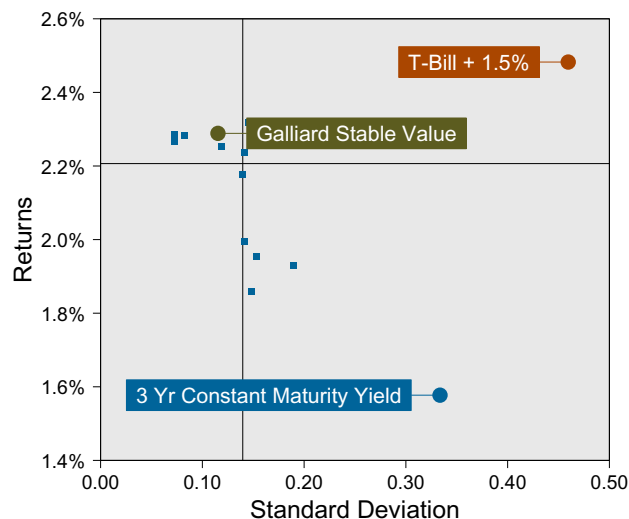
Performance vs Callan Stable Value SA (Gross)



Relative Returns vs 3 Yr Constant Maturity Yield



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

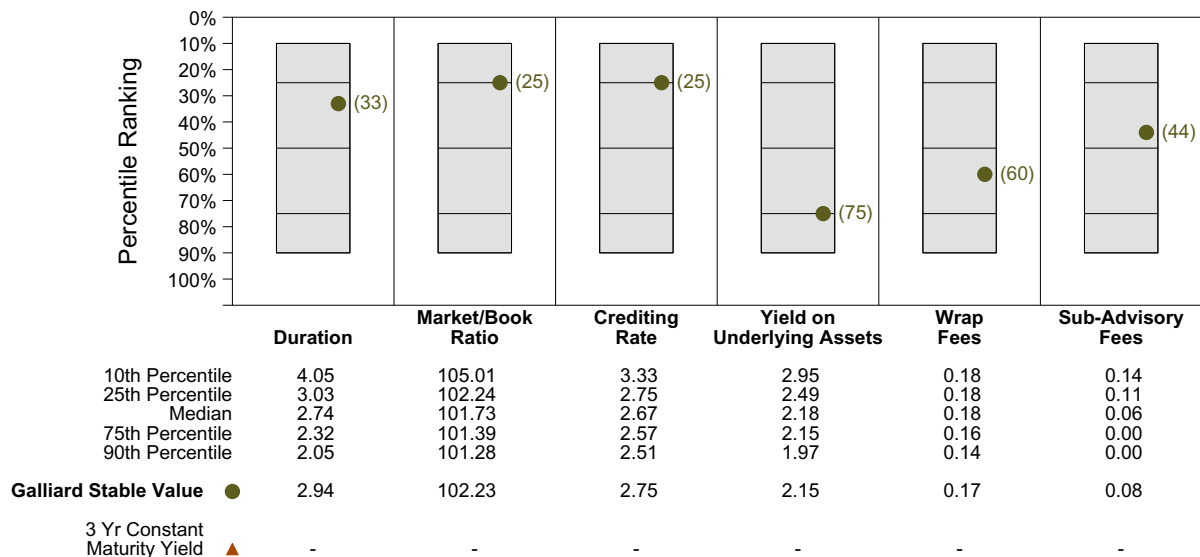


Galliard Stable Value Stable Value Characteristics Analysis Summary

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 September 30, 2019



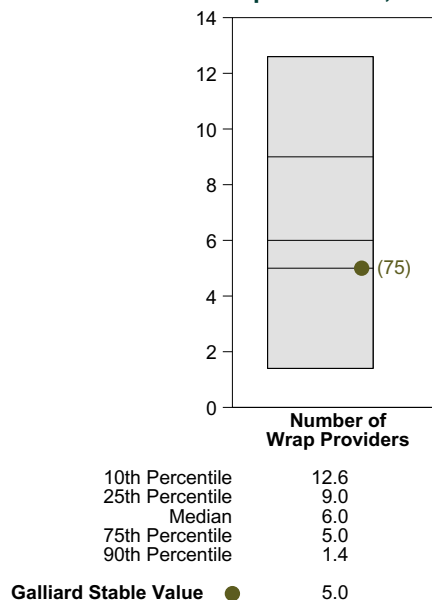
Wrap Structure and Diversification

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.

Portfolio Wrap Exposure September 30, 2019



Wrap Contract Diversification September 30, 2019

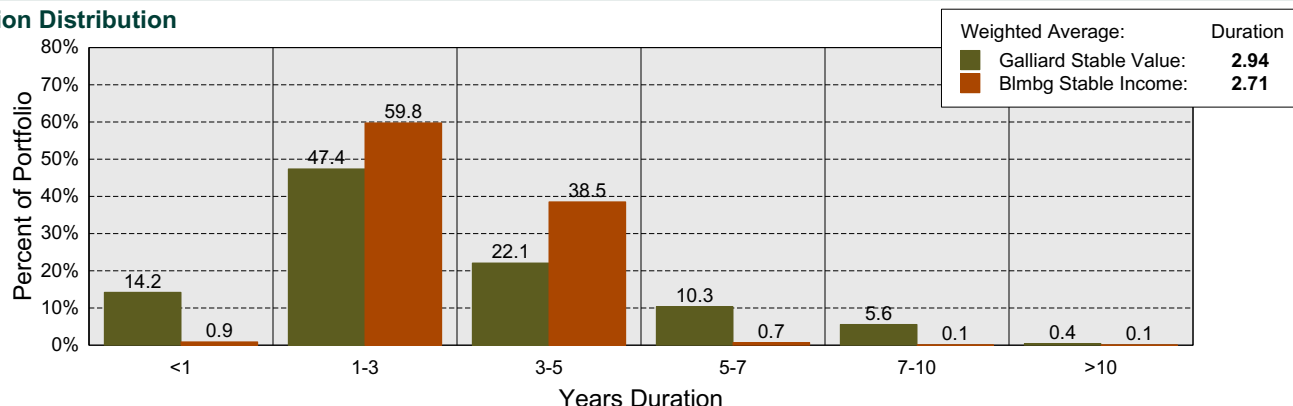


Galliard Stable Value Stable Value Portfolio Characteristics Summary As of September 30, 2019

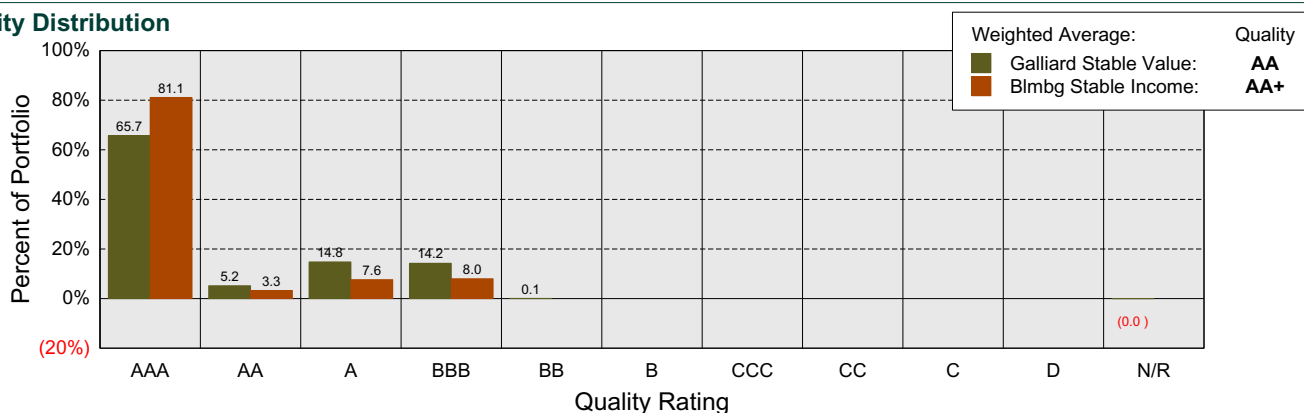
Portfolio Structure Comparison

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.

Duration Distribution



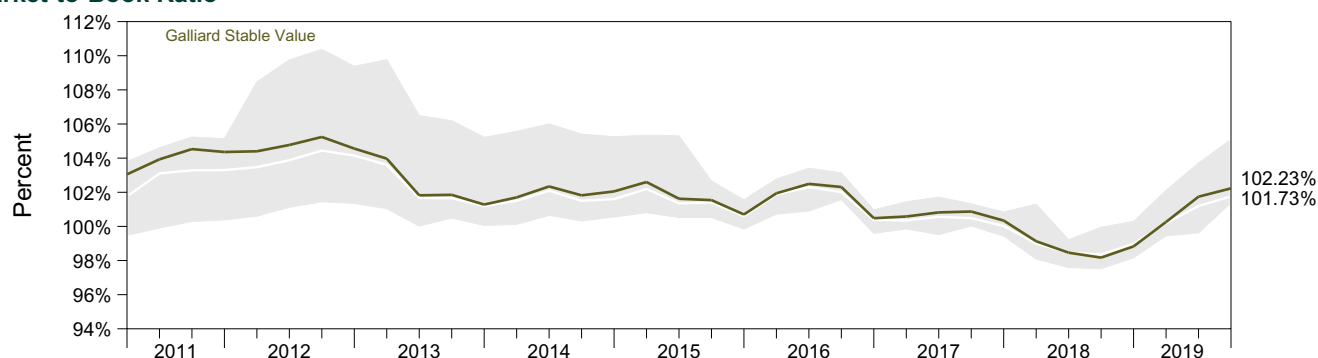
Quality Distribution



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



IRS Provides Further Tailwinds to Open MEPs – July 11, 2019

On July 3, the Internal Revenue Service (IRS) set forth proposed regulations that would relax the existing “bad apple rule,” which has been one of several impediments to open multi-employer plans (MEPs), i.e., DC plans shared by more than one employer.

The bad apple rule as it currently exists stipulates that the tax-qualified status of all the plans within a MEP could be revoked if one plan in the MEP falls out of compliance. Although the rule has seldom been enforced, it represents an impediment to more widespread adoption of MEPs. Under the proposal, the rule would still exist though there would be exemptions. To qualify for the exemptions, MEPs would need to demonstrate there are procedures in place to promote compliance, and employers not in compliance have the opportunity to remedy non-compliance. If an employer remains out of compliance or is unresponsive, the MEP would spin off their assets and remove them from the plan.

Although the rule is seldom enforced, the IRS’ openness to relaxing it represents another step along with other proposals (such as the SECURE Act) that would potentially increase utilization of open MEPs.

U.S. Department of Labor Adopts Final MEP Rule – August 2, 2019

On July 29, the U.S. Department of Labor (DOL) finalized a rule that intends to expand the scope of multi-employer plans (MEPs).

The rule that becomes effective September 30 narrowly expands the circumstances where businesses can band together to offer a single defined contribution (DC) plan. With the rule, the DOL intends to expand access to DC plans by clarifying the circumstances under which an employer group, association, or professional employer organization (PEO) may sponsor a MEP. For reference, PEOs are human resources companies that take on certain employment responsibilities for their clients, such as tax withholding and reporting.

The rule essentially clarifies what constitutes an “employer” and, as such, a sponsor of a DC plan. Among the rule’s stipulations:

- Workers whose companies are members of the same associations (such as a local chamber of commerce) are able to participate in the same retirement plan.
- Sponsors of a MEP have at least one substantial business purpose unrelated to offering employee benefits to its employee members.
- The rule establishes a safe harbor for PEOs offering MEPs, requiring the PEO to perform substantial employment functions (e.g., recruiting, hiring, paying wages, and reporting).

Interestingly, the DOL also released a request for information that seeks more information on open MEPs, which would allow unrelated companies to participate in common DC plans.

While the rule stops short of authorizing “open” MEPs (a key distinction from the more restrictive MEPs the DOL addressed), which would allow unrelated companies to participate in common DC plans, it does build on recent momentum for MEPs and open MEPs. This includes the Internal Revenue Service’s proposed relaxation of the “bad apple rule” and the SECURE Act’s support for open MEPs.

Uncashed Checks: The Income Conundrum – August 21, 2019

Continuing on the Department of Labor (DOL) theme of managing missing participants and uncashed checks, the Internal Revenue Service (IRS) issued a new revenue ruling clarifying the tax treatment of those uncashed checks.

When a check is cut from a retirement plan, the service provider (on behalf of the plan administrator) will withhold taxes from the payment. If the participant does not cash the check for any reason—which is seen frequently with minimum required distributions or a payout of a trailing balance—the assets typically revert to the trust. This can create issues for a number of reasons:

- Minimum required distributions are required and are considered a plan failure if not taken. They should not be credited back to the participant’s account.
- Trailing balances of a *de minimus* amount (i.e., <\$10) could result in a participant’s account remaining active, requiring maintenance (e.g., statements, required notices), and generating fees.

Depending on the plan document, uncashed checks may revert to the trust or could be escheated to the state. However, since the taxes have been withheld and potentially remitted, the question of how to handle the tax implications was unclear. For example, if the withholding has been taken from the payment, who is responsible for uncashed checks that revert to the trust?

This revenue ruling provides an answer for this question: A participant cannot change the timing of taxation merely by refusing to cash a check. The plan should issue a 1099-R, and the participant is required to include the amount from the uncashed check as gross income in the year the distribution is made.

Although the clarification is important and continues the focus on missing participants, there are still a number of questions that plague plan sponsors and should be considered through the lens of a plan fiduciary with responsibility for plan assets. The IRS notes in this ruling that it is analyzing other issues involving uncashed checks from eligible retirement plans, including situations involving missing participants.

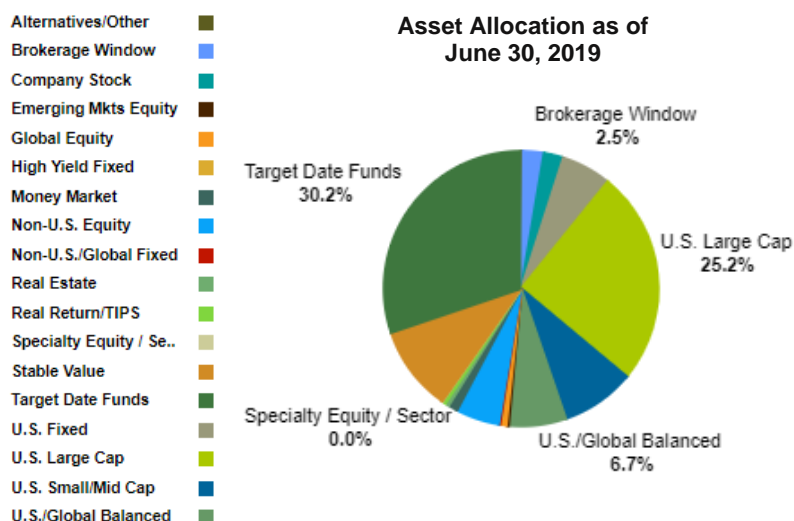
Structure Utilization

Asset Allocation

TDFs Decline in 1st Quarter

The percentage of assets allocated to U.S. large-cap equity increased in the second quarter. Gains as a result of strong performance in the U.S. large-cap market outweighed outflows from the asset class. The current allocation to U.S. large-cap equity (25.2%) is now at its second highest level over the past decade, slightly behind the 25.5% allocation in the third quarter of 2018.

On the other hand, the percentage allocated to stable value decreased, while the allocation to TDFs remained steady, with about 30% of assets allocated to these funds.



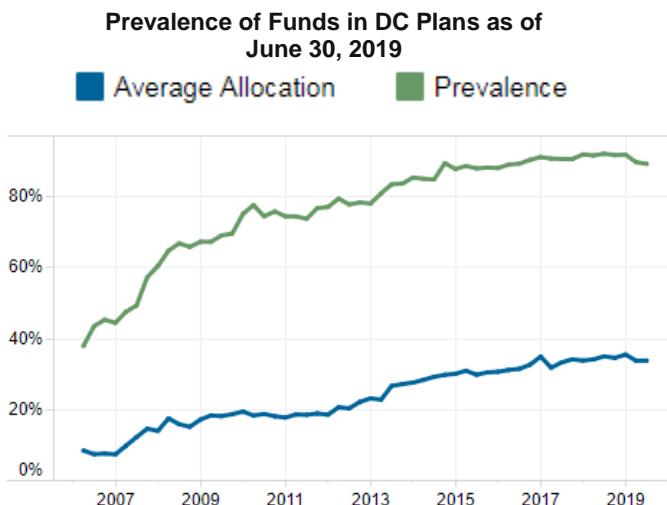
Prevalence

Stable Value Continues Steady Ascension

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.

Stable value's prevalence within DC plans rose for the seventh consecutive quarter and is now at 77%, up approximately 4 percentage points from a year ago. This could be in response to the premium afforded to stable value relative to money market options. Additionally, more plans are now offering emerging market equity, global equity, and high yield fixed income as investment options.

The presence of company stock (21.8%) increased slightly but remains near historic lows. Additionally, the percentage of plans offering a brokerage window (41.6%) continued to climb.



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.

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 ratios 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.

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 on-going 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.

Manager Name
Aberdeen Standard Investments
Acadian Asset Management LLC
AEGON USA Investment Management Inc.
Alcentra
AllianceBernstein
Allianz Global Investors
Allianz Life Insurance Company of North America
American Century Investments
Amundi Pioneer Asset Management
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Atlanta Capital Management Co., LLC
Aurelius Capital Management
Aviva Investors Americas
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BlackRock
BMO Global Asset Management
BNP Paribas Asset Management
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
BrightSphere Investment Group
Brown Brothers Harriman & Company
Cambiar Investors, LLC
Capital Group
Carillon Tower Advisers
CastleArk Management, LLC
Causeway Capital Management LLC
Chartwell Investment Partners

Manager Name
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments
Columbus Circle Investors
Corbin Capital Partners, L.P.
Cooke & Bieler, L.P.
Credit Suisse Asset Management
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 Investors
Fidelity Institutional Asset Management
Fiera Capital Corporation
Financial Engines
First Hawaiian Bank Wealth Management Division
First State Investments
Fisher Investments
Franklin Templeton
Fred Alger Management, Inc.
GAM (USA) Inc.
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.

Manager Name
Heitman LLC
Hotchkis & Wiley Capital Management, LLC
HSBC Global Asset Management
Income Research + Management, Inc.
Insight Investment Management Limited
Intech Investment Management, LLC
Intercontinental Real Estate Corporation
Invesco
Investec Asset Management North America, Inc.
Ivy Investments
J.P. Morgan
Janus
Jarislowsky Fraser Global Investment Management
Jennison Associates LLC
Jobs Peak Advisors
KeyCorp
Lazard Asset Management
Legal & General Investment Management America
Lincoln National Corporation
LMCG Investments, LLC
Logan Circle Partners, L.P.
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
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
Mountain Lake Investment Management LLC
Mountain Pacific Advisors, LLC
MUFG Union Bank, N.A.
Natixis Investment Managers
Neuberger Berman
Newton Investment Management
Nikko Asset Management Co., Ltd.
Northern Trust Asset Management
Nuveen
OFI Global Asset Management

Manager Name
Osterweis Capital Management, LLC
P/E Investments
Pacific Investment Management Company
Pathway Capital Management
Peregrine Capital Management, LLC.
Perkins Investment Management
PGIM Fixed Income
PineBridge Investments
PNC Capital Advisors, LLC
Polen Capital Management
Principal Global Investors
Putnam Investments, LLC
QMA LLC
RBC Global Asset Management
Regions Financial Corporation
Robeco Institutional Asset Management, US Inc.
Rockefeller Capital Management
Rothschild & Co. Asset Management US
Russell Investments
Schroder Investment Management North America Inc.
Smith Graham & Co. Investment Advisors, L.P.
South Texas Money Management, Ltd.
State Street Global Advisors
Strategic Global Advisors
Stone Harbor Investment Partners, L.P.
Sun Life Investment Management
T. Rowe Price Associates, Inc.
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Thornburg Investment Management, Inc.
Tri-Star Trust Bank
UBS Asset Management
VanEck
Versus Capital Group
Victory Capital Management Inc.
Virtus Investment Partners, Inc.
Vontobel Asset Management, Inc.
Voya
WCM Investment Management
WEDGE Capital Management
Wellington Management Company, LLP
Wells Fargo Asset Management
Western Asset Management Company LLC
Westfield Capital Management Company, LP
William Blair & Company LLC