


September 30, 2023



The North Carolina Supplemental Retirement Plans Executive Summary

**Investment Measurement Service
Quarterly Review**

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The North Carolina Supplemental Retirement Plans
September 30, 2023

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U.S. EQUITY

Tough quarter for all indices

- All U.S. equity indices posted negative absolute returns during 3Q23.
- The Russell 2000 Value Index led the pack during the quarter, which was a reversal of the previous two quarters when the Russell 1000 Growth Index led.
- Only 2 of the 11 S&P 500 Index sectors gained in 3Q; Energy was up 12% and Communication Services rose 3%.
- On a YTD basis, six sectors generated positive returns, with Information Technology, Communication Services, and Consumer Discretionary substantially leading the group.

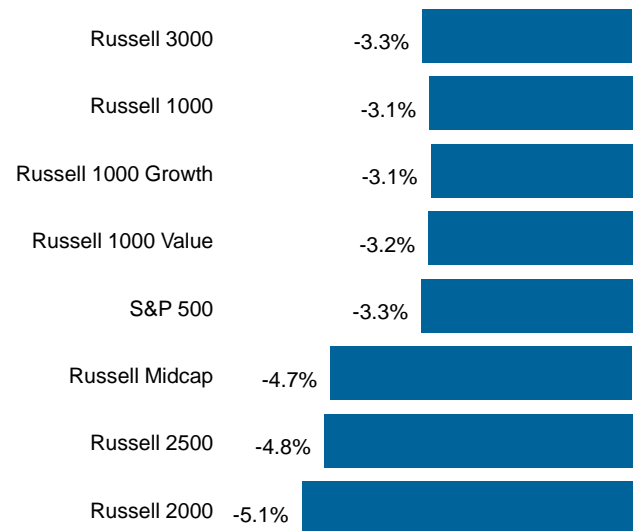
Active management remains challenging for large cap

- Index concentration stayed notable within the Russell 1000 Growth Index; the top 10 issuers comprised 51% of the index and the top 5 issuers comprised 40% of the index.
- YTD, 97% of the S&P 500's return has been driven by the 10 largest weighted stocks.
- The “Magnificent 7” has buoyed large cap index returns and has outperformed the broader market significantly. YTD, the Magnificent 7 alone is up 83%.
- No exposures or significant underweights to top benchmark names have been disadvantageous to absolute and relative performance for managers' portfolios.

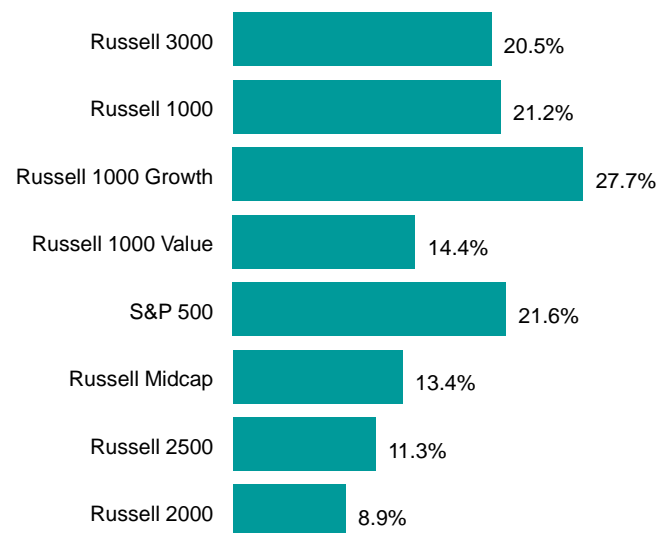
Compelling small cap valuations

- Small cap valuations, on both an absolute and relative (to large cap valuations) basis, continue to look compelling and may point to an attractive entry point for investors.
- What continues to pressure the asset class is the rhetoric around interest rates; as investors anticipate a higher-for-longer interest rate environment, there are concerns about small cap companies' ability to repay and re-finance debt.
- If inflation data continues to improve in 2023, the small cap market could be positioned for a boost to performance.

U.S. Equity: Quarterly Returns

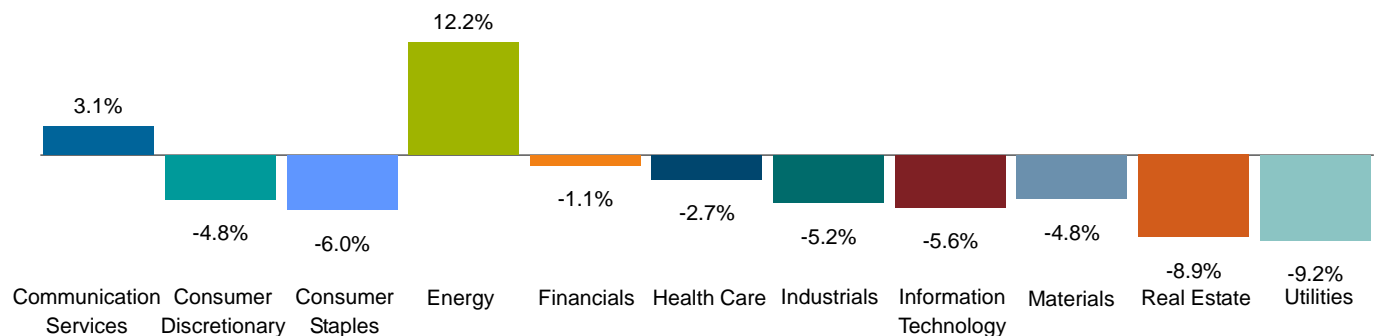


U.S. Equity: One-Year Returns



Sources: FTSE Russell, S&P Dow Jones Indices

S&P Sector Returns, Quarter Ended 9/30/23



Source: S&P Dow Jones Indices

GLOBAL EQUITY

Most global markets were in the red for 3Q23.

Narrow market with India and Japan leading

- Global markets retreated in 3Q23 amid fears of a global recession driven by higher interest rates and slowing growth in regions outside the U.S.
- Emerging markets outperformed developed markets, buoyed by good results from India, whose economy grew nearly 8% on the heels of supportive infrastructure spending.
- Japan was strong again in local currency as it continues to benefit from post-COVID exuberance, easy monetary policy, and a new economic stimulus plan.

Value outpaces growth

- With energy as a strong outperformer on the heels of oil price increases, value outpaced growth by a wide margin in global ex-U.S. markets.

Strong U.S. dollar a headwind

- The stronger U.S. dollar, which gained 3% over the quarter, was a notable headwind for the period.

Market dispersion is low

- Global markets have seen a prolonged period of low dispersion, excluding the 2016-2018 challenges with Brexit and oil price volatility. The global markets have seen high correlations for most of the last 10 years.
- This was in conjunction with a period of universally tight monetary policies, which helped mitigate any volatility.
- With increased dispersion of central bank actions, we expect there to be fewer co-movements across countries, a period that may benefit active management.

China: Danger or opportunity

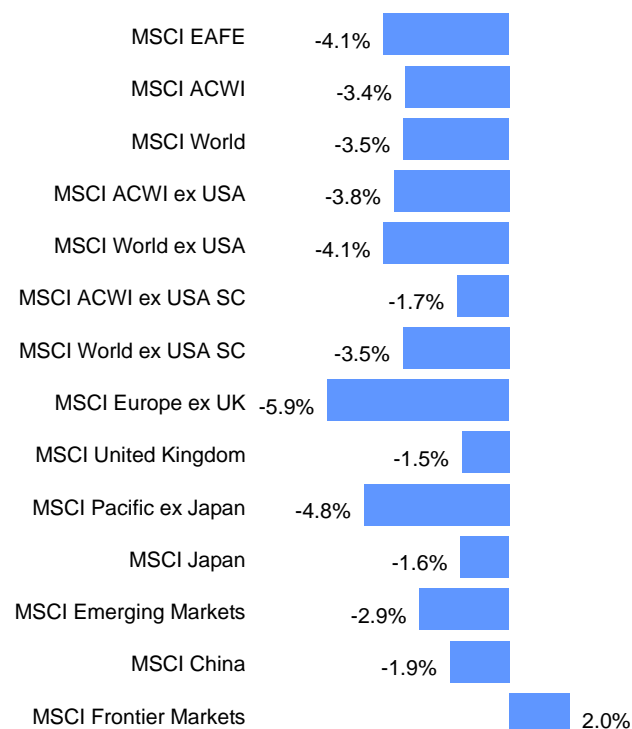
Merits

- Long-term growth potential:** China has the second-largest GDP and the world's largest population of consumers.
- Compelling valuation:** Forward earnings yield is at a decade high.

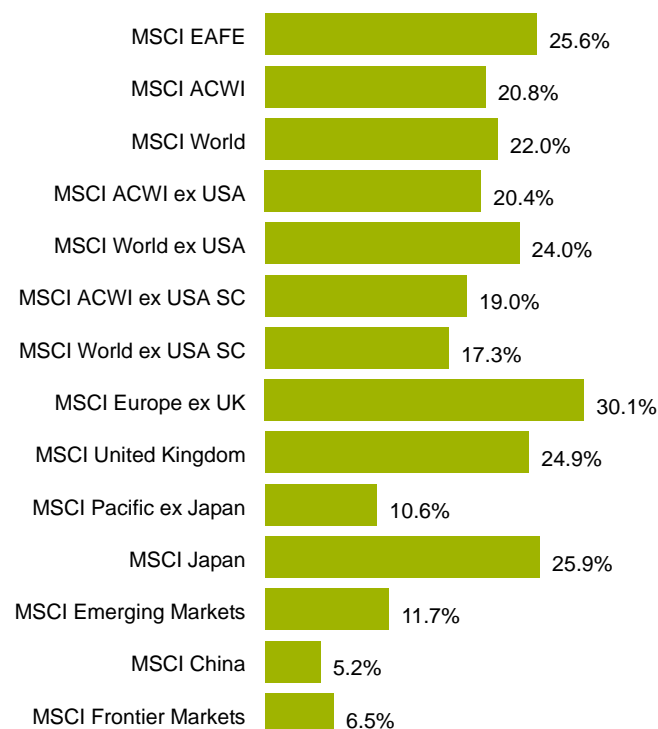
Considerations

- Downside risk:** Chinese federal debt has continued to grow aggressively and may become unsustainable.
- Political risk:** China is run by an authoritarian regime that may act against investors.
- Old before rich:** China currently has 2.26 workers for every retiree—the U.S. has 2.8.

Global Equity: Quarterly Returns



Global Equity: One-Year Returns



Source: MSCI

U.S. FIXED INCOME

U.S. fixed income fell for a second straight quarter

- The Bloomberg Aggregate Index is on track for a third calendar year of negative returns, with the rise in yields continuing to detract from performance.

U.S. Treasury 10-year yield climbed roughly 80 bps

- 10-year ended the quarter at 4.6%, its highest level since '07.
- The yield curve's inversion narrowed as it bear-steepened with long-term rates rising more than short-term rates.

TIPS outperformed nominal Treasuries

- 10-year break-even spreads widened over 10 bps.

Fed policy rate held to 5.25%-5.50%

- The updated dot plot suggested an additional rate hike may be in the cards before year-end.

Lower-quality credit continued to outperform

- High yield spreads were flat, but the sector was buoyed by strong performance in July.
- IG corporate spreads tightened slightly and remain close to their 10-year average.
- Agency RMBS underperformed other securitized sectors as interest rate volatility weighed on the sector.

MUNICIPAL BONDS

Bloomberg Aggregate down sharply in 3Q

- Corporate excess return: +84 bps; YTD +237 bps
- Mortgage excess return: -85 bps; YTD -58 bps
- High yield corporates excess return: +102 bps; YTD +516 bps
- Taxable equivalent yield is 7.3%

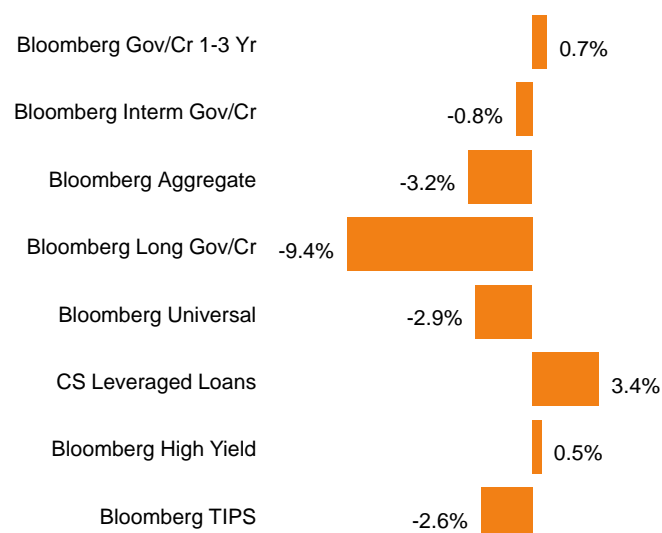
U.S. Treasury yield curve remains inverted

- 106 bps as of 6/30; 44 bps as of 9/30
- 2-year UST: 5.03%; 10-year UST: 4.59%
- Long rates rose more than short rates in a bear-steepening

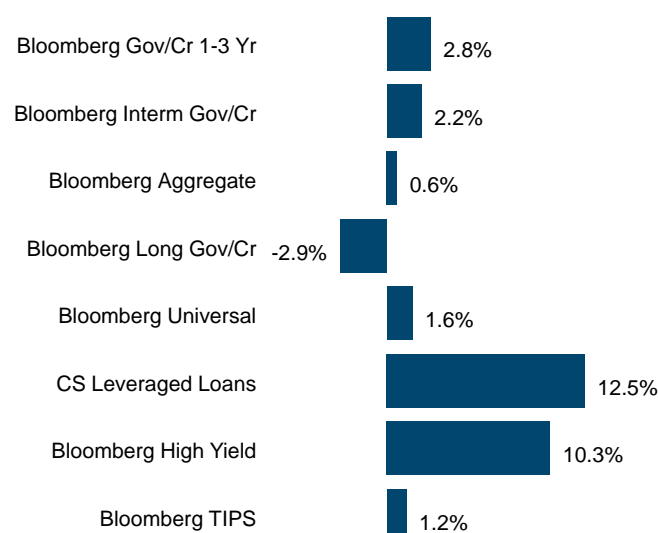
Fed Funds rate expectations

- “Higher for longer” theme prevails
- Median expectation from Fed is 5.5% for year-end 2023
- Market expectations are similar at 5.4%; up sharply from market expectations at the end of 1Q for cuts

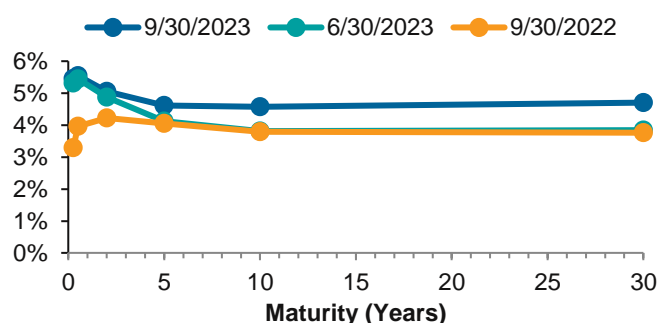
U.S. Fixed Income: Quarterly Returns



U.S. Fixed Income: One-Year Returns



U.S. Treasury Yield Curves



Sources: Bloomberg, Credit Suisse

MUNICIPAL BONDS (continued)**Valuations**

- Credit spreads close to historical averages
- Mortgage spreads widened on interest rate volatility and slowing prepayments.

GLOBAL FIXED INCOME**Down on both a hedged and unhedged basis**

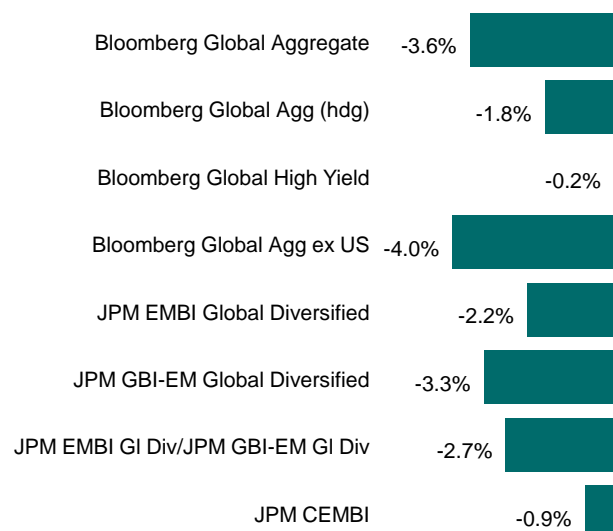
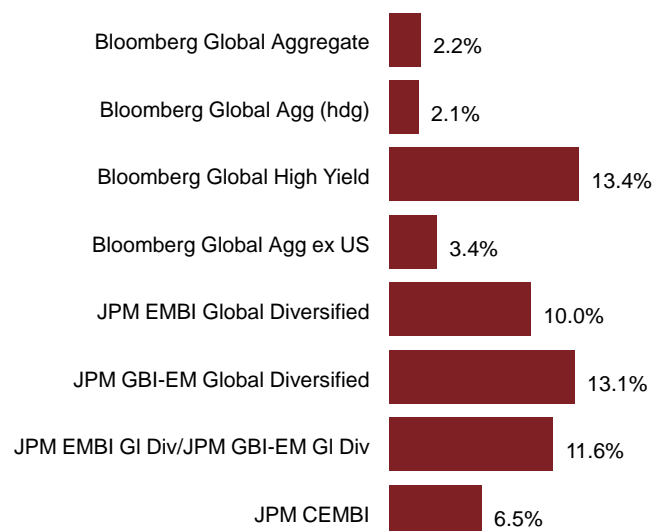
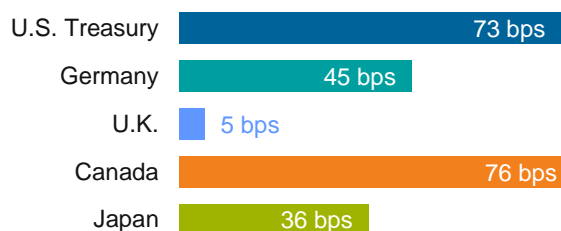
- Developed market rates sold off as long-term inflation and rate expectations in the U.S. moved higher.
- The ECB continued to tighten monetary policy in September, bringing rates to the highest level since launching the euro.

U.S. dollar strength detracted from unhedged returns

- U.S. dollar gained over 3% versus a basket of developed market currencies.

Emerging market debt indices also negative

- EM yield curves steepened; central banks in Latin America and Eastern Europe have begun monetary easing.
- Heightened geopolitical risk, war, commodity price volatility, and an economic slowdown in China remain significant headwinds to the sector.

Global Fixed Income: Quarterly Returns**Global Fixed Income: One-Year Returns****Change in 10-Year Global Government Bond Yields****2Q23 to 3Q23**

Sources: Bloomberg, JP Morgan

Investment Fund Balances

The table below compares the fund's investment fund balances as of September 30, 2023 with that of June 30, 2023. 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, 2023			June 30, 2023		
	Market Value	Weight	Net New Invest.	Invest. Return	Market Value	Weight
North Carolina SRP 401k & 457						
Tier II Passive	\$4,924,816,580	33.55%	\$(47,970,609)	\$(158,464,832)	\$5,131,252,021	33.82%
Fixed Income Passive	83,361,540	0.57%	(128,168)	(2,782,995)	86,272,704	0.57%
Treasury Inflation Protected	365,483,212	2.49%	1,622,078	(2,952,098)	366,813,232	2.42%
Large Cap Passive	3,504,774,166	23.88%	(55,274,947)	(117,572,447)	3,677,621,561	24.24%
International Passive	99,806,184	0.68%	1,895,225	(4,241,492)	102,152,452	0.67%
SMID Cap Passive	356,673,903	2.43%	1,044,149	(17,948,771)	373,578,524	2.46%
Inflation Responsive Fund	514,717,574	3.51%	2,871,055	(12,967,029)	524,813,548	3.46%
Tier II Active	\$9,752,088,591	66.45%	\$29,342,140	\$(320,115,284)	\$10,042,861,735	66.18%
Stable Value Fund	2,418,681,151	16.48%	(37,618,018)	17,240,867	2,439,058,303	16.07%
Fixed Income Fund	2,160,121,849	14.72%	48,751,913	(65,342,763)	2,176,712,699	14.34%
Large Cap Core Equity Fund	2,017,290,559	13.74%	(22,938,909)	(85,295,081)	2,125,524,549	14.01%
International Equity Fund	2,172,478,717	14.80%	51,112,768	(131,039,909)	2,252,405,858	14.84%
Small/Mid Cap Equity Fund	983,516,314	6.70%	(9,965,615)	(55,678,397)	1,049,160,326	6.91%
Total Fund	\$14,676,905,171	100.0%	\$(18,628,469)	\$(478,580,116)	\$15,174,113,756	100.0%

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, 2023. 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, 2023

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 7 Years	
Tier 2: Passive (Net of Fee)										
Fixed Income Passive	(3.22%)	71	0.65%	76	(5.21%)	70	0.07%	78	(0.12%)	85
Blmbg Aggregate	(3.23%)	71	0.64%	76	(5.21%)	69	0.10%	75	(0.09%)	84
Callan Core Bond MFs	(3.05%)		0.93%		(4.97%)		0.35%		0.20%	
Treasury Inflation Protected Securities	(0.80%)	6	2.28%	20	(0.05%)	9	2.65%	6	-	
Blmbg US TIPS 1-10 Yr	(1.00%)	12	2.11%	24	(0.02%)	8	2.63%	6	1.90%	9
Callan TIPS MFs	(2.57%)		1.36%		(2.06%)		1.98%		1.42%	
Large Cap Passive	(3.28%)	71	21.60%	49	10.12%	58	9.91%	31	12.23%	29
S&P 500 Index	(3.27%)	71	21.62%	49	10.15%	57	9.92%	31	12.24%	29
Callan Large Cap Core MFs	(2.84%)		21.45%		10.34%		9.29%		11.25%	
International Passive	(4.06%)	38	20.77%	70	3.50%	55	2.52%	69	4.77%	59
International Benchmark (1)	(3.49%)	30	20.19%	71	3.42%	56	2.39%	72	4.60%	61
Callan Non US Equity MFs	(5.13%)		23.88%		5.25%		3.07%		5.03%	
SMID Cap Passive	(4.78%)	82	11.29%	66	8.35%	76	4.48%	57	7.89%	39
Russell 2500 Index	(4.78%)	82	11.28%	66	8.39%	76	4.55%	56	7.96%	38
Callan SMID Core MFs	(3.63%)		13.38%		10.20%		4.86%		7.51%	
Inflation Responsive Fund	(2.46%)	67	1.28%	70	2.91%	79	2.52%	82	2.65%	83
Inflation Responsive Benchmark	(2.44%)	67	0.90%	72	2.75%	80	2.41%	82	1.74%	99
Callan Real Assets MFs	(1.25%)		4.98%		5.64%		3.40%		3.81%	
Tier 2: Active (Net of Fee)										
Stable Value Fund	0.71%	8	2.54%	12	2.06%	11	2.24%	4	2.20%	5
3 Yr US Treas Rolling	1.14%	1	4.26%	1	2.27%	3	1.93%	27	1.93%	22
T-Bill + 1.5%	1.67%	1	5.97%	1	3.20%	1	3.22%	1	3.05%	1
Callan Stable Value CT	0.60%		2.21%		1.62%		1.76%		1.72%	
Fixed Income Fund	(2.95%)	50	1.73%	42	(4.80%)	64	0.74%	20	0.61%	37
Blmbg Aggregate	(3.23%)	72	0.64%	81	(5.21%)	88	0.10%	78	(0.09%)	94
Callan Core Plus MFs	(2.96%)		1.49%		(4.63%)		0.50%		0.47%	
Large Cap Core Equity Fund	(4.06%)	80	23.76%	38	8.06%	58	8.47%	53	-	
Russell 1000 Index	(3.15%)	53	21.19%	52	9.53%	44	9.63%	35	12.00%	44
Callan Lg Cap Broad MF	(3.12%)		21.47%		8.76%		8.61%		11.48%	
International Equity Fund	(5.72%)	57	22.97%	61	0.96%	74	2.32%	73	4.38%	64
International Benchmark (1)	(3.49%)	30	20.19%	71	3.42%	56	2.39%	72	4.60%	61
Callan Non US Equity MFs	(5.13%)		23.88%		5.25%		3.07%		5.03%	
Small/Mid Cap Equity Fund	(5.37%)	52	10.69%	65	9.33%	45	4.74%	46	-	
Russell 2500 Index	(4.78%)	45	11.28%	60	8.39%	46	4.55%	47	7.96%	59
Callan SMID Broad MFs	(5.20%)		12.91%		6.96%		4.44%		8.56%	

(1) As of 9/30/21, International Benchmark consists of MSCI ACWI ex-US IMI, previously consisted of MSCI ACWI ex-US.

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, 2023. 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, 2023

	Last 10 Years		Last 15 Years		Since Inception
Tier 2: Passive (Net of Fee)					
Fixed Income Passive	1.07%	82	-		1.45% (10/10)
Blmbg Aggregate	1.13%	79	2.53%	90	1.52% (10/10)
Callan Core Bond MFs	1.32%		2.99%		-
Treasury Inflation Protected Securities	-		-		2.43% (7/18)
Blmbg US TIPS 1-10 Yr	1.78%	20	2.56%	78	2.42% (7/18)
Callan TIPS MFs	1.56%		2.76%		-
Large Cap Passive	11.86%	20	-		14.46% (4/09)
S&P 500 Index	11.91%	18	11.28%	19	14.53% (4/09)
Callan Large Cap Core MFs	10.91%		10.31%		-
International Passive	3.39%	65	-		7.14% (4/09)
International Benchmark (1)	3.25%	69	4.25%	76	7.06% (4/09)
Callan Non US Equity MFs	3.66%		5.10%		-
SMID Cap Passive	7.85%	40	-		13.03% (4/09)
Russell 2500 Index	7.90%	39	9.47%	37	13.09% (4/09)
Callan SMID Core MFs	7.45%		8.98%		-
Inflation Responsive Fund	2.22%	67	-		1.70% (9/11)
Inflation Responsive Benchmark	1.10%	91	1.95%		0.49% (9/11)
Callan Real Assets MFs	2.78%		-		-
Tier 2: Active (Net of Fee)					
Stable Value Fund	2.10%	8	-		2.43% (7/09)
3 Yr US Treas Rolling	1.62%	44	1.37%	100	1.36% (7/09)
T-Bill + 1.5%	2.62%	1	2.30%	15	2.32% (7/09)
Callan Stable Value CT	1.61%		1.79%		-
Fixed Income Fund	1.71%	42	-		3.08% (4/09)
Blmbg Aggregate	1.13%	92	2.53%	94	2.30% (4/09)
Callan Core Plus MFs	1.63%		3.41%		-
Large Cap Core Equity Fund	-		-		10.24% (10/17)
Russell 1000 Index	11.63%	40	11.26%	42	10.94% (10/17)
Callan Lg Cap Broad MF	10.95%		10.73%		-
International Equity Fund	3.79%	48	-		7.51% (4/09)
International Benchmark (1)	3.25%	69	4.25%	76	7.06% (4/09)
Callan Non US Equity MFs	3.66%		5.10%		-
Small/Mid Cap Equity Fund	-		-		6.37% (10/17)
Russell 2500 Index	7.90%	43	9.47%	51	6.40% (10/17)
Callan SMID Broad MFs	7.76%		9.55%		-

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	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 7 Years	
Tier 2: Active (Net of Fee)										
Stable Value Fund	0.71%	8	2.54%	12	2.06%	11	2.24%	4	2.20%	5
3 Yr US Treas Rolling	1.14%	1	4.26%	1	2.27%	3	1.93%	27	1.93%	22
T-Bill + 1.5%	1.67%	1	5.97%	1	3.20%	1	3.22%	1	3.05%	1
Callan Stable Value CT	0.60%		2.21%		1.62%		1.76%		1.72%	
Fixed Income Fund	(2.95%)	50	1.73%	42	(4.80%)	64	0.74%	20	0.61%	37
Blmbg Aggregate	(3.23%)	72	0.64%	81	(5.21%)	88	0.10%	78	(0.09%)	94
Callan Core Plus MFs	(2.96%)		1.49%		(4.63%)		0.50%		0.47%	
TCW Core Plus	(3.45%)	75	0.50%	83	(5.28%)	88	0.45%	56	-	
Blmbg Aggregate	(3.23%)	72	0.64%	81	(5.21%)	88	0.10%	78	(0.09%)	94
Callan Core Plus MFs	(2.96%)		1.49%		(4.63%)		0.50%		0.47%	
Prudential Core Plus	(2.45%)	9	2.92%	4	(4.28%)	26	1.08%	8	1.07%	11
Blmbg Aggregate	(3.23%)	72	0.64%	81	(5.21%)	88	0.10%	78	(0.09%)	94
Callan Core Plus MFs	(2.96%)		1.49%		(4.63%)		0.50%		0.47%	
Large Cap Core Equity Fund	(4.06%)	80	23.76%	38	8.06%	58	8.47%	53	-	
Russell 1000 Index	(3.15%)	53	21.19%	52	9.53%	44	9.63%	35	12.00%	44
Callan Lg Cap Broad MF	(3.12%)		21.47%		8.76%		8.61%		11.48%	
Hotchkis & Wiley Large Cap Value	(0.63%)	12	23.22%	9	18.89%	4	7.46%	23	10.32%	18
Russell 1000 Value Index	(3.16%)	78	14.44%	55	11.05%	63	6.23%	62	7.92%	75
Callan Lg Cap Value MF	(2.65%)		15.10%		12.00%		6.39%		8.99%	
Macquarie Large Cap Value	(5.48%)	99	7.26%	91	9.15%	77	4.18%	94	6.87%	92
Russell 1000 Value Index	(3.16%)	78	14.44%	55	11.05%	63	6.23%	62	7.92%	75
Callan Lg Cap Value MF	(2.65%)		15.10%		12.00%		6.39%		8.99%	
Sands Capital Large Cap Growth	(7.68%)	99	26.13%	59	(7.60%)	99	4.98%	98	10.94%	93
Russell 1000 Growth Index	(3.13%)	31	27.72%	41	7.97%	11	12.42%	8	15.64%	8
Callan Large Cap Grwth MF	(3.57%)		27.16%		4.68%		9.95%		13.61%	
Loomis SaylesLarge Cap Growth	(3.62%)	51	41.28%	2	7.79%	15	12.36%	8	14.27%	32
Russell 1000 Growth Index	(3.13%)	31	27.72%	41	7.97%	11	12.42%	8	15.64%	8
Callan Large Cap Grwth MF	(3.57%)		27.16%		4.68%		9.95%		13.61%	
BlackRock Russell 1000 Index	(3.16%)	66	21.12%	56	9.58%	67	9.60%	41	-	
Russell 1000 Index	(3.15%)	66	21.19%	55	9.53%	67	9.63%	40	12.00%	31
Callan Large Cap Core MFs	(2.84%)		21.45%		10.34%		9.29%		11.25%	

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, 2023. 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, 2023

	Last 10 Years		Last 15 Years		Since Inception
Tier 2: Active (Net of Fee)					
Stable Value Fund	2.10%	8	-		2.43% ^(7/09)
3 Yr US Treas Rolling	1.62%	44	1.37%	100	1.36% ^(7/09)
T-Bill + 1.5%	2.62%	1	2.30%	15	2.32% ^(7/09)
Callan Stable Value CT	1.61%		1.79%		-
Fixed Income Fund	1.71%	42	-		3.08% ^(4/09)
Bimbg Aggregate	1.13%	92	2.53%	94	2.30% ^(4/09)
Callan Core Plus MFs	1.63%		3.41%		-
TCW Core Plus	-		-		0.63% ^(1/17)
Bimbg Aggregate	1.13%	92	2.53%	94	0.35% ^(1/17)
Callan Core Plus MFs	1.63%		3.41%		-
Prudential Core Plus	-		-		1.85% ^(1/15)
Bimbg Aggregate	1.13%	92	2.53%	94	0.64% ^(1/15)
Callan Core Plus MFs	1.63%		3.41%		-
Large Cap Core Equity Fund	-		-		10.24% ^(10/17)
Russell 1000 Index	11.63%	40	11.26%	42	10.94% ^(10/17)
Callan Lg Cap Broad MF	10.95%		10.73%		-
Hotchkis & Wiley Large Cap Value	9.64%	20	-		14.27% ^(4/09)
Russell 1000 Value Index	8.45%	62	8.59%	56	12.21% ^(4/09)
Callan Lg Cap Value MF	8.60%		8.77%		-
Macquarie Large Cap Value	-		-		6.50% ^(6/15)
Russell 1000 Value Index	8.45%	62	8.59%	56	7.15% ^(6/15)
Callan Lg Cap Value MF	8.60%		8.77%		-
Sands Capital Large Cap Growth	9.84%	95	-		16.12% ^(4/09)
Russell 1000 Growth Index	14.48%	5	13.67%	8	16.57% ^(4/09)
Callan Large Cap Grwth MF	12.79%		12.25%		-
Loomis Sayles Large Cap Growth	-		-		14.38% ^(8/14)
Russell 1000 Growth Index	14.48%	5	13.67%	8	14.08% ^(8/14)
Callan Large Cap Grwth MF	12.79%		12.25%		-
BlackRock Russell 1000 Index	-		-		10.65% ^(11/17)
Russell 1000 Index	11.63%	26	11.26%	20	10.68% ^(11/17)
Callan Large Cap Core MFs	10.91%		10.31%		-

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, 2023. 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, 2023

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 7 Years	
Tier 2: Active (Net of Fee)										
International Equity Fund	(5.72%)	57	22.97%	61	0.96%	74	2.32%	73	4.38%	64
International Benchmark (1)	(3.49%)	30	20.19%	71	3.42%	56	2.39%	72	4.60%	61
Callan Non US Equity MFs	(5.13%)		23.88%		5.25%		3.07%		5.03%	
Mondrian ACWI ex-US Value	(1.85%)	14	28.24%	26	8.26%	22	3.48%	37	4.61%	61
MSCI ACWI ex US	(3.77%)	31	20.39%	70	3.74%	53	2.58%	65	4.74%	59
MSCI ACWI ex US Value	(0.07%)	7	25.17%	39	9.57%	19	2.29%	74	4.57%	62
Callan Non US Equity MFs	(5.13%)		23.88%		5.25%		3.07%		5.03%	
Baillie Gifford ACWI ex-US Growth	(10.35%)	95	19.70%	72	(4.70%)	96	1.73%	83	4.72%	59
MSCI ACWI ex US	(3.77%)	31	20.39%	70	3.74%	53	2.58%	65	4.74%	59
MSCI ACWI ex US Growth	(7.31%)	76	15.84%	93	(1.86%)	85	2.54%	68	4.66%	60
Callan Non US Equity MFs	(5.13%)		23.88%		5.25%		3.07%		5.03%	
Acadian	0.18%	11	22.14%	30	-		-		-	
MSCI ACWI ex US Small Cap	(1.70%)	19	19.01%	47	4.02%	35	2.58%	37	4.70%	46
Callan Intl Small Cap MFs	(4.33%)		18.64%		0.59%		1.63%		4.54%	
WCM	(5.94%)	67	15.85%	60	-		-		-	
MSCI ACWI ex US Small Cap	(1.70%)	19	19.01%	47	4.02%	35	2.58%	37	4.70%	46
Callan Intl Small Cap MFs	(4.33%)		18.64%		0.59%		1.63%		4.54%	
Small/Mid Cap Equity Fund	(5.37%)	52	10.69%	65	9.33%	45	4.74%	46	-	
Russell 2500 Index	(4.78%)	45	11.28%	60	8.39%	46	4.55%	47	7.96%	59
Callan SMID Broad MFs	(5.20%)		12.91%		6.96%		4.44%		8.56%	
Earnest Partners Small/Mid Cap	(5.78%)	95	10.54%	70	-		-		-	
Russell 2500 Index	(4.78%)	82	11.28%	66	8.39%	76	4.55%	56	7.96%	38
Callan SMID Core MFs	(3.63%)		13.38%		10.20%		4.86%		7.51%	
Brown Advisory Small/Mid Cap Growth	(6.26%)	61	9.32%	71	3.15%	35	5.65%	31	8.96%	65
Russell 2500 Growth Index	(6.84%)	66	10.61%	59	1.01%	52	4.05%	48	8.78%	67
Callan SMID Growth MFs	(5.91%)		11.71%		1.52%		3.85%		9.88%	
BlackRock Russell 2500 Index	(4.63%)	75	11.68%	63	8.38%	76	4.65%	56	-	
Russell 2500 Index	(4.78%)	82	11.28%	66	8.39%	76	4.55%	56	7.96%	38
Callan SMID Core MFs	(3.63%)		13.38%		10.20%		4.86%		7.51%	

(1) As of 9/30/21, International Benchmark consists of MSCI ACWI ex-US IMI, previously consisted of MSCI ACWI ex-US.

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, 2023. 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, 2023

	Last 10 Years		Last 15 Years		Since Inception
Tier 2: Active (Net of Fee)					
International Equity Fund	3.79%	48	-		7.51% ^(4/09)
International Benchmark	3.25%	69	4.25%	76	7.06% ^(4/09)
Callan Non US Equity MFs	3.66%		5.10%		-
Mondrian ACWI ex-US Value	3.76%	48	-		6.75% ^(4/09)
MSCI ACWI ex US	3.35%	68	4.31%	73	7.13% ^(4/09)
MSCI ACWI ex US Value	2.58%	85	3.76%	85	6.65% ^(4/09)
Callan Non US Equity MFs	3.66%		5.10%		-
Baillie Gifford ACWI ex-US Growth	4.36%	30	-		8.86% ^(4/09)
MSCI ACWI ex US	3.35%	68	4.31%	73	7.13% ^(4/09)
MSCI ACWI ex US Growth	3.92%	43	4.72%	54	7.47% ^(4/09)
Callan Non US Equity MFs	3.66%		5.10%		-
Acadian	-		-		(3.87%) ^(10/21)
MSCI ACWI ex US Small Cap	4.35%	47	6.64%	54	(8.04%) ^(10/21)
Callan Intl Small Cap MFs	4.23%		6.81%		-
WCM	-		-		(21.10%) ^(10/21)
MSCI ACWI ex US Small Cap	4.35%	47	6.64%	54	(8.04%) ^(10/21)
Callan Intl Small Cap MFs	4.23%		6.81%		-
Small/Mid Cap Equity Fund	-		-		6.37% ^(10/17)
Russell 2500 Index	7.90%	43	9.47%	51	6.40% ^(10/17)
Callan SMID Broad MFs	7.76%		9.55%		-
Earnest Partners Small/Mid Cap	-		-		(0.35%) ^(4/21)
Russell 2500 Index	7.90%	39	9.47%	37	(4.09%) ^(4/21)
Callan SMID Core MFs	7.45%		8.98%		-
Brown Advisory Small/Mid Cap Growth	9.18%	28	-		14.13% ^(4/09)
Russell 2500 Growth Index	8.37%	52	10.33%	45	13.69% ^(4/09)
Callan SMID Growth MFs	8.52%		10.25%		-
BlackRock Russell 2500 Index	-		-		6.33% ^(11/17)
Russell 2500 Index	7.90%	39	9.47%	37	6.22% ^(11/17)
Callan SMID Core MFs	7.45%		8.98%		-

The North Carolina Supplemental Retirement Plans

Fee Matrix

A	B	C	D	E	F C+D+E	G B*F	H	I F-H
Funds and Sub-Advisors	Assets*	Inv. Mgmt. Fee	Expenses ¹	NC Budget ²	Expense (%)	Annual Expenses (\$) ³	Median	Difference
North Carolina Stable Value Fund	\$2,418,681,151	0.2590%	0.0064%	0.0100%	0.28%	\$6,661,048	0.61%	-0.33%
Galliard	\$0	0.2590%	0.0000%			\$0	0.27%	-0.01%
North Carolina Fixed Income Passive Fund	\$83,361,540	0.0200%	0.0140%	0.0100%	0.04%	\$36,679	0.09%	-0.05%
Blackrock	\$83,361,540	0.0200%	0.0100%			\$16,672	0.04%	-0.02%
North Carolina Fixed Income Fund	\$2,160,121,849	0.1236%	0.0074%	0.0100%	0.14%	\$3,045,772	0.38%	-0.24%
50% TCW	\$1,077,282,523	0.1371%	0.0000%			\$1,476,954	0.21%	-0.07%
50% Prudential	\$1,082,839,316	0.1100%	0.0100%			\$1,191,123	0.21%	-0.10%
North Carolina Inflation Sensitive Fund	\$514,717,574	0.0900%	0.0111%	0.0100%	0.11%	\$571,851	0.40%	-0.29%
Blackrock	\$514,717,571	0.0900%	0.0100%			\$463,246	0.11%	-0.02%
North Carolina Large Cap Passive Fund	\$3,504,774,166	0.0050%	0.0019%	0.0100%	0.02%	\$592,307	0.16%	-0.14%
Blackrock	\$3,504,774,166	0.0050%	0.0100%			\$175,239	0.02%	-0.02%
North Carolina Large Cap Core Fund	\$2,017,290,559	0.2827%	0.0068%	0.0100%	0.30%	\$6,041,785	0.59%	-0.29%
18.75% Hotchkis & Wiley	\$388,943,281	0.4000%	0.0000%			\$1,555,773	0.40%	0.00%
18.75% Macquarie Large Cap Value	\$381,164,875	0.2721%	0.0000%			\$1,037,150	0.40%	-0.13%
18.75% Sands Capital Management	\$370,521,133	0.4500%	0.0000%			\$1,667,345	0.43%	0.02%
18.75% Loomis Sayles	\$375,728,207	0.3772%	0.0000%			\$1,417,247	0.43%	-0.05%
25% BlackRock Advisors Inc., Large Cap Index*	\$500,933,055	0.0050%	0.0100%			\$25,047	0.02%	-0.02%
North Carolina SMID Cap Passive Fund	\$356,673,903	0.0050%	0.0113%	0.0100%	0.03%	\$93,805	0.17%	-0.14%
Blackrock	\$356,673,903	0.0050%	0.0100%			\$17,834	0.03%	-0.03%
North Carolina SMID Cap Core Fund	\$983,516,314	0.2688%	0.0051%	0.0100%	0.28%	\$2,792,203	0.82%	-0.54%
30% Earnest Partners	\$295,589,985	0.4700%	0.0000%			\$1,389,273	0.68%	-0.68%
30% Wedge	\$0	0.0400%	0.0000%			\$0	0.66%	-0.62%
30% Brown Advisory	\$294,890,529	0.3839%	0.0000%			\$1,132,085	0.70%	-0.32%
10% BlackRock Advisors Inc., SMID Index*	\$99,207,055	0.0050%	0.0100%			\$4,960	0.04%	-0.04%
North Carolina International Passive Fund	\$99,806,184	0.0210%	0.0235%	0.0100%	0.05%	\$54,394	0.06%	-0.01%
Blackrock	\$99,806,184	0.0210%	0.0200%			\$20,959	0.06%	-0.04%
North Carolina International Equity	\$2,172,478,717	0.3790%	0.0234%	0.0100%	0.41%	\$8,959,302	0.80%	-0.39%
43% Baillie Gifford Growth	\$912,979,128	0.2742%	0.0000%			\$2,503,389	0.51%	-0.24%
43% Mondrian Investment Partners Value	\$955,374,474	0.3856%	0.0000%			\$3,683,924	0.51%	-0.12%
7% Acadian	\$153,930,643	0.6474%	0.0000%			\$996,547	0.83%	-0.18%
7% WCM	\$149,921,738	0.7000%	0.0000%			\$1,049,452	0.84%	-0.14%
North Carolina TIPS Fund	\$365,483,212	0.0250%	0.0035%	0.0100%	0.04%	\$140,711	0.37%	-0.33%
Blackrock	\$365,483,212	0.0250%	0.0000%			\$91,371	0.11%	-0.09%
Total	\$14,676,905,171	0.1218%	0.0104%	0.0100%	0.20%	\$28,989,858	0.22%	

*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 9/30/2023

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.

The North Carolina Supplemental Retirement Plans

Active Management Scorecard – Rolling 3-Years

North Carolina Supplemental Retirement Plans Active Management Scorecard - Rolling 3 Years									
	Large Cap Equity								
	3 Years to 09/30/2023		3 Years to 06/30/2023		3 Years to 03/31/2023		3 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
Hotchkis & Wiley Large Cap Value									
Macquarie Large Cap Value									
Sands Capital Large Cap Growth									
Loomis Large Cap Growth									
	Small/Mid Cap								
	3 Years to 09/30/2023		3 Years to 06/30/2023		3 Years to 03/31/2023		3 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
EARNEST Partners SMID Cap Core*									
Brown Advisory									
	International Equity								
	3 Years to 09/30/2023		3 Years to 06/30/2023		3 Years to 03/31/2023		3 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
Baillie Gifford ACWI ex US Growth									
Mondrian ACWI ex US Value									
Acadian*									
WCM*									
	Fixed Income								
	3 Years to 09/30/2023		3 Years to 06/30/2023		3 Years to 03/31/2023		3 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
TCW Core Plus*									
Prudential Core Plus									
	Stable Value								
	3 Years to 09/30/2023		3 Years to 06/30/2023		3 Years to 03/31/2023		3 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
Stable Value									
*Composite returns used to populate history; gross returns compared to index and separate account peer groups									

The North Carolina Supplemental Retirement Plans

Active Management Scorecard – Rolling 5-Years

North Carolina Supplemental Retirement Plans Active Management Scorecard - Rolling 5 Years									
	Large Cap Equity								
	5 Years to 09/30/2023		5 Years to 06/30/2023		5 Years to 3/31/2023		5 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
Hotchkis & Wiley Large Cap Value									
Macquarie Large Cap Value*									
Sands Capital Large Cap Growth									
Loomis Large Cap Growth*									
	Small/Mid Cap								
	5 Years to 09/30/2023		5 Years to 06/30/2023		5 Years to 3/31/2023		5 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
EARNEST Partners SMID Cap Core*									
Brown Advisory									
	International Equity								
	5 Years to 09/30/2023		5 Years to 06/30/2023		5 Years to 3/31/2023		5 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
Baillie Gifford ACWI ex US Growth									
Mondrian ACWI ex US Value									
Acadian*									
WCM*									
	Fixed Income								
	5 Years to 09/30/2023		5 Years to 06/30/2023		5 Years to 3/31/2023		5 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
TCW Core Plus*									
Prudential Core Plus									
	Stable Value								
	5 Years to 09/30/2023		5 Years to 06/30/2023		5 Years to 3/31/2023		5 Years to 12/31/2022		5 Year Risk
	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	Above Benchmark	Above Peer Median	
Stable Value									
*Composite returns used to populate history; gross returns compared to index and separate account peer groups									

The North Carolina Supplemental Retirement Plans Quarterly Manager Review

Callan Manager Assessment

	Manager Overall	Product People	Philosophy/ Process	Short Term Performance	Long Term Performance	Product Dynamics	Product Overall	STATUS	NOTES
LARGE CAP VALUE EQUITY									
Hotchkis & Wiley Large Cap Value	●	●	●	●	●	●	●	Within Expectations	
Macquarie Large Cap Value	●	●	●	●	●	●	●	Cautionary	<ul style="list-style-type: none"> Firm announced the July 2023 retirement of senior PM Bob Vogel. He will remain an active team member until his retirement. Former PM Ty Nutt retired in July 2019 and transitioned his lead role to Nik Lalvani. Macquarie promoted Associate PM Erin Ksenak to PM in December 2020 and analyst Vincent Celentano to Associate PM. Continue to monitor the team, process, and performance subsequent to transitions. Very difficult performance results for YTD 2023. Recent underperformance impacting long-term results; client and asset stability has declined over the past three years.
LARGE CAP CORE EQUITY									
BlackRock Russell 1000 Index	●	●	●	●	●	●	●	Within Expectations	
LARGE CAP GROWTH EQUITY									
Loomis Sayles Large Cap Growth	●	●	●	●	●	●	●	Within Expectations	<ul style="list-style-type: none"> Loomis offered a voluntary separation program in 4Q22 to eligible personnel at the firm, excluding portfolio managers. A number of fixed income analysts within the central research team accepted the buyout. Strategy has had nearly \$5B in outflows in 2022 and continues to experience net outflows in 2023; however, most outflow activity has been attributed to rebalancing. Strategy remains capacity constrained. Due to significant outperformance versus the benchmark in 2023, trailing 3- and 5-year performance has improved, though trailing 7-year performance continues to lag the benchmark.
Sands Capital Large Cap Growth	●	●	●	●	●	●	●	Cautionary	<ul style="list-style-type: none"> One of the four PMs on the strategy, Mike Sramek, elected to not to not return from a medical leave that was initiated in July 2022 and officially retired from the firm in December 2022. His tenure at the firm and impact on both Select and Focus Growth strategies necessitates continued due diligence around impact of his absence on the portfolio management approach going forward. Despite positive returns during 1Q and 2Q of 2023, the strategy declined substantially on an absolute and relative basis during 3Q23, which has impacted YTD and 1-year trailing numbers. While performance results are aligned with broader challenges within US Equity, the portfolio's exposure to higher growth and higher cash burn companies will be monitored in a higher-for-longer interest rate environment. 3/5/7 year performance remains meaningfully behind the benchmark. Exposure to innovation/disruptive growth companies has increased return volatility in recent time periods, though the investment team continues to re-calibrate growth exposure to ensure balance across different growth buckets. Continuing to monitor risk management approach around higher beta companies. Stability of asset base should be monitored; strategy experienced some outflows at the end of 2022 and has experienced outflows in 2023, particularly within its endowment and foundation client base.

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.

The North Carolina Supplemental Retirement Plans Quarterly Manager Review

Callan Manager Assessment

	Manager Overall	Product People	Philosophy/ Process	Short Term Performance	Long Term Performance	Product Dynamics	Product Overall	<u>STATUS</u>	<u>NOTES</u>
SMALL CAP GROWTH EQUITY									
Brown Advisory Small/Mid Cap Growth	●	●	●	●	●	●	●	Within Expectations	• Strategy AUM near high watermark (mitigated by slowing net flows and market volatility); total securities near all-time high (but within expected range).
SMALL/MID CAP BROAD									
BlackRock Russell 2500 Index	●	●	●	●	●	●	●	Within Expectations	• Head of EII Portfolio Management Amy Whitelaw stepped away from her role in February 2023. In conjunction BlackRock announced promotions to senior team members to expand the leadership team.
Earnest Partners Small/Mid Cap	●	●	●	●	●	●	●	Within Expectations	• Firm founder Paul Viera owns majority of firm. • Strategy market capitalization consistently larger than benchmark and peers.
BlackRock SMID Cap Passive	●	●	●	●	●	●	●	Within Expectations	• Head of EII Portfolio Management Amy Whitelaw stepped away from her role in February 2023. In conjunction BlackRock announced promotions to senior team members to expand the leadership team.
ACWI XUS CORE									
BlackRock International Passive	●	●	●	●	●	●	●	Within Expectations	• Head of EII Portfolio Management Amy Whitelaw stepped away from her role in February 2023. In conjunction BlackRock announced promotions to senior team members to expand the leadership team.
ACWI XUS VALUE									
Mondrian ACWI ex-US Value	●	●	●	●	●	●	●	Within Expectations	• In the last few years, there have been a number of investment professional shifts on the team, but all were well telegraphed and resources remain robust.
ACWI XUS GROWTH									
Baillie Gifford ACWI ex-US Growth	●	●	●	●	●	●	●	Within Expectations	• The retirement of Portfolio Manager Angus Franklin in 6/2022, and the portfolio manager rotation of Toby Ross with Steve Vaughan in 9/2022 are expected to be seamless given the team-driven process and depth and breadth of the team.

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.

The North Carolina Supplemental Retirement Plans Quarterly Manager Review

Callan Manager Assessment

	Manager Overall	Product People	Philosophy/ Process	Short Term Performance	Long Term Performance	Product Dynamics	Product Overall	STATUS	NOTES
ACWI XUS SMALL CORE									
Acadian	●	●	●	●	●	●	●	Within Expectations	<ul style="list-style-type: none"> Stable organization despite parent company BrightSphere who is expected sell its affiliate Acadian; however, the terms of the firm and economic structure are expected to be intact similar to BHMS transaction in July 2020 and TS&W transaction in May 2021. Co-CEO structure streamlined succession; the appointment of Fanesca Young as lead portfolio manager of Equities and departure of Portfolio Manager Kurt Livermore during 2Q23 are expected to have a de minimis impact given the systematic nature of the process and depth and breadth of the team. The staffing reduction should not impact Acadian's equity investment strategies. Acadian has been adding to its investment capabilities, and the staffing reduction was likely a recalibration following a refocusing of future organizational priorities.
ACWI XUS SMALL GROWTH									
WCM	●	●	●	●	●	●	●	Within Expectations	<ul style="list-style-type: none"> Co-CEO Kurt Winrich retired, effective 12/31/2021. Winrich continues to serve as chairman of the Board. In June 2023, WCM acquired Martin Capital, based in Eugene, Oregon, that manages dividend growth strategies and has \$300 million in assets under management. The team will continue to operate independently from other teams under the WCM umbrella. The strategy has limited capacity.
CORE BOND									
BlackRock Fixed Income Passive	●	●	●	●	●	●	●	Within Expectations	
CORE PLUS BOND									
Prudential Core Plus	●	●	●	●	●	●	●	Within Expectations	<ul style="list-style-type: none"> In January 2023 it was announced that Head of Fixed Income Michael Lillard will be retiring effective April 2024; PGIM provided ample notice regarding his retirement.
TCW Core Plus	●	●	●	●	●	●	●	Within Expectations	<ul style="list-style-type: none"> Monitoring the CEO leadership transition which occurred at year-end 2022. Monitoring potential impacts to investment strategy consistency due to CIO Tad Rivelle's 2021 year-end retirement and leadership transitioning to other senior members of the investment team. Securitized Portfolio Manager Harrison Choi retired from the firm in June 23. Long duration and yield curve positioning (overweight 2-year) were significant detractors in 2Q.

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.

The North Carolina Supplemental Retirement Plans Quarterly Manager Review

Callan Manager Assessment

	Manager Overall	Product People	Philosophy/ Process	Short Term Performance	Long Term Performance	Product Dynamics	Product Overall	<u>STATUS</u>	<u>NOTES</u>
US TIPS									
BlackRock Treasury Inflation Protected	●	●	●	●	●	●	●	Within Expectations	<ul style="list-style-type: none"> Head of EII Portfolio Management Amy Whitelaw stepped away from her role in February 2023. In conjunction BlackRock announced promotions to senior team members to expand the leadership team.
STABLE VALUE									
Galliard Stable Value	●	●	●	●	●	●	●	Within Expectations	<ul style="list-style-type: none"> Continuing to monitor parent company's (Allspring) ownership change that occurred in November 2021. Wells was rebranded to Allspring Global Investments and Joseph Sullivan replaced Nico Marais as CEO. Assets have stabilized since late 2020. The Galliard Stable Return Fund's put queue peaked in 2020 and has since decreased to 2017 levels. Leadership and the investment team has remained stable since the founding partners' retirement at the end of 2019.

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.

The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2023

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	5 Year Risk
Tier 2: Passive vs. Net of Fee Groups									
Fixed Income Passive (i)									
Callan Core Bond MFs	-3.2 71	0.7 76	-5.2 70	0.1 78		-0.3 87	-0.2 97	0.1 100	5.8 80
Blmbg Aggregate	-3.2 71	0.6 76	-5.2 69	0.1 75		-0.3 82			5.9 80
Treasury Inflation Protected (i)									
Callan TIPS MFs	-0.8 6	2.3 20	-0.0 9	2.6 6		0.2 1	0.1 3	0.3 97	4.2 96
Blmbg US TIPS 1-10 Yr	-1.0 12	2.1 24	-0.0 8	2.6 6		0.2 1			4.2 96
Large Cap Passive (i)									
Callan Large Cap Core MFs	-3.3 71	21.6 49	10.1 58	9.9 31		0.4 34	-0.3 56	0.0 100	20.9 57
S&P 500 Index	-3.3 71	21.6 49	10.2 57	9.9 31		0.4 34			20.9 57
International Passive (i)									
Callan Non US Equity MFs	-4.1 38	20.8 70	3.5 55	2.5 69		0.0 65	0.1 49	0.9 100	21.1 83
International Benchmark	-3.5 30	20.2 71	3.4 56	2.4 72		0.0 68			20.9 85
SMID Cap Passive (i)									
Callan SMID Core MFs	-4.8 82	11.3 66	8.3 76	4.5 57		0.1 57	-0.9 89	0.1 100	27.5 39
Russell 2500 Index	-4.8 82	11.3 66	8.4 76	4.5 56		0.1 57			27.5 39
Inflation Responsive Fund (i)									
Callan Real Assets MFs	-2.5 67	1.3 70	2.9 79	2.5 82		0.1 81	0.6 20	0.2 100	12.2 71
Inflation Responsive Benchmark	-2.4 67	0.9 72	2.7 80	2.4 82		0.1 82			12.2 71
Tier 2: Active vs. Net of Fee Groups									
Stable Value Fund									
Callan Stable Value CT	0.7 8	2.5 12	2.1 11	2.2 4		2.6 9	-1.3 4	0.7 31	0.2 50
T-Bill + 1.5%	1.7 1	6.0 1	3.2 1	3.2 1		1.8 12			0.8 1
Fixed Income Fund									
Callan Core Plus MFs	-3.0 50	1.7 42	-4.8 64	0.7 20		-0.1 19	0.3 22	2.3 68	6.7 40
Blmbg Aggregate	-3.2 72	0.6 81	-5.2 88	0.1 78		-0.3 92			5.9 93
TCW Core Plus									
Callan Core Plus MFs	-3.4 75	0.5 83	-5.3 88	0.4 56		-0.2 62	0.3 21	1.0 93	6.3 68
Blmbg Aggregate	-3.2 72	0.6 81	-5.2 88	0.1 78		-0.3 92			5.9 93

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

Risk:
■ below median
■ second quartile
■ first quartile

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

The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2023

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	5 Year Risk
Prudential Core Plus Callan Core Plus MFs Blmbg Aggregate	-2.5 9 -3.2 72	2.9 4 0.6 81	-4.3 26 -5.2 88	1.1 8 0.1 78	<div></div> <div></div> <div></div>	-0.1 6 -0.3 92	0.3 24	3.7 24	7.4 14 5.9 93
Large Cap Core Equity Fund Callan Lg Cap Broad MF Russell 1000 Index	-4.1 80 -3.1 53	23.8 38 21.2 52	8.1 58 9.5 44	8.5 53 9.6 35	<div></div> <div></div> <div></div>	0.3 55 0.4 26	-0.3 71	3.6 82	23.2 41 21.5 55
Hotchkis & Wiley Large Cap Value Callan Lg Cap Value MF Russell 1000 Value Index	-0.6 12 -3.2 78	23.2 9 14.4 55	18.9 4 11.1 63	7.5 23 6.2 62	<div></div> <div></div> <div></div>	0.2 63 0.2 53	0.1 38	9.6 7	28.7 5 20.8 61
Macquarie Large Cap Value Callan Lg Cap Value MF Russell 1000 Value Index	-5.5 99 -3.2 78	7.3 91 14.4 55	9.1 77 11.1 63	4.2 94 6.2 62	<div></div> <div></div> <div></div>	0.1 94 0.2 53	-0.5 94	3.7 62	20.2 77 20.8 61
Sands Capital Large Cap Growth Callan Large Cap Grwth MF Russell 1000 Growth Index	-7.7 99 -3.1 31	26.1 59 27.7 41	-7.6 99 8.0 11	5.0 98 12.4 8	<div></div> <div></div> <div></div>	0.1 99 0.4 10	-0.5 42	14.3 1	33.6 1 24.5 63
Loomis Sayles Large Cap Growth Callan Large Cap Grwth MF Russell 1000 Growth Index	-3.6 51 -3.1 31	41.3 2 27.7 41	7.8 15 8.0 11	12.4 8 12.4 8	<div></div> <div></div> <div></div>	0.5 7 0.4 10	-0.0 8	6.0 31	23.5 73 24.5 63
BlackRock Russell 1000 Index (i) Callan Large Cap Core MFs Russell 1000 Index	-3.2 66 -3.1 66	21.1 56 21.2 55	9.6 67 9.5 67	9.6 41 9.6 40	<div></div> <div></div> <div></div>	0.4 43 0.4 42	-0.2 58	0.1 99	21.6 25 21.5 26
International Equity Fund Callan Non US Equity MFs International Benchmark	-5.7 57 -3.5 30	23.0 61 20.2 71	1.0 74 3.4 56	2.3 73 2.4 72	<div></div> <div></div> <div></div>	0.0 73 0.0 68	-0.0 75	3.2 94	22.5 57 20.9 85
Mondrian ACWI ex-US Value Callan Non US Equity MFs MSCI ACWI ex US	-1.8 14 -3.8 31	28.2 26 20.4 70	8.3 22 3.7 53	3.5 37 2.6 65	<div></div> <div></div> <div></div>	0.1 34 0.0 59	0.2 39	5.1 58	20.9 85 20.9 86
Baillie Gifford ACWI ex-US Growth Callan Non US Equity MFs MSCI ACWI ex US	-10.4 95 -3.8 31	19.7 72 20.4 70	-4.7 96 3.7 53	1.7 83 2.6 65	<div></div> <div></div> <div></div>	0.0 84 0.0 59	-0.1 80	8.5 16	25.7 16 20.9 86

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:
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Tracking Error:
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The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2023

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	5 Year Risk
Acadian Callan Intl Small Cap MFs MSCI ACWI ex US Small Cap	0.2 11 -1.7 19	22.1 30 19.0 47	9.5 16 4.0 35	6.4 2 2.6 37	<div></div> <div></div> <div></div>	0.2 2 0.0 37	0.8 1	4.5 83	24.4 83 24.8 75
WCM Callan Intl Small Cap MFs MSCI ACWI ex US Small Cap	-5.9 67 -1.7 19	15.8 60 19.0 47	-3.6 81 4.0 35	5.6 3 2.6 37	<div></div> <div></div> <div></div>	0.1 6 0.0 37	0.2 14	14.6 5	33.8 5 24.8 75
Small/Mid Cap Equity Fund Callan SMID Broad MFs Russell 2500 Index	-5.4 52 -4.8 45	10.7 65 11.3 60	9.3 45 8.4 46	4.7 46 4.5 47	<div></div> <div></div> <div></div>	0.1 46 0.1 50	0.1 44	2.2 100	27.0 59 27.5 56
Earnest Partners Small/Mid Cap Callan SMID Core MFs Russell 2500 Index	-5.8 95 -4.8 82	10.5 70 11.3 66			<div></div> <div></div> <div></div>	0.1 57			27.5 39
Brown Advisory Small/Mid Cap Growth Callan SMID Growth MFs Russell 2500 Growth Index	-6.3 61 -6.8 66	9.3 71 10.6 59	3.1 35 1.0 52	5.7 31 4.0 48	<div></div> <div></div> <div></div>	0.1 32 0.1 49	0.4 26	4.5 84	27.4 70 28.8 50
BlackRock Russell 2500 Index (i) Callan SMID Core MFs Russell 2500 Index	-4.6 75 -4.8 82	11.7 63 11.3 66	8.4 76 8.4 76	4.7 56 4.5 56	<div></div> <div></div> <div></div>	0.1 56 0.1 57	0.2 37	0.6 100	27.8 29 27.5 39

Returns:
 above median
 third quartile
 fourth quartile

Return Consistency:
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 third quartile
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The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2023

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	5 Year Risk
Tier 2: Active vs. Gross of Fee Groups									
Stable Value Fund									
Galliard Stable Value	0.7 66	2.6 57	2.2 38	2.4 35		3.4 39	-1.2 34	0.7 20	0.2 51
Callan Stable Value SA									
T-Bill + 1.5%	1.7 1	6.0 1	3.2 3	3.2 2		1.8 84			0.8 1
Fixed Income Fund									
TCW Core Plus	-3.4 85	0.6 79	-5.1 92	0.6 51		-0.2 39	0.5 44	1.0 59	6.3 16
Callan Core Bond FI									
Bimbg Aggregate	-3.2 70	0.6 79	-5.2 93	0.1 94		-0.3 96			5.9 75
Prudential Core Plus	-2.5 4	2.9 2	-4.3 11	1.1 6		-0.1 2	0.3 74	3.7 1	7.4 1
Callan Core Bond FI									
Bimbg Aggregate	-3.2 70	0.6 79	-5.2 93	0.1 94		-0.3 96			5.9 75
Large Cap Core Equity Fund									
Hotchkis & Wiley Large Cap Value	-0.5 13	23.7 4	19.4 8	7.9 28		0.2 69	0.2 53	9.6 6	28.7 5
Callan Large Cap Value									
Russell 1000 Value Index	-3.2 86	14.4 66	11.1 83	6.2 78		0.2 67			20.8 70
Macquarie Large Cap Value	-5.4 99	7.5 97	9.4 93	4.5 97		0.1 95	-0.5 98	3.7 60	20.2 83
Callan Large Cap Value									
Russell 1000 Value Index	-3.2 86	14.4 66	11.1 83	6.2 78		0.2 67			20.8 70
Sands Capital Large Cap Growth	-7.6 98	26.7 48	-7.2 97	5.4 96		0.1 97	-0.5 56	14.3 4	33.6 3
Callan Large Cap Growth									
Russell 1000 Growth Index	-3.1 36	27.7 43	8.0 26	12.4 15		0.4 25			24.5 53
Loomis Sayles Large Cap Growth	-3.5 54	41.8 1	8.2 24	12.8 10		0.5 13	0.1 11	6.0 32	23.5 65
Callan Large Cap Growth									
Russell 1000 Growth Index	-3.1 36	27.7 43	8.0 26	12.4 15		0.4 25			24.5 53
BlackRock Russell 1000 Index (i)	-3.2 82	21.1 53	9.6 66	9.6 56		0.4 52	-0.2 61	0.1 100	21.6 31
Callan Large Cap Core									
Russell 1000 Index	-3.1 82	21.2 50	9.5 67	9.6 56		0.4 51			21.5 31

Returns:
■ above median
■ third quartile
■ fourth quartile

Return Consistency:
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■ third quartile
■ fourth quartile

Sharpe Ratio:
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■ third quartile
■ fourth quartile

Excess Return Ratio:
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■ below median
■ second quartile
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**The North Carolina Supplemental Retirement Plans
Investment Manager Performance Monitoring Summary Report
September 30, 2023**

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	5 Year Risk
International Fund									
Mondrian ACWI ex-US Value Callan NonUS Eq	-1.8 15	28.7 20	8.7 19	3.9 47		0.1 45	0.3 49	5.1 50	20.9 82
MSCI ACWI ex US	-3.8 37	20.4 74	3.7 62	2.6 81		0.0 80			20.9 82
Baillie Gifford ACWI ex-US Growth Callan NonUS Eq	-10.3 97	20.0 74	-4.5 96	2.0 87		0.0 87	-0.1 87	8.5 11	25.7 9
MSCI ACWI ex US	-3.8 37	20.4 74	3.7 62	2.6 81		0.0 80			20.9 82
Acadian Callan Intl Small Cap	0.2 2	22.1 23	9.5 6	6.4 3		0.2 6	0.8 3	4.5 78	24.4 78
MSCI ACWI ex US Small Cap	-1.7 18	19.0 53	4.0 30	2.6 33		0.0 34			24.8 75
WCM Callan Intl Small Cap	-5.9 82	15.8 75	-3.6 80	5.6 7		0.1 12	0.2 23	14.6 3	33.8 4
MSCI ACWI ex US Small Cap	-1.7 18	19.0 53	4.0 30	2.6 33		0.0 34			24.8 75
Small/Mid Cap Equity Fund									
Earnest Partners Small/Mid Cap Callan Small/MidCap Core	-5.7 76	11.0 80	10.9 53	8.6 9		0.3 6	0.6 12	6.4 32	23.4 85
Russell 2500 Index	-4.8 65	11.3 79	8.4 83	4.5 77		0.1 76			27.5 44
Brown Advisory Small/Mid Cap Growth Callan Sm/MidCap Growth	-6.2 46	9.7 71	3.5 33	6.1 35		0.2 38	0.5 30	4.5 89	27.4 74
Russell 2500 Growth Index	-6.8 61	10.6 65	1.0 65	4.0 58		0.1 58			28.8 49
BlackRock Russell 2500 Index (i) Callan Small/MidCap Core	-4.6 60	11.7 77	8.4 83	4.7 76		0.1 75	0.2 63	0.6 100	27.8 32
Russell 2500 Index	-4.8 65	11.3 79	8.4 83	4.5 77		0.1 76			27.5 44

Returns:
■ above median
■ third quartile
■ fourth quartile

Return Consistency:
■ above median
■ third quartile
■ fourth quartile

Sharpe Ratio:
■ above median
■ third quartile
■ fourth quartile

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Tracking Error:
■ below median
■ second quartile
■ first quartile

Risk:
■ below median
■ second quartile
■ first quartile

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Investment Fund Balances

The table below compares the fund's investment fund balances as of September 30, 2023 with that of June 30, 2023.

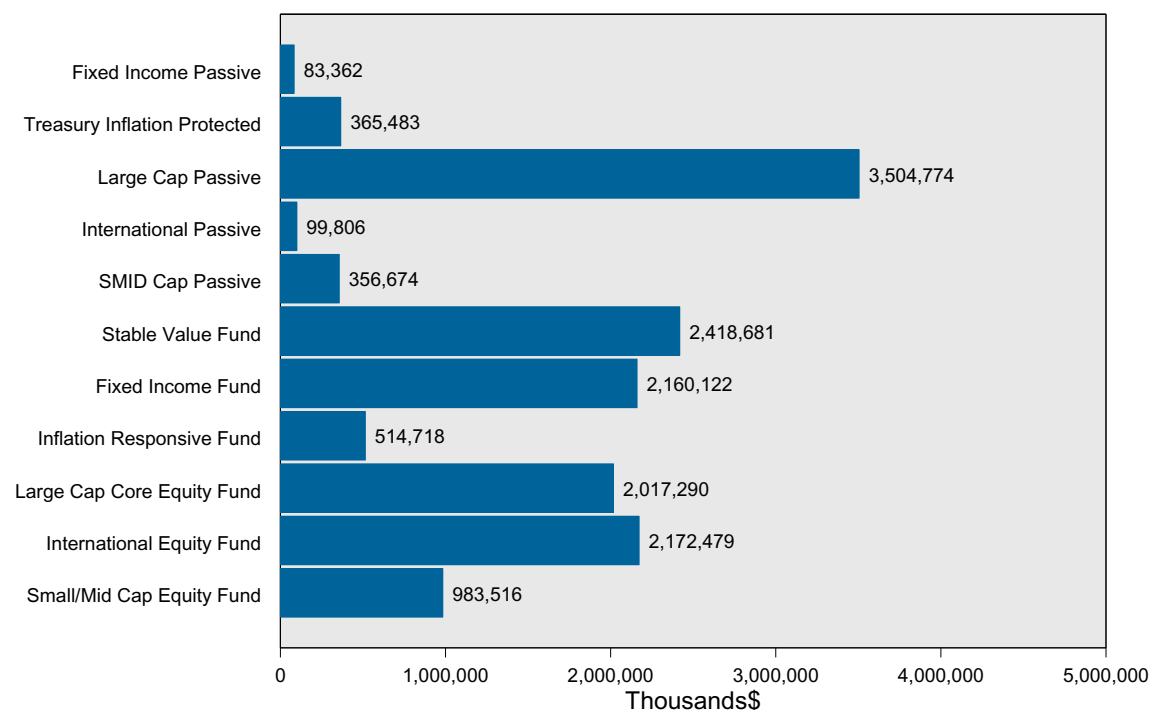
Asset Distribution Across Investment Funds

	September 30, 2023		June 30, 2023	
	Market Value	Weight	Market Value	Weight
North Carolina SRP 401k & 457				
Tier I: GoalMaker				
Post Retirement Conservative 11+	49,425,916	0.67%	48,171,391	0.64%
Post Retirement Conservative 6-10	146,510,309	2.00%	143,337,712	1.90%
Post Retirement Conservative 0-5	384,603,131	5.24%	398,081,776	5.27%
Pre Retirement Conservative 0-5	305,729,453	4.17%	324,966,811	4.30%
Pre Retirement Conservative 6-10	183,159,431	2.50%	196,594,127	2.60%
Pre Retirement Conservative 11-15	140,908,680	1.92%	147,994,932	1.96%
Pre Retirement Conservative 16-20	105,372,386	1.44%	109,007,480	1.44%
Pre Retirement Conservative 21-25	90,061,989	1.23%	93,089,365	1.23%
Pre Retirement Conservative 26+	94,848,295	1.29%	101,227,660	1.34%
Post Retirement Moderate 11+	54,069,213	0.74%	52,842,090	0.70%
Post Retirement Moderate 6-10	157,045,966	2.14%	155,730,142	2.06%
Post Retirement Moderate 0-5	463,667,135	6.32%	462,897,614	6.12%
Pre Retirement Moderate 0-5	641,565,332	8.74%	655,367,037	8.67%
Pre Retirement Moderate 6-10	612,730,325	8.35%	632,336,112	8.36%
Pre Retirement Moderate 11-15	516,051,484	7.03%	530,271,944	7.01%
Pre Retirement Moderate 16-20	392,880,942	5.35%	407,855,500	5.40%
Pre Retirement Moderate 21-25	289,037,711	3.94%	301,815,772	3.99%
Pre Retirement Moderate 26+	329,417,414	4.49%	339,241,307	4.49%
Post Retirement Aggressive 11+	20,312,624	0.28%	20,214,151	0.27%
Post Retirement Aggressive 6-10	56,010,358	0.76%	54,942,821	0.73%
Post Retirement Aggressive 0-5	180,666,143	2.46%	182,343,811	2.41%
Pre Retirement Aggressive 0-5	347,895,968	4.74%	351,798,694	4.65%
Pre Retirement Aggressive 6-10	433,623,939	5.91%	444,448,931	5.88%
Pre Retirement Aggressive 11-15	472,985,481	6.44%	487,178,239	6.44%
Pre Retirement Aggressive 16-20	380,197,964	5.18%	397,442,558	5.26%
Pre Retirement Aggressive 21-25	264,512,486	3.60%	281,316,485	3.72%
Pre Retirement Aggressive 26+	226,351,955	3.08%	238,949,701	3.16%
Tier I: GoalMaker Total	\$7,339,642,030	100.0%	\$7,559,464,163	100.0%

Changes in Investment Fund Balances Period Ended September 30, 2023

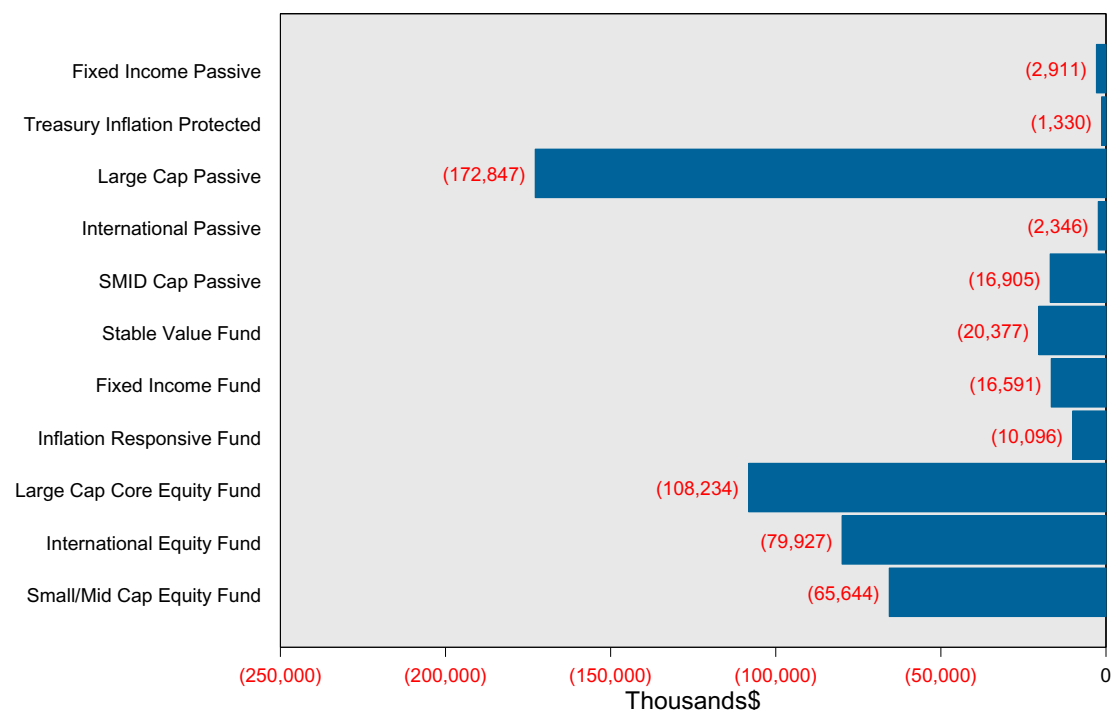
Allocation Across Investment Options

The chart below illustrates the allocation of the aggregate fund assets across the various investment options for the quarter ended September 30, 2023.



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, 2023. 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. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

	3 Years Ended 9/2023		3 Years Ended 6/2023		3 Years Ended 3/2023		3 Years Ended 12/2022	
Tier 2: Passive (Net of Fee)								
Fixed Income Passive	(5.21%)	70	(3.98%)	87	(2.77%)	98	(2.79%)	80
Blmbg Aggregate	(5.21%)	69	(3.96%)	85	(2.77%)	98	(2.71%)	78
Callan Core Bond MFs	(4.97%)		(3.61%)		(1.79%)		(2.41%)	
Large Cap Passive	10.12%	58	14.57%	45	18.58%	41	7.65%	54
S&P 500 Index	10.15%	57	14.60%	45	18.60%	39	7.66%	53
Callan Large Cap Core MFs	10.34%		14.16%		17.99%		7.69%	
International Passive	3.50%	55	7.08%	63	11.63%	73	0.04%	68
International Benchmark (1)	3.42%	56	6.79%	65	11.37%	83	(0.22%)	70
Callan Non US Equity MFs	5.25%		8.42%		13.23%		0.84%	
SMID Cap Passive	8.35%	76	12.24%	71	19.35%	62	4.91%	61
Russell 2500 Index	8.39%	76	12.29%	70	19.42%	59	5.00%	58
Callan SMID Core MFs	10.20%		13.81%		19.83%		5.25%	
Inflation Responsive Fund	2.91%	79	5.16%	79	7.92%	78	2.28%	83
Inflation Responsive Benchmark	2.75%	80	4.97%	79	7.72%	79	2.12%	84
Callan Real Assets MFs	5.64%		8.04%		11.13%		5.06%	

(1) As of 9/30/21, International Benchmark consists of MSCI ACWI ex-US IMI, previously consisted of MSCI ACWI ex-US.

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 9/2023		3 Years Ended 6/2023		3 Years Ended 3/2023		3 Years Ended 12/2022	
Tier 2: Active (Net of Fee)								
Stable Value Fund	2.06%	11	2.02%	9	2.00%	6	2.01%	6
3 Yr US Treas Rolling	2.27%	3	1.89%	19	1.57%	44	1.30%	82
T-Bill + 1.5%	3.20%	1	2.77%	1	2.39%	1	2.22%	2
Callan Stable Value CT	1.62%		1.58%		1.50%		1.50%	
Fixed Income Fund	(4.80%)	64	(3.31%)	66	(1.29%)	66	(2.40%)	48
Blmbg Aggregate	(5.21%)	88	(3.96%)	92	(2.77%)	98	(2.71%)	82
Callan Core Plus MFs	(4.63%)		(3.03%)		(0.90%)		(2.43%)	
TCW Core Plus	(5.28%)	78	(3.79%)	69	(2.05%)	75	(2.29%)	41
Blmbg Aggregate	(5.21%)	69	(3.96%)	85	(2.77%)	98	(2.71%)	78
Callan Core Bond MFs	(4.97%)		(3.61%)		(1.79%)		(2.41%)	
Prudential Core Plus	(4.28%)	26	(2.81%)	37	(0.48%)	27	(2.48%)	61
Blmbg Aggregate	(5.21%)	88	(3.96%)	92	(2.77%)	98	(2.71%)	82
Callan Core Plus MFs	(4.63%)		(3.03%)		(0.90%)		(2.43%)	
Large Cap Core Equity Fund	8.06%	58	12.48%	59	17.58%	47	5.99%	60
Russell 1000 Index	9.53%	44	14.09%	39	18.55%	32	7.35%	37
Callan Lg Cap Broad MF	8.76%		13.07%		17.50%		6.51%	
Hotchkis & Wiley Large Cap Value	18.89%	4	19.72%	5	25.99%	5	8.38%	26
Russell 1000 Value Index	11.05%	63	14.30%	64	17.93%	66	5.96%	77
Callan Lg Cap Value MF	12.00%		14.91%		18.74%		6.94%	
Macquarie Large Cap Value	9.15%	77	12.22%	86	16.48%	81	6.73%	60
Russell 1000 Value Index	11.05%	63	14.30%	64	17.93%	66	5.96%	77
Callan Lg Cap Value MF	12.00%		14.91%		18.74%		6.94%	
Sands Capital Large Cap Growth	(7.60%)	99	(0.42%)	99	6.40%	99	(2.28%)	98
Russell 1000 Growth Index	7.97%	11	13.73%	7	18.58%	7	7.79%	12
Callan Large Cap Grwth MF	4.68%		9.87%		14.82%		4.94%	
Loomis SaylesLarge Cap Growth	7.79%	15	12.91%	13	16.36%	28	4.80%	52
Russell 1000 Growth Index	7.97%	11	13.73%	7	18.58%	7	7.79%	12
Callan Large Cap Grwth MF	4.68%		9.87%		14.82%		4.94%	
International Equity Fund	0.96%	74	5.30%	82	9.99%	88	(2.36%)	92
International Benchmark (1)	3.42%	56	6.79%	65	11.37%	83	(0.22%)	70
Callan Non US Equity MFs	5.25%		8.42%		13.23%		0.84%	
Mondrian ACWI ex-US Value	8.26%	22	10.12%	33	12.50%	59	(0.95%)	85
MSCI ACWI ex US	3.74%	53	7.22%	62	11.80%	69	0.07%	67
MSCI ACWI ex US Value	9.57%	19	10.42%	29	13.82%	45	0.06%	68
Callan Non US Equity MFs	5.25%		8.42%		13.23%		0.84%	
Baillie Gifford ACWI ex-US Growth	(4.70%)	96	2.26%	96	9.05%	91	(2.99%)	95
MSCI ACWI ex US	3.74%	53	7.22%	62	11.80%	69	0.07%	67
MSCI ACWI ex US Growth	(1.86%)	85	3.96%	88	9.49%	89	(0.40%)	74
Callan Non US Equity MFs	5.25%		8.42%		13.23%		0.84%	
Small/Mid Cap Equity Fund	9.33%	45	13.41%	45	20.87%	34	6.38%	31
Russell 2500 Index	8.39%	46	12.29%	48	19.42%	48	5.00%	47
Callan SMID Broad MFs	6.96%		11.63%		19.13%		4.75%	
Brown Advisory Small/Mid Cap Growth	3.15%	35	8.33%	29	16.87%	28	4.88%	32
Russell 2500 Growth Index	1.01%	52	6.56%	47	14.75%	50	2.88%	49
Callan SMID Growth MFs	1.52%		5.85%		14.74%		2.78%	

(1) As of 9/30/21, International Benchmark consists of MSCI ACWI ex-US IMI, previously consisted of MSCI ACWI ex-US.

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, 2023. 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, 2023

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
Tier 2: Active (Gross of Fee)										
Stable Value Fund										
Galliard Stable Value	0.71%	66	2.62%	57	2.17%	38	2.37%	35	2.45%	(1/11)
3 Yr US Treas Rolling	1.14%	3	4.26%	2	2.27%	31	1.93%	88	1.38%	(1/11)
T-Bill + 1.5%	1.67%	1	5.97%	1	3.20%	3	3.22%	2	2.40%	(1/11)
Callan Stable Value SA	0.72%		2.64%		2.16%		2.31%		-	
Fixed Income Fund										
TCW Core Plus	(3.41%)	85	0.65%	79	(5.15%)	92	0.58%	51	0.78%	(1/17)
Blmbg Aggregate	(3.23%)	70	0.64%	79	(5.21%)	93	0.10%	94	0.35%	(1/17)
Callan Core Bond FI	(3.13%)		1.10%		(4.75%)		0.59%		-	
Prudential Core Plus	(2.45%)	4	2.92%	2	(4.28%)	11	1.09%	6	1.97%	(1/15)
Blmbg Aggregate	(3.23%)	70	0.64%	79	(5.21%)	93	0.10%	94	0.64%	(1/15)
Callan Core Bond FI	(3.13%)		1.10%		(4.75%)		0.59%		-	
Large Cap Core Equity Fund										
Hotchkis & Wiley Large Cap Value	(0.53%)	13	23.67%	4	19.37%	8	7.88%	28	14.79%	(4/09)
Russell 1000 Value Index	(3.16%)	86	14.44%	66	11.05%	83	6.23%	78	12.21%	(4/09)
Callan Large Cap Value	(2.07%)		16.45%		13.95%		6.97%		-	
Macquarie Large Cap Value	(5.41%)	99	7.54%	97	9.44%	93	4.47%	97	6.80%	(6/15)
Russell 1000 Value Index	(3.16%)	86	14.44%	66	11.05%	83	6.23%	78	7.15%	(6/15)
Callan Large Cap Value	(2.07%)		16.45%		13.95%		6.97%		-	
Sands Capital Large Cap Growth	(7.57%)	98	26.66%	48	(7.19%)	97	5.44%	96	16.69%	(4/09)
Russell 1000 Growth Index	(3.13%)	36	27.72%	43	7.97%	26	12.42%	15	16.57%	(4/09)
Callan Large Cap Growth	(3.42%)		26.41%		5.97%		10.53%		-	
Loomis SaylesLarge Cap Growth	(3.52%)	54	41.78%	1	8.19%	24	12.78%	10	14.81%	(8/14)
Russell 1000 Growth Index	(3.13%)	36	27.72%	43	7.97%	26	12.42%	15	14.08%	(8/14)
Callan Large Cap Growth	(3.42%)		26.41%		5.97%		10.53%		-	
BlackRock Russell 1000 Index	(3.16%)	82	21.12%	53	9.59%	66	9.61%	56	10.65%	(11/17)
Russell 1000 Index	(3.15%)	82	21.19%	50	9.53%	67	9.63%	56	10.68%	(11/17)
Callan Large Cap Core	(2.46%)		21.19%		10.30%		9.80%		-	
International Equity Fund										
Mondrian ACWI ex-US Value	(1.75%)	15	28.71%	20	8.68%	19	3.88%	47	7.22%	(4/09)
MSCI ACWI ex US	(3.77%)	37	20.39%	74	3.74%	62	2.58%	81	7.13%	(4/09)
MSCI ACWI ex US Value	(0.07%)	3	25.17%	40	9.57%	14	2.29%	84	6.65%	(4/09)
Callan NonUS Eq	(4.58%)		23.96%		4.97%		3.76%		-	
Baillie Gifford ACWI ex-US Growth	(10.29%)	97	19.99%	74	(4.46%)	96	2.00%	87	9.28%	(4/09)
MSCI ACWI ex US	(3.77%)	37	20.39%	74	3.74%	62	2.58%	81	7.13%	(4/09)
MSCI ACWI ex US Growth	(7.31%)	83	15.84%	94	(1.86%)	94	2.54%	81	7.47%	(4/09)
Callan NonUS Eq	(4.58%)		23.96%		4.97%		3.76%		-	
Small/Mid Cap Equity Fund										
Earnest Partners Small/Mid Cap	(5.66%)	76	11.04%	80	-		-		0.14%	(4/21)
Russell 2500 Index	(4.78%)	65	11.28%	79	8.39%	83	4.55%	77	(4.09%)	(4/21)
Callan Small/MidCap Core	(4.11%)		14.71%		11.04%		6.27%		-	
Brown Advisory Small/Mid Cap Growth	(6.15%)	46	9.75%	71	3.54%	33	6.09%	35	14.70%	(4/09)
Russell 2500 Growth Index	(6.84%)	61	10.61%	65	1.01%	65	4.05%	58	13.69%	(4/09)
Callan Sm/MidCap Growth	(6.32%)		12.46%		2.08%		5.48%		-	
BlackRock Russell 2500 Index	(4.63%)	60	11.69%	77	8.38%	83	4.66%	76	6.33%	(11/17)
Russell 2500 Index	(4.78%)	65	11.28%	79	8.39%	83	4.55%	77	6.22%	(11/17)
Callan Small/MidCap Core	(4.11%)		14.71%		11.04%		6.27%		-	

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 9/2023		3 Years Ended 6/2023		3 Years Ended 3/2023		3 Years Ended 12/2022	
Tier 2: Active (Gross of Fee)								
Stable Value Fund								
Galliard Stable Value	2.17%	38	2.15%	33	2.13%	32	2.14%	32
3 Yr US Treas Rolling	2.27%	31	1.89%	79	1.57%	90	1.30%	93
T-Bill + 1.5%	3.20%	3	2.77%	5	2.39%	12	2.22%	29
Callan Stable Value SA	2.16%		2.08%		2.05%		2.05%	
Fixed Income Fund								
TCW Core Plus	(5.15%)	92	(3.66%)	83	(1.92%)	67	(2.16%)	49
Blmbg Aggregate	(5.21%)	93	(3.96%)	95	(2.77%)	96	(2.71%)	96
Callan Core Bond FI	(4.75%)		(3.38%)		(1.72%)		(2.17%)	
Prudential Core Plus	(4.28%)	11	(2.81%)	11	(0.48%)	3	(2.48%)	80
Blmbg Aggregate	(5.21%)	93	(3.96%)	95	(2.77%)	96	(2.71%)	96
Callan Core Bond FI	(4.75%)		(3.38%)		(1.72%)		(2.17%)	
Large Cap Core Equity Fund								
Hotchkis & Wiley Large Cap Value	19.37%	8	20.19%	11	26.48%	6	8.82%	35
Russell 1000 Value Index	11.05%	83	14.30%	82	17.93%	84	5.96%	92
Callan Large Cap Value	13.95%		16.37%		20.59%		7.87%	
Macquarie Large Cap Value	9.44%	93	12.52%	94	16.78%	89	7.02%	65
Russell 1000 Value Index	11.05%	83	14.30%	82	17.93%	84	5.96%	92
Callan Large Cap Value	13.95%		16.37%		20.59%		7.87%	
Sands Capital Large Cap Growth	(7.19%)	97	0.02%	96	6.86%	96	(1.85%)	96
Russell 1000 Growth Index	7.97%	26	13.73%	15	18.58%	20	7.79%	27
Callan Large Cap Growth	5.97%		11.24%		15.76%		6.09%	
Loomis SaylesLarge Cap Growth	8.19%	24	13.33%	24	16.79%	36	5.20%	59
Russell 1000 Growth Index	7.97%	26	13.73%	15	18.58%	20	7.79%	27
Callan Large Cap Growth	5.97%		11.24%		15.76%		6.09%	
International Equity Fund								
Mondrian ACWI ex-US Value	8.68%	19	10.54%	28	12.93%	61	(0.56%)	83
MSCI ACWI ex US	3.74%	62	7.22%	77	11.80%	80	0.07%	74
MSCI ACWI ex US Value	9.57%	14	10.42%	29	13.82%	48	0.06%	74
Callan NonUS Eq	4.97%		9.01%		13.78%		1.44%	
Baillie Gifford ACWI ex-US Growth	(4.46%)	96	2.52%	95	9.32%	94	(2.73%)	98
MSCI ACWI ex US	3.74%	62	7.22%	77	11.80%	80	0.07%	74
MSCI ACWI ex US Growth	(1.86%)	94	3.96%	95	9.49%	93	(0.40%)	83
Callan NonUS Eq	4.97%		9.01%		13.78%		1.44%	
Small/Mid Cap Equity Fund								
Brown Advisory Small/Mid Cap Growth	3.54%	33	8.73%	31	17.29%	38	5.30%	38
Russell 2500 Growth Index	1.01%	65	6.56%	58	14.75%	63	2.88%	67
Callan Sm/MidCap Growth	2.08%		7.63%		16.22%		3.52%	

Investment Fund Returns

The table below details the rates of return for the Fund's investment funds over various time periods ended September 30, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Tier 1: GoalMaker Funds (Net of Fee)					
Post Retirement Conservative 11+	(1.77%)	5.65%	0.52%	2.98%	-
Post Ret Conservative 11+ Index	(1.62%)	5.54%	0.64%	2.74%	-
Post Retirement Conservative 6-10	(1.95%)	6.01%	0.42%	3.00%	-
Post Ret Conservative 6-10 Index	(1.78%)	5.82%	0.56%	2.74%	-
Post Retirement Conservative 0-5	(2.19%)	6.33%	0.54%	3.11%	-
Post Ret Conservative 0-5 Index	(2.03%)	6.07%	0.64%	2.84%	-
Pre Retirement Conservative 0-5	(2.57%)	7.28%	0.44%	3.20%	3.57%
Pre Ret Conservative 0-5 Index	(2.37%)	6.80%	0.58%	2.93%	3.31%
Pre Retirement Conservative 6-10	(3.00%)	8.41%	0.65%	3.35%	4.05%
Pre Ret Conservative 6-10 Index	(2.73%)	7.75%	0.88%	3.11%	3.79%
Pre Retirement Conservative 11-15	(3.32%)	9.54%	1.15%	3.65%	4.86%
Pre Ret Conservative 11-15 Index	(3.00%)	8.78%	1.42%	3.45%	4.62%
Pre Retirement Conservative 16-20	(3.73%)	11.55%	1.66%	3.91%	5.75%
Pre Ret Conservative 16-20 Index	(3.28%)	10.59%	2.12%	3.77%	5.53%
Pre Retirement Conservative 21-25	(4.01%)	13.12%	2.49%	4.33%	-
Pre Ret Conservative 21-25 Index	(3.49%)	12.09%	3.04%	4.23%	-
Pre Retirement Conservative 26+	(4.18%)	14.78%	3.52%	4.71%	-
Pre Ret Conservative 26+ Index	(3.54%)	13.76%	4.21%	4.67%	-

Investment Fund Returns

The table below details the rates of return for the Fund's investment funds over various time periods ended September 30, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2023

	Last 10 Years	Last 15 Years	Since Inception
Tier 1: GoalMaker Funds (Net of Fee)			
Post Retirement Conservative 11+	-	-	3.01% ^(7/18)
Post Ret Conservative 11+ Index	-	-	2.78% ^(7/18)
Post Retirement Conservative 6-10	-	-	3.04% ^(7/18)
Post Ret Conservative 6-10 Index	-	-	2.80% ^(7/18)
Post Retirement Conservative 0-5	-	-	3.18% ^(7/18)
Post Ret Conservative 0-5 Index	-	-	2.93% ^(7/18)
Pre Retirement Conservative 0-5	3.65%	-	4.92% ^(7/09)
Pre Ret Conservative 0-5 Index	3.34%	3.91%	4.18% ^(7/09)
Pre Retirement Conservative 6-10	4.10%	-	5.67% ^(7/09)
Pre Ret Conservative 6-10 Index	3.78%	4.44%	4.88% ^(7/09)
Pre Retirement Conservative 11-15	4.92%	-	6.79% ^(7/09)
Pre Ret Conservative 11-15 Index	4.66%	5.52%	6.27% ^(7/09)
Pre Retirement Conservative 16-20	5.74%	-	7.96% ^(7/09)
Pre Ret Conservative 16-20 Index	5.50%	6.43%	7.57% ^(7/09)
Pre Retirement Conservative 21-25	-	-	4.59% ^(7/18)
Pre Ret Conservative 21-25 Index	-	-	4.50% ^(7/18)
Pre Retirement Conservative 26+	-	-	5.03% ^(7/18)
Pre Ret Conservative 26+ Index	-	-	4.98% ^(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, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Tier 1: GoalMaker Funds (Net of Fee)					
Post Retirement Moderate 11+	(2.13%)	7.59%	1.54%	3.62%	-
Post Ret Moderate 11+ Index	(1.89%)	7.39%	1.78%	3.43%	-
Post Retirement Moderate 6-10	(2.43%)	8.33%	1.54%	3.71%	-
Post Ret Moderate 6-10 Index	(2.23%)	10.57%	3.04%	3.88%	-
Post Retirement Moderate 0-5	(2.84%)	9.03%	1.49%	3.79%	-
Post Ret Moderate 0-5 Index	(2.57%)	8.51%	1.73%	3.60%	-
Pre Retirement Moderate 0-5	(3.19%)	9.99%	1.47%	3.83%	4.65%
Pre Ret Moderate 0-5 Index	(2.85%)	9.29%	1.80%	3.65%	4.43%
Pre Retirement Moderate 6-10	(3.59%)	11.58%	1.99%	4.07%	5.22%
Pre Ret Moderate 6-10 Index	(3.14%)	10.72%	2.45%	3.93%	5.02%
Pre Retirement Moderate 11-15	(3.90%)	13.17%	2.72%	4.39%	5.97%
Pre Ret Moderate 11-15 Index	(3.36%)	12.22%	3.28%	4.30%	5.79%
Pre Retirement Moderate 16-20	(4.18%)	14.78%	3.52%	4.71%	6.94%
Pre Ret Moderate 16-20 Index	(3.54%)	13.76%	4.21%	4.67%	6.79%
Pre Retirement Moderate 21-25	(4.29%)	16.26%	4.27%	5.00%	-
Pre Ret Moderate 21-25 Index	(3.55%)	15.22%	5.10%	4.99%	-
Pre Retirement Moderate 26+	(4.40%)	17.50%	5.11%	5.31%	-
Pre Ret Moderate 26+ Index	(3.60%)	16.51%	6.01%	5.32%	-

Investment Fund Returns

The table below details the rates of return for the Fund's investment funds over various time periods ended September 30, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2023

	Last 10 Years	Last 15 Years	Since Inception
Tier 1: GoalMaker Funds (Net of Fee)			
Post Retirement Moderate 11+	-	-	3.70% ^(7/18)
Post Ret Moderate 11+ Index	-	-	3.53% ^(7/18)
Post Retirement Moderate 6-10	-	-	3.82% ^(7/18)
Post Ret Moderate 6-10 Index	-	-	4.01% ^(7/18)
Post Retirement Moderate 0-5	-	-	3.96% ^(7/18)
Post Ret Moderate 0-5 Index	-	-	3.77% ^(7/18)
Pre Retirement Moderate 0-5	4.59%	-	6.15% ^(7/09)
Pre Ret Moderate 0-5 Index	4.31%	4.95%	5.51% ^(7/09)
Pre Retirement Moderate 6-10	5.17%	-	6.88% ^(7/09)
Pre Ret Moderate 6-10 Index	4.94%	5.71%	6.47% ^(7/09)
Pre Retirement Moderate 11-15	5.83%	-	7.88% ^(7/09)
Pre Ret Moderate 11-15 Index	5.61%	6.40%	7.45% ^(7/09)
Pre Retirement Moderate 16-20	6.66%	-	9.06% ^(7/09)
Pre Ret Moderate 16-20 Index	6.48%	7.28%	8.77% ^(7/09)
Pre Retirement Moderate 21-25	-	-	5.35% ^(7/18)
Pre Ret Moderate 21-25 Index	-	-	5.34% ^(7/18)
Pre Retirement Moderate 26+	-	-	5.70% ^(7/18)
Pre Ret Moderate 26+ Index	-	-	5.72% ^(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, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Tier 1: GoalMaker Funds (Net of Fee)					
Post Retirement Aggressive 11+	(2.63%)	10.14%	4.02%	5.17%	-
Post Ret Aggressive 11+ Index	(2.28%)	9.78%	2.97%	4.19%	-
Post Retirement Aggressive 6-10	(2.90%)	11.32%	4.24%	5.36%	-
Post Ret Aggressive 6-10 Index	(2.50%)	10.84%	3.32%	4.43%	-
Post Retirement Aggressive 0-5	(3.32%)	11.81%	4.01%	5.31%	-
Post Ret Aggressive 0-5 Index	(2.92%)	11.13%	3.12%	4.40%	-
Pre Retirement Aggressive 0-5	(3.74%)	12.94%	4.08%	5.30%	6.30%
Pre Ret Aggressive 0-5 Index	(3.28%)	12.10%	3.46%	4.55%	5.64%
Pre Retirement Aggressive 6-10	(4.08%)	14.81%	4.17%	5.19%	6.60%
Pre Ret Aggressive 6-10 Index	(3.45%)	13.81%	4.14%	4.71%	6.13%
Pre Retirement Aggressive 11-15	(4.29%)	16.26%	4.63%	5.21%	7.18%
Pre Ret Aggressive 11-15 Index	(3.55%)	15.22%	5.10%	4.99%	6.90%
Pre Retirement Aggressive 16-20	(4.40%)	17.29%	5.08%	5.30%	7.96%
Pre Ret Aggressive 16-20 Index	(3.60%)	16.29%	5.86%	5.24%	7.81%
Pre Retirement Aggressive 21-25	(4.46%)	18.13%	5.38%	5.36%	-
Pre Ret Aggressive 21-25 Index	(3.60%)	17.14%	6.42%	5.42%	-
Pre Retirement Aggressive 26+	(4.46%)	18.13%	5.38%	5.36%	-
Pre Ret Aggressive 26+ Index	(3.60%)	17.14%	6.42%	5.42%	-

Investment Fund Returns

The table below details the rates of return for the Fund's investment funds over various time periods ended September 30, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

Returns for Periods Ended September 30, 2023

	Last 10 Years	Last 15 Years	Since Inception
Tier 1: GoalMaker Funds (Net of Fee)			
Post Retirement Aggressive 11+	-	-	5.32% ^(7/18)
Post Ret Aggressive 11+ Index	-	-	4.38% ^(7/18)
Post Retirement Aggressive 6-10	-	-	5.54% ^(7/18)
Post Ret Aggressive 6-10 Index	-	-	4.66% ^(7/18)
Post Retirement Aggressive 0-5	-	-	5.52% ^(7/18)
Post Ret Aggressive 0-5 Index	-	-	4.66% ^(7/18)
Pre Retirement Aggressive 0-5	5.97%	-	7.68% ^(7/09)
Pre Ret Aggressive 0-5 Index	5.42%	6.09%	6.92% ^(7/09)
Pre Retirement Aggressive 6-10	6.28%	-	8.27% ^(7/09)
Pre Ret Aggressive 6-10 Index	5.85%	6.57%	7.62% ^(7/09)
Pre Retirement Aggressive 11-15	6.81%	-	9.02% ^(7/09)
Pre Ret Aggressive 11-15 Index	6.53%	7.28%	8.67% ^(7/09)
Pre Retirement Aggressive 16-20	7.50%	-	10.10% ^(7/09)
Pre Ret Aggressive 16-20 Index	7.33%	8.05%	9.92% ^(7/09)
Pre Retirement Aggressive 21-25	-	-	5.77% ^(7/18)
Pre Ret Aggressive 21-25 Index	-	-	5.84% ^(7/18)
Pre Retirement Aggressive 26+	-	-	5.77% ^(7/18)
Pre Ret Aggressive 26+ Index	-	-	5.84% ^(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 9/2023	3 Years Ended 6/2023	3 Years Ended 3/2023	3 Years Ended 12/2022
Tier 1: GoalMaker Funds (Net of Fee)				
Post Retirement Conservative 11+	0.52%	2.06%	4.01%	1.38%
Post Ret Conservative 11+ Index	0.64%	1.96%	3.56%	1.30%
Post Retirement Conservative 6-10	0.42%	2.05%	4.08%	1.24%
Post Ret Conservative 6-10 Index	0.56%	1.94%	3.59%	1.19%
Post Retirement Conservative 0-5	0.54%	2.31%	4.55%	1.31%
Post Ret Conservative 0-5 Index	0.64%	2.17%	4.00%	1.26%
Pre Retirement Conservative 0-5	0.44%	2.44%	4.91%	1.10%
Pre Ret Conservative 0-5 Index	0.58%	2.32%	4.36%	1.16%
Pre Retirement Conservative 6-10	0.65%	2.95%	5.77%	1.10%
Pre Ret Conservative 6-10 Index	0.88%	2.88%	5.26%	1.27%
Pre Retirement Conservative 11-15	1.15%	3.72%	6.85%	1.33%
Pre Ret Conservative 11-15 Index	1.42%	3.69%	6.39%	1.58%
Pre Retirement Conservative 16-20	1.66%	4.59%	8.07%	1.34%
Pre Ret Conservative 16-20 Index	2.12%	4.72%	7.80%	1.81%
Pre Retirement Conservative 21-25	2.49%	5.75%	9.58%	1.74%
Pre Ret Conservative 21-25 Index	3.04%	5.96%	9.45%	2.30%
Pre Retirement Conservative 26+	3.52%	7.06%	11.18%	2.19%
Pre Ret Conservative 26+ Index	4.21%	7.39%	11.25%	2.84%

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 9/2023	3 Years Ended 6/2023	3 Years Ended 3/2023	3 Years Ended 12/2022
Tier 1: GoalMaker Funds (Net of Fee)				
Post Retirement Moderate 11+	1.54%	3.45%	5.82%	1.99%
Post Retirement Moderate 6-10	1.54%	3.65%	6.19%	1.86%
Post Ret Moderate 6-10 Index	3.04%	5.18%	7.84%	2.41%
Post Retirement Moderate 0-5	1.49%	3.83%	6.65%	1.73%
Pre Retirement Moderate 0-5	1.47%	4.04%	7.09%	1.52%
Pre Ret Moderate 0-5 Index	1.80%	4.07%	6.73%	1.81%
Pre Retirement Moderate 6-10	1.99%	4.90%	8.32%	1.63%
Pre Ret Moderate 6-10 Index	2.45%	5.03%	8.09%	2.07%
Pre Retirement Moderate 11-15	2.72%	5.94%	9.70%	1.89%
Pre Ret Moderate 11-15 Index	3.28%	6.16%	9.61%	2.43%
Pre Retirement Moderate 16-20	3.52%	7.06%	11.18%	2.19%
Pre Ret Moderate 16-20 Index	4.21%	7.39%	11.25%	2.84%
Pre Retirement Moderate 21-25	4.27%	8.04%	12.33%	2.45%
Pre Ret Moderate 21-25 Index	5.10%	8.49%	12.59%	3.19%
Pre Retirement Moderate 26+	5.11%	9.08%	13.60%	2.83%
Pre Ret Moderate 26+ Index	6.01%	9.60%	13.98%	3.59%

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 9/2023	3 Years Ended 6/2023	3 Years Ended 3/2023	3 Years Ended 12/2022
Tier 1: GoalMaker Funds (Net of Fee)				
Post Retirement Aggressive 11+	4.02%	6.46%	9.35%	3.93%
Post Ret Aggressive 11+ Index	2.97%	5.12%	7.71%	2.73%
Post Retirement Aggressive 6-10	4.24%	6.91%	10.01%	3.91%
Post Ret Aggressive 6-10 Index	3.32%	5.68%	8.48%	2.86%
Post Retirement Aggressive 0-5	4.01%	6.91%	10.30%	3.61%
Post Ret Aggressive 0-5 Index	3.12%	5.70%	8.75%	2.67%
Pre Retirement Aggressive 0-5	4.08%	7.28%	11.03%	3.36%
Pre Ret Aggressive 0-5 Index	3.46%	6.33%	9.73%	2.73%
Pre Retirement Aggressive 6-10	4.17%	7.69%	11.71%	2.90%
Pre Ret Aggressive 6-10 Index	4.14%	7.28%	11.01%	2.84%
Pre Retirement Aggressive 11-15	4.63%	8.40%	12.71%	2.80%
Pre Ret Aggressive 11-15 Index	5.10%	8.49%	12.59%	3.19%
Pre Retirement Aggressive 16-20	5.08%	9.03%	13.54%	2.86%
Pre Ret Aggressive 16-20 Index	5.86%	9.42%	13.77%	3.50%
Pre Retirement Aggressive 21-25	5.38%	9.45%	14.06%	2.85%
Pre Ret Aggressive 21-25 Index	6.42%	10.11%	14.60%	3.71%
Pre Retirement Aggressive 26+	5.38%	9.45%	14.06%	2.85%
Pre Ret Aggressive 26+ Index	6.42%	10.11%	14.60%	3.71%

Galliard Stable Value Period Ended September 30, 2023

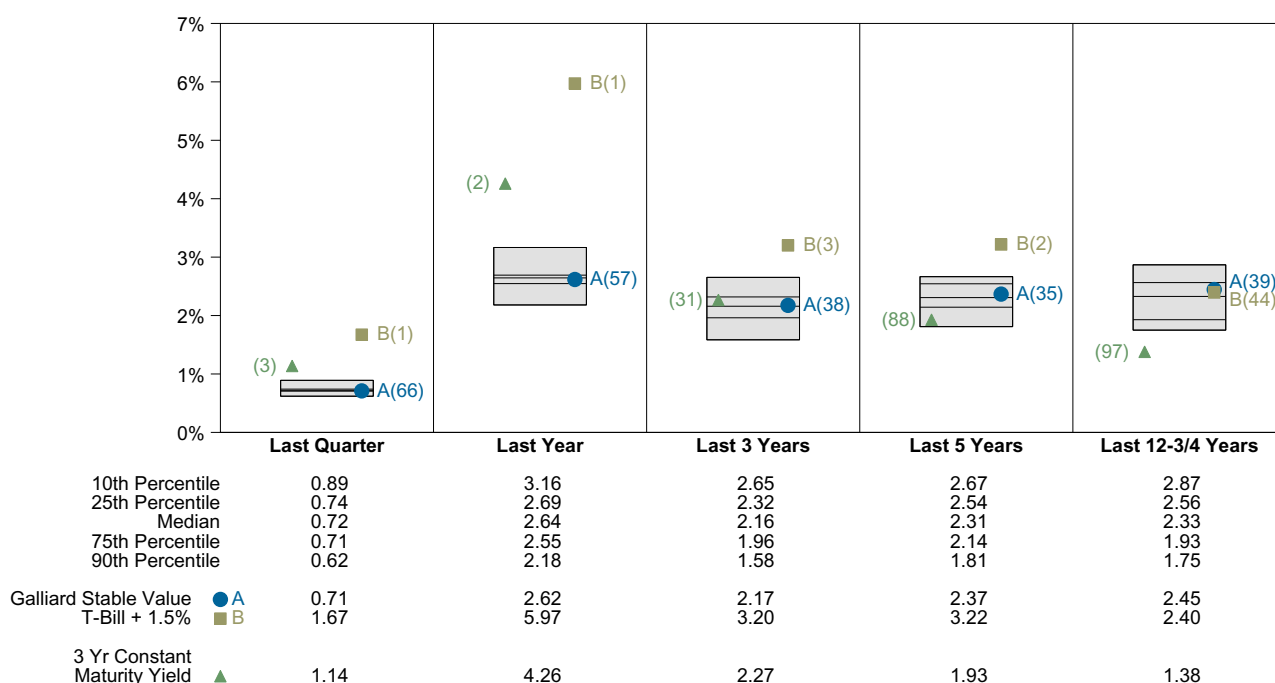
Investment Philosophy

Galliard manages stable value portfolios with a focus on principal preservation, liquidity, and income generation. These goals are balanced with a conservative approach to underlying fixed income portfolios and active wrap contract management. Galliard's fixed income team seeks to generate diversified sources of income over treasuries by emphasizing higher quality sectors, while external managers are systematically reviewed and approved as subadvisers to complement the overall structure.

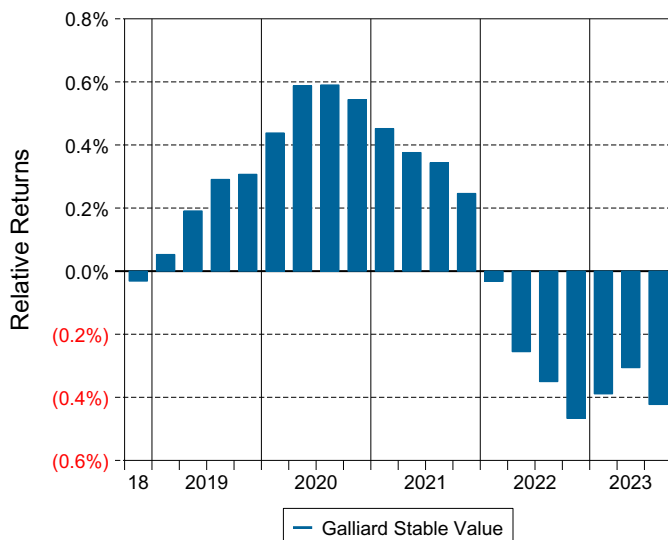
Quarterly Summary and Highlights

- Galliard Stable Value's portfolio posted a 0.71% return for the quarter placing it in the 66 percentile of the Callan Stable Value SA group for the quarter and in the 57 percentile for the last year.
- Galliard Stable Value's portfolio underperformed the 3 Yr Constant Maturity Yield by 0.43% for the quarter and underperformed the 3 Yr Constant Maturity Yield for the year by 1.64%.

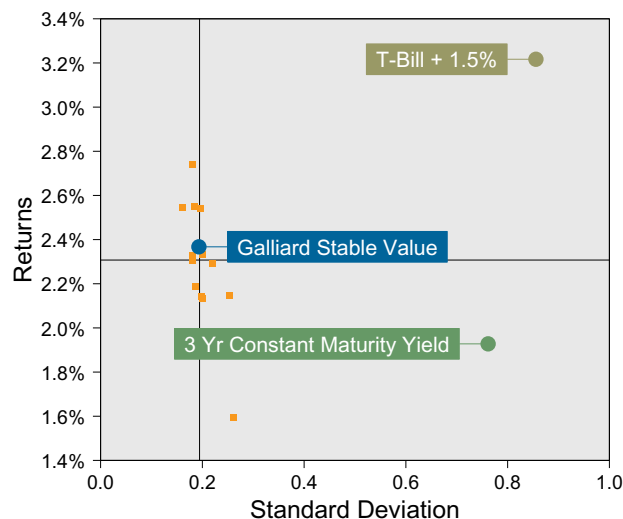
Performance vs Callan Stable Value SA (Gross)



Relative Returns vs 3 Yr Constant Maturity Yield



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

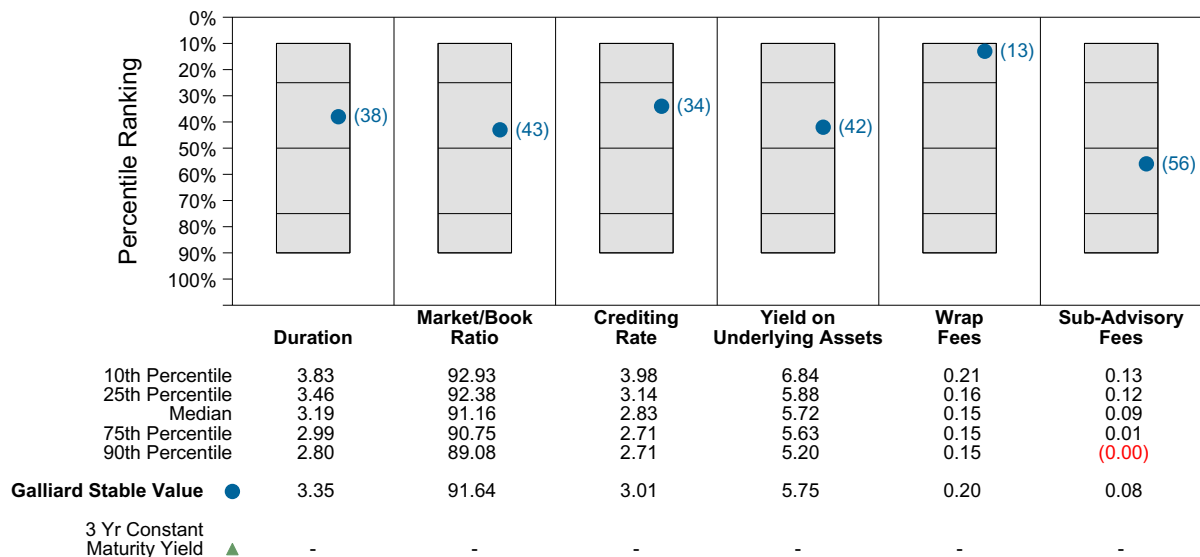


Galliard Stable Value Stable Value Characteristics Analysis Summary

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.

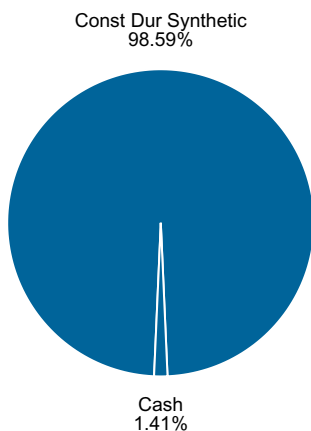
Portfolio Characteristics Percentile Rankings Rankings Against Callan Stable Value SA as of September 30, 2023



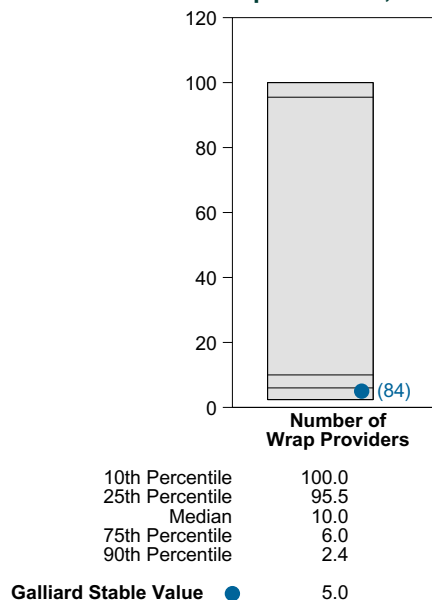
Wrap Structure and Diversification

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, 2023



Wrap Contract Diversification September 30, 2023

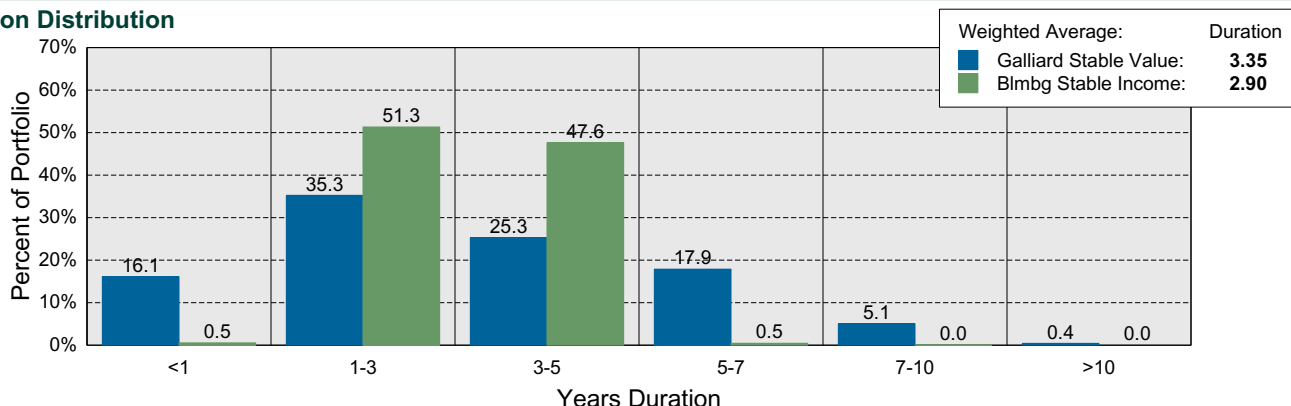


Galliard Stable Value Stable Value Portfolio Characteristics Summary As of September 30, 2023

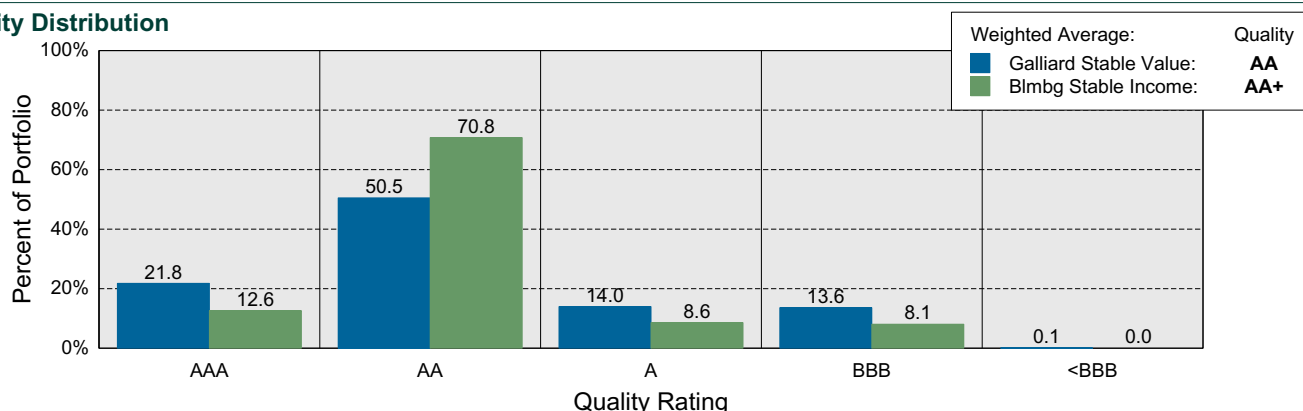
Portfolio Structure Comparison

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



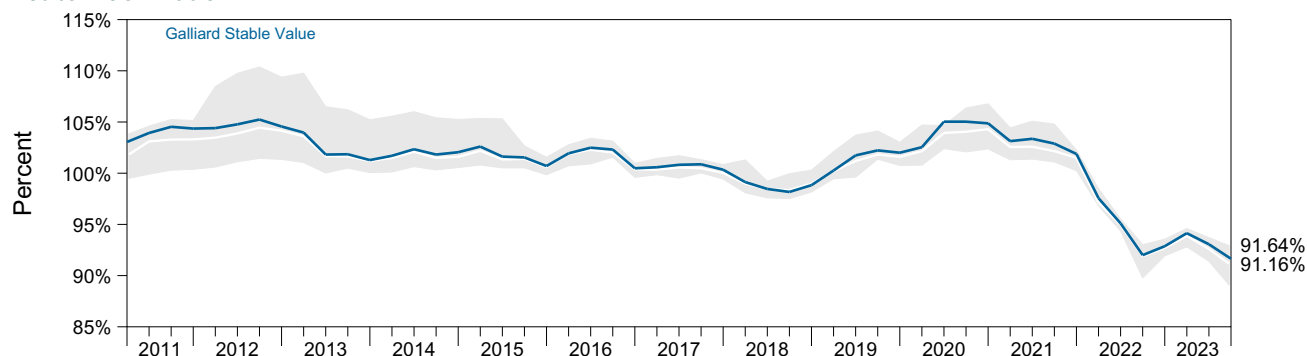
Quality Distribution



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



Third Quarter 2023 DC Trends

The IRS delays SECURE 2.0 Roth catch-ups

The U.S. Internal Revenue Service (IRS) provided relief on Friday, Aug. 25 to the onerous SECURE 2.0 provision requiring that age-50 catch-up contributions be made on a Roth basis for individuals making more than \$145,000 from that employer in the prior year. The implementation of this provision has been delayed from 2024 to 2026.

Beginning in 2003, participants were able to make additional deferrals into a defined contribution (DC) plan beginning with the year they reach age 50. Historically, participants were able to designate these catch-up contributions as either pre-tax or Roth, if the plan offered Roth deferrals.

SECURE 2.0 added a tax revenue-generating provision to the existing catch-up contribution requirements, effective in 2024. Essentially, any catch-up contributions made on behalf of individuals making more than \$145,000 from the plan sponsor for FICA purposes must be designated as Roth. This provision was the cause of significant confusion and consternation for plan sponsors, payroll providers, and recordkeepers due to the complexity and uncertainty on implementation. For example:

- Payroll systems were not programmed to track the \$145,000 limit
- Reporting with FICA wage information would not be available at the beginning of the year to ensure the mandatory Roth catch-ups are applied correctly
- Not all DC plans offer Roth (and according to SECURE 2.0, any plan with catch-up contributions would have to add Roth for all participants)
- It was unclear how to override existing elections the participants had made designating pre-tax catch-up contributions

The IRS issued guidance on August 25 providing that plans would not be required to mandate these Roth catch-up contributions based on income levels until 2026, and that any plans offering catch-up contributions would have until 2026 to add Roth deferrals.

Incidentally, a drafting error in SECURE 2.0 had accidentally removed a provision that authorized any age-50 catch-up contributions. This guidance also clarified that the inadvertent deletion in SECURE 2.0 would not impact the ability to make catch-up contributions.

This guidance applies to 401(k), 403(b), and governmental 457(b) plans.

The IRS notes that future guidance will cover implementation concerns and forecasts the potential guidance to be issued will address how to override the participants' elections and how to calculate the wages from different participating employers.

This guidance is welcome relief to plan sponsors who offer catch-up contributions. The IRS has acted in a timely and accommodating manner to allow all parties time to consider how to implement and administer this provision. Plan sponsors should incorporate timing and resources to implement this provision, and other provisions from SECURE 2.0, into their planning over the next two years. This may include plan amendments, updates to required reporting, payroll programming, recordkeeping systems, and employee communications.

The DOL and the Duty to Diversify

Recent litigation involving multiple plaintiffs including the U.S. Department of Labor (DOL) has resulted in a \$124 million

Third Quarter 2023 DC Trends

settlement and two key lessons: investment diversity matters in defined contribution (DC) plans and the current DOL is willing to take aggressive action.

On October 8, 2019, the DOL filed a lawsuit involving the fiduciaries of the DST Systems Inc. 401(k) Profit Sharing Plan and its investment adviser. While Callan does not typically comment on specific litigation, this is an unusual and noteworthy case due to the plaintiff—the DOL—and the cause of action: failure to diversify.

The DST 401(k) Plan included both a deferral and matching feature, where the investments were participant-directed, and a profit sharing component where the investments were directed by the trustee. The investment decisions for the profit sharing portion were outsourced to a third-party investment adviser who acted as a plan fiduciary.

The complaint alleged that the plan fiduciaries violated the Employee Retirement Income Security Act (ERISA) by failing to monitor the investment adviser and that the plan fiduciaries and the investment adviser failed to act prudently and loyally by diversifying plan investments. The complaint was based in part on an undiversified position in Valeant Pharmaceuticals stock, which grew to more than 45% of the plan's assets. Valeant's stock fell dramatically in 2015, following a fraud scandal.

In a motion to dismiss, the defendants claimed that the suit was time barred, as DST had hired the investment adviser in the 1970s and, therefore, the lawsuit was not filed in a timely manner. The DOL countered, and the Court agreed, that the fiduciaries had a continuing duty to monitor investments and providers on an ongoing basis, citing the Supreme Court decision in *Tibble v. Edison*, as well as to diversify plan investments. The duty of prudence described in ERISA includes a clear obligation to diversify—"a fiduciary shall discharge his duties ... by diversifying the investments of the plan so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so" (29 U.S. Code § 1104(a)). This duty is separate from the requirement under ERISA § 404(c) that the plan offer broadly diversified options in plans where the participants may direct their own investments; it does not appear that § 404(c) would have applied to the profit sharing component of the DST 401(k) Plan.

The defendants also claimed that the DOL was time-barred due to the information provided on the annual Form 5500 filings and because of those, the DOL should have known that the plan was not properly diversified. Here the motion to dismiss relied on the Supreme Court decision in *Intel v. Sulyma*, that held if "a plaintiff is not aware of a fact," the plaintiff "does not have 'actual knowledge' of that fact even if the plaintiff "received numerous disclosures" about the plans at issue.

After the motion to dismiss was denied, and following multiple rounds of arbitration, the parties settled. The agreement includes a \$124,625,000 payment, which the proposed settlement notes may include up to \$9.5 million for the Class Counsel and \$15.5 million in fees for the Arbitration Counsel.

The DOL solicitor noted in a statement following the settlement that "we will aggressively pursue appropriate legal action to ensure those rights and benefits... Fiduciaries to retirement plans must comply with the Employee Retirement Income Security Act's safeguards—including diversification—to protect workers' retirement benefits and fulfill their own fiduciary responsibilities."

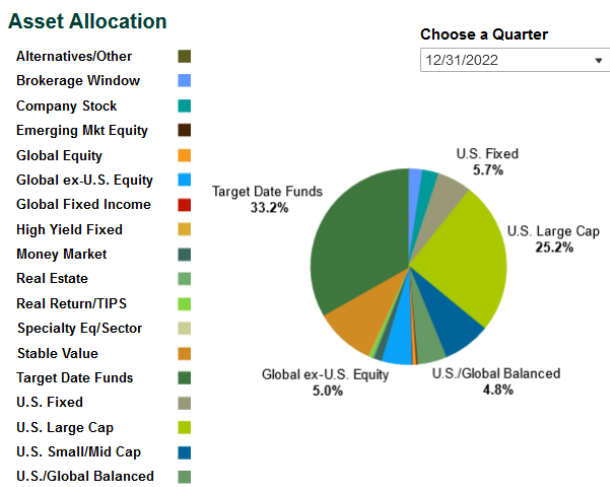
DC plan fiduciaries should understand the impact of specific investments, their risk and return characteristics, on the entire portfolio. Fiduciaries should ensure that those involved in decision-making are well versed on the diversification principles found in ERISA § 404(a), which apply to all DC plans, and § 404(c), which applies to plans where participants can direct their investments. It is notable that Courts are split on whether the duty to diversify should be applied solely at the plan level (Fifth Circuit) or to each individual investment option (Fourth Circuit).

Structure Utilization

Asset Allocation

Capital Preservation and U.S. Fixed Income Decline

Global ex-U.S. equity (5.0%) and U.S. large cap (25.2%) were among the asset classes with the largest percentage increases in allocation. The increased allocations to global ex-U.S. equity (0.35 percentage points from the previous quarter) and U.S. large cap (0.18 percentage points from the previous quarter) came despite investor outflows, signaling the asset classes were relative outperformers. Within capital preservation, stable value (10.0%) had a decrease in allocation from the previous quarter's level (10.5%), coinciding with investor outflows.

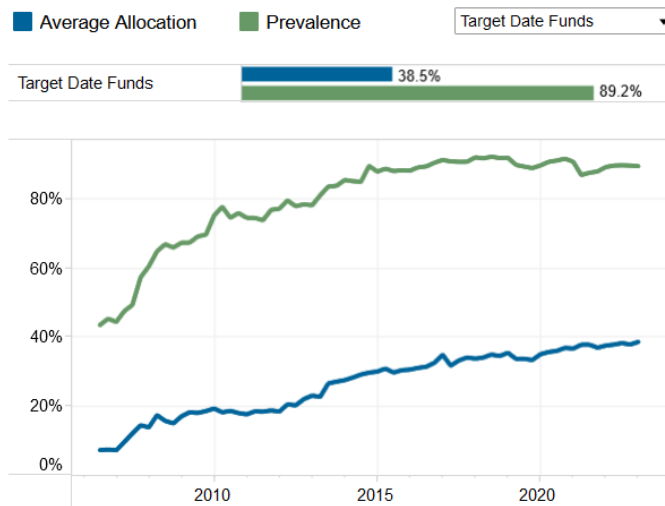


Prevalence

Balanced Funds Dip—Again—to Lowest Recorded Level

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 particular asset classes when offered as an option. The prevalence of a balanced fund (40.8%) decreased again to its lowest level since the inception of the Index in 2006. This should not come as much of a surprise given that balanced funds and target date funds may have overlapping roles as diversified asset allocation options for participants who prefer to delegate the asset allocation decision to a professional manager.

Other notable movements included a 1.1 percentage point increase in the prevalence of a real estate offering (23.1%) as well as a 1.2 percentage point decrease in the prevalence of company stock (18.5%).



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 Index Measures the performance of the large-cap growth segment of the US equity universe. It includes those Russell 1000 companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell 1000 Growth Index is constructed to provide a comprehensive and unbiased barometer for the large-cap growth segment. The index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect growth characteristics.

Russell 1000 Value Index Measures the performance of the large-cap value segment of the US equity universe. It includes those Russell 1000 companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years). The Russell 1000 Value Index is constructed to provide a comprehensive and unbiased barometer for the large-cap value segment. The index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect value characteristics.

Russell 2000 Value Index Measures the performance of the small-cap value segment of the US equity universe. It includes those Russell 2000 companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years). The Russell 2000 Value Index is constructed to provide a comprehensive and unbiased barometer for the small-cap value segment. The index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect value characteristics.

Russell 2500 Growth Index Measures the performance of the small to mid-cap growth segment of the US equity universe. It includes those Russell 2500 companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell 2500 Growth Index is constructed to provide a comprehensive and unbiased barometer of the small to mid-cap growth market. The index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small to mid-cap opportunity set and that the represented companies continue to reflect growth characteristics.

Russell MidCap Growth Idx Measures the performance of the mid-cap growth segment of the US equity universe. It includes those Russell Midcap Index companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell Midcap Growth Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap growth market. The index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap growth market.

S&P 500 Index Measures performance of top 500 companies in leading industries of U.S. economy. The index covers approximately 80% of available market capitalization.

Fixed Income Market Indicators

3-month Treasury Bill Provides 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 Aggregate Represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

International Equity Market Indicators

MSCI EAFE (Net) 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.