





PERIOD ENDING: September 30, 2024

**Investment Performance Summary for** 

**North Dakota State Investment Board** 

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# 3<sup>rd</sup> quarter summary

#### THE ECONOMY

- On September 18th, the Federal Reserve cut interest rates by 50 basis points, bringing the target rate from 5.25-5.50% to 4.75-5.00%. This larger cut surprised many investors who still see inflation risks on the horizon and the economy as generally strong. This move likely kicks off a multi-year period of cuts as the Fed brings interest rates towards what they see as a more neutral level.
- U.S. inflation (CPI) fell to 2.4% year-over-year in September, moving closer to the Fed's 2% target. However, risks remain that inflation moderates above the Fed target, as shelter inflation is still elevated and food prices accelerated in September. Core inflation (ex-Food & Energy) has not budged from Q2 levels—at 3.3% year-over-year.

#### **EQUITY**

- Global markets delivered strong performance, with consistent results across regions. Emerging markets (MSCI EM +8.7%) led, followed by international developed (MSCI EAFE +7.3%) and lastly the U.S. market (S&P 500 +5.9%).
   U.S. dollar weakness provided particular benefits to investors in international developed equities.
- Small cap and value style investing reversed their run of underperformance during the second quarter. Small cap led large cap by +3.2% (-8.9% over the past year), while value also outperformed by +6.2% (-14.4% over the past year). Despite this improvement, the market environment has been incredibly difficult for these style factors.

#### **FIXED INCOME**

- The 10-year U.S. Treasury yield fell from 4.36% to 3.79% during the quarter, alongside a series of economic data releases that suggested inflation is moving further towards the Fed's 2% target, and that the labor market is softening. Interestingly, yields moved slightly higher in late September after the Fed's aggressive 50 bps rate cut.
- Default activity remained low, given economic strength.
   High yield bond default rates continued to decline, falling to 1.4%, well below the long-term annual average of 3.4%.
   However, distressed exchange activity was high. Total distressed exchange volume was roughly \$13.5 billion, the second largest quarter on record (since Q4 2008).

#### **ASSET ALLOCATION ISSUES**

- China announced an aggressive stimulus program in the form of both fiscal and monetary support. Those moves followed a People's Bank of China rate cut from 2.3% to 2.0%. Chinese equities rallied more than 30% in late September. It is not yet clear whether these efforts will help solve any of China's deep and structural issues.
- On August 5th, volatility spiked 42 points to 66, marking the largest one day jump in volatility in modern market history. This was widely attributed to the unwinding of carry trade positions (one popular carry trade involved borrowing in Yen to invest in equities) following a weak labor market data release and an unexpected interest rate hike from the Bank of Japan.

In September, the Fed enacted the first of likely a series of interest rate cuts.

A soft landing appears very possible for the U.S. economy.



## U.S. economics summary

- On September 18<sup>th</sup>, the Federal Reserve cut interest rates by 50 basis points, bringing the target rate from 5.25-5.50% to 4.75-5.00%. This larger cut surprised many investors who still see inflation risks on the horizon and see the economy as generally strong. This move likely kicks off a multi-year period of cuts as the Fed brings interest rates towards what they see as a more neutral level.
- U.S. inflation (CPI) fell to 2.4% year-over-year in September, moving closer to the Fed's 2% target. However, risks remain that inflation remains above the Fed target, as shelter inflation is still high and food prices accelerated in September. Core inflation (ex-Food & Energy) has not budged from Q2 levels—at 3.3% year-over-year.
- Since earlier in 2024, unemployment had been ticking higher, but in August and September this trend reversed, with unemployment ending the quarter at 4.1%. The September nonfarm employment report reflected a 254,000

- gain in jobs, dramatically outperforming expectations. The impacts of unlawful immigration on official employment statistics have continued to cause discrepancies in data and confusion regarding true labor conditions. We believe analyzing jobs data requires careful analysis.
- Multiple labor strikes have been occurring around the country, including Boeing and the International Longshoremen's Association (ILA). As organized labor fights for higher wages and benefits, disruptions to production and trade could contribute to inflation flareups.
- Consumer sentiment improved slightly during the third quarter, as illustrated by the University of Michigan Consumer Sentiment survey. Households expressed further frustration about high prices, but optimism has grown around the economy and the inflation outlook. According to the survey, expectations have brightened for Americans across the economic and political spectrum.

	Most Recent	12 Months Prior
Real GDP (YoY)	2.7% 9/30/24	2.4% 6/30/23
Inflation	3.3%	3.7%
(CPI YoY, Core)	9/30/24	9/30/23
Expected Inflation (5yr-5yr forward)	2.3% 9/30/24	2.5% 9/30/23
Fed Funds Target	4.75–5.00%	5.25–5.50%
Range	9/30/24	9/30/23
10-Year Rate	3.79% 9/30/24	4.59% 9/30/23
U-3	<b>4.1%</b>	3.8%
Unemployment	9/30/24	9/30/23
U-6	7.7%	7.0%
Unemployment	9/30/24	9/30/23



## International economics summary

- The Eurozone faces slowing growth, with recession potentially imminent for Germany. A global shift in consumer purchase patterns towards services and away from goods has likely had a major impact on manufacturing-heavy economies. These effects are biting especially hard in export-heavy economies such as Germany and Japan. China's struggling economy is having widespread impacts on global growth, as well as energy and other commodity prices.
- Falling inflation and moderating economic growth creates conditions central banks may see as conducive to interest rate cuts. The European Central Bank and Federal Reserve kicked off a rate cutting cycle during the quarter. The Bank of Japan stands out from the crowd, deciding earlier this year to raise rates modestly. The bank sees Japan's economy growing faster than potential and wishes to normalize rates carefully.
- One year has passed since the Hamas attack on Israel, and the beginning of

- the Israel-Hamas war. The conflict has now broadened out as Israel engages with the Iranian-backed militia Hezbollah, which is designated a terrorist group by much of the western world. Over the past month, Israel and Iran have clashed directly, substantially increasing risks of widespread war in the Middle East.
- China announced an aggressive economic stimulus program in the form of fiscal and monetary support. Those moves followed a People's Bank of China rate cut from 2.3% to 2.0%.
   Chinese equities rallied more than 30% in the last few weeks of September. It is not yet clear whether these developments will be sufficient to help turnaround the Chinese economy, which faces serious structural issues.
- India continues to be the fastestgrowing major economy in the world, posting strong real GDP growth (+6.7%) on the back of a rapidly growing manufacturing sector and large investments in public infrastructure.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United	2.7%	<b>2.4</b> % 9/30/24	4.1%
States	9/30/24		9/30/24
Eurozone	0.6%	1.7%	6.4%
	6/30/24	9/30/24	8/31/24
Japan	(1.0%)	2.2%	2.5%
	6/30/24	9/30/24	8/31/24
BRICS	<b>4.8</b> % 6/30/24	2.0%	5.3%
Nations		9/30/24	12/31/23
Brazil	3.3% 6/30/24	<b>4.4%</b> 9/30/24	6.6% 8/31/24
Russia	4.1%	8.6%	2.4%
	6/30/24	9/30/24	8/31/24
India	6.7%	5.5%	7.8%
	6/30/24	9/30/24	9/30/24
China	4.6%	0.4%	5.1%
	9/30/24	9/30/24	9/30/24

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.



## Equity environment

- Global markets delivered strong performance during the quarter, with fairly consistent results across broad regions. Emerging markets (MSCI EM +8.7%) led, followed by international developed equities (MSCI EAFE +7.3%), and lastly the domestic market (S&P 500 +5.9%). Dollar weakness provided particular benefits to investors in international developed equities.
- Market expectations for Federal Reserve rate cuts became aggressive, after the Fed cut by 50 basis points on September 18<sup>th</sup>. This likely contributed to dollar weakness, since expectations for lower rates make U.S. dollar holdings less attractive.
- S&P 500 blended year-over-year earnings growth was +3.4%, as of October 18th. Once again, technology companies led the way on earnings, providing growth of +15.2%, while Healthcare ranked second at +10.9%. Materials (-2.7%) and Energy (-20.9%) both

- acted as a drag on overall index earnings.
- Small cap and value reversed their run of underperformance. Small cap led large cap by +3.2% (Russell 2000 +9.3% vs. Russell 1000 +6.1%) in Q3, while value outperformed growth by +6.2% (Russell 1000 Value +9.4% vs. Russell 1000 Growth +3.2%). Despite size and style factors performing well during Q3, both have done poorly over the past full year, with small cap and value underperforming by -8.9% and -14.4%, respectively.
- On August 5th, volatility spiked 42 points to 66, marking the largest one day jump in volatility in modern market history. This was widely attributed to significant investor unwinding of carry trade positions (borrowing in Yen to purchase U.S. equities) following a weak labor market data release and an unexpected interest rate hike from the Bank of Japan.

	QTD TO	TAL RETURN	1 YEAR TOTA	AL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	
U.S. Large Cap (S&P 500)		5.9%	36.4	1%	
U.S. Small Cap (Russell 2000)		9.3%	26.8	3%	
U.S. Equity (Russell 3000)		6.2%	35.2%		
U.S. Large Value (Russell 1000 Value)		9.4%	27.8%		
US Large Growth (Russell 1000 Growth)		3.2%	42.2%		
Global Equity (MSCI ACWI)	6.6%	5.1%	31.8%	30.8%	
International Large (MSCI EAFE)	7.3%	1.5%	24.8%	20.9%	
Eurozone (EURO STOXX 50)	6.6%	2.9%	29.4%	25.1%	
U.K. (FTSE 100)	8.0%	1.9%	23.5%	12.9%	
Japan (TOPIX)	(4.9%)	(4.0%)	21.7%	22.2%	
Emerging Markets (MSCI Emerging Markets)	8.7%	6.7%	26.1%	25.2%	

Source: Standard & Poor's, FTSE, MSCI, STOXX, JPX, as of 9/30/24



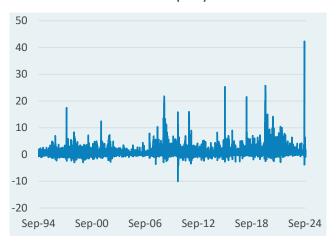
## Market volatility

Market-priced volatility (Cboe VIX Index) rose during Q3, starting the quarter at 12.4% and ending at 16.7%—closer to the longer-term average of 19.5%. On August 5<sup>th</sup>, volatility spiked 42 points to 66, making the largest one day jump in volatility in modern market history. The previous record was set during market turmoil among COVID-19 lockdowns. This market shock in August was widely attributed to unwinding of carry trade positions (borrowing in Yen to purchase U.S. equities) following a weak labor market data release, as well as an unexpected interest rate hike from the Bank of Japan. Volatility has since subsided, and markets have recovered much of their losses. With valuations at elevated levels, it would not be surprising to see further market shakiness.

Bond market volatility remains significantly above the longerterm average, but has trended downward as inflation risk has eased, and economic conditions have outperformed expectations. The Federal Reserve path to lower interest rates, and bumps that will inevitably occur along that path, could result in elevated fixed income volatility.

Recent realized one-year volatility has drifted to very low levels, despite uncertainty around inflation and interest rates, geopolitical risk flareups, and the upcoming election. Domestic and foreign markets showed similar volatility levels during that time.

#### U.S. IMPLIED VOLATILITY (VIX)



#### **REALIZED VOLATILITY**



#### U.S. TREASURY IMPLIED VOL ("MOVE" INDEX)





## Domestic equity

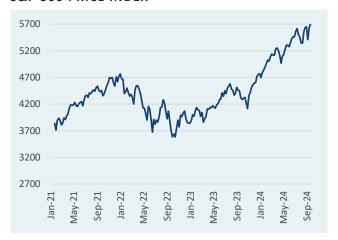
U.S. equities underperformed both international and emerging market shares—the S&P 500 ended Q3 up +5.9%. Market momentum was fueled by strengthening earnings expectations and a solid macro environment. Easing inflation and a normalizing labor market allowed for the Fed to kick off its rate cutting cycle on September 18<sup>th</sup> with a 50 bps cut. Many other central banks have also pivoted towards lower interest rates.

S&P 500 blended year-over-year earnings growth was +3.4%, as of October 18<sup>th</sup>. If earnings growth remains positive, it will mark a fifth straight quarter of positive earnings growth for large cap domestic equities. Once again, the Technology sector has led the way in earnings,

providing gains of +15.6%, year-over-year. The Communication Services sector was close behind at a +10.6% pace. Industrials (-8.4%) and Energy (-26.0%) both acted as a drag on the index.

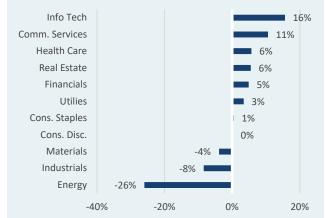
Robust price gains have continued to push valuations higher for the S&P 500, further generating concerns that U.S. equities are *priced for perfection*. Despite this, a resilient economy, interest rate cuts, and decreasing inflation risks arguably provide some fundamental justification for richer prices. Investors will be looking for these conditions to persist, specifically the trajectory of earnings and a path to profitability for recent substantial investments into artificial intelligence capabilities.

#### **S&P 500 PRICE INDEX**



Source: Standard & Poor's, as of 9/30/24

#### S&P 500 BLENDED EPS GROWTH (YOY)



Source: Factset, as of 9/30/24

#### S&P 500 EPS GROWTH (YEAR-OVER-YEAR)



Source: Factset, Verus, as of 10/18/24



## Domestic equity size & style

Small cap and value reversed their run of underperformance. Small cap led large cap by +3.2% (Russell 2000 +9.3% vs. Russell 1000 +6.1%) in Q3, while value outperformed growth by +6.2% (Russell 1000 Value +9.4% vs. Russell 1000 Growth +3.2%). Despite size and style factors performing well during the quarter, both have done poorly over the past year, with small cap and value underperforming by -8.9% and -14.4%, respectively.

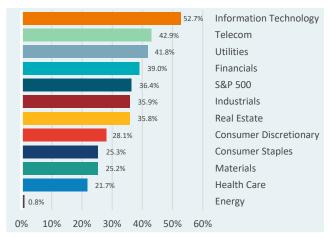
Sector performance differences continue to fuel significant volatility across size and style factors. The Information

Technology sector, which has a much greater concentration to Growth stocks, has delivered outsize performance. Mega cap technology companies have led other S&P 500 constituents during the past year. On the other hand, the Energy sector which has a much greater concentration of Value stocks, has lagged the overall index considerably over the same time period. For investors who engage in tactical factor timing, the current environment has likely proved particularly difficult to do so profitably.

#### VALUE VS. GROWTH 1-YR ROLLING



#### S&P 500 SECTOR RETURNS (PAST 1 YEAR)



#### 1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	27.8%	35.7%	42.2%
Mid Cap	29.0%	29.3%	29.3%
Small Cap	25.9%	26.8%	27.7%



## International developed equity

International developed shares (MSCI EAFE +7.3%) outperformed the U.S. market (S&P 500 +5.9%) during the quarter, but trailed emerging market equities (MSCI EM +8.7%). It should be noted that most of this performance was due to currency movements, rather than equity market performance. Unhedged currency exposure contributed +5.8% of the +7.3% index total return.

On a hedged basis, the international developed equity market underperformed the rest of the world (MSCI EAFE Hedged +1.5%). Many developed economies face more sluggish growth, with Europe's largest economy, Germany, now expected to contract -0.2% this year. High energy prices and increased competition with China have weighed on

European manufacturing. The European Union announced duties on these foreign exports with the goal of protecting their manufacturing sector. The European Central Bank has also implemented an accelerated rate cutting cycle in comparison to the U.S., where inflation is under the 2% target, and rate cuts may be necessary to stimulate growth.

Japanese equities saw significant volatility in Q3, as an unexpected rate hike followed by weak U.S. economic data triggered what appeared to be the unwinding of a carry trade, triggering a sharp sell-off. Japanese equities recovered most of these losses, but the MSCI Japan (hedged) ended the quarter down -4.0%.

#### INTERNATIONAL DEVELOPED EQUITY



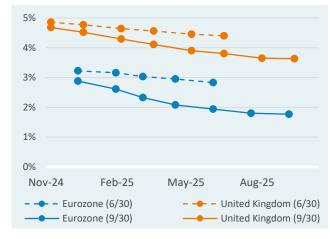
Source: MSCI, as of 9/30/24

#### **MSCI EAFE PERFORMANCE**



Source: MSCI, as of 9/30/24

#### ECB & BOE RATE EXPECTATIONS VS Q2



Source: Bloomberg, as of 9/30/24



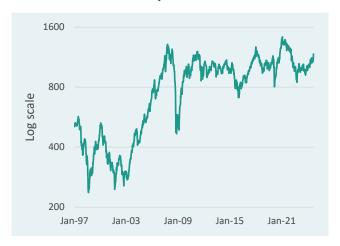
# Emerging market equity

Emerging market equities (MSCI EM +8.7%) outperformed both international developed (MSCI EAFE +7.3%) and domestic equities (S&P 500 +5.9%) over the quarter. After dragging the index lower for multiple years, Chinese equities delivered an aggressive rally in September on government stimulus news, though in early October this reversed and much of those gains were lost.

China announced an aggressive economic stimulus program in September, with President Xi pledging both fiscal and

monetary support. Spending was specifically aimed at the ailing real estate market, and at mitigating the downward trajectory of the stock market. Those moves followed the People's Bank of China rate cut from 2.3% to 2.0%. It is not yet clear whether these developments will be sufficient to help turn around the Chinese economy, which faces serious structural issues such as a declining population, shrinking workforce, and a real estate crisis due to substantial excess inventory.

#### **EMERGING MARKET EQUITY**



#### MSCI EM 2024 SECTOR RETURNS YTD (USD)



#### CHINA UNDERPERFORMANCE PARTLY REVERSED





## Fixed income environment

- On September 18<sup>th</sup>, the Federal Reserve cut interest rates by 50 bps, bringing the target rate from 5.25-5.50% to 4.75-5.00%. This larger cut surprised many investors who still see inflation risks and a generally strong economy. This move likely kicks off a multi-year period of cuts as the Fed brings interest rates towards what they believe to be a more neutral level. Investors have now focused sharply on what the neutral interest rate level, or "R-star", might be today.
- The 10-year U.S. Treasury yield fell from 4.36% to 3.79% during the quarter, alongside a series of economic data releases that suggested inflation is moving further towards the Fed's 2% target, and that the labor market is softening. Interestingly, yields moved slightly higher in late September after the Fed rate cut.
- Most credit indices saw positive returns, rising with the rest of the fixed income universe. However, greater credit risk only provided marginally higher returns, with high

- yield outperforming investment grade by +0.1%. Bank Loans (S&P/LSTA Leveraged Loan) underperformed other major fixed income indices, as the floating rate nature (and ultra-low duration) of bank loans meant these bonds did not benefit from the decline in yields.
- The U.S. yield curve uninverted during the quarter, indicated by the 10-year minus the 2-year Treasury yield, as shorter-term interest rates dropped along with more aggressive Federal Reserve rate cut expectations. This ended more that two years of yield curve inversion.
- Default activity remained low in Q3 as the economy remained strong. High yield bond default rates continued to decline, falling to 1.4%, down from 2.2% a year ago and well below the long-term annual average of 3.4%. However, distressed exchange activity was high. Total distressed credit volume was roughly \$13.5 billion, the second largest quarterly total on record (since Q4 2008).

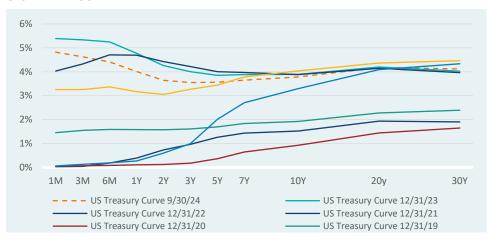
	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	5.2%	11.6%
Core Plus Fixed Income (Bloomberg U.S. Universal)	5.2%	12.1%
U.S. Treasuries (Bloomberg U.S. Treasury)	4.7%	9.7%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	8.0%	15.2%
U.S. High Yield (Bloomberg U.S. Corporate HY)	5.3%	15.7%
Bank Loans (S&P/LSTA Leveraged Loan)	2.1%	9.6%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	9.0%	13.4%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	6.2%	18.6%
Mortgage-Backed Securities (Bloomberg MBS)	5.5%	12.3%

Source: Standard & Poor's, J.P. Morgan, Bloomberg, as of 9/30/24



## Yield environment

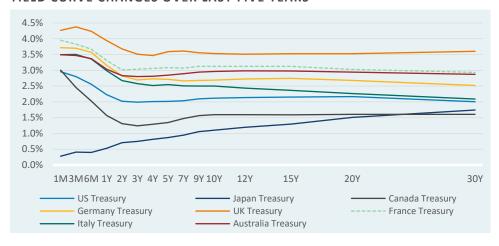
#### U.S. YIELD CURVE



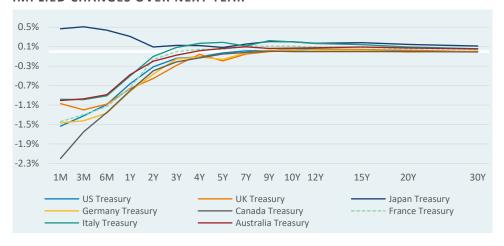
#### **GLOBAL GOVERNMENT YIELD CURVES**



#### YIELD CURVE CHANGES OVER LAST FIVE YEARS



#### IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/24



## Credit environment

During the third quarter, longer duration credit outperformed shorter duration as U.S. interest rates headed downward. Long duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) gained 8.1% while lower quality credit markets also delivered strong returns—high yield and bank loans added +5.3% (Bloomberg U.S. Corporate High Yield) and +2.1% (CS Leveraged Loans), respectively.

Returns within the high yield bond market were broadly positive. Lower quality credits saw the strongest performance. Bonds rated CCC, which include distressed credit, returned +11.6%, compared to higher quality BB-rated bonds which returned +4.3%. Non-distressed CCC-rated bonds also delivered robust returns, gaining +6.9%. Similarly, lower quality

bank loans outperformed higher quality, with CCC-rated loans returning +2.6%, compared to +2.0% and +1.9% for B- and BB-rated loans.

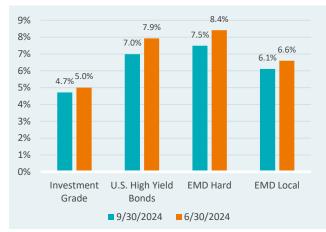
Credit spreads broadly declined alongside an easing of perceived U.S. recession risk. Lower-quality high yield bond spreads fell by roughly 0.2%, to 3.0%, while investment grade spreads tightened slightly to 0.9%. Broadly, across credit ratings, spreads remain well below their long-term historical averages. While some technical factors may be contributing to relative tightness, spreads suggest that investors are fairly confident in the ability of businesses to service debt in the future.

#### **SPREADS**



Source: Barclays, Bloomberg, as of 9/30/24

#### YIELD TO MATURITY



Source: Bloomberg, J.P. Morgan as of 9/30/24

#### CREDIT SPREAD (OAS)

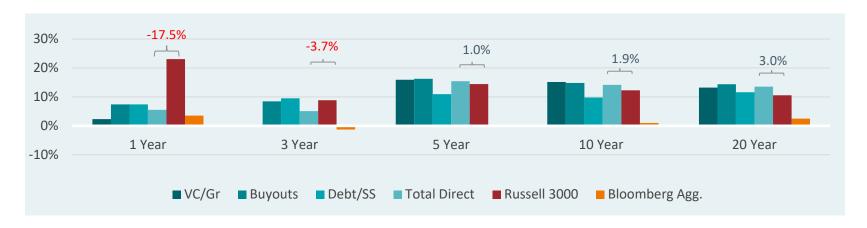
Market	9/30/24	9/30/23
Long U.S. Corp	1.1%	1.3%
U.S. Inv Grade Corp	0.9%	1.2%
U.S. High Yield	3.0%	3.9%
U.S. Bank Loans*	4.7%	5.2%

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/24

\*Discount margin (4-year life)



# Private equity vs. traditional assets performance



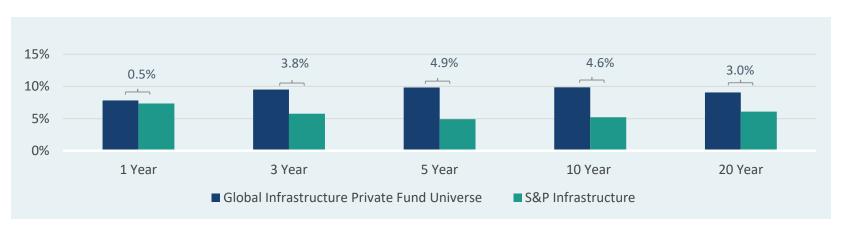


Sources: FTSE PME: U.S. Direct Private Equity returns are as of June 30, 2024, whereas "Passive" strategies as of March 31, 2024. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.



## Private vs. liquid real assets performance





Sources: FTSE PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of June 30, 2024. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

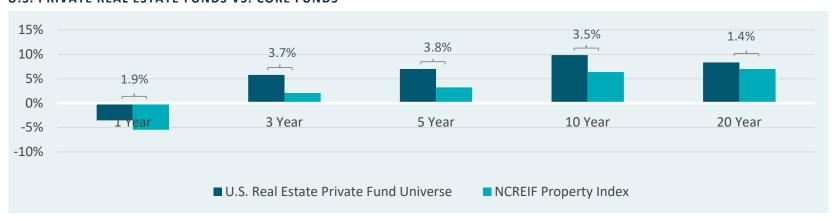


# Private vs. liquid and core real estate performance

#### U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



#### U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS





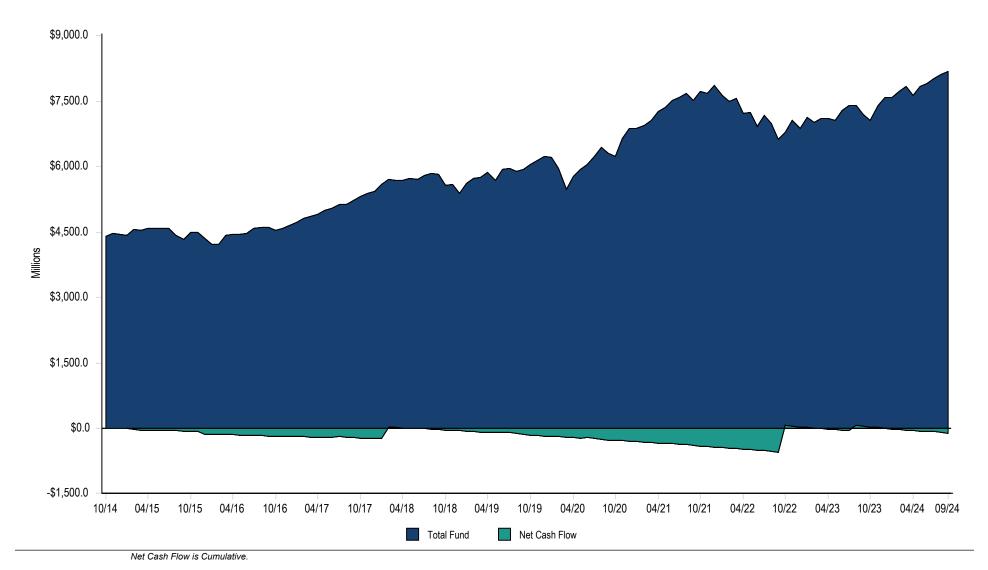
## **Consolidated Pension Plan**

**Investment Performance Review Period Ending: September 30, 2024** 



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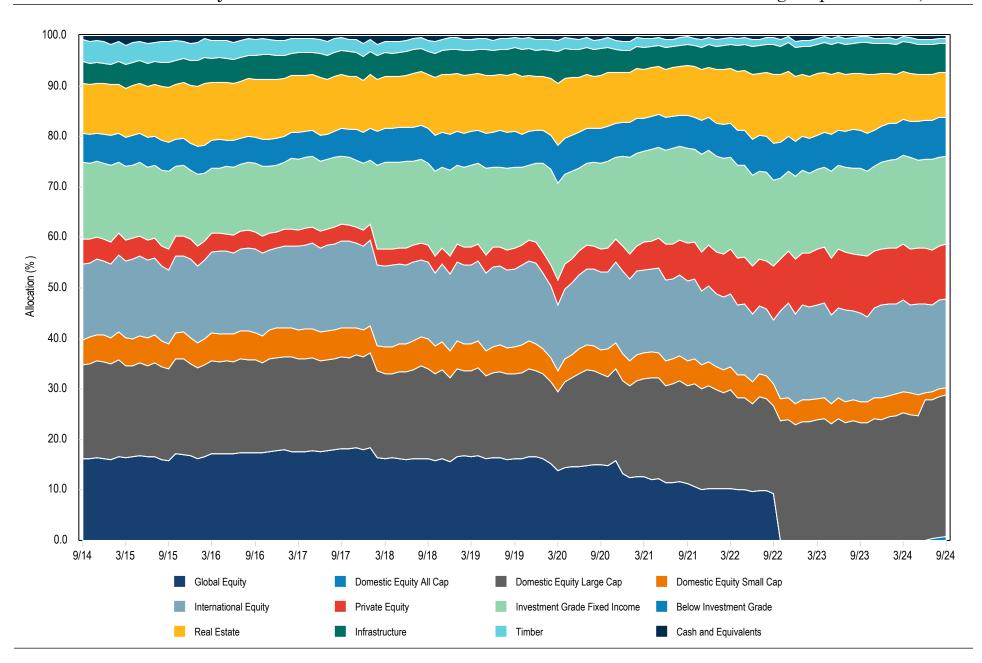


U.δ%	U.8%
27.5%	28.0%
1.5%	1.5%
17.4%	47.70/
	17.7%
40.00/	
10.8%	10.7%
18.1%	17.5%
7.9%	7.7%
9.09/	8.8%
8.9%	0.076
5.9%	5.8%
Ų. <u>Ž</u> %	V-9 %
Policy	Actual

	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Differences (\$)
Domestic Equity All Cap	67,977,792	0.8	0.8	45,421
Domestic Equity Large Cap	2,287,831,642	28.0	27.5	35,587,084
Domestic Equity Small Cap	118,919,449	1.5	1.5	-3,124
International Equity	1,445,179,617	17.7	17.4	18,026,905
Private Equity	878,456,793	10.7	10.8	-1,881,257
Investment Grade Fixed Income	1,432,484,798	17.5	18.1	-47,949,811
Below Investment Grade	634,199,308	7.7	7.9	-9,193,906
Real Estate	718,278,709	8.8	8.9	-10,152,739
Infrastructure	475,676,255	5.8	5.9	-5,415,885
Timber	69,361,272	0.8	0.9	-617,255
Cash and Equivalents	56,257,367	0.7	0.4	21,554,565
Total	8,184,623,000	100.0	100.0	

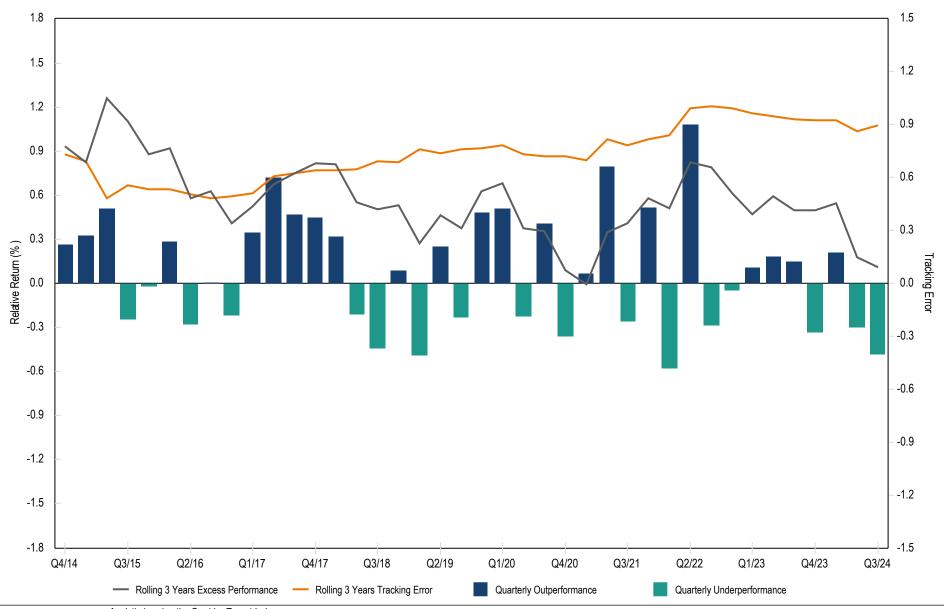
Residual Holdings value \$4,494,763 & Transition Account value of \$264,915 included in Large Cap Domestic Equity value for styling purposes. Policy Asset Allocation based upon 8/31/2024 data.





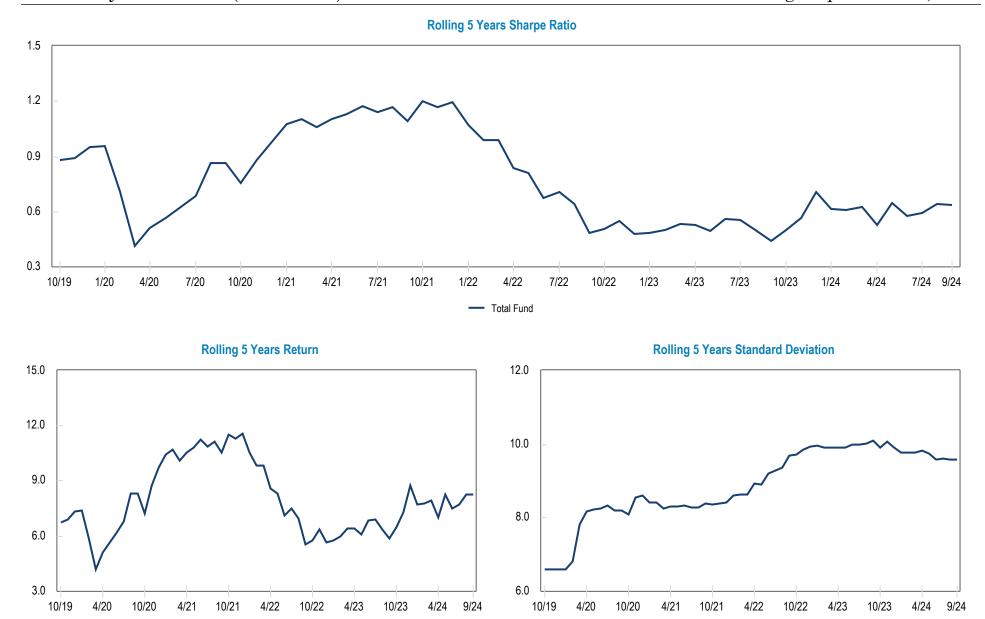


**Rolling Annualized Excess Performance and Tracking Error** 



Verus<sup>77</sup>

Total Fund





Total Fund





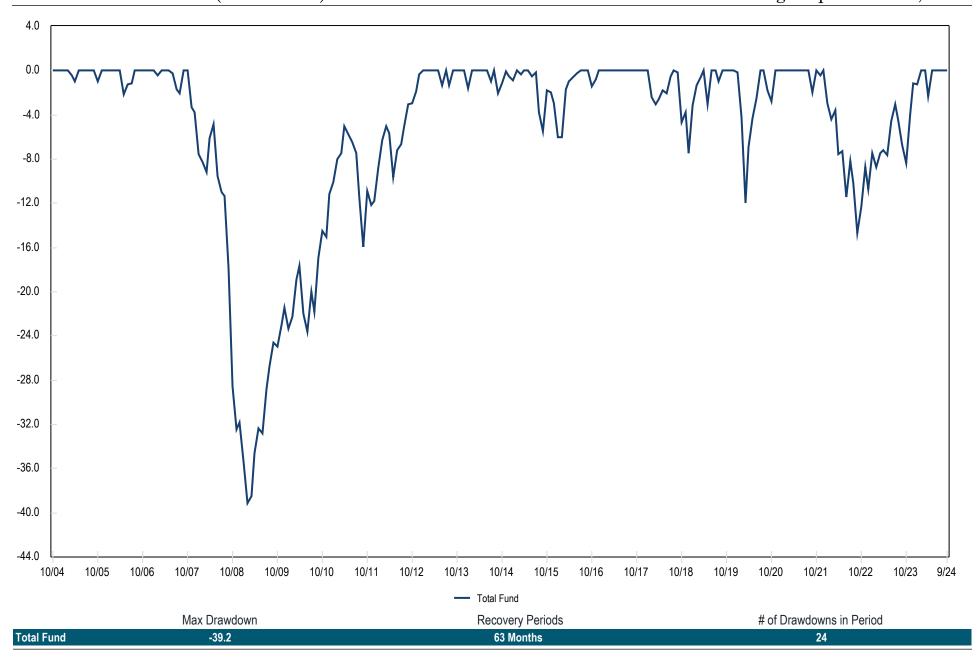


NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

**Rolling 3 Years Return** 18.0 15.0 12.0 9.0 6.0 3.0 0.0 6/15 12/15 6/16 12/16 6/17 12/17 6/18 12/18 6/19 12/19 6/20 12/20 6/21 12/21 6/22 12/22 6/23 12/23 9/24 12/14 Total Fund Corridor Target Index Policy Index Sep-2015 Sep-2016 Sep-2017 Sep-2018 Sep-2019 Sep-2020 Sep-2021 Sep-2022 Sep-2023 Sep-2024 6.1 10.1 8.0 10.7 5.9 4.3 Return 7.5 7.2 6.4 5.5 5.5 9.6 10.8 9.2 8.8 Standard Deviation 6.1 5.7 5.2 6.6 10.3 Sep-2015 Sep-2016 Sep-2017 Sep-2018 Sep-2019 Sep-2020 Sep-2021 Sep-2022 Sep-2023 Sep-2024 vs. Policy Index 0.9 -0.2 0.5 0.3 0.0 Alpha 1.0 0.7 0.5 -0.1 -0.1 1.0 0.9 1.0 1.0 1.0 1.1 1.0 1.0 1.0 0.9 Beta 66.7 63.9 47.2 47.2 Consistency 66.7 55.6 41.7 52.8 50.0 44.4 Tracking Error 0.7 0.7 0.7 0.7 0.8 0.8 0.9 1.1 1.2 1.3 vs. Corridor Target Index Alpha 1.2 8.0 1.0 0.6 0.3 0.4 0.6 1.0 8.0 0.4 Beta 1.0 1.0 1.0 1.0 1.0 0.9 0.9 1.0 1.0 1.0 Consistency 66.7 61.1 58.3 58.3 55.6 61.1 61.1 66.7 58.3 50.0 0.7 0.7 0.7 0.7 0.6 0.7 0.9 1.1 1.1 1.0 Tracking Error



NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024





Total Fund Risk Statistics (Net of Fees)

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

	1	Yr	3	Yrs	5	Yrs	10 Yrs	
	Total Fund	Policy Index						
Return Summary Statistics								
Up Market Periods	9	9	21	21	38	38	82	82
Down Market Periods	3	3	15	15	22	22	38	38
Maximum Return	4.8	5.4	4.8	5.4	6.9	7.3	6.9	7.3
Minimum Return	-2.3	-2.2	-5.0	-5.4	-8.1	-7.9	-8.1	-7.9
Return	15.8	17.3	4.3	4.7	8.3	8.4	7.4	7.2
Cumulative Return	15.8	17.3	13.6	14.8	48.8	49.5	104.1	100.9
Active Return	-1.3	0.0	-0.4	0.0	-0.1	0.0	0.1	0.0
Risk Summary Statistics								
Beta	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0
Upside Risk	2.1	2.3	6.7	7.4	7.7	8.1	6.7	6.8
Downside Risk	2.8	3.1	5.8	6.4	6.2	6.4	5.2	5.3
isk/Return Summary Statistic	cs							
Standard Deviation	6.4	7.1	8.8	9.6	9.6	10.0	8.2	8.4
Alpha	0.4	0.0	0.0	0.0	0.3	0.0	0.4	0.0
Sharpe Ratio	1.5	1.5	0.1	0.2	0.6	0.6	0.7	0.7
Active Return/Risk	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tracking Error	1.1	0.0	1.3	0.0	1.2	0.0	1.0	0.0
Information Ratio	-1.2	-	-0.3	-	-0.1	-	0.1	-
orrelation Statistics								
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	33.3	100.0	44.4	100.0	48.3	100.0	50.8	100.0



Total Fund Risk Statistics (Net of Fees)

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

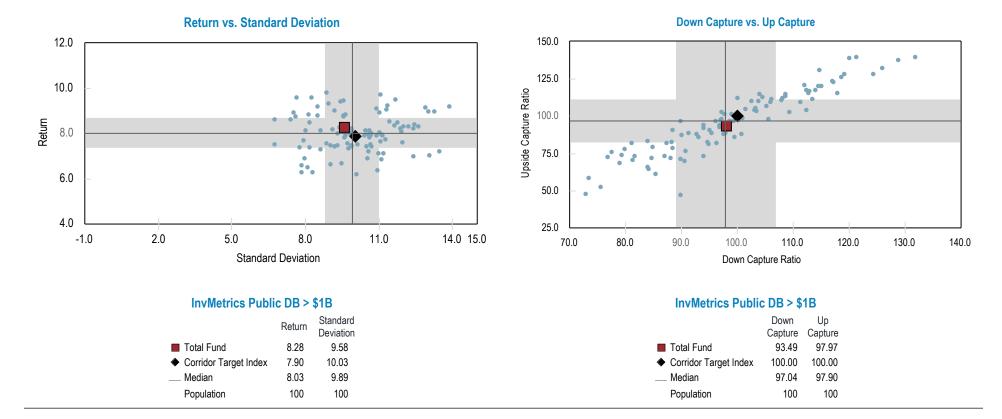
		1 Yr	3 Yrs			5 Yrs		10 Yrs	
	Total Fund	Corridor Target Index	Total Fund	Corridor Target Index	Total Fund	Corridor Target Index	Total Fund	<b>Corridor Target Index</b>	
Return Summary Statistics									
Up Market Periods	9	9	21	21	38	38	82	82	
Down Market Periods	3	3	15	15	22	22	38	38	
Maximum Return	4.8	5.1	4.8	5.1	6.9	7.6	6.9	7.6	
Minimum Return	-2.3	-2.2	-5.0	-5.2	-8.1	-8.4	-8.1	-8.4	
Return	15.8	16.8	4.3	4.2	8.3	7.9	7.4	7.0	
Cumulative Return	15.8	16.8	13.6	13.3	48.8	46.2	104.1	96.8	
Active Return	-0.9	0.0	0.1	0.0	0.3	0.0	0.3	0.0	
Risk Summary Statistics									
Beta	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0	
Upside Risk	2.1	2.2	6.7	7.1	7.7	8.0	6.7	6.8	
Downside Risk	2.8	3.0	5.8	6.3	6.2	6.5	5.2	5.5	
Risk/Return Summary Statis	stics								
Standard Deviation	6.4	6.8	8.8	9.4	9.6	10.0	8.2	8.5	
Alpha	0.0	0.0	0.4	0.0	0.7	0.0	0.6	0.0	
Sharpe Ratio	1.5	1.6	0.1	0.1	0.6	0.6	0.7	0.6	
Active Return/Risk	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Tracking Error	0.9	0.0	1.0	0.0	1.0	0.0	0.9	0.0	
Information Ratio	-1.1	-	0.0	-	0.3	-	0.4	-	
Correlation Statistics									
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Consistency	33.3	100.0	50.0	100.0	58.3	100.0	56.7	100.0	

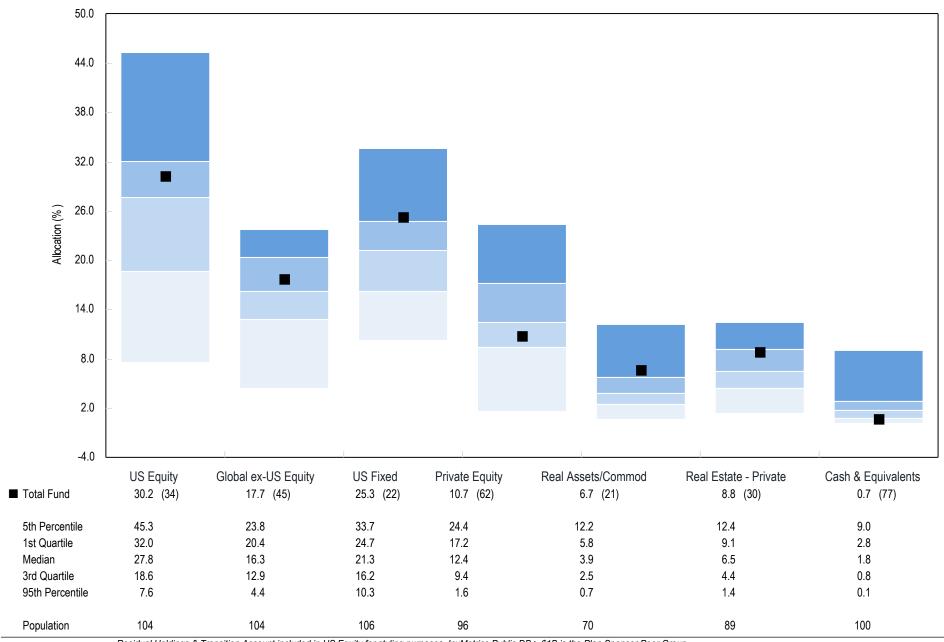


Total Fund vs. InvMetrics Public DB > \$1B 26.0 20.0 14.0 8.0 Return 2.0 -4.0 -10.0 -16.0 -22.0 3 Mo Fiscal YTD 3 Yrs 5 Yrs 10 Yrs 2023 2022 2021 2020 2019 4.1 (76) 4.1 (76) 4.3 (59) 8.3 (37) 7.4 (27) Total Fund 10.7 (61) -10.7 (58) 16.4 (38) 12.1 (41) 17.9 (27) ▲ Policy Index 4.6 (57) 4.6 (57) 4.7 (44) 8.4 (33) 7.2 (39) 11.3 (48) -10.4 (53) 16.1 (41) 17.5 (34) 12.0 (44) 17.9 (27) ◆ Corridor Target Index 4.6 (56) 4.6 (56) 7.9 (61) 7.0 (49) 10.5 (65) -10.9 (59) 11.6 (47) 4.2 (60) 15.2 (51) 5th Percentile 6.1 6.1 6.2 9.5 8.2 14.3 -4.1 20.7 15.5 21.2 1st Quartile 5.3 5.3 5.2 8.8 7.4 12.4 -8.0 17.2 13.1 18.0 Median 4.7 4.7 4.6 8.0 7.0 11.2 -10.3 15.3 11.3 16.8 4.1 3rd Quartile 4.1 4.0 7.5 6.5 9.6 -12.5 13.1 9.4 15.5 95th Percentile 3.7 3.7 2.9 6.6 7.8 -15.6 10.6 12.8 6.0 6.8 Population 104 104 101 100 96 177 177 207 217 193



	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	8.28	9.58	0.72	0.95	0.99	97.97	93.49	0.30	1.04	0.64
Corridor Target Index	7.90	10.03	0.00	1.00	1.00	100.00	100.00	-	0.00	0.58





Residual Holdings & Transition Account included in US Equity for styling purposes. InvMetrics Public DB > \$1B is the Plan Sponsor Peer Group.



## Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	8,184,623,000	100.0	4.1	9.3	4.1	15.8	4.3	8.3	7.5	7.4
Policy Index			4.6	9.9	4.6	17.3	4.7	8.4	7.6	7.2
Corridor Target Index			4.6	9.9	4.6	16.8	4.2	7.9	7.3	7.0
Total Equity	4,793,870,530	58.6	5.1	14.9	5.1	24.7	6.9	12.1	10.1	9.6
Total Equity Blend			5.8	-	5.8	-	-	-	-	-
Public Equity	3,915,413,736	47.8	6.1	17.1	6.1	29.7	7.4	12.1	•	•
MSCI AC World IMI Index (Net)			6.8	17.8	6.8	31.0	7.4	11.9	-	-
Domestic Equity	2,469,969,204	30.2	6.1	19.4	6.1	33.2	9.8	15.3	13.9	13.0
Russell 3000 Index			6.2	20.6	6.2	35.2	10.3	15.3	13.7	12.8
Domestic All Cap Equity	67,977,792	0.8	-		-					
Russell 3000 Index			-	-	-	-	-	-	-	-
Large Cap	2,283,071,964	27.9	6.1	22.4	6.1	36.6	11.3	17.2	15.5	14.1
Russell 1000 Index			6.1	21.2	6.1	35.7	10.8	15.6	14.2	13.1
Small Cap	118,919,449	1.5	7.7	4.6	7.7	16.5	2.3	7.4	7.4	8.2
Russell 2000 Index			9.3	11.2	9.3	26.8	1.8	9.4	7.4	8.8
International Equity	1,445,179,617	17.7	5.9	13.6	5.9	24.5	2.8	8.5	6.1	6.4
MSCI AC World ex USA IMI (Net)			8.2	13.9	8.2	25.1	3.7	7.7	5.4	5.3
International All Cap	618,549,344	7.6	3.4	13.4	3.4	24.1				
MSCI AC World ex USA IMI (Net)			8.2	13.9	8.2	25.1	-	-	-	-
Developed International Equity	583,709,208	7.1	8.0	13.5	8.0	25.3	4.4	9.4	6.8	6.9
MSCI World ex U.S. (Net)			7.8	13.1	7.8	25.0	5.6	8.4	6.2	5.7
Developed International Large Cap	502,889,398	6.1	7.8	13.6	7.8	25.5				
MSCI World ex U.S. (Net)			7.8	13.1	7.8	25.0	-	-	-	-
Developed International Small Cap	80,819,810	1.0	9.3	12.9	9.3	24.2				
MSCI World ex U.S. Small Cap Index (Net)			10.4	11.5	10.4	23.4	-	-	-	-
Emerging Markets	242,921,064	3.0	7.3	15.2	7.3	24.1	-2.7	5.5	3.6	4.6
MSCI Emerging Markets (Net)			8.7	16.9	8.7	26.1	0.4	5.7	3.7	4.0
Private Equity	878,456,793	10.7	0.8	5.8	0.8	5.9	6.5	14.3	12.5	7.9
Private Equity Benchmark			1.0	-	1.0	-	-	-	-	-
Total Income	2,066,684,105	25.3	4.5	5.8	4.5	12.5	0.9	2.6	3.5	3.7
Total Income Blend			5.2	-	5.2	-	-	-	-	-
Investment Grade Fixed Income	1,432,484,798	17.5	5.1	5.1	5.1	12.8	-1.0	1.0	2.3	2.9
Blmbg. U.S. Aggregate Index			5.2	4.4	5.2	11.6	-1.4	0.3	1.5	1.8
Below Investment Grade	634,199,308	7.7	3.2	7.6	3.2	11.8	6.0	6.7	6.3	6.2
Blmbg. U.S. High Yield - 2% Issuer Cap			5.3	8.0	5.3	15.7	3.1	4.7	4.7	5.0

Domestic All Cap Equity funded 08/01/2024. Residual Holdings value \$4,494,763 included in Total Fund value. Transition Account value of \$264,915 included in Total Equity value.



## Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Real Assets	1,263,316,236	15.4	0.4	-3.8	0.4	-5.7	1.2	3.5	4.1	5.1
Total Real Assets Blend			-0.6	-	-0.6	-	-	-	-	-
Global Real Estate	718,278,709	8.8	-0.6	-10.3	-0.6	-13.4	-2.9	0.8	2.4	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-8.4	-0.8	-10.3	1.1	2.6	3.8	5.8
Other Real Assets	545,037,527	6.7	1.7	6.0	1.7	6.6	7.5	7.7		-
Other Real Assets Blend			-0.3	-	-0.3	-	-	-	-	-
Infrastructure	475,676,255	5.8	2.0	6.6	2.0	7.1	8.4	8.6	8.0	6.5
NFI-ODCE Equal-Weighted +1% (Smoothed Monthly Return) 1Q Lag			-0.6	-7.7	-0.6	-9.4	2.1	3.6	4.8	6.9
Timber	69,361,272	0.8	0.0	2.2	0.0	3.0	3.2	4.1	3.1	2.0
NCREIF Timberland Index (Smoothed Monthly Return) 1Q Lag			1.7	8.4	1.7	9.8	11.0	7.2	6.0	5.9
Cash & Equivalents	56,257,367	0.7	1.3	4.1	1.3	5.6	3.6	2.4	2.3	1.7
90 Day U.S. Treasury Bill			1.4	4.0	1.4	5.5	3.5	2.3	2.2	1.6

# Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

Total Fund   S,184,623,000   10,00   4.1   4.1   9.3   15.8   4.3   8.3   7.4		Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Contribor Targel Index	Total Fund	8,184,623,000	100.0				15.8			
Total Equity   4,793,870,530   58.6   5.1   5.1   14.9   24.7   6.9   12.1   9.6     Total Equity Bend   3,915,413,736   47.8   6.1   6.1   6.1   17.1   29.7   7.4   12.1       MSCI AC World Mil Index (Net)   2,489,989,204   30.2   6.1   6.1   17.8   31.0   7.4   11.9       Domestic Equity   2,489,989,204   30.2   6.1   6.1   19.4   33.2   9.8   15.3   13.0     Russell 3000 Index   6.2   6.2   20.6   35.2   10.3   15.3   12.8     Domestic All Cap Equity   67,977,792   0.8   -   -   -   -   -   -   -   -   -     Two Sigma Active Extension U.S. All Cap Equity   67,977,792   0.8   -   -   -   -   -   -   -   -   -	Policy Index			4.6	4.6	9.9	17.3	4.7	8.4	7.2
Total Equity Blend   S.8   S	Corridor Target Index			4.6						7.0
Public Equity   3,915,413,736   47.8   6.1   6.1   17.1   29.7   7.4   12.1	Total Equity	4,793,870,530	58.6	5.1	5.1	14.9	24.7	6.9	12.1	9.6
MSCI AC World IMI Index (Net)         6.8         6.8         17.8         31.0         7.4         11.9           Domestic Equity         2,499,969,204         30.2         6.1         6.1         19.4         33.2         9.8         15.3         12.8           Russell 3000 Index         6.2         6.2         6.2         6.2         6.2         1.0         1.5         12.8           Domestic All Cap Equity         67.977,792         0.8         - <td>Total Equity Blend</td> <td></td> <td></td> <td>5.8</td> <td>5.8</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	Total Equity Blend			5.8	5.8	-	-	-	-	-
Domestic Equity	Public Equity	3,915,413,736	47.8	6.1	6.1	17.1	29.7	7.4	12.1	-
Russell 3000 Index	MSCI AC World IMI Index (Net)			6.8	6.8	17.8	31.0	7.4	11.9	-
Domestic All Cap Equity   67,977,792   0.8   -   -   -   -   -   -   -   -   -	Domestic Equity	2,469,969,204	30.2	6.1		19.4	33.2	9.8	15.3	13.0
Russell 3000 Index	Russell 3000 Index			6.2	6.2	20.6	35.2	10.3	15.3	12.8
Two Sigma Active Extension U.S. All Cap Equity 67,977,792 0.8	Domestic All Cap Equity	67,977,792	0.8							-
Large Cap	Russell 3000 Index			-	-	-	-	-	-	-
Russell 1000 Index         6.1         6.1         21.2         35.7         10.8         15.6         13.1           LA Capital Large Cap Growth         54,349,829         0.7         2.8         2.8         28.0         45.1         13.4         20.7         16.7           NTAM R1000 Index         663,969,788         8.1         6.1         6.1         21.2         35.7         -         -         -         -           NTAM Quant Enh R1000         341,596,66         4.2         6.2         6.2         23.0         36.9         13.0         15.7         12.2           Parametric-Cilifon Enh R1000         341,794,151         4.2         6.0         6.0         21.6         36.1         10.8         15.4         13.1           LA Capital Enhanced Alpha Fund         350,288,231         4.3         7.2         7.2         23.0         37.3         12.9         16.5         13.8           LA Capital Enhanced ex Alpha Fd         531,213,340         6.5         5.7         5.7         23.0         36.4         11.6         16.8         13.3           Small Cap         118,919,449         1.5         7.7         7.7         7.7         4.6         16.5         2.3         7.4         <	Two Sigma Active Extension U.S. All Cap Equity	67,977,792	8.0	-	-	-	-	-	-	-
LA Capital Large Cap Growth         54,349,829         0.7         2.8         2.8         28.0         45.1         13.4         20.7         16.7           NTAM R1000 Index         663,969,788         8.1         6.1         6.1         21.2         35.7         -         -         -         -           NTAM Quant Enh R1000         341,456,626         4.2         6.2         6.2         23.0         36.9         13.0         15.7         12.2           Parametric-Clifton Enh R1000         341,794,151         4.2         6.0         6.0         21.6         36.1         10.8         15.4         13.1           LA Capital Enhanced Alpha Fund         350,288,231         4.3         7.2         7.2         23.0         36.4         11.6         16.8         13.3           Small Cap         118,919,449         1.5         7.7         7.7         4.6         16.5         2.3         7.4         8.2           Russell 2000 Index         9.3         9.3         11.2         26.8         1.8         9.4         8.8           Atlanta Capital         38,106,307         0.5         9.0         9.0         8.0         21.0         8.4         9.9         -           Riv	Large Cap	2,283,071,964	27.9	6.1	6.1	22.4	36.6	11.3	17.2	14.1
NTAM R1000 Index         663,969,788         8.1         6.1         6.1         21.2         35.7         -         -         -         -         NTAM Quant Enh R1000         341,456,626         4.2         6.2         6.2         23.0         36.9         13.0         15.7         12.2           Parametric-Clifton Enh R1000         341,794,151         4.2         6.0         6.0         21.6         36.1         10.8         15.4         13.1           LA Capital Enhanced Alpha Fund         350,288,231         4.3         7.2         7.2         23.0         37.3         12.9         16.5         13.8           LA Capital Enhanced ex Alpha Fd         531,213,340         6.5         5.7         5.7         23.0         36.4         11.6         16.8         13.8           Small Cap         118,919,449         1.5         7.7         7.7         4.6         16.5         2.3         7.4         8.2           Russell 2000 Index         9.3         9.3         11.2         26.8         1.8         9.4         8.8           Atlanta Capital         38,106,307         0.5         9.0         9.0         8.0         21.0         8.4         9.9         -           Riverbridge Small	Russell 1000 Index			6.1	6.1	21.2	35.7	10.8	15.6	13.1
NTAM Quant Enh R1000 341,456,626 4.2 6.2 6.2 23.0 36.9 13.0 15.7 12.2 Parametric-Clifton Enh R1000 341,794,151 4.2 6.0 6.0 6.0 21.6 36.1 10.8 15.4 13.1 LA Capital Enhanced Alpha Fund 350,288,231 4.3 7.2 7.2 23.0 37.3 12.9 16.5 13.8 LA Capital Enhanced ex Alpha Fd 531,213,340 6.5 5.7 5.7 23.0 36.4 11.6 16.8 13.3 \$\frac{Small Cap}{Small Cap}\$ 118,919,449 1.5 7.7 7.7 4.6 16.5 2.3 7.4 8.2 \$\frac{Russell 2000 Index}{Small Cap}\$ 38,106,307 0.5 9.0 9.0 8.0 21.0 8.4 9.9 \$\frac{Parametric-Cliffon Enhanced ex Alpha Fd}{Small Cap Small Cap Growth}\$ 37,952,795 0.5 6.6 6.6 6.0 0.5 9.3 8.3 \$Parametric-Para	LA Capital Large Cap Growth	54,349,829	0.7	2.8	2.8	28.0	45.1	13.4	20.7	16.7
Parametric-Cliffon Enh R1000         341,794,151         4.2         6.0         6.0         21.6         36.1         10.8         15.4         13.1           LA Capital Enhanced Alpha Fund         350,288,231         4.3         7.2         7.2         23.0         37.3         12.9         16.5         13.8           LA Capital Enhanced ex Alpha Fd         531,213,340         6.5         5.7         5.7         23.0         36.4         11.6         16.8         13.3           Small Cap         118,919,449         1.5         7.7         7.7         4.6         16.5         2.3         7.4         8.2           Russell 2000 Index         9.0         9.0         9.0         8.0         21.0         8.4         9.9         -           Riverbridge Small Cap Growth         37,952,795         0.5         6.6         6.6         -0.5         9.3         8.3         -         -           Sycamore Small Cap Value         37,285,417         0.5         7.0         7.0         4.8         17.0         5.7         -         -           NTAM R2000 Index         5,574,930         0.1         9.3         9.3         11.0         26.6         -         -         -         - <td>NTAM R1000 Index</td> <td>663,969,788</td> <td>8.1</td> <td>6.1</td> <td>6.1</td> <td>21.2</td> <td>35.7</td> <td>-</td> <td>-</td> <td>-</td>	NTAM R1000 Index	663,969,788	8.1	6.1	6.1	21.2	35.7	-	-	-
LA Capital Enhanced Alpha Fund       350,288,231       4.3       7.2       7.2       23.0       37.3       12.9       16.5       13.8         LA Capital Enhanced ex Alpha Fd       531,213,340       6.5       5.7       5.7       23.0       36.4       11.6       16.8       13.3         Small Cap       118,919,449       1.5       7.7       7.7       4.6       16.5       2.3       7.4       8.2         Russell 2000 Index       9.3       9.3       9.3       11.2       26.8       1.8       9.4       8.8         Atlanta Capital       38,106,307       0.5       9.0       9.0       8.0       21.0       8.4       9.9       -         Riverbridge Small Cap Growth       37,952,795       0.5       6.6       6.6       6.0       9.5       9.3       -8.3       -       -       -         Sycamore Small Cap Value       37,285,417       0.5       7.0       7.0       4.8       17.0       5.7       -       -       -       -         NTAM R2000 Index       5,574,930       0.1       9.3       9.3       11.0       26.6       -       -       -       -       -       -       -       -       -       -	NTAM Quant Enh R1000	341,456,626	4.2	6.2	6.2	23.0	36.9	13.0	15.7	12.2
LA Capital Enhanced ex Alpha Fd         531,213,340         6.5         5.7         5.7         23.0         36.4         11.6         16.8         13.3           Small Cap         118,919,449         1.5         7.7         7.7         4.6         16.5         2.3         7.4         8.2           Russell 2000 Index         9.3         9.3         11.2         26.8         1.8         9.4         8.8           Atlanta Capital         38,106,307         0.5         9.0         9.0         8.0         21.0         8.4         9.9         -           Riverbridge Small Cap Growth         37,952,795         0.5         6.6         6.6         -0.5         9.3         8.3         -         -         -           Sycamore Small Cap Value         37,285,417         0.5         7.0         7.0         4.8         17.0         5.7         -         -           NTAM R2000 Index         5,574,930         0.1         9.3         9.3         11.0         26.6         -         -         -           MSCI AC World ex USA IMI (Net)         8.2         8.2         8.2         13.9         25.1         3.7         7.7         5.3           International All Cap         618,549	Parametric-Clifton Enh R1000	341,794,151	4.2	6.0	6.0	21.6	36.1	10.8	15.4	13.1
Small Cap         118,919,449         1.5         7.7         7.7         4.6         16.5         2.3         7.4         8.2           Russell 2000 Index         9.3         9.3         11.2         26.8         1.8         9.4         8.8           Atlanta Capital         38,106,307         0.5         9.0         9.0         8.0         21.0         8.4         9.9         -           Riverbridge Small Cap Growth         37,952,795         0.5         6.6         6.6         -0.5         9.3         -8.3         -         -           Sycamore Small Cap Value         37,285,417         0.5         7.0         7.0         4.8         17.0         5.7         -         -           NTAM R2000 Index         5,574,930         0.1         9.3         9.3         11.0         26.6         -         -         -           International Equity         1,445,179,617         17.7         5.9         5.9         13.6         24.5         2.8         8.5         6.4           MSCI AC World ex USA IMI (Net)         8.2         8.2         8.2         13.9         25.1         3.7         7.7         5.3           International All Cap         618,549,344         7.6 <td>LA Capital Enhanced Alpha Fund</td> <td>350,288,231</td> <td>4.3</td> <td>7.2</td> <td>7.2</td> <td>23.0</td> <td>37.3</td> <td>12.9</td> <td>16.5</td> <td>13.8</td>	LA Capital Enhanced Alpha Fund	350,288,231	4.3	7.2	7.2	23.0	37.3	12.9	16.5	13.8
Russell 2000 Index       9.3       9.3       11.2       26.8       1.8       9.4       8.8         Atlanta Capital       38,106,307       0.5       9.0       9.0       8.0       21.0       8.4       9.9       -         Riverbridge Small Cap Growth       37,952,795       0.5       6.6       6.6       -0.5       9.3       -8.3       -       -         Sycamore Small Cap Value       37,285,417       0.5       7.0       7.0       4.8       17.0       5.7       -       -         NTAM R2000 Index       5,574,930       0.1       9.3       9.3       11.0       26.6       -       -       -       -         International Equity       1,445,179,617       17.7       5.9       5.9       13.6       24.5       2.8       8.5       6.4         MSCI AC World ex USA IMI (Net)       8.2       8.2       13.9       25.1       3.7       7.7       5.3         International All Cap       618,549,344       7.6       3.4       3.4       13.4       24.1       -       -       -         MSCI AC World ex USA IMI (Net)       8.2       8.2       13.9       25.1       -       -       -         William Blair Int'l Le	LA Capital Enhanced ex Alpha Fd	531,213,340	6.5	5.7	5.7	23.0	36.4	11.6	16.8	13.3
Atlanta Capital       38,106,307       0.5       9.0       9.0       8.0       21.0       8.4       9.9       -         Riverbridge Small Cap Growth       37,952,795       0.5       6.6       6.6       -0.5       9.3       -8.3       -       -         Sycamore Small Cap Value       37,285,417       0.5       7.0       7.0       4.8       17.0       5.7       -       -         NTAM R2000 Index       5,574,930       0.1       9.3       9.3       11.0       26.6       -       -       -       -         International Equity       1,445,179,617       17.7       5.9       5.9       13.6       24.5       2.8       8.5       6.4         MSCI AC World ex USA IMI (Net)       8.2       8.2       13.9       25.1       3.7       7.7       5.3         International All Cap       618,549,344       7.6       3.4       3.4       13.4       24.1       -       -       -         MSCI AC World ex USA IMI (Net)       8.2       8.2       13.9       25.1       -       -       -         William Blair Int'l Leaders       223,368,632       2.7       3.2       3.2       9.3       23.2       -2.7       7.0       - <td>Small Cap</td> <td>118,919,449</td> <td>1.5</td> <td>7.7</td> <td>7.7</td> <td>4.6</td> <td>16.5</td> <td>2.3</td> <td>7.4</td> <td>8.2</td>	Small Cap	118,919,449	1.5	7.7	7.7	4.6	16.5	2.3	7.4	8.2
Riverbridge Small Cap Growth   37,952,795   0.5   6.6   6.6   6.6   -0.5   9.3   -8.3   -   -	Russell 2000 Index			9.3	9.3	11.2	26.8	1.8	9.4	8.8
Sycamore Small Cap Value         37,285,417         0.5         7.0         7.0         4.8         17.0         5.7         -         -           NTAM R2000 Index         5,574,930         0.1         9.3         9.3         11.0         26.6         -         -         -           International Equity         1,445,179,617         17.7         5.9         5.9         13.6         24.5         2.8         8.5         6.4           MSCI AC World ex USA IMI (Net)         8.2         8.2         13.9         25.1         3.7         7.7         5.3           International All Cap         618,549,344         7.6         3.4         3.4         13.4         24.1         -         -         -           MSCI AC World ex USA IMI (Net)         8.2         8.2         13.9         25.1         -         -         -           William Blair Int'l Leaders         223,368,632         2.7         3.2         3.2         9.3         23.2         -2.7         7.0         -           Arrowstreet ACWI ex US         395,180,712         4.8         3.5         3.5         15.8         24.7         -         -         -         -           Developed International Equity         583,709,2	Atlanta Capital	38,106,307	0.5	9.0	9.0	8.0	21.0	8.4	9.9	-
NTAM R2000 Index         5,574,930         0.1         9.3         9.3         11.0         26.6         -         -         -         -           International Equity         1,445,179,617         17.7         5.9         5.9         13.6         24.5         2.8         8.5         6.4           MSCI AC World ex USA IMI (Net)         8.2         8.2         13.9         25.1         3.7         7.7         5.3           International All Cap         618,549,344         7.6         3.4         3.4         13.4         24.1         -         -         -         -           MSCI AC World ex USA IMI (Net)         8.2         8.2         13.9         25.1         -         -         -         -           William Blair Int'l Leaders         223,368,632         2.7         3.2         3.2         9.3         23.2         -2.7         7.0         -           Arrowstreet ACWI ex US         395,180,712         4.8         3.5         3.5         15.8         24.7         -         -         -         -           Developed International Equity         583,709,208         7.1         8.0         8.0         13.5         25.3         4.4         9.4         6.9	Riverbridge Small Cap Growth	37,952,795	0.5	6.6	6.6	-0.5	9.3	-8.3	-	-
International Equity         1,445,179,617         17.7         5.9         5.9         13.6         24.5         2.8         8.5         6.4           MSCI AC World ex USA IMI (Net)         8.2         8.2         13.9         25.1         3.7         7.7         5.3           International All Cap         618,549,344         7.6         3.4         3.4         13.4         24.1         -         -         -           MSCI AC World ex USA IMI (Net)         8.2         8.2         13.9         25.1         -         -         -         -           William Blair Int'l Leaders         223,368,632         2.7         3.2         3.2         9.3         23.2         -2.7         7.0         -           Arrowstreet ACWI ex US         395,180,712         4.8         3.5         3.5         15.8         24.7         -         -         -           Developed International Equity         583,709,208         7.1         8.0         8.0         13.5         25.3         4.4         9.4         6.9	Sycamore Small Cap Value	37,285,417	0.5	7.0	7.0	4.8	17.0	5.7	-	-
MSCI AC World ex USA IMI (Net)       8.2       8.2       13.9       25.1       3.7       7.7       5.3         International All Cap       618,549,344       7.6       3.4       3.4       13.4       24.1       -       -       -       -         MSCI AC World ex USA IMI (Net)       8.2       8.2       13.9       25.1       -       -       -       -         William Blair Int'l Leaders       223,368,632       2.7       3.2       3.2       9.3       23.2       -2.7       7.0       -         Arrowstreet ACWI ex US       395,180,712       4.8       3.5       3.5       15.8       24.7       -       -       -         Developed International Equity       583,709,208       7.1       8.0       8.0       13.5       25.3       4.4       9.4       6.9	NTAM R2000 Index	5,574,930	0.1	9.3	9.3	11.0	26.6	-	-	-
International All Cap         618,549,344         7.6         3.4         3.4         13.4         24.1         -         -         -           MSCI AC World ex USA IMI (Net)         8.2         8.2         13.9         25.1         -         -         -         -           William Blair Int'l Leaders         223,368,632         2.7         3.2         3.2         9.3         23.2         -2.7         7.0         -           Arrowstreet ACWI ex US         395,180,712         4.8         3.5         3.5         15.8         24.7         -         -         -           Developed International Equity         583,709,208         7.1         8.0         8.0         13.5         25.3         4.4         9.4         6.9	International Equity	1,445,179,617	17.7	5.9	5.9	13.6	24.5	2.8	8.5	6.4
MSCI AC World ex USA IMI (Net)       8.2       8.2       13.9       25.1       - <td>MSCI AC World ex USA IMI (Net)</td> <td></td> <td></td> <td>8.2</td> <td>8.2</td> <td>13.9</td> <td>25.1</td> <td>3.7</td> <td>7.7</td> <td>5.3</td>	MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	3.7	7.7	5.3
William Blair Int'l Leaders       223,368,632       2.7       3.2       3.2       9.3       23.2       -2.7       7.0       -         Arrowstreet ACWI ex US       395,180,712       4.8       3.5       3.5       15.8       24.7       -       -       -       -         Developed International Equity       583,709,208       7.1       8.0       8.0       13.5       25.3       4.4       9.4       6.9	International All Cap	618,549,344	7.6	3.4	3.4	13.4	24.1		-	-
Arrowstreet ACWI ex US 395,180,712 4.8 3.5 3.5 15.8 24.7  Developed International Equity 583,709,208 7.1 8.0 8.0 13.5 25.3 4.4 9.4 6.9	MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	-	-	-
Developed International Equity 583,709,208 7.1 8.0 8.0 13.5 25.3 4.4 9.4 6.9	William Blair Int'l Leaders	223,368,632	2.7	3.2	3.2	9.3	23.2	-2.7	7.0	-
	Arrowstreet ACWI ex US	395,180,712	4.8	3.5	3.5	15.8	24.7	-	-	-
	Developed International Equity	583,709,208	7.1	8.0	8.0	13.5	25.3	4.4	9.4	6.9
				7.8			25.0			

Two Sigma Active Extension U.S. All Cap Equity funded 08/01/2024. Wellington International Small Cap value of \$111,259 and Residual Holdings value of \$4,494,763 included in Total Fund value. Fiscal year 06/30.



## Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Developed International Large Cap	502,889,398	6.1	7.8	7.8	13.6	25.5	•	•	•
MSCI World ex U.S. (Net)			7.8	7.8	13.1	25.0	-	-	-
State St MSCI World exUS	502,889,398	6.1	7.8	7.8	13.5	25.5	-	-	-
Developed International Small Cap	80,819,810	1.0	9.3	9.3	12.9	24.2	•	•	-
MSCI World ex U.S. Small Cap Index (Net)			10.4	10.4	11.5	23.4	-	-	-
State St MSCI exUS Small	45,675,552	0.6	10.4	10.4	11.5	23.3	-	-	-
DFA Intl Small Cap Value	35,033,000	0.4	8.5	8.5	15.4	26.1	7.7	9.8	6.2
Emerging Markets	242,921,064	3.0	7.3	7.3	15.2	24.1	-2.7	5.5	4.6
MSCI Emerging Markets (Net)			8.7	8.7	16.9	26.1	0.4	5.7	4.0
DFA EM All Cap Core	120,865,317	1.5	6.6	6.6	15.2	24.3	-	-	=.
State St MSCI EM China	34,227,440	0.4	23.5	23.5	29.7	24.2	-	-	-
State St MSCI EM ex China	87,828,307	1.1	3.1	3.1	10.8	24.9	-	-	-
Transition Account	264,915	0.0							
Private Equity	878,456,793	10.7	0.8	0.8	5.8	5.9	6.5	14.3	7.9
Private Equity Benchmark			1.0	1.0	-	-	-	-	-
Total Adams Street 2010 Funds	6,583,537	0.1	-2.8	-2.8	-0.8	-5.0	-4.3	11.5	12.7
Total ASP (Brinson) Fds 1998-2003	325,008	0.0	-8.7	-8.7	-5.7	56.4	8.7	7.8	4.7
Total ASP (Brinson) Non-US 1999-2004	179,207	0.0	-5.5	-5.5	0.1	-1.2	9.4	7.2	5.3
Adams St 2008 Non-US Partnership	1,992,804	0.0	-35.2	-35.2	-34.8	-37.5	-18.6	-1.9	5.7
Adams St 2015 Global Fund	34,131,135	0.4	-1.0	-1.0	4.3	0.3	0.1	15.6	-
Adams St 2016 Global Fund	33,560,738	0.4	-1.2	-1.2	3.1	-0.2	3.9	15.4	-
Adams St 2017 Global Fund	70,637,014	0.9	-1.7	-1.7	1.0	-1.2	5.2	16.7	-
Adams St 2018 Global Fund	75,554,574	0.9	-0.1	-0.1	5.3	4.9	7.2	19.3	-
Adams St 2019 Global Fund	70,750,603	0.9	-0.6	-0.6	3.8	2.5	4.9	36.4	-
Adams St 2020 Global Fund	52,312,038	0.6	-1.3	-1.3	4.4	3.2	5.2	-	-
Adams St 2021 Global Fund	36,300,678	0.4	0.3	0.3	6.1	5.4	-	-	-
Altor Fund VI	7,522,012	0.1	55.4	55.4	60.3	12.1	-	-	-
BlackRock PEP	224,148,440	2.7	2.3	2.3	6.5	7.0	8.8	16.0	-
Blackrock PEP 2020	138,618,989	1.7	2.8	2.8	7.8	10.8	11.1	-	-
HIG Capital	3,012,137	0.0	-1.1	-1.1	-	_	-	-	-
Sixth Street Partners - TAO	81,772,032	1.0	0.3	0.3	5.8	8.4	9.1	-	-
Kelso	11,026,757	0.1	2.8	2.8	19.2	19.2	_	-	-
Portfolio Advisors GP Solutions	10,450,842	0.1	-6.3	-6.3	-	-	_	-	-
Private Equity Misc Funds	19,578,249	0.2	5.2	5.2	28.7	32.6	3.0	2.3	-1.2

Two Sigma Active Extension U.S. All Cap Equity funded 08/01/2024. Wellington International Small Cap value of \$111,259 and Residual Holdings value of \$4,494,763 included in Total Fund value. Fiscal year 06/30.



	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
otal Income	2,066,684,105	25.3	4.5	4.5	5.8	12.5	0.9	2.6	3.7
Total Income Blend			5.2	5.2	-	-	-	-	-
Investment Grade Fixed Income	1,432,484,798	17.5	5.1	5.1	5.1	12.8	-1.0	1.0	2.9
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	1.8
Allspring Med Quality Credit	117,325,726	1.4	5.9	5.9	6.5	16.2	-	-	-
Manulife-Declaration TRBF	71,352	0.0	11.7	11.7	10.0	19.3	3.7	4.0	4.2
PIMCO DISCO II	60,246,833	0.7	3.3	3.3	8.8	11.7	5.9	6.1	7.1
PIMCO Core Plus Constrained	363,181,168	4.4	4.6	4.6	5.2	12.6	-1.1	0.9	2.6
Prudential Core	366,392,551	4.5	5.4	5.4	5.2	13.0	-1.1	0.8	-
State Street Gov Index	145,510,299	1.8	4.7	4.7	4.0	9.7	-	-	-
State Street Credit Index	30,226,230	0.4	5.7	5.7	5.5	14.0	-	-	-
Western Asset Core Plus	349,530,639	4.3	5.6	5.6	4.6	13.3	-	-	-
Below Investment Grade	634,199,308	7.7	3.2	3.2	7.6	11.8	6.0	6.7	6.2
Blmbg. U.S. High Yield - 2% Issuer Cap			5.3	5.3	8.0	15.7	3.1	4.7	5.0
Cerberus ND Private Credit	151,553,234	1.9	0.1	0.1	4.3	6.0	7.2	8.3	-
Ares ND Credit Strategies	128,750,205	1.6	2.3	2.3	10.2	14.4	10.3	9.2	
Loomis Sayles HY	2,585,003	0.0	0.6	0.6	-1.1	5.5	-1.3	2.2	3.4
PIMCO Bravo II	2,589,405	0.0	4.0	4.0	6.5	12.4	-10.5	-5.5	1.0
Nomura High Yield	174,627,795	2.1	5.1	5.1	-	-	-	-	-
PineBridge High Yield	174,093,666	2.1	4.8	4.8	-	-	-	-	-
otal Real Assets	1,263,316,236	15.4	0.4	0.4	-3.8	-5.7	1.2	3.5	5.1
Total Real Assets Blend			-0.6	-0.6	-	-	-	-	
Global Real Estate	718,278,709	8.8	-0.6	-0.6	-10.3	-13.4	-2.9	0.8	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-0.8	-8.4	-10.3	1.1	2.6	5.8
Invesco Core Real Estate	352,899,086	4.3	-1.0	-1.0	-10.3	-10.3	0.2	1.8	5.4
Invesco Asia RE Fund III	15,811,917	0.2	-1.0	-1.0	1.5	-4.0	-6.4	1.1	-
Invesco RE Fund VI	48,710,716	0.6	-2.6	-2.6	-11.8	2.1	-	-	
Invesco Value Added Fd IV	233,395	0.0	-6.4	-6.4	-31.4	-57.4	-40.4	-24.2	
Invesco Value Added Fd V	53,961,568	0.7	0.0	0.0	-25.7	-25.7	-7.3	-0.2	
JP Morgan SPC & Strat RE	246,662,027	3.0	0.3	0.3	-6.2	-14.7	-5.5	-0.5	3.9
Other Real Assets	545,037,527	6.7	1.7	1.7	6.0	6.6	7.5	7.7	
Other Real Assets Blend			-0.3	-0.3	-	-	-	-	
Infrastructure	475,676,255	5.8	2.0	2.0	6.6	7.1	8.4	8.6	6.5
NFI-ODCE Equal-Weighted +1% (Smoothed Monthly Return) 1Q Lag			-0.6	-0.6	-7.7	-9.4	2.1	3.6	6.9
ISQ Global Infrastructure II	76,213,272	0.9	2.8	2.8	9.4	10.5	11.2	12.0	
ISQ Global Infrastructure III	38,607,991	0.5	2.7	2.7	17.0	12.6		_	

Two Sigma Active Extension U.S. All Cap Equity funded 08/01/2024. Wellington International Small Cap value of \$111,259 and Residual Holdings value of \$4,494,763 included in Total Fund value. Fiscal year 06/30.



NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Мо	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
The Rohatyn Group	15,093,811	0.2	3.3	3.3	3.3	9.0	3.2	-2.7	-2.0
JP Morgan IIF Infrastructure	131,626,105	1.6	1.9	1.9	8.9	9.8	7.0	7.5	5.9
Grosvenor CIS Fund I	8,227,178	0.1	0.5	0.5	5.4	3.5	12.1	11.0	8.8
Grosvenor CIS Fund II	18,987,089	0.2	0.7	0.7	2.6	1.6	9.4	11.6	-
Grosvenor CIS Fund III	35,981,215	0.4	3.4	3.4	5.7	4.0	-	-	-
Macquarie Infrastructure Fund IV	83,914,809	1.0	2.8	2.8	3.1	3.9	9.0	10.4	-
Macquarie Infrastructure Fund V	67,024,785	8.0	-0.7	-0.7	2.5	3.0	12.1	-	-
Timber	69,361,272	0.8	0.0	0.0	2.2	3.0	3.2	4.1	2.0
NCREIF Timberland Index (Smoothed Monthly Return) 1Q Lag			1.7	1.7	8.4	9.8	11.0	7.2	5.9
Springbank Timberland	45,504,273	0.6	-0.1	-0.1	1.1	1.1	0.0	2.5	0.3
Teredo	23,856,999	0.3	0.3	0.3	5.0	7.8	13.7	9.6	6.7
Cash & Equivalents	56,257,367	0.7	1.3	1.3	4.1	5.6	3.6	2.4	1.7
90 Day U.S. Treasury Bill			1.4	1.4	4.0	5.5	3.5	2.3	1.6
Northern Trust Cash Account	44,482,799	0.5	1.3	1.3	4.2	5.6	3.7	2.4	1.7
BND Cash	11,774,567	0.1	1.3	1.3	4.1	5.5	3.6	2.4	-

## Total Fund Monthly Index Performance

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Equity							
Total Equity Blend	5.8	5.8	-	-	-	-	-
Public Equity							
MSCI AC World IMI Index (Net)	6.8	6.8	17.8	31.0	7.4	11.9	9.2
Domestic Equity							
Russell 1000 Index	6.1	6.1	21.2	35.7	10.8	15.6	13.1
Russell 1000 Growth Index	3.2	3.2	24.6	42.2	12.0	19.7	16.5
Russell 2000 Index	9.3	9.3	11.2	26.8	1.8	9.4	8.8
Russell 2000 Value Index	10.2	10.2	9.2	25.9	3.8	9.3	8.2
Russell 2000 Growth Index	8.4	8.4	13.2	27.7	-0.4	8.8	8.9
Russell 3000 Index	6.2	6.2	20.6	35.2	10.3	15.3	12.8
S&P SmallCap 600 Index	10.1	10.1	9.3	25.9	4.0	10.2	10.0
International Equity							
MSCI AC World ex USA IMI (Net)	8.2	8.2	13.9	25.1	3.7	7.7	5.3
MSCI World ex U.S. (Net)	7.8	7.8	13.1	25.0	5.6	8.4	5.7
MSCI World ex U.S. Small Cap Index (Net)	10.4	10.4	11.5	23.4	0.0	6.9	6.0
MSCI World ex U.S. Small Value (Net)	10.9	10.9	12.1	23.3	3.6	7.4	5.6
MSCI Emerging Markets (Net)	8.7	8.7	16.9	26.1	0.4	5.7	4.0
MSCI China (Net)	23.5	23.5	29.3	23.9	-5.6	0.8	3.4
MSCI Emerging Markets ex China (Net)	4.0	4.0	12.7	27.4	3.4	8.4	4.8
Private Equity							
Private Equity Benchmark	1.0	1.0	-	-	-	-	-
Total Income							
Total Income Blend	5.2	5.2	-	-	-	-	-
Investment Grade Fixed Income							
Blmbg. U.S. Aggregate Index	5.2	5.2	4.4	11.6	-1.4	0.3	1.8
Blmbg. U.S. Corp: BAA Bond	5.8	5.8	5.6	15.0	-0.8	1.5	3.2
Blmbg. U.S. Credit Index	5.7	5.7	5.2	13.8	-1.1	1.1	2.8
Blmbg. U.S. Government Index	4.7	4.7	3.8	9.7	-1.7	-0.2	1.4
Libor 3 month Index	1.3	1.3	4.2	5.6	4.1	2.7	2.0

Fiscal year 06/30.



## Total Fund Monthly Index Performance

NDSIB - Consolidated Pension Trust Period Ending: September 30, 2024

	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Below Investment Grade Fixed Income							
Blmbg. U.S. High Yield - 2% Issuer Cap	5.3	5.3	8.0	15.7	3.1	4.7	5.0
Morningstar LSTA US LL B TR USD	2.2	2.2	6.9	10.2	6.9	6.2	5.2
Total Real Assets							
Total Real Assets Blend	-0.6	-0.6	-	-	-	-	-
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag	-0.8	-0.8	-8.4	-10.3	1.1	2.6	5.8
Other Real Assets	-0.3	-0.3	-	-	-	-	-
NFI-ODCE Equal-Weighted +1% (Smoothed Monthly Return) 1Q Lag	-0.6	-0.6	-7.7	-9.4	2.1	3.6	6.9
NCREIF Timberland Index (Smoothed Monthly Return) 1Q Lag	1.7	1.7	8.4	9.8	11.0	7.2	5.9
Cash							
90 Day U.S. Treasury Bill	1.4	1.4	4.0	5.5	3.5	2.3	1.6



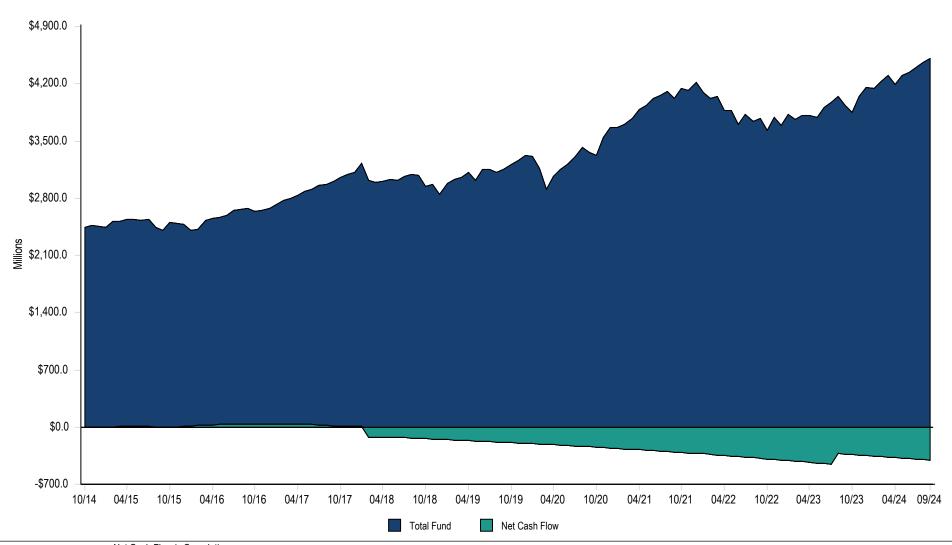
# **Public Employees Retirement System**

**Investment Performance Review Period Ending: September 30, 2024** 



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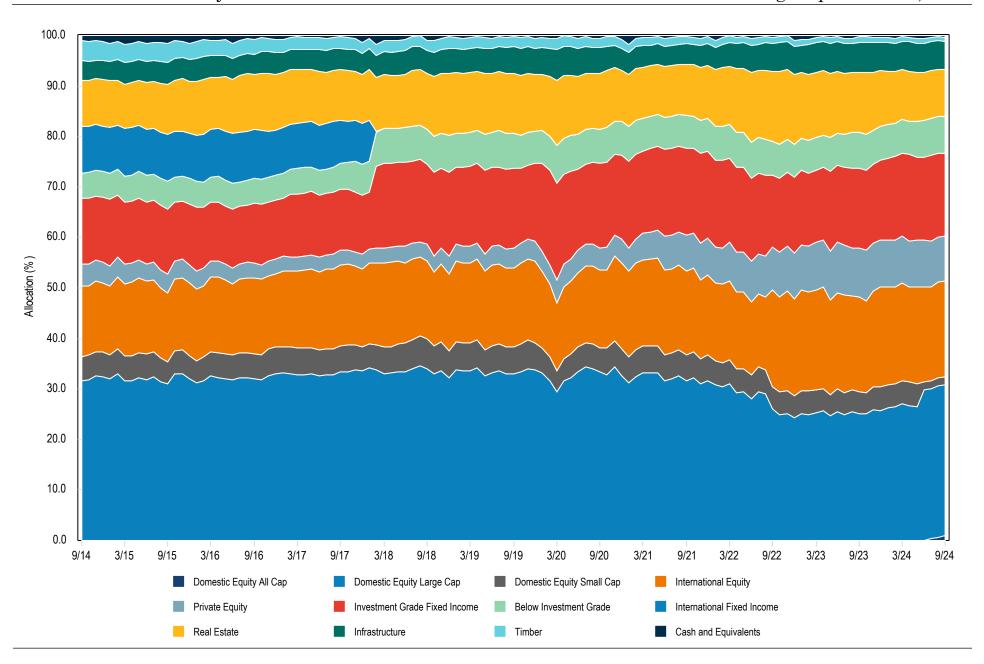


0.9%	0.9%
29.6%	29.9%
1.5%	2.69
1.3/0	1.6%
18.8%	18.9%
8.9%	8.9%
17.2%	16.5%
7.5%	7.3%
9.1%	9.1%
5.6%	5.6% U.979
U.0% Policy	Actual
Policy	Actual

	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Differences (\$)
Domestic Equity All Cap	40,208,427	0.9	0.9	-17,836
Domestic Equity Large Cap	1,348,054,073	29.9	29.6	13,732,683
Domestic Equity Small Cap	72,457,047	1.6	1.5	5,308,049
International Equity	853,333,312	18.9	18.8	3,801,531
Private Equity	403,579,077	8.9	8.9	8,639
Investment Grade Fixed Income	744,102,671	16.5	17.2	-32,552,830
Below Investment Grade	329,783,660	7.3	7.5	-10,020,033
Real Estate	412,160,777	9.1	9.1	21,964
Infrastructure	251,189,017	5.6	5.6	355
Timber	35,075,339	0.8	0.8	-9,900
Cash and Equivalents	19,727,379	0.4	0.0	19,727,379
Total	4,509,670,778	100.0	100.0	

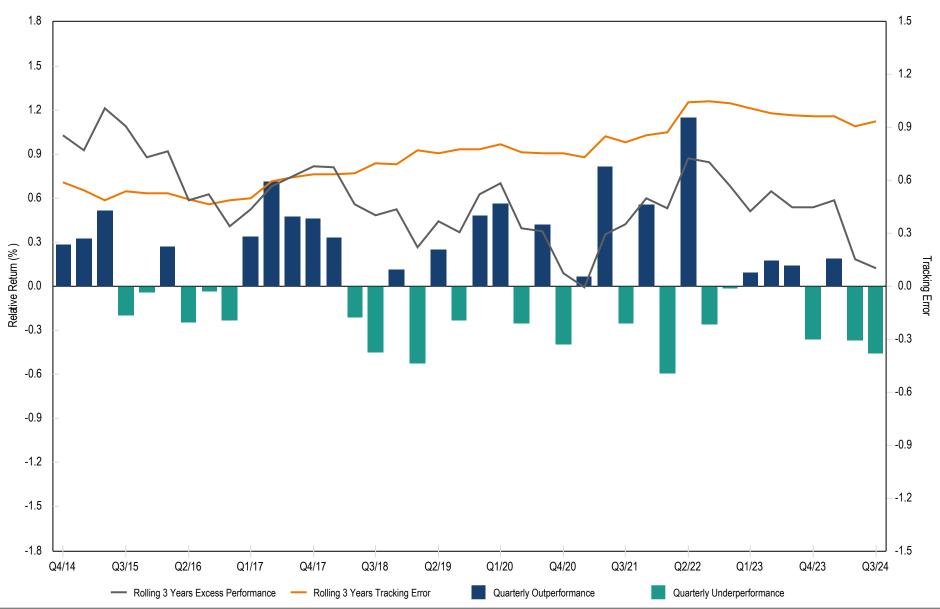
Residual Holdings value of \$441,308 & Transition Account value of \$26,010 included in Domestic Equity Large Cap value for styling purposes.







**Rolling Annualized Excess Performance and Tracking Error** 



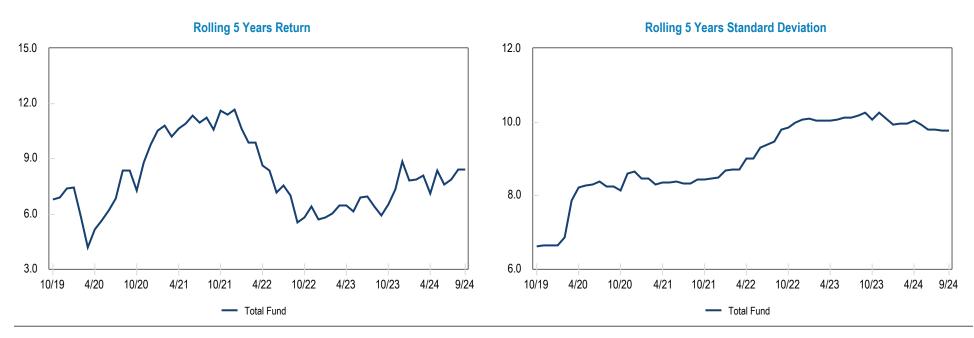
Analytic is using the Corridor Target Index



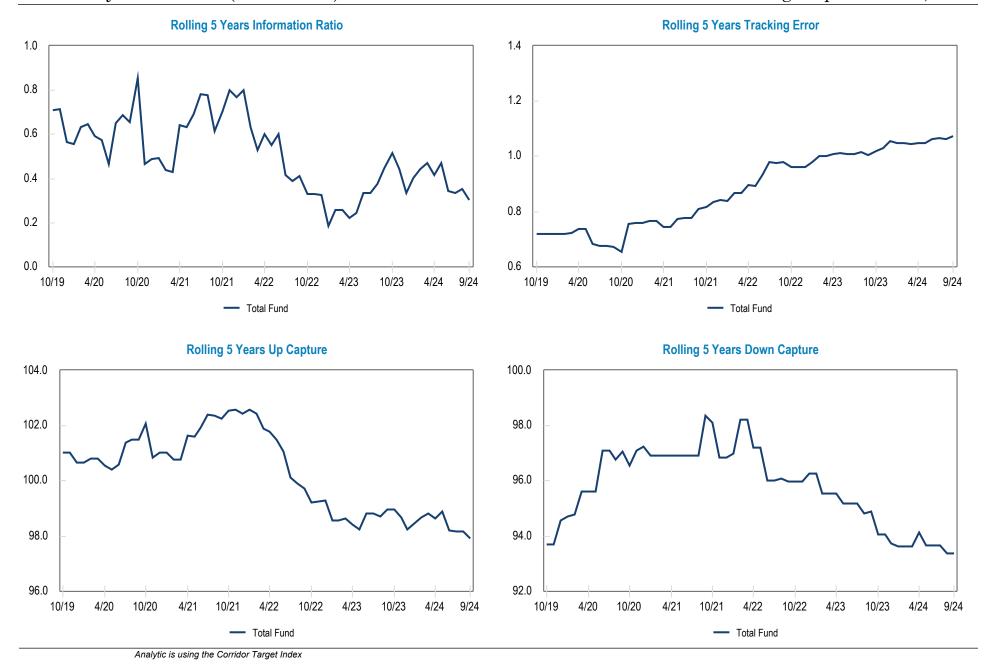


1.2 0.9 0.6 0.3 4/20 7/20 1/21 4/21 7/21 10/21 4/22 7/22 10/22 1/20 10/20 1/22 1/23 4/23 7/23 10/23 1/24 4/24 7/24 9/24 10/19 **Total Fund** 

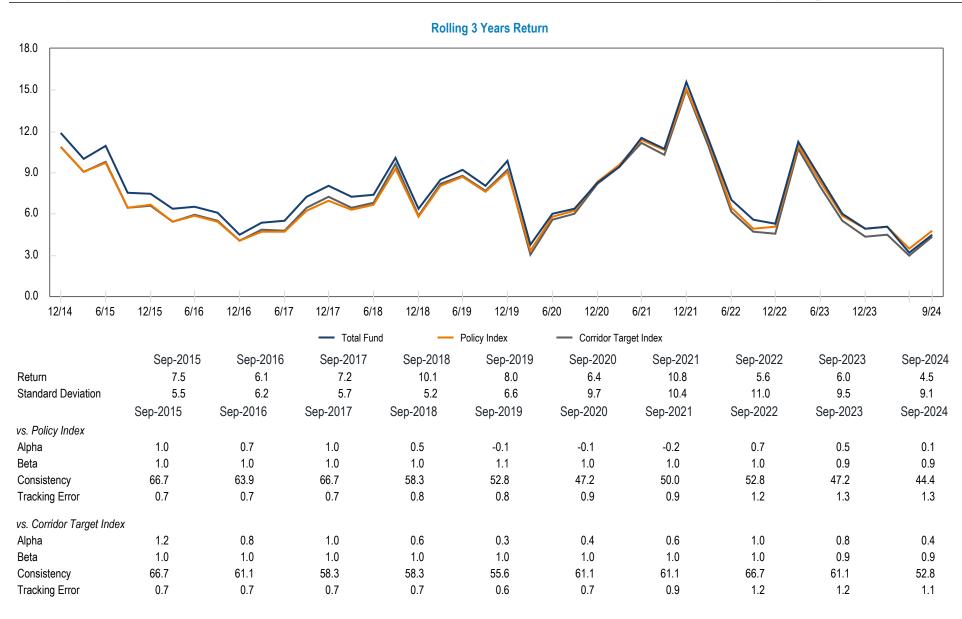
**Rolling 5 Years Sharpe Ratio** 



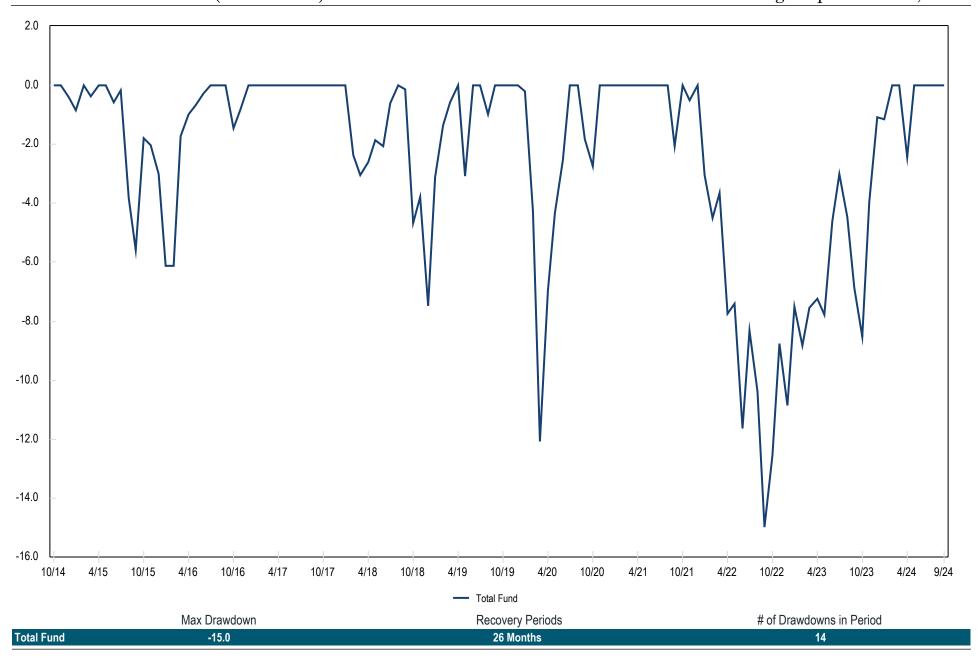














Total Fund Risk Statistics (Net of Fees)

NDSIB - Public Employees Retirement System Period Ending: September 30, 2024

	1	Yr	3	Yrs	5	Yrs	10	Yrs
	Total Fund	Policy Index						
Return Summary Statistics								
Up Market Periods	9	9	21	21	38	38	82	82
Down Market Periods	3	3	15	15	22	22	38	38
Maximum Return	5.0	5.6	5.0	5.6	6.9	7.3	6.9	7.3
Minimum Return	-2.4	-2.3	-5.1	-5.6	-8.2	-7.9	-8.2	-7.9
Return	16.4	17.7	4.5	4.8	8.4	8.4	7.5	7.2
Cumulative Return	16.4	17.7	14.2	15.0	50.0	49.6	105.9	101.1
Active Return	-1.2	0.0	-0.3	0.0	0.0	0.0	0.2	0.0
Risk Summary Statistics								
Beta	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0
Upside Risk	2.2	2.4	7.0	7.6	7.9	8.2	6.8	6.9
Downside Risk	3.0	3.2	6.0	6.6	6.3	6.5	5.3	5.4
Risk/Return Summary Statistic								
Standard Deviation	6.7	7.4	9.1	9.9	9.8	10.2	8.3	8.5
Alpha	0.3	0.0	0.1	0.0	0.4	0.0	0.4	0.0
Sharpe Ratio	1.5	1.6	0.2	0.2	0.6	0.6	0.7	0.7
Active Return/Risk	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tracking Error	1.1	0.0	1.3	0.0	1.2	0.0	1.0	0.0
Information Ratio	-1.1	-	-0.3	-	0.0	-	0.2	-
Forrelation Statistics								
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	41.7	100.0	44.4	100.0	48.3	100.0	52.5	100.0



NDSIB - Public Employees Retirement System Period Ending: September 30, 2024

		1 Yr		3 Yrs		5 Yrs		10 Yrs
	Total Fund	Corridor Target Index						
Return Summary Statistics								
Up Market Periods	9	9	21	21	38	38	82	82
Down Market Periods	3	3	15	15	22	22	38	38
Maximum Return	5.0	5.3	5.0	5.3	6.9	7.7	6.9	7.7
Minimum Return	-2.4	-2.3	-5.1	-5.4	-8.2	-8.5	-8.2	-8.5
Return	16.4	17.5	4.5	4.4	8.4	8.0	7.5	7.1
Cumulative Return	16.4	17.5	14.2	13.8	50.0	47.2	105.9	98.3
Active Return	-1.0	0.0	0.1	0.0	0.3	0.0	0.3	0.0
Risk Summary Statistics								
Beta	0.9	1.0	0.9	1.0	0.9	1.0	1.0	1.0
Upside Risk	2.2	2.3	7.0	7.3	7.9	8.1	6.8	7.0
Downside Risk	3.0	3.2	6.0	6.5	6.3	6.7	5.3	5.6
Risk/Return Summary Stat	istics							
Standard Deviation	6.7	7.1	9.1	9.7	9.8	10.3	8.3	8.7
Alpha	0.0	0.0	0.4	0.0	8.0	0.0	0.7	0.0
Sharpe Ratio	1.5	1.6	0.2	0.1	0.6	0.6	0.7	0.6
Active Return/Risk	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tracking Error	0.9	0.0	1.1	0.0	1.1	0.0	0.9	0.0
Information Ratio	-1.1	-	0.1	-	0.3	-	0.4	-
Correlation Statistics								
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	33.3	100.0	52.8	100.0	60.0	100.0	57.5	100.0

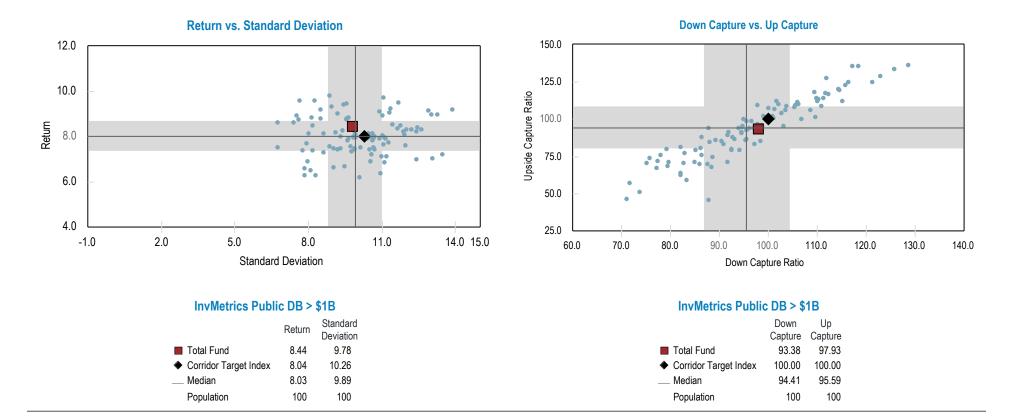


NDSIB - Public Employees Retirement System Period Ending: September 30, 2024

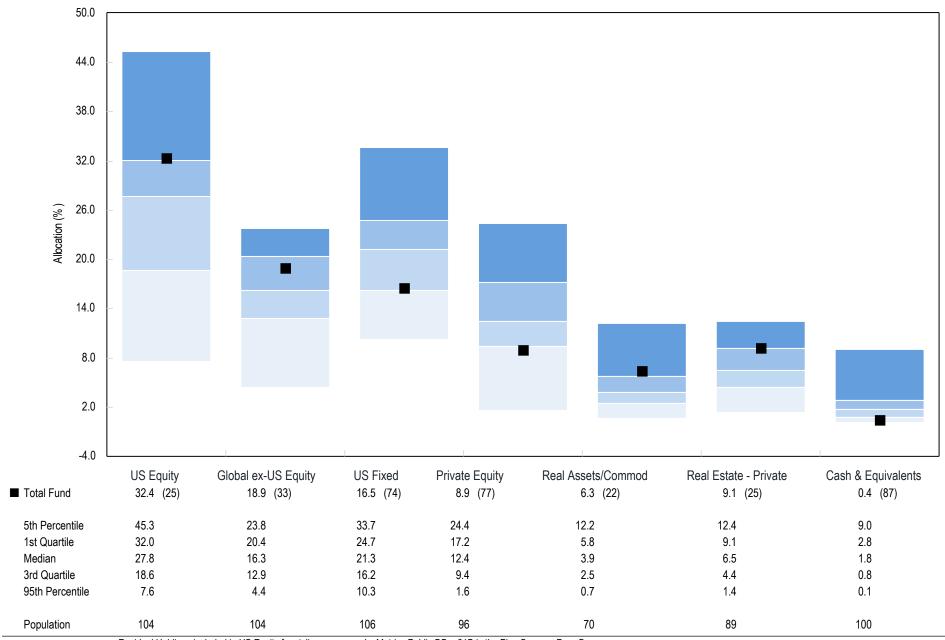
Total Fund vs. InvMetrics Public DB > \$1B 26.0 20.0 14.0 8.0 Return 2.0 -4.0 -10.0 -16.0 -22.0 3 Mo Fiscal YTD 3 Yrs 5 Yrs 10 Yrs 2023 2022 2021 2020 2019 4.3 (71) 4.3 (71) 4.5 (56) 7.5 (25) -10.9 (59) Total Fund 8.4 (32) 11.0 (53) 16.7 (33) 12.2 (38) 18.0 (26) ▲ Policy Index 4.6 (55) 4.6 (55) 4.8 (43) 8.4 (32) 7.2 (38) 11.6 (39) -10.7 (58) 16.1 (44) 12.0 (44) 17.4 (36) ◆ Corridor Target Index 4.7 (50) 4.7 (50) 4.4 (58) 8.0 (49) 7.1 (46) 10.9 (55) -11.2 (62) 15.4 (50) 11.7 (46) 18.0 (26) 5th Percentile 6.1 6.1 6.2 9.5 8.2 14.3 -4.1 20.7 15.5 21.2 1st Quartile 5.3 5.3 5.2 8.8 7.4 12.4 -8.0 17.2 13.1 18.0 Median 4.7 4.7 4.6 8.0 7.0 11.2 -10.3 15.3 11.3 16.8 4.1 3rd Quartile 4.1 4.0 7.5 6.5 9.6 -12.5 13.1 9.4 15.5 95th Percentile 3.7 3.7 2.9 6.6 7.8 -15.6 10.6 12.8 6.0 6.8 Population 104 104 101 100 96 177 177 207 217 193



	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	8.44	9.78	0.75	0.95	0.99	97.93	93.38	0.30	1.08	0.64
Corridor Target Index	8.04	10.26	0.00	1.00	1.00	100.00	100.00	-	0.00	0.58



NDSIB - Public Employees Retirement System Period Ending: September 30, 2024



Residual Holdings included in US Equity for styling purposes. InvMetrics Public DB > \$1B is the Plan Sponsor Peer Group.



NDSIB - Public Employees Retirement System Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	4,509,670,778	100.0	4.3	9.6	4.3	16.4	4.5	8.4	7.6	7.5
Policy Index			4.6	10.1	4.6	17.7	4.8	8.4	7.7	7.2
Corridor Target Index			4.7	10.2	4.7	17.5	4.4	8.0	7.3	7.1
Total Equity	2,717,190,627	60.3	5.2	15.2	5.2	25.5	7.0	12.2	10.1	9.6
Total Equity Blend			5.9	-	5.9	-	-	-	-	-
Public Equity	2,313,611,550	51.3	6.1	17.0	6.1	29.7	7.3	12.1	•	•
MSCI AC World IMI Index (Net)			6.8	17.8	6.8	31.0	7.4	11.9	-	-
Domestic Equity	1,460,252,228	32.4	6.1	19.3	6.1	33.1	9.8	15.3	13.9	13.0
Russell 3000 Index			6.2	20.6	6.2	35.2	10.3	15.3	13.7	12.8
Domestic All Cap Equities	40,208,427	0.9	-		-	-				
Russell 3000 Index			-	-	-	-	-	-	-	-
Large Cap	1,347,586,755	29.9	6.1	22.4	6.1	36.6	11.4	17.2	15.5	14.1
Russell 1000 Index			6.1	21.2	6.1	35.7	10.8	15.6	14.2	13.1
Small Cap	72,457,047	1.6	7.7	4.4	7.7	16.2	2.2	7.3	7.4	8.2
Russell 2000 Index			9.3	11.2	9.3	26.8	1.8	9.4	7.4	8.8
International Equity	853,333,312	18.9	5.9	13.5	5.9	24.4	2.8	8.5	6.1	6.5
MSCI AC World ex USA IMI (Net)			8.2	13.9	8.2	25.1	3.7	7.7	5.4	5.3
International All Cap	364,554,452	8.1	3.4	13.5	3.4	24.4			-	-
MSCI AC World ex USA IMI (Net)			8.2	13.9	8.2	25.1	-	-	-	-
Developed International Equity	344,020,719	7.6	8.0	13.4	8.0	24.9	3.9	9.1	6.6	6.8
MSCI World ex U.S. (Net)			7.8	13.1	7.8	25.0	5.6	8.4	6.2	5.7
Developed International Large Cap	296,387,945	6.6	7.8	13.4	7.8	25.2				
MSCI World ex U.S. (Net)			7.8	13.1	7.8	25.0	5.6	8.4	6.2	5.7
Developed International Small Cap	47,632,775	1.1	9.3	11.7	9.3	22.4				
MSCI World ex U.S. Small Cap Index (Net)			10.4	11.5	10.4	23.4	0.0	6.9	4.5	6.0
Emerging Markets	144,758,141	3.2	7.3	15.3	7.3	24.3	-2.6	5.6	3.6	4.6
MSCI Emerging Markets (Net)			8.7	16.9	8.7	26.1	0.4	5.7	3.7	4.0
Private Equity	403,579,077	8.9	0.8	5.8	0.8	5.8	6.4	14.3	12.5	7.9
Private Equity Benchmark			1.0	-	1.0	-	-	-	-	-
Total Income	1,073,886,332	23.8	4.5	5.9	4.5	12.5	1.0	2.7	3.6	3.8
Total Income Blend			5.2	-	5.2	-	-	-	-	-
Investment Grade	744,102,671	16.5	5.2	5.2	5.2	12.9	-1.0	1.0	2.3	2.9
Blmbg. U.S. Aggregate Index			5.2	4.4	5.2	11.6	-1.4	0.3	1.5	1.8
Below Investment Grade	329,783,660	7.3	3.0	7.7	3.0	11.6	6.1	6.8	6.3	6.3
Blmbg. U.S. High Yield - 2% Issuer Cap			5.3	8.0	5.3	15.7	3.1	4.7	4.7	5.0

Domestic All Cap Equity funded 08/01/2024. Residual Holdings value of \$441,308 included in Total Fund value. Transition Account value of \$26,010 included in Total Equity & Total Fund values.



NDSIB - Public Employees Retirement System Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Real Assets	698,425,133	15.5	0.3	-4.1	0.3	-6.0	1.0	3.4	4.0	5.1
Total Real Assets Blend			-0.6	-	-0.6	-	-	-	-	-
Global Real Estate	412,160,777	9.1	-0.6	-10.3	-0.6	-13.4	-2.9	0.9	2.4	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-8.4	-0.8	-10.3	1.1	2.6	3.8	5.8
Timber	35,075,339	0.8	0.0	2.2	0.0	3.0	3.2	4.1	3.1	2.0
NCREIF Timberland Index (Smoothed Monthly Return) 1Q Lag			1.7	8.4	1.7	9.8	11.0	7.2	6.0	5.9
Infrastructure	251,189,017	5.6	2.0	6.8	2.0	7.3	8.5	8.6	8.0	6.5
NFI-ODCE Equal-Weighted +1% (Smoothed Monthly Return) 1Q Lag			-0.6	-7.7	-0.6	-9.4	2.1	3.6	4.8	6.9
Cash & Equivalents	19,727,379	0.4	1.3	4.1	1.3	5.5	3.6	2.4	2.3	1.7
90 Day U.S. Treasury Bill			1.4	4.0	1.4	5.5	3.5	2.3	2.2	1.6

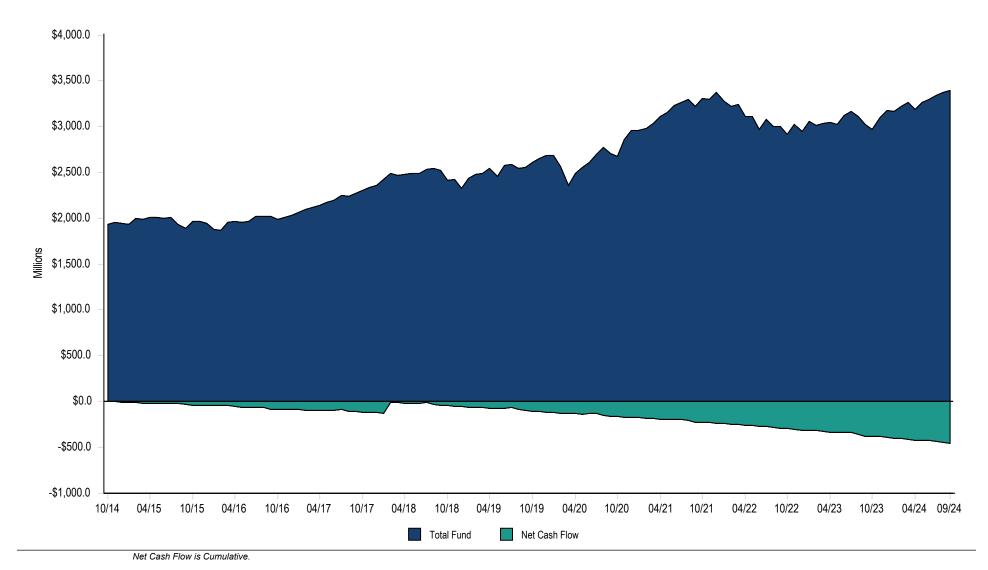
## **Teachers' Fund For Retirement**

**Investment Performance Review Period Ending: September 30, 2024** 



### **VERUSINVESTMENTS.COM**

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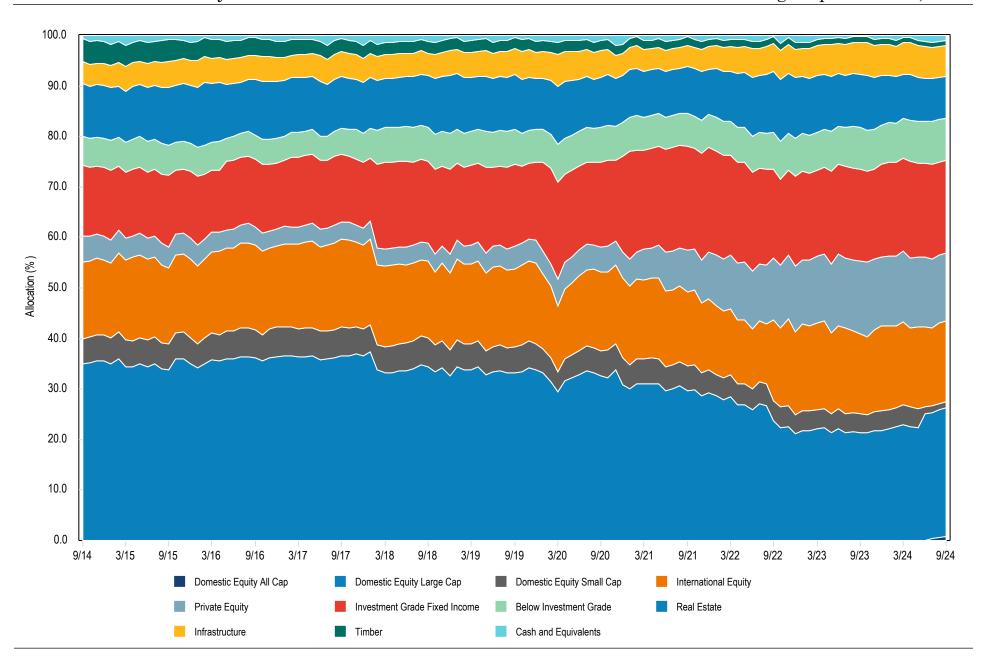


0.8%	. 0.8%
25.0%	25.5%
1.5%	1.2%
15.9%	16.0%
13.5%	13.5%
18.9%	18.3%
8.4%	8.4%
8.3%	8.3%
6.1% V.87%	6.1% ს.ყ <i>უ</i> გ
1.070	1.070
Policy	Actual

	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Differences (\$)
Domestic Equity All Cap	25,494,408	0.8	0.8	552
Domestic Equity Large Cap	865,086,682	25.5	25.0	17,780,904
Domestic Equity Small Cap	42,177,050	1.2	1.3	-459,811
International Equity	542,568,610	16.0	15.9	3,124,054
Private Equity	457,819,827	13.5	13.5	16,713
Investment Grade Fixed Income	622,378,616	18.3	18.9	-20,229,492
Below Investment Grade	284,179,373	8.4	8.4	-1,412,915
Real Estate	282,723,903	8.3	8.3	-16,875
Infrastructure	205,774,089	6.1	6.1	-9,870
Timber	31,309,252	0.9	0.9	10,537
Cash and Equivalents	35,142,749	1.0	1.0	1,196,204
Total	3,394,654,560	100.0	100.0	

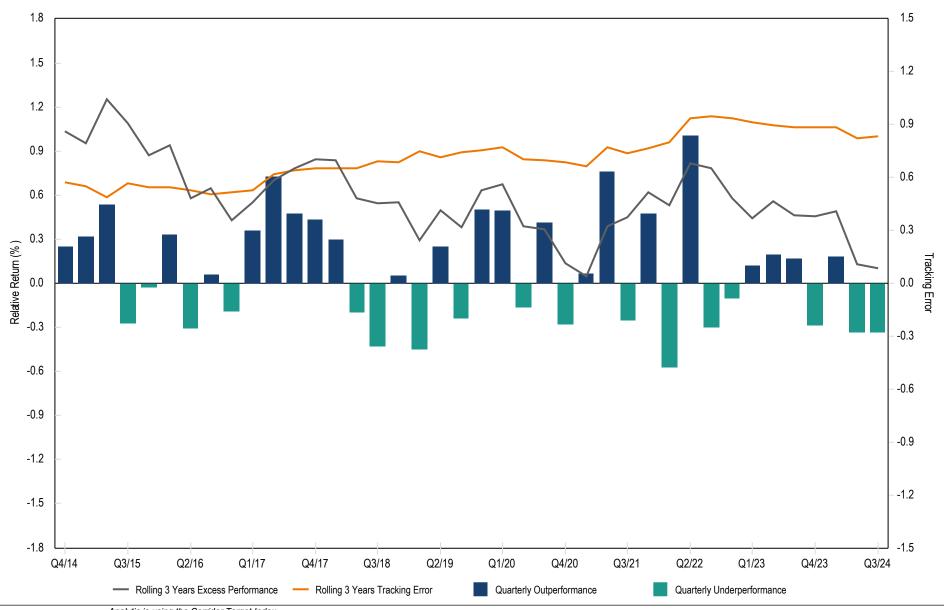
Residual Holdings value of \$4,013,871 & Transition Account value of \$236,572 included in Domestic Equity Large Cap value for styling purposes.



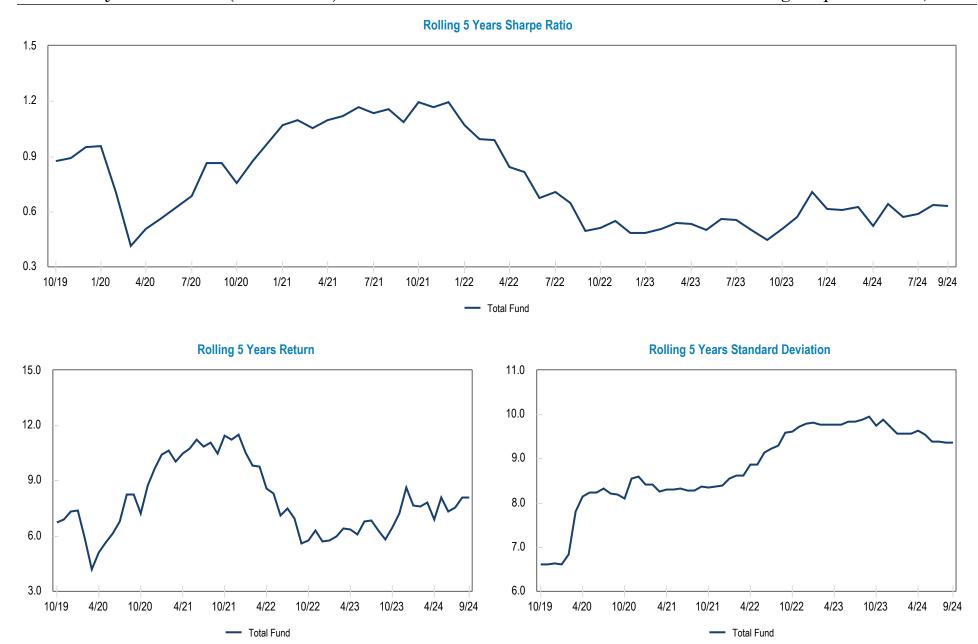




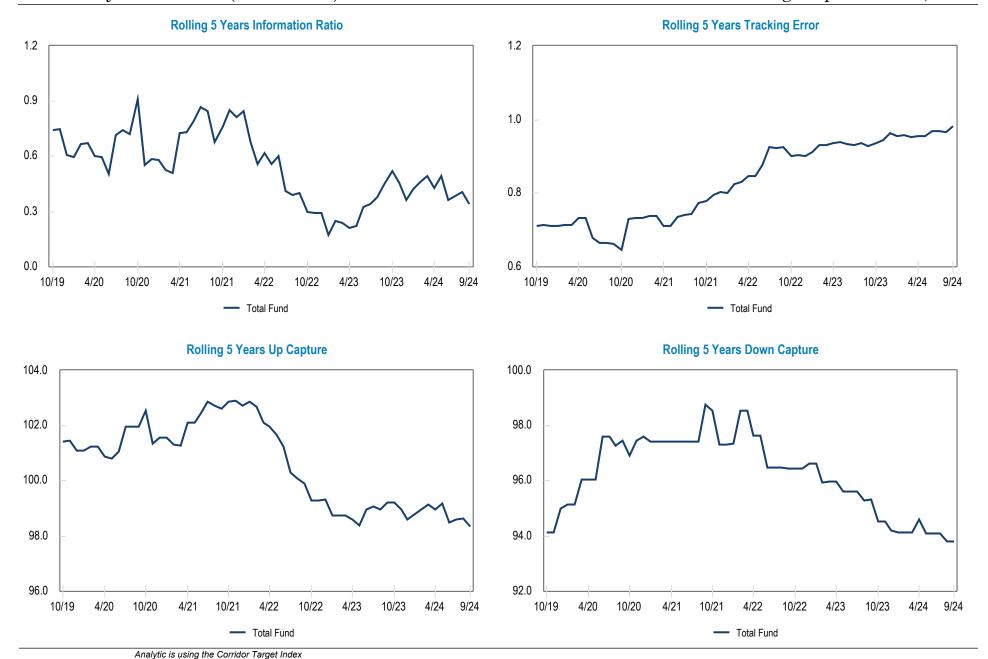
**Rolling Annualized Excess Performance and Tracking Error** 



Verus<sup>77</sup>



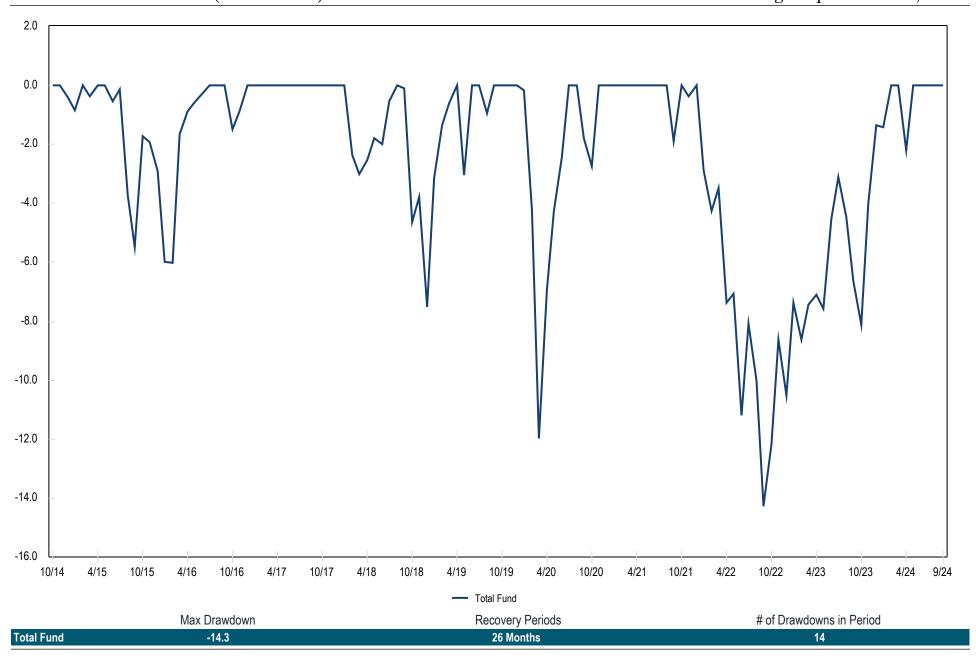






**Rolling 3 Years Return** 18.0 15.0 12.0 9.0 6.0 3.0 0.0 6/15 12/15 6/16 12/16 6/17 12/17 6/18 12/18 6/19 12/19 6/20 12/20 6/21 12/21 6/22 12/22 6/23 12/23 9/24 12/14 Total Fund Corridor Target Index Policy Index Sep-2015 Sep-2016 Sep-2017 Sep-2018 Sep-2019 Sep-2020 Sep-2021 Sep-2022 Sep-2023 Sep-2024 6.1 10.0 8.0 10.6 5.9 4.1 Return 7.6 7.2 6.4 5.6 9.6 10.7 9.0 8.4 5.5 6.2 5.7 5.2 6.6 10.3 Standard Deviation Sep-2015 Sep-2016 Sep-2017 Sep-2018 Sep-2019 Sep-2020 Sep-2021 Sep-2022 Sep-2023 Sep-2024 vs. Policy Index 0.0 -0.2 0.3 Alpha 1.0 0.7 1.0 0.5 0.0 0.1 -0.1 1.0 1.0 1.0 1.0 1.1 1.0 1.0 1.0 0.9 0.9 Beta 66.7 63.9 47.2 44.4 Consistency 66.7 55.6 47.2 52.8 47.2 44.4 Tracking Error 0.7 0.7 0.7 0.7 0.7 0.8 0.9 1.2 1.2 1.2 vs. Corridor Target Index Alpha 1.2 8.0 1.0 0.6 0.3 0.4 0.6 0.9 0.7 0.3 Beta 1.0 1.0 1.0 0.9 0.9 1.0 1.0 1.0 1.0 1.0 58.3 Consistency 63.9 58.3 55.6 50.0 55.6 58.3 66.7 55.6 52.8 0.7 0.7 0.7 0.7 0.6 0.7 0.8 1.1 1.1 1.0 Tracking Error





Total Fund Risk Statistics (Net of Fees)

NDSIB - Teachers Fund For Retirement Period Ending: September 30, 2024

	1 Yr		3	Yrs	5	Yrs	10 Yrs		
	Total Fund	Policy Index							
Return Summary Statistics									
Up Market Periods	9	9	21	21	38	38	82	82	
Down Market Periods	3	3	15	15	22	22	38	38	
Maximum Return	4.5	5.2	4.5	5.2	6.9	7.5	6.9	7.5	
Minimum Return	-2.2	-2.1	-4.7	-5.1	-8.1	-8.0	-8.1	-8.0	
Return	14.9	16.6	4.1	4.6	8.1	8.4	7.3	7.2	
Cumulative Return	14.9	16.6	12.8	14.5	47.6	49.6	102.3	100.9	
Active Return	-1.6	0.0	-0.6	0.0	-0.3	0.0	0.1	0.0	
Risk Summary Statistics									
Beta	0.9	1.0	0.9	1.0	0.9	1.0	1.0	1.0	
Upside Risk	2.0	2.2	6.4	7.1	7.5	8.0	6.6	6.8	
Downside Risk	2.7	3.0	5.6	6.1	6.1	6.3	5.2	5.3	
Risk/Return Summary Statistics									
Standard Deviation	6.1	6.8	8.4	9.2	9.4	9.9	8.1	8.3	
Alpha	0.3	0.0	-0.1	0.0	0.2	0.0	0.3	0.0	
Sharpe Ratio	1.5	1.5	0.1	0.2	0.6	0.6	0.7	0.7	
Active Return/Risk	-0.3	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	
Tracking Error	1.1	0.0	1.2	0.0	1.2	0.0	1.0	0.0	
Information Ratio	-1.4	-	-0.5	-	-0.3	-	0.1	-	
Correlation Statistics									
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Consistency	33.3	100.0	44.4	100.0	48.3	100.0	50.8	100.0	

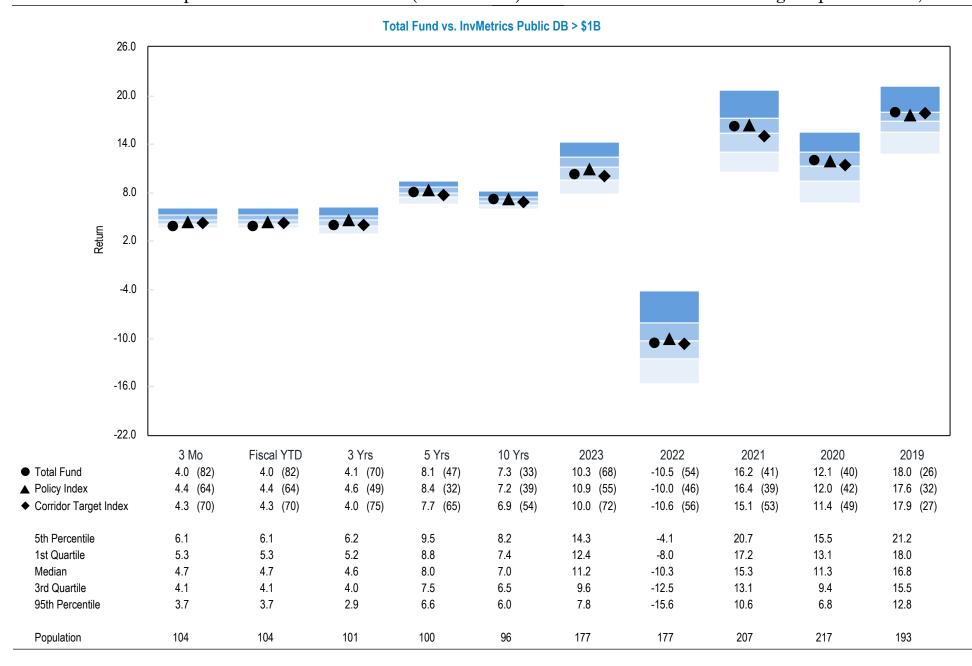


NDSIB - Teachers Fund For Retirement Period Ending: September 30, 2024

	1 Yr			3 Yrs		5 Yrs		10 Yrs		
	Total Fund	Corridor Target Index								
Return Summary Statistics	;									
Up Market Periods	9	9	21	21	38	38	82	82		
Down Market Periods	3	3	15	15	22	22	38	38		
Maximum Return	4.5	4.7	4.5	4.7	6.9	7.6	6.9	7.6		
Minimum Return	-2.2	-2.0	-4.7	-5.1	-8.1	-8.3	-8.1	-8.3		
Return	14.9	15.8	4.1	4.0	8.1	7.7	7.3	6.9		
Cumulative Return	14.9	15.8	12.8	12.4	47.6	44.8	102.3	94.7		
Active Return	-0.8	0.0	0.1	0.0	0.3	0.0	0.4	0.0		
Risk Summary Statistics										
Beta	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0		
Upside Risk	2.0	2.1	6.4	6.7	7.5	7.8	6.6	6.7		
Downside Risk	2.7	2.8	5.6	6.0	6.1	6.4	5.2	5.4		
Risk/Return Summary Stat	istics									
Standard Deviation	6.1	6.4	8.4	8.9	9.4	9.8	8.1	8.4		
Alpha	0.0	0.0	0.3	0.0	0.7	0.0	0.6	0.0		
Sharpe Ratio	1.5	1.5	0.1	0.1	0.6	0.6	0.7	0.6		
Active Return/Risk	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Tracking Error	0.8	0.0	1.0	0.0	1.0	0.0	0.9	0.0		
Information Ratio	-1.0	-	0.1	-	0.3	-	0.4	-		
Correlation Statistics										
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Consistency	50.0	100.0	52.8	100.0	60.0	100.0	55.8	100.0		



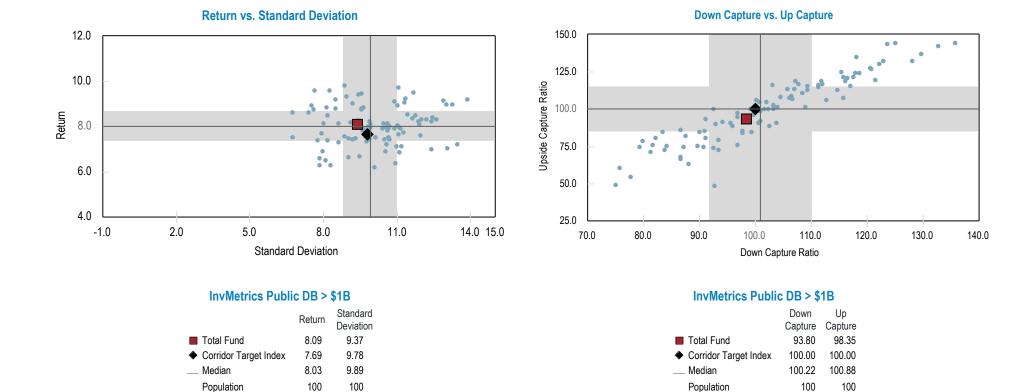
NDSIB - Teachers Fund For Retirement Period Ending: September 30, 2024



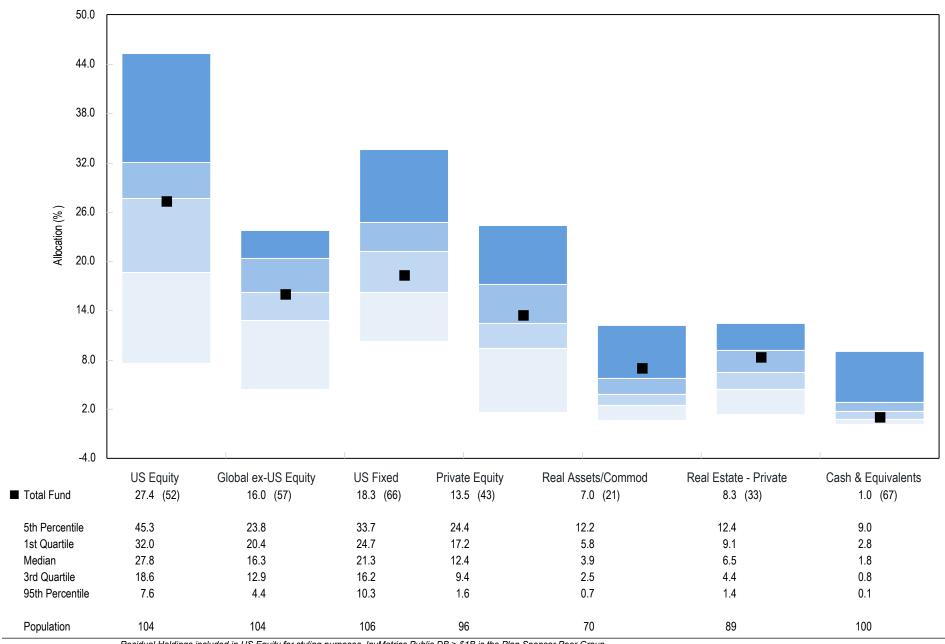


NDSIB - Teachers Fund For Retirement Period Ending: September 30, 2024

	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	8.09	9.37	0.71	0.95	0.99	98.35	93.80	0.34	0.98	0.63
Corridor Target Index	7.69	9.78	0.00	1.00	1.00	100.00	100.00	-	0.00	0.57



NDSIB - Teachers Fund For Retirement Period Ending: September 30, 2024



Residual Holdings included in US Equity for styling purposes. InvMetrics Public DB > \$1B is the Plan Sponsor Peer Group.



NDSIB - Teachers Fund For Retirement Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	3,394,654,560	100.0	4.0	8.8	4.0	14.9	4.1	8.1	7.4	7.3
Policy Index			4.4	9.5	4.4	16.6	4.6	8.4	7.7	7.2
Corridor Target Index			4.3	9.3	4.3	15.8	4.0	7.7	7.1	6.9
Total Equity	1,929,132,706	56.8	4.7	14.0	4.7	23.1	6.6	12.0	10.1	9.5
Total Equity Blend			5.4	-	5.4	-	-	-	-	-
Public Equity	1,471,312,879	43.3	6.0	16.8	6.0	29.4	7.3	12.1	•	•
MSCI AC World IMI Index (Net)			6.8	17.8	6.8	31.0	7.4	11.9	9.8	9.2
Domestic Equity	928,507,697	27.4	6.1	19.3	6.1	33.1	9.8	15.4	13.9	13.0
Russell 3000 Index			6.2	20.6	6.2	35.2	10.3	15.3	13.7	12.8
Domestic All Cap Equities	25,494,408	0.8	-		-		•		-	•
Russell 3000 Index			-	-	-	-	-	-	-	-
Large Cap	860,836,239	25.4	6.1	22.4	6.1	36.6	11.4	17.2	15.5	14.1
Russell 1000 Index			6.1	21.2	6.1	35.7	10.8	15.6	14.2	13.1
Small Cap	42,177,050	1.2	7.7	4.4	7.7	16.3	2.3	7.3	7.4	8.2
Russell 2000 Index			9.3	11.2	9.3	26.8	1.8	9.4	7.4	8.8
International Equity	542,568,610	16.0	5.9	13.1	5.9	23.9	2.7	8.4	6.1	6.4
MSCI AC World ex USA IMI (Net)			8.2	13.9	8.2	25.1	3.7	7.7	5.4	5.3
International All Cap	233,387,063	6.9	3.4	12.4	3.4	23.1	•	•	-	
MSCI AC World ex USA IMI (Net)			8.2	13.9	8.2	25.1	3.7	7.7	5.4	5.3
Developed International Equity	220,241,407	6.5	8.0	13.3	8.0	25.5	5.5	10.1	7.3	7.3
MSCI World ex U.S. (Net)			7.8	13.1	7.8	25.0	5.6	8.4	6.2	5.7
Developed International Large Cap	189,746,995	5.6	7.8		7.8		•		•	
MSCI World ex U.S. (Net)			7.8	13.1	7.8	25.0	5.6	8.4	6.2	5.7
Developed International Small Cap	30,494,411	0.9	9.3	•	9.3					
MSCI World ex U.S. Small Cap Index (Net)			10.4	11.5	10.4	23.4	0.0	6.9	4.5	6.0
Emerging Markets	88,940,141	2.6	7.3	15.1	7.3	24.1	-2.7	5.5	3.6	4.6
MSCI Emerging Markets (Net)			8.7	16.9	8.7	26.1	0.4	5.7	3.7	4.0
Private Equity	457,819,827	13.5	8.0	5.8	0.8	5.8	6.5	14.3	12.5	7.9
Private Equity Benchmark			1.0	-	1.0	-	-	-	-	-
Total Income	906,557,989	26.7	4.6	5.9	4.6	12.7	0.8	2.5	3.4	3.6
Total Income Blend			5.2	-	5.2	-	-	-	-	-
Investment Grade	622,378,616	18.3	5.2	5.2	5.2	12.9	-1.0	1.0	2.3	2.9
Blmbg. U.S. Aggregate Index			5.2	4.4	5.2	11.6	-1.4	0.3	1.5	1.8
Below Investment Grade	284,179,373	8.4	3.3	7.8	3.3	12.3	5.8	6.6	6.2	6.2
Blmbg. U.S. High Yield - 2% Issuer Cap			5.3	8.0	5.3	15.7	3.1	4.7	4.7	5.0

Domestic All Cap Equity funded 08/01/2024. Residual Holdings value of \$4,013,871 included in Total Fund value. Transition Account value of \$236,572 included in Total Equity & Total Fund values.



NDSIB - Teachers Fund For Retirement Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Real Assets	519,807,245	15.3	0.4	-3.4	0.4	-5.2	1.4	3.7	4.2	5.1
Total Real Assets Blend			-0.6	-	-0.6	-	-	-	-	-
Global Real Estate	282,723,903	8.3	-0.6	-10.3	-0.6	-13.4	-2.9	0.8	2.4	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-8.4	-0.8	-10.3	1.1	2.6	3.8	5.8
Infrastructure	205,774,089	6.1	2.0	6.8	2.0	7.3	8.5	8.6	8.0	6.5
NFI-ODCE Equal-Weighted +1% (Smoothed Monthly Return) 1Q Lag			-0.6	-7.7	-0.6	-9.4	2.1	3.6	4.8	6.9
Timber	31,309,252	0.9	0.0	2.2	0.0	3.0	3.2	4.1	3.1	2.0
NCREIF Timberland Index (Smoothed Monthly Return) 1Q Lag			1.7	8.4	1.7	9.8	11.0	7.2	6.0	5.9
Cash & Equivalents	35,142,749	1.0	1.3	4.1	1.3	5.5	3.6	2.4	2.3	1.7
90 Day U.S. Treasury Bill			1.4	4.0	1.4	5.5	3.5	2.3	2.2	1.6



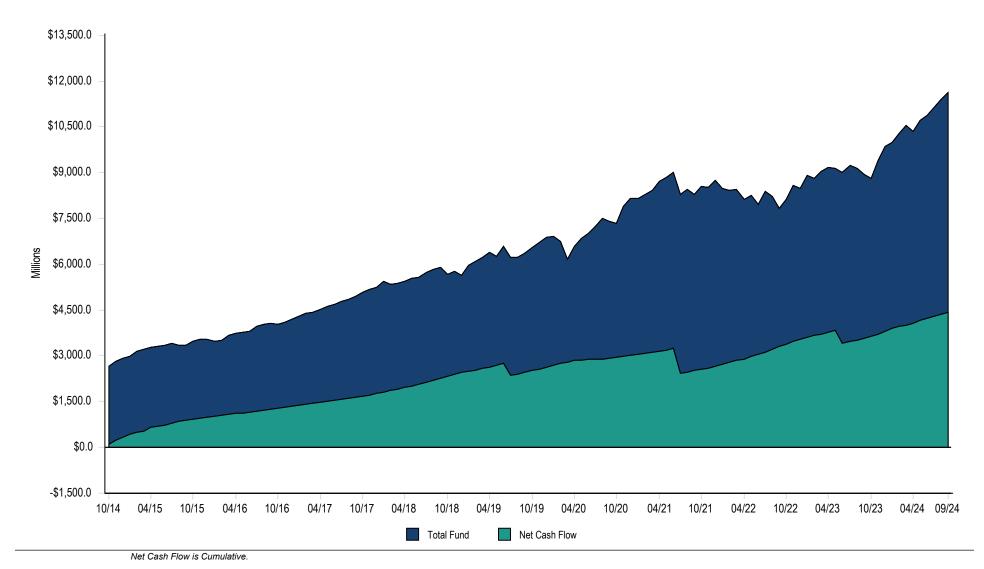
# **Legacy Fund**

**Investment Performance Review Period Ending: September 30, 2024** 



### **VERUSINVESTMENTS.COM**

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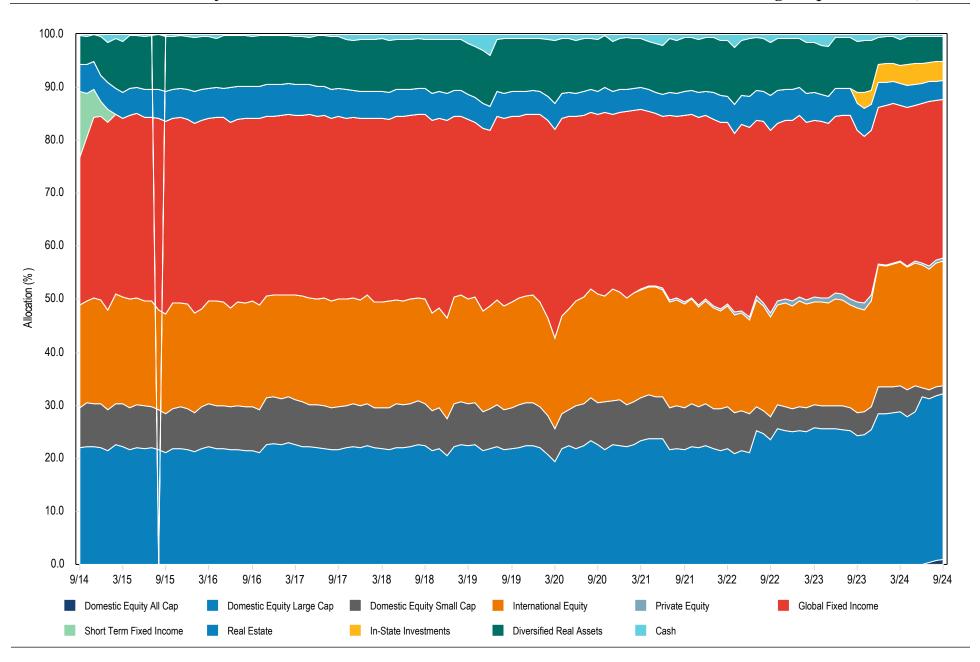
NDSIB - Legacy Fund Period Ending: September 30, 2024

0.9%	0.9%
31.5%	31.2%
1.6%	1.6%
22.3%	23.5%
	U.0 %
31.2%	30.0%
3.6%	3.6%
3.6%	3.6%
4.7%	4.7%
Policy	Actual

	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Differences (\$)
Domestic Equity All Cap	106,805,773	0.9	0.9	29,780
Domestic Equity Large Cap	3,626,735,697	31.2	31.5	-35,948,111
Domestic Equity Small Cap	191,039,667	1.6	1.6	6,766,842
International Equity	2,726,945,388	23.5	22.3	135,274,755
Private Equity	64,225,248	0.6	0.6	-26,248
Global Fixed Income	3,482,627,487	30.0	31.2	-147,291,544
Real Estate	415,545,718	3.6	3.6	-55,728
In-State Investments	417,101,459	3.6	3.6	-10,420
Diversified Real Assets	546,473,773	4.7	4.7	45,593
Cash	41,215,081	0.4	0.0	41,215,081
Total	11,618,715,290	100.0	100.0	

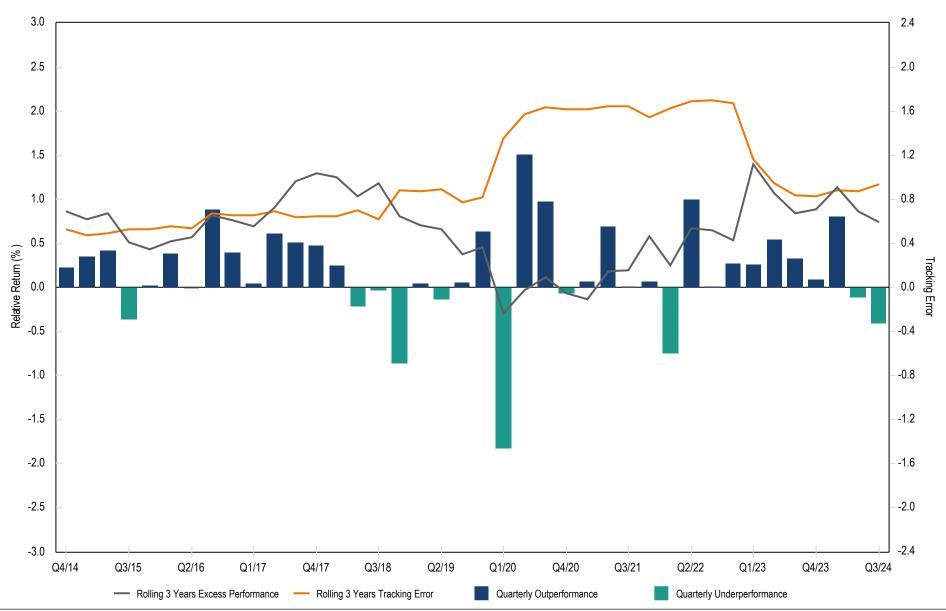
Residual Holdings value of \$1,790,527 & Transition Account value of \$47,276 included in Large Cap Domestic Equity value for styling purposes.





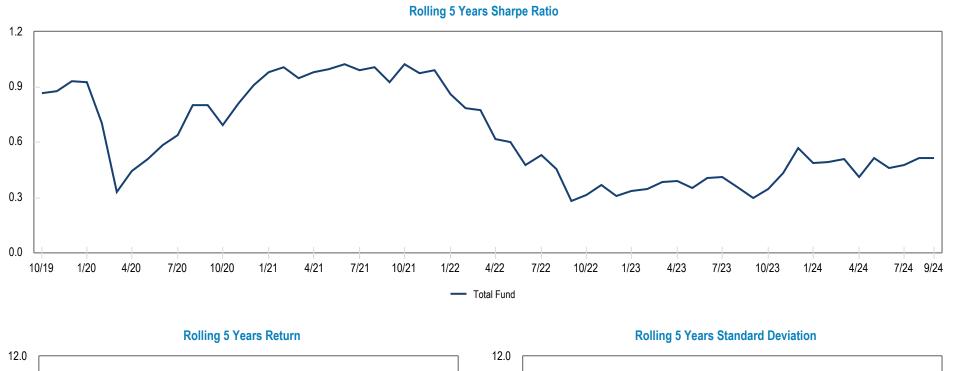


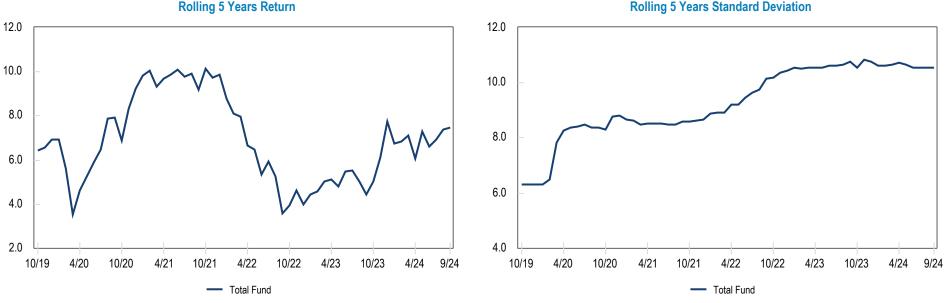
**Rolling Annualized Excess Performance and Tracking Error** 



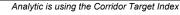
Analytic is using the Corridor Target Index





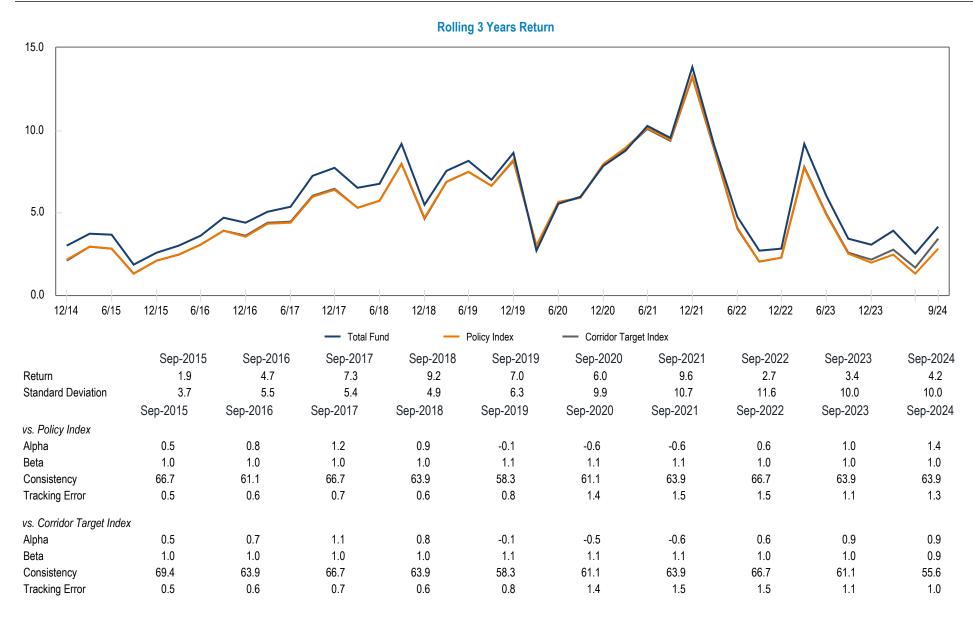






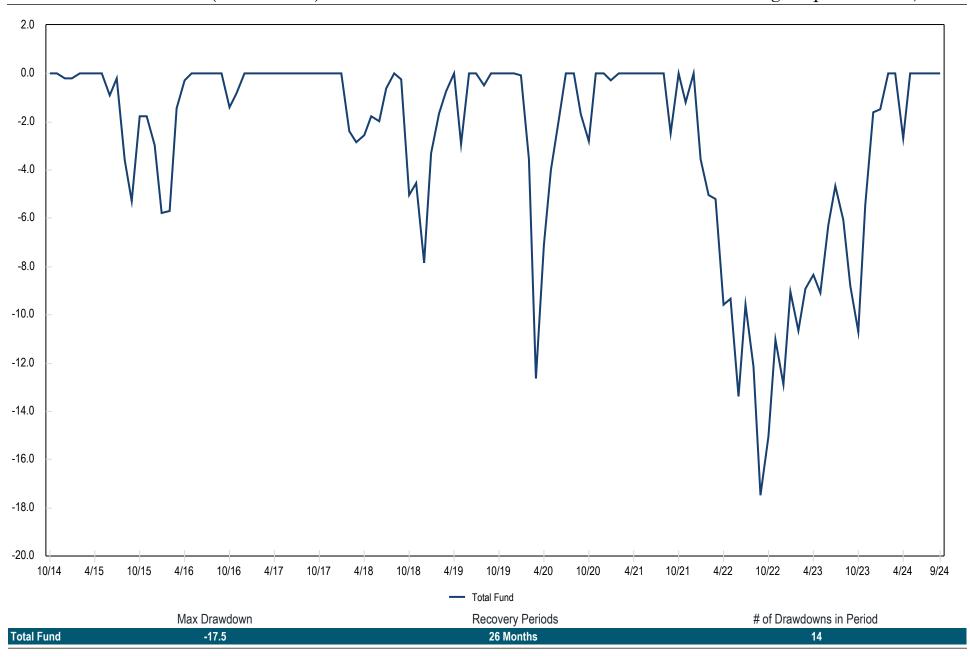


NDSIB - Legacy Fund Period Ending: September 30, 2024





NDSIB - Legacy Fund Period Ending: September 30, 2024





Total Fund Risk Statistics (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	1	Yr	3	Yrs	5	Yrs	10	Yrs
	Total Fund	Policy Index						
Return Summary Statistics								
Up Market Periods	9	9	21	21	39	39	81	81
Down Market Periods	3	3	15	15	21	21	39	39
Maximum Return	5.9	6.0	5.9	6.0	7.1	7.6	7.1	7.6
Minimum Return	-2.7	-2.3	-6.1	-6.3	-9.4	-7.8	-9.4	-7.8
Return	19.6	17.4	4.2	2.9	7.5	6.3	6.9	6.0
Cumulative Return	19.6	17.4	13.0	8.8	43.3	35.9	94.6	79.2
Active Return	1.9	0.0	1.2	0.0	1.1	0.0	0.9	0.0
Risk Summary Statistics								
Beta	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Upside Risk	2.5	2.4	7.7	7.6	8.2	8.0	6.9	6.6
Downside Risk	3.4	3.1	6.6	7.1	7.0	6.8	5.7	5.5
Risk/Return Summary Statistics	;							
Standard Deviation	7.8	7.6	10.0	10.3	10.6	10.3	8.7	8.4
Alpha	1.9	0.0	1.4	0.0	1.0	0.0	0.7	0.0
Sharpe Ratio	1.7	1.5	0.1	0.0	0.5	0.4	0.6	0.5
Active Return/Risk	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Tracking Error	1.6	0.0	1.3	0.0	1.4	0.0	1.2	0.0
Information Ratio	1.1	-	1.0	-	0.8	-	0.7	-
Correlation Statistics								
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	66.7	100.0	63.9	100.0	66.7	100.0	64.2	100.0



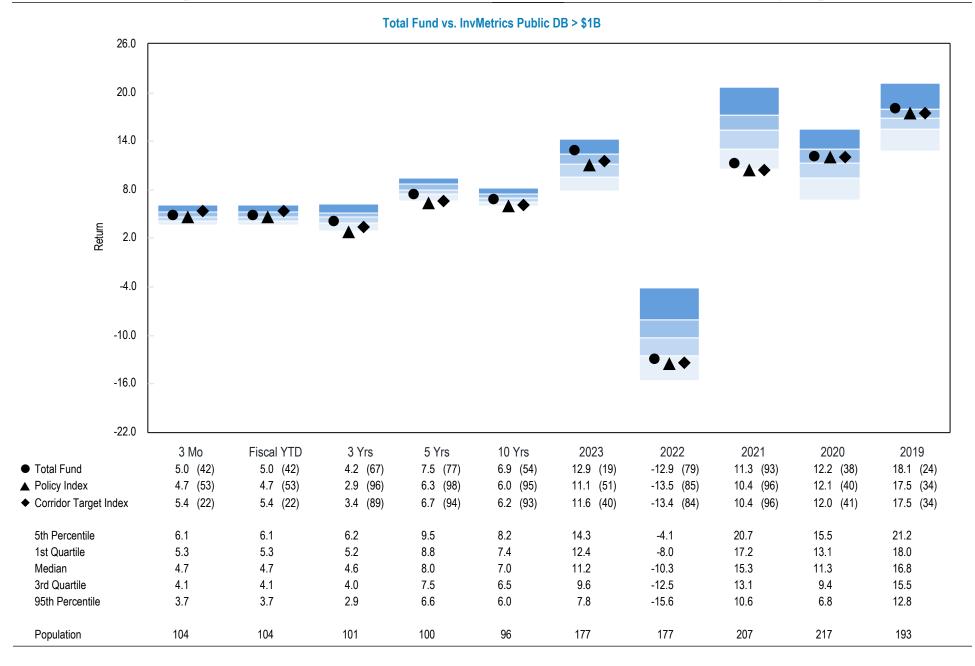
Total Fund Risk Statistics (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

		1 Yr		3 Yrs		5 Yrs		10 Yrs
	<b>Total Fund</b>	Corridor Target Index	Total Fund	Corridor Target Index	Total Fund	Corridor Target Index	Total Fund	Corridor Target Index
Return Summary Statistics								
Up Market Periods	9	9	21	21	39	39	81	81
Down Market Periods	3	3	15	15	21	21	39	39
Maximum Return	5.9	6.1	5.9	6.1	7.1	7.6	7.1	7.6
Minimum Return	-2.7	-2.7	-6.1	-6.3	-9.4	-7.8	-9.4	-7.8
Return	19.6	19.2	4.2	3.4	7.5	6.7	6.9	6.2
Cumulative Return	19.6	19.2	13.0	10.7	43.3	38.2	94.6	82.3
Active Return	0.3	0.0	0.7	0.0	0.7	0.0	0.7	0.0
Risk Summary Statistics								
Beta	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0
Upside Risk	2.5	2.6	7.7	7.8	8.2	8.1	6.9	6.7
Downside Risk	3.4	3.6	6.6	7.2	7.0	6.9	5.7	5.5
Risk/Return Summary Stati	stics							
Standard Deviation	7.8	8.1	10.0	10.6	10.6	10.5	8.7	8.5
Alpha	1.1	0.0	0.9	0.0	0.7	0.0	0.6	0.0
Sharpe Ratio	1.7	1.6	0.1	0.0	0.5	0.5	0.6	0.6
Active Return/Risk	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Tracking Error	0.7	0.0	1.0	0.0	1.3	0.0	1.1	0.0
Information Ratio	0.5	-	0.7	-	0.6	-	0.6	-
Correlation Statistics								
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	50.0	100.0	55.6	100.0	61.7	100.0	61.7	100.0



NDSIB - Legacy Fund Period Ending: September 30, 2024

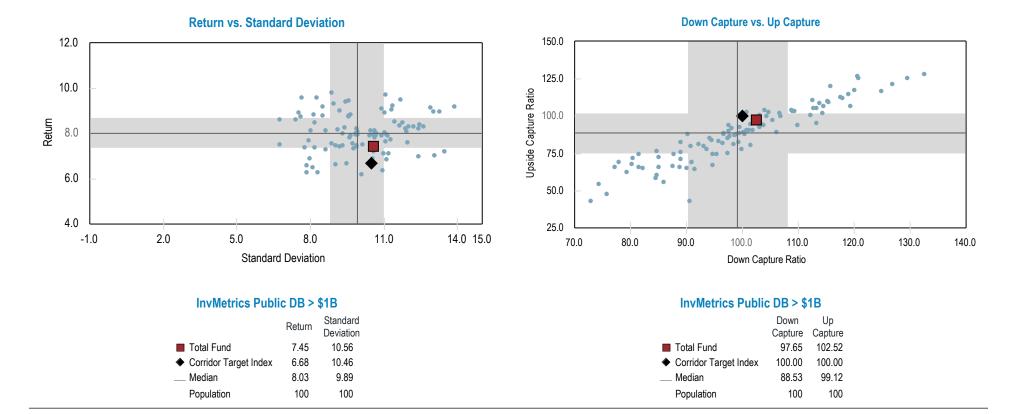




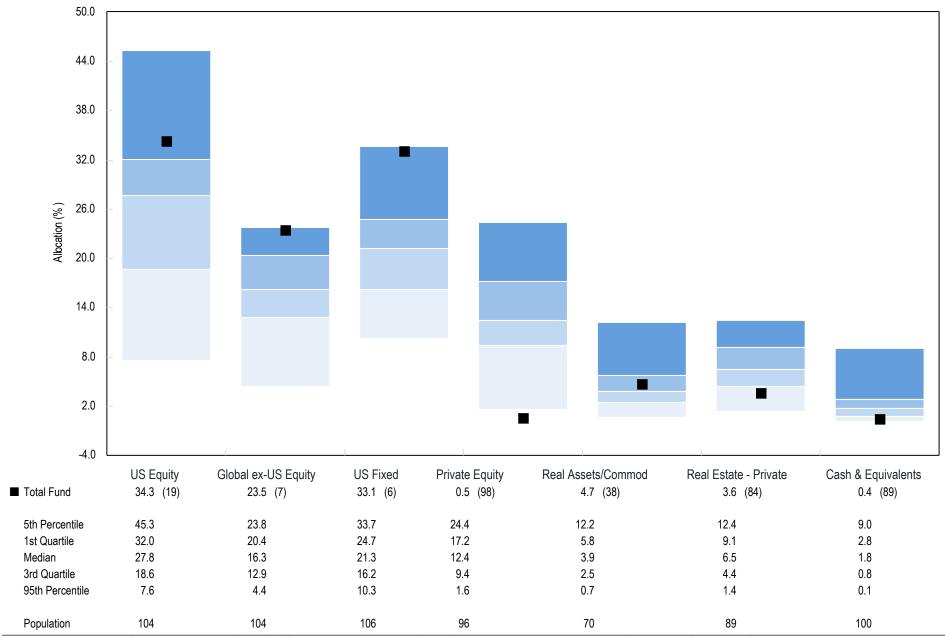
Total Fund Risk Analysis 5 Years (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	7.45	10.56	0.73	1.00	0.99	102.52	97.65	0.57	1.29	0.52
Corridor Target Index	6.68	10.46	0.00	1.00	1.00	100.00	100.00	-	0.00	0.45



NDSIB - Legacy Fund Period Ending: September 30, 2024



In-State Equity included in US equity & In-State Fixed Income included in US Fixed for styling purposes. InvMetrics Public DB > \$1B is the Plan Sponsor Peer Group.



Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	11,618,715,290	100.0	5.0	5.0	10.9	19.6	4.2	7.5	6.7	6.9
Policy Index			4.7	4.7	9.3	17.4	2.9	6.3	6.0	6.0
Corridor Target Index			5.4	5.4	10.6	19.2	3.4	6.7	6.2	6.2
Total Equity	6,713,961,246	57.8	6.1	6.1	16.8	29.5	6.9	11.8	•	•
Total Equity Blend			7.0	7.0	17.1	30.1	7.2	11.7	-	-
Public Equity	6,649,735,999	57.2	6.2	6.2	16.9	29.6	•	-	•	•
MSCI AC World IMI Index (Net)			6.8	6.8	17.8	31.0	-	-	-	-
Domestic Equity	3,922,743,335	33.8	6.1	6.1	19.3	33.3	9.9	14.3	12.3	12.0
Russell 3000 Index			6.2	6.2	20.6	35.2	10.3	15.3	13.7	12.8
Domestic All Cap Equity	106,805,773	0.9				-		-		
Russell 3000 Index			-	-	-	-	-	-	-	-
Large Cap	3,624,897,895	31.2	6.1	6.1	22.3	36.8	11.8	16.4	14.3	13.3
Russell 1000 Index			6.1	6.1	21.2	35.7	10.8	15.6	14.2	13.1
Small Cap	191,039,667	1.6	7.9	7.9	4.9	16.7	1.8	6.8	5.5	7.5
Russell 2000 Index			9.3	9.3	11.2	26.8	1.8	9.4	7.4	8.8
International Equity	2,726,945,388	23.5	6.2	6.2	13.4	24.4	2.8	8.2	5.7	6.2
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	3.7	7.7	5.4	5.3
International Equity All Cap	963,273,020	8.3	3.4	3.4	12.6	23.6		-		
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	-	-	-	-
Developed International Equity	1,252,959,924	10.8	8.0	8.0	•	-				
MSCI World ex U.S. (Net)			7.8	7.8	13.1	25.0	-	-	-	-
International Developed Large Cap	1,081,044,433	9.3	7.7	7.7	13.0	24.8				
MSCI World ex U.S. (Net)			7.8	7.8	13.1	25.0	-	-	-	-
International Developed Small Cap	171,915,491	1.5	9.6	9.6	12.9	24.3				
MSCI World ex U.S. Small Cap Index (Net)			10.4	10.4	11.5	23.4	-	-	-	-
Emerging Markets	510,712,444	4.4	7.4	7.4	15.4	24.4		-		
MSCI Emerging Markets (Net)			8.7	8.7	16.9	26.1	-	-	-	-
Private Equity	64,225,248	0.6	5.1	5.1	7.0	9.0	5.3	•	•	
Private Equity Benchmark			2.8	2.8	-	-	-	-	-	-
Total Income	3,482,627,487	30.0	4.5	4.5	5.1	11.9	-0.1	1.6	2.7	3.2
Total Income Blend			4.6	4.6	3.9	11.0	-1.6	0.2	1.4	1.8
Core Fixed Income	2,112,451,230	18.2	5.3	5.3	5.1	13.0	-	-	-	
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-	-	-	-
Private Credit	674,049,068	5.8	1.8	1.8	7.0	9.7	-	-	-	
Morningstar LSTA Leveraged Loan Index + 100 bps			2.3	2.3	7.3	10.7	-	-	-	-

Domestic All Cap Equity funded 08/01/2024. Residual Holdings value \$1,790,527 included in Total Fund value. Transition Account value of \$47,276 included in Total Equity value.



Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
High Yield	696,127,189	6.0	4.8	4.8						•
Blmbg. U.S. High Yield - 2% Issuer Cap			5.3	5.3	-	-	-	-	-	-
Total Real Assets	962,019,491	8.3	0.6	0.6	-1.6	-0.9	1.5	3.7		
Total Real Asset Blend			-0.7	-0.7	-	-	-	-	-	-
Real Estate	415,545,718	3.6	-0.8	-0.8	-10.3	-10.4	0.4	1.6	2.8	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-0.8	-8.4	-10.3	1.1	2.6	3.8	5.8
Infrastructure	546,473,773	4.7	1.7	1.7	6.4	7.4	3.5	5.5	5.3	4.4
NFI-ODCE Equal-Weighted +1% (Smoothed Monthly Return) 1Q Lag			-0.6	-0.6	-7.7	-9.4	2.1	3.6	4.8	6.9
In-State Investments	417,101,459	3.6	1.2	1.2	2.9					•
In-State Investments			1.2	1.2	2.9	-	-	-	-	-
In-State Fixed Income	362,243,656	3.1	0.9	0.9	2.7					-
In-State Fixed Income			0.9	0.9	2.7	-	-	-	-	-
In-State Equity	54,857,803	0.5	3.5	3.5	3.9					•
In-State Equity			3.5	3.5	3.9	-	-	-	-	-
Cash and Equivalents	41,215,081	0.4	1.3	1.3	4.0	5.4	3.5	2.3	2.1	1.6
90 Day U.S. Treasury Bill			1.4	1.4	4.0	5.5	3.5	2.3	2.2	1.6



Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	11,618,715,290	100.0	5.0	5.0	10.9	19.6	4.2	7.5	6.9
Policy Index			4.7	4.7	9.3	17.4	2.9	6.3	6.0
Corridor Target Index			5.4	5.4	10.6	19.2	3.4	6.7	6.2
Total Equity	6,713,961,246	57.8	6.1	6.1	16.8	29.5	6.9	11.8	-
Total Equity Blend			7.0	7.0	17.1	30.1	7.2	11.7	-
Public Equity	6,649,735,999	57.2	6.2	6.2	16.9	29.6			-
MSCI AC World IMI Index (Net)			6.8	6.8	17.8	31.0	-	-	-
Domestic Equity	3,922,743,335	33.8	6.1	6.1	19.3	33.3	9.9	14.3	12.0
Russell 3000 Index			6.2	6.2	20.6	35.2	10.3	15.3	12.8
Domestic All Cap Equity	106,805,773	0.9							-
Russell 3000 Index			6.2	6.2	-	-	-	-	-
Two Sigma Active Extension U.S. All Cap Equity	106,805,773	0.9	-	-	-	-	-	-	-
Large Cap	3,624,897,895	31.2	6.1	6.1	22.3	36.8	11.8	16.4	13.3
Russell 1000 Index			6.1	6.1	21.2	35.7	10.8	15.6	13.1
LA Capital Large Cap Growth	87,314,844	0.8	2.8	2.8	27.9	45.1	13.1	20.5	-
NTAM R1000 Index	1,087,441,156	9.4	6.1	6.1	21.2	35.7	-	-	-
NTAM Quant Enh R1000	518,431,533	4.5	6.2	6.2	23.0	36.9	-	-	-
Parametric-Clifton Enh R1000	520,715,818	4.5	5.9	5.9	21.4	35.8	11.0	15.4	-
LA Capital Enhanced ex Alpha Fd	821,408,272	7.1	5.5	5.5	22.3	36.2	11.4	16.7	-
LA Capital Enhanced Alpha Fund	589,586,272	5.1	7.4	7.4	23.6	38.7	13.2	16.8	-
Small Cap	191,039,667	1.6	7.9	7.9	4.9	16.7	1.8	6.8	7.5
Russell 2000 Index			9.3	9.3	11.2	26.8	1.8	9.4	8.8
Atlanta Capital	50,656,893	0.4	9.0	9.0	8.0	20.6	8.2	-	-
Riverbridge Small Cap Growth	48,909,087	0.4	6.5	6.5	-0.9	9.1	-8.8	-	-
Sycamore Small Cap Value	49,163,479	0.4	7.0	7.0	4.7	16.6	5.7	-	-
NTAM R2000 Index	42,310,207	0.4	9.3	9.3	11.2	26.8	-	-	-
International Equity	2,726,945,388	23.5	6.2	6.2	13.4	24.4	2.8	8.2	6.2
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	3.7	7.7	5.3
International Equity All Cap	963,273,020	8.3	3.4	3.4	12.6	23.6			•
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	-	-	-
William Blair Int'l Leaders	448,858,324	3.9	3.2	3.2	8.9	22.8	-3.0	6.8	-
Arrowstreet ACWI ex US	514,414,696	4.4	3.5	3.5	15.8	24.7	-	-	-

Two Sigma Active Extension U.S. All Cap Equity funded 08/01/2024. Residual Holdings value of \$1,790,527 included in Total Fund value. Fiscal year 06/30.



Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Developed International Equity	1,252,959,924	10.8	8.0	8.0					-
MSCI World ex U.S. (Net)			7.8	7.8	13.1	25.0	-	-	-
International Developed Large Cap	1,081,044,433	9.3	7.7	7.7	13.0	24.8			-
MSCI World ex U.S. (Net)			7.8	7.8	13.1	25.0	-	-	-
State St MSCI World exUS	1,081,044,433	9.3	7.7	7.7	13.0	24.8	-	-	-
International Developed Small Cap	171,915,491	1.5	9.6	9.6	12.9	24.3			-
MSCI World ex U.S. Small Cap Index (Net)			10.4	10.4	11.5	23.4	-	-	-
DFA Intl Small Cap Value	69,483,729	0.6	8.5	8.5	15.4	26.3	7.7	9.9	-
State St MSCI exUS Small	102,431,762	0.9	10.3	10.3	11.3	23.0	-	-	-
Emerging Markets	510,712,444	4.4	7.4	7.4	15.4	24.4			-
MSCI Emerging Markets (Net)			8.7	8.7	16.9	26.1	-	-	-
DFA EM All Cap Core	256,067,638	2.2	6.6	6.6	15.2	24.3	-	-	-
State St MSCI EM China	70,805,107	0.6	23.5	23.5	29.7	24.2	-	-	-
State St MSCI EM ex China	183,839,699	1.6	3.1	3.1	11.1	25.4	-	-	-
Transition Account	47,276	0.0							
Private Equity	64,225,248	0.6	5.1	5.1	7.0	9.0	5.3		-
Private Equity Benchmark			2.8	2.8	-	-	-	-	-
Altor Fund VI	8,148,675	0.1	55.2	55.2	34.6	-	-	-	-
Kelso	11,945,654	0.1	3.0	3.0	19.2	-	-	-	-
Portfolio Advisors GP Solutions	15,676,237	0.1	-6.3	-6.3	-	-	-	-	-
HIG Capital	4,303,052	0.0	-1.1	-1.1	-	-	-	-	-
Cerberus Global II	15,118,094	0.1	0.0	0.0	-	-	-	-	-
Fortress	9,033,535	0.1	25.4	25.4	-	-	-	-	-
Total Income	3,482,627,487	30.0	4.5	4.5	5.1	11.9	-0.1	1.6	3.2
Total Income Blend			4.6	4.6	3.9	11.0	-1.6	0.2	1.8
Core Fixed Income	2,112,451,230	18.2	5.3	5.3	5.1	13.0		-	-
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-	-	-
Allspring Med Quality Credit	180,249,470	1.6	6.0	6.0	6.5	16.2	-0.4	2.6	-
Manulife-Declaration TRBF	104,122	0.0	11.7	11.7	10.0	19.3	3.7	4.0	-
PIMCO Core Plus Constrained	553,376,046	4.8	5.0	5.0	5.5	12.8	-	-	-
Prudential Core Plus	554,325,352	4.8	5.3	5.3	5.4	12.9	-1.2	0.9	-
State Street Credit Index	62,188,209	0.5	5.7	5.7	5.5	14.0	-	-	-
State Street Gov Index	221,448,588	1.9	4.7	4.7	3.9	9.7	-	-	-
Western Asset Core Plus	540,759,443	4.7	5.7	5.7	4.7	13.5	-1.9	0.2	-

Two Sigma Active Extension U.S. All Cap Equity funded 08/01/2024. Residual Holdings value of \$1,790,527 included in Total Fund value. Fiscal year 06/30.



Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Private Credit	674,049,068	5.8	1.8	1.8	7.0	9.7	-	-	-
Morningstar LSTA Leveraged Loan Index + 100 bps			2.3	2.3	7.3	10.7	-	-	-
Ares ND Credit Strategies	194,448,021	1.7	2.3	2.3	7.8	12.0	9.5	8.7	-
Cerberus ND Private Credit	231,257,578	2.0	0.1	0.1	5.3	7.0	7.6	8.7	-
PIMCO DISCO II	118,097,212	1.0	3.3	3.3	8.8	11.7	5.9	6.0	-
PIMCO Bravo II	1,266,510	0.0	4.0	4.0	6.5	12.4	-10.6	-5.5	-
Sixth Street Partners - TAO	128,979,747	1.1	3.1	3.1	7.3	9.9	9.6	-	-
High Yield	696,127,189	6.0	4.8	4.8					-
Blmbg. U.S. High Yield - 2% Issuer Cap			5.3	5.3	-	-	-	-	-
Nomura High Yield	348,202,570	3.0	4.8	4.8	-	-	-	-	-
PineBridge High Yield	347,924,619	3.0	4.7	4.7	-	-	-	-	-
Total Real Assets	962,019,491	8.3	0.6	0.6	-1.6	-0.9	1.5	3.7	-
Total Real Assets Blend			-0.7	-0.7	-	-	-	-	-
Real Estate	415,545,718	3.6	-0.8	-0.8	-10.3	-10.4	0.4	1.6	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-0.8	-8.4	-10.3	1.1	2.6	5.8
Invesco Core Real Estate	186,540,612	1.6	-1.0	-1.0	-10.3	-10.3	0.2	1.8	-
Invesco RE Fund VI	48,710,716	0.4	-2.6	-2.6	-11.9	-14.3	-	-	-
JP Morgan Income & Growth Fd	180,294,390	1.6	0.0	0.0	-9.9	-9.4	0.4	1.2	-
Infrastructure	546,473,773	4.7	1.7	1.7	6.4	7.4	3.5	5.5	4.4
NFI-ODCE Equal-Weighted +1% (Smoothed Monthly Return) 1Q Lag			-0.6	-0.6	-7.7	-9.4	2.1	3.6	6.9
ISQ Global Infrastructure II	87,938,389	8.0	2.8	2.8	9.4	10.5	11.2	12.0	-
ISQ Global Infrastructure III	57,911,988	0.5	2.7	2.7	17.0	12.6	-	-	-
JP Morgan IIF Infrastructure	108,143,695	0.9	1.9	1.9	8.9	9.8	7.0	7.3	-
Grosvenor CIS Fund II	47,459,203	0.4	0.7	0.7	2.5	1.6	9.3	11.5	-
Grosvenor CIS Fund III	47,225,347	0.4	2.1	2.1	5.7	4.0	-	-	-
Macquarie Infrastructure Fund IV	96,824,780	8.0	2.8	2.8	3.1	3.9	9.0	10.4	-
Macquarie Infrastructure Fund V	100,537,178	0.9	-0.7	-0.7	2.5	3.0	12.1	-	-
Western US TIPS	433,193	0.0	1.3	1.3	-12.3	-8.4	-7.0	-1.4	0.3



Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Legacy Fund Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
In-State Investments	417,101,459	3.6	1.2	1.2	2.9				
In-State Investments			1.2	1.2	2.9	-	-	-	-
In-State Fixed Income	362,243,656	3.1	0.9	0.9	2.7				
In-State Fixed Income			0.9	0.9	2.7	-	-	-	-
BND Legacy Infrastructure Loan Fund	49,577,272	0.4	0.5	0.5	1.5	-	-	-	-
BND CDs	312,666,384	2.7	1.0	1.0	2.9	3.8	3.2	3.0	-
In-State Equity	54,857,803	0.5	3.5	3.5	3.9				
In-State Equity			3.5	3.5	3.9	-	-	-	-
50 South Capital	54,857,803	0.5	3.5	3.5	-1.3	-1.3	-14.1	-	-
Cash and Equivalents	41,215,081	0.4	1.3	1.3	4.0	5.4	3.5	2.3	1.6
90 Day U.S. Treasury Bill			1.4	1.4	4.0	5.5	3.5	2.3	1.6
Northern Trust Cash Account	17,157,422	0.1	1.3	1.3	4.0	5.3	3.4	2.2	-
BND Cash	24,057,659	0.2	1.3	1.3	4.1	5.5	3.6	2.4	-

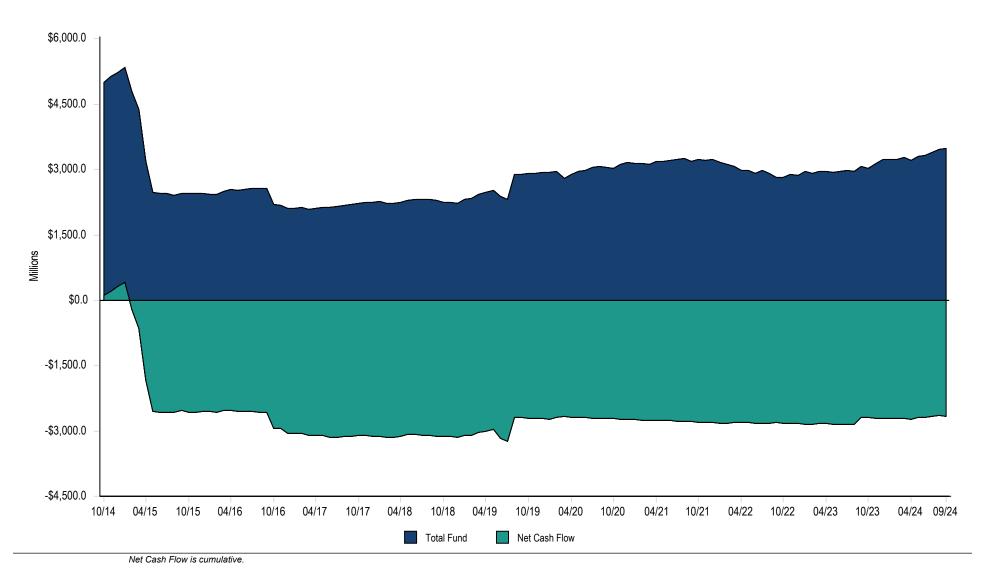
# **Consolidated Insurance Trust**

**Investment Performance Review Period Ending: September 30, 2024** 



**VERUSINVESTMENTS.COM** 

SEATTLE 206.622.3700 CHICAGO 312.815.5228 PITTSBURGH 412.784.6678 LOS ANGELES 310.297.1777 SAN FRANCISCO 415.362.3484

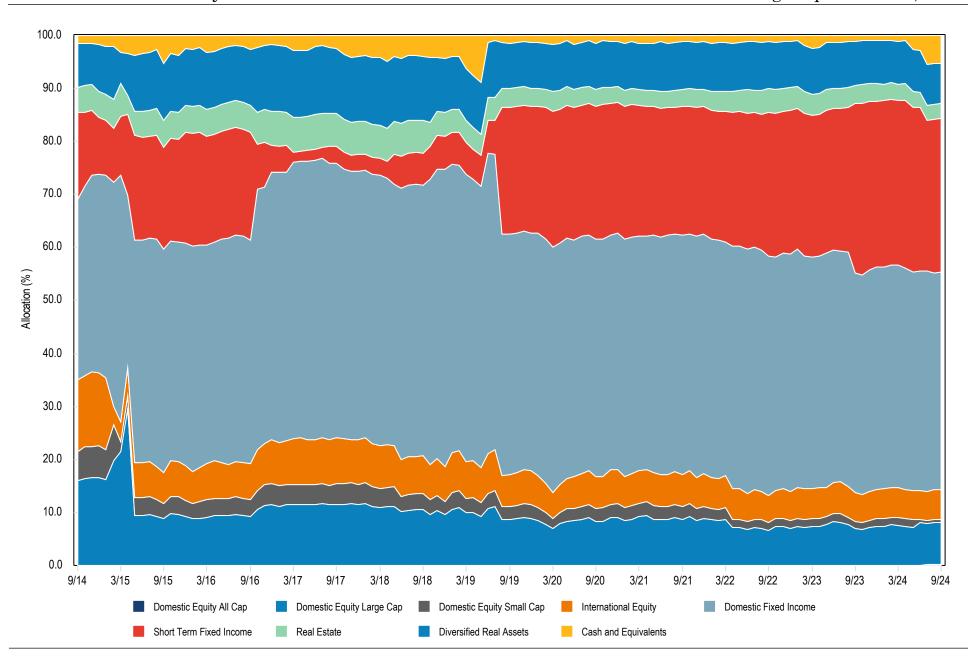


6.8%	7.9%
1.5%	
5.5%	U.070
5.5%	5.7%
41.1%	41.0%
29.0%	29.0%
2.8%	2.8%
7.7%	7.6%
5.3%	5.2%
Policy	Actual

	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Differences (\$)
Domestic Equity All Cap	8,465,545	0.2	0.2	-140,463
Domestic Equity Large Cap	273,766,969	7.9	6.8	36,492,003
Domestic Equity Small Cap	21,594,590	0.6	1.5	-31,191,251
International Equity	197,101,445	5.7	5.5	5,295,470
Domestic Fixed Income	1,429,395,023	41.0	41.1	-3,244,046
Short Term Fixed Income	1,009,890,552	29.0	29.0	60,839
Real Estate	96,424,680	2.8	2.8	-1,412,047
Diversified Real Assets	264,852,178	7.6	7.7	-2,839,975
Cash and Equivalents	182,722,913	5.2	5.3	-3,020,530
Total	3,484,213,896	100.0	100.0	

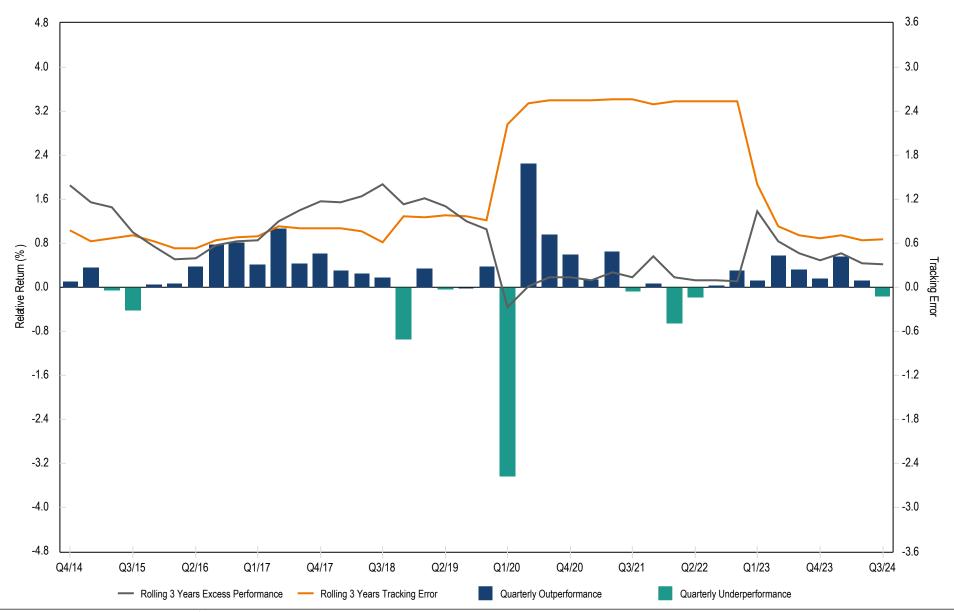
Residual Holdings value of \$212,521 included in Domestic Equity Large Cap value for styling purposes. Policy Asset Allocation based upon 8/31/2024 data.







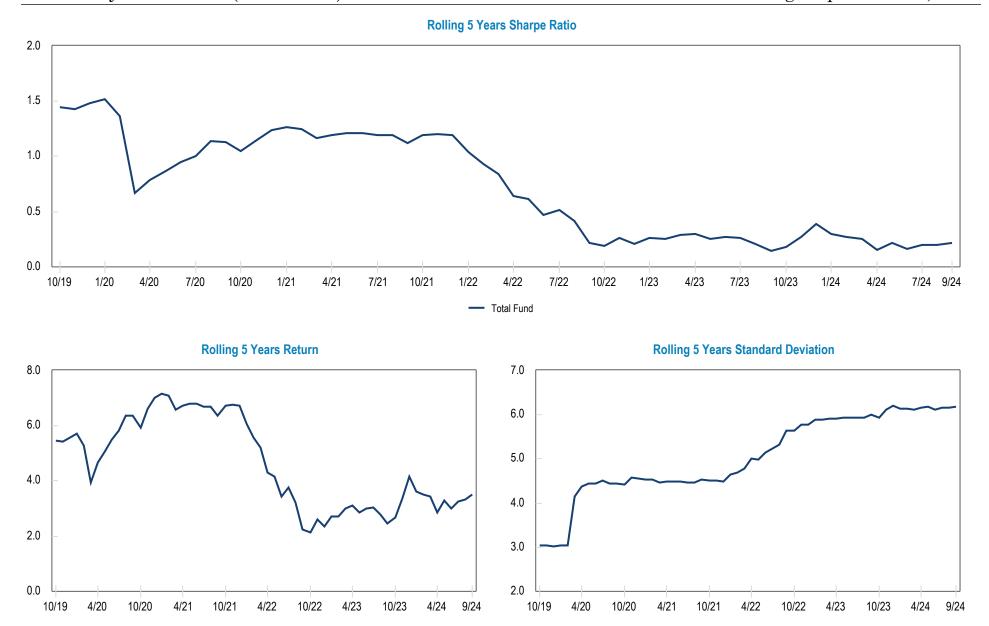
**Rolling Annualized Excess Performance and Tracking Error** 



Analytic is using the Corridor Target Index



Total Fund

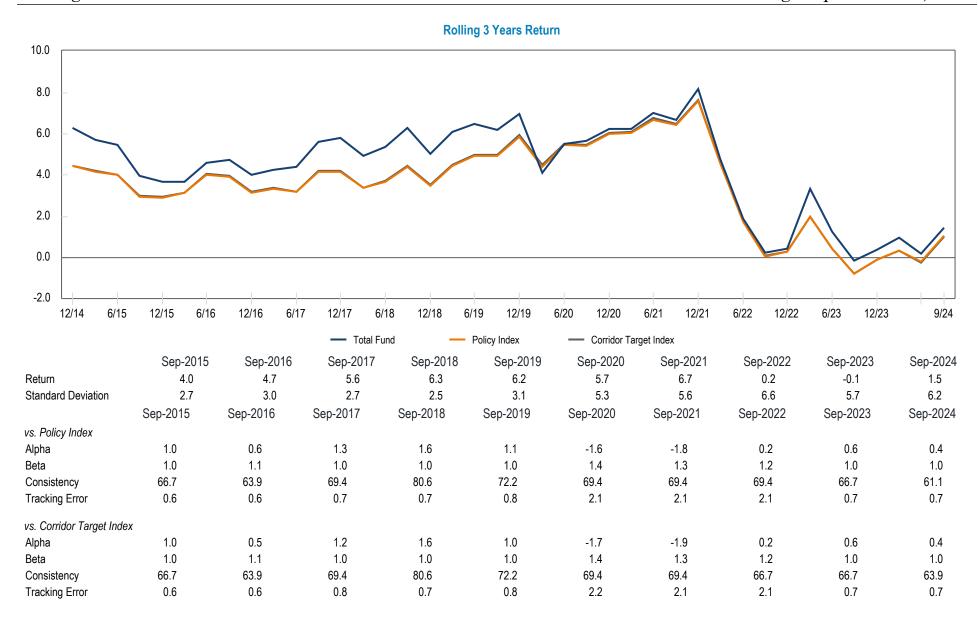




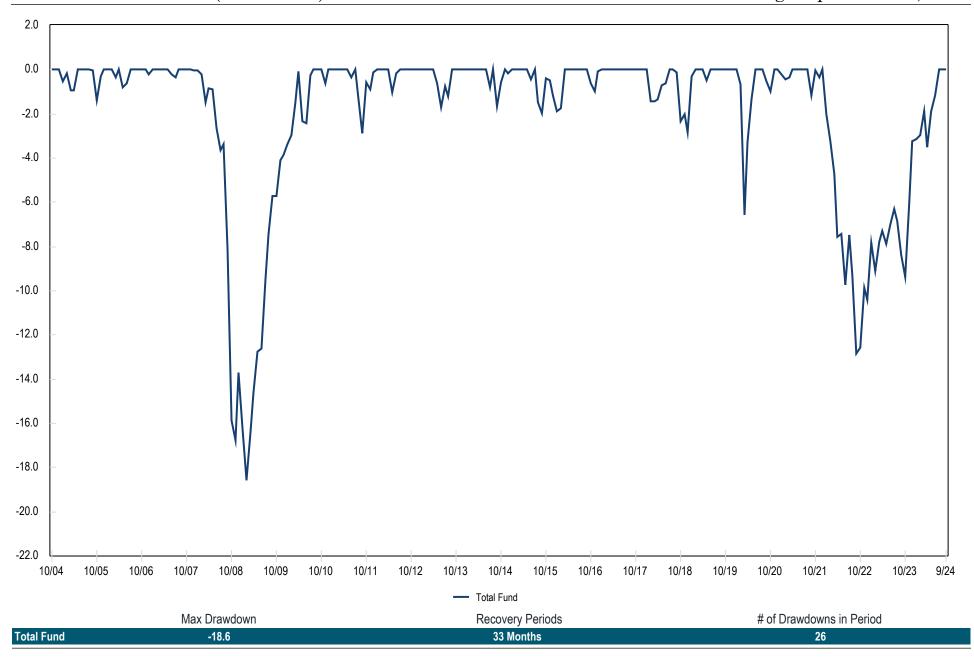
Total Fund











Total Fund Risk Statistics (Net of Fees)

NDSIB - Consolidated Insurance Trust Period Ending: September 30, 2024

	1	Yr	3	Yrs	5 Yrs		10	Yrs
	Total Fund	Policy Index						
Return Summary Statistics								
Up Market Periods	8	8	19	19	35	35	78	78
Down Market Periods	4	4	17	17	25	25	42	42
Maximum Return	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Minimum Return	-1.6	-1.7	-4.0	-4.0	-5.9	-4.0	-5.9	-4.0
Return	12.3	11.5	1.5	1.1	3.5	3.0	4.5	3.7
Cumulative Return	12.3	11.5	4.4	3.2	18.9	16.1	55.3	44.4
Active Return	0.7	0.0	0.4	0.0	0.5	0.0	0.8	0.0
Risk Summary Statistics								
Beta	1.0	1.0	1.0	1.0	1.1	1.0	1.1	1.0
Upside Risk	1.6	1.6	4.6	4.6	4.6	4.3	3.9	3.6
Downside Risk	1.9	2.1	4.2	4.4	4.2	3.6	3.2	2.8
isk/Return Summary Statistic	cs							
Standard Deviation	5.0	5.1	6.2	6.3	6.2	5.6	4.9	4.4
Alpha	1.0	0.0	0.4	0.0	0.3	0.0	0.5	0.0
Sharpe Ratio	1.3	1.1	-0.3	-0.4	0.2	0.2	0.6	0.5
Active Return/Risk	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.0
Tracking Error	0.4	0.0	0.7	0.0	1.7	0.0	1.3	0.0
Information Ratio	1.7	-	0.5	-	0.3	-	0.6	-
orrelation Statistics								
R-Squared	1.0	1.0	1.0	1.0	0.9	1.0	0.9	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	58.3	100.0	61.1	100.0	68.3	100.0	67.5	100.0



Total Fund Risk Statistics (Net of Fees)

NDSIB - Consolidated Insurance Trust Period Ending: September 30, 2024

		1 Yr		3 Yrs		5 Yrs		10 Yrs
	<b>Total Fund</b>	Corridor Target Index	Total Fund	Corridor Target Index	Total Fund	Corridor Target Index	Total Fund	<b>Corridor Target Index</b>
Return Summary Statistics								
Up Market Periods	8	8	19	19	35	35	78	78
Down Market Periods	4	4	17	17	25	25	42	42
Maximum Return	3.7	3.6	3.7	3.6	3.7	3.6	3.7	3.6
Minimum Return	-1.6	-1.7	-4.0	-3.9	-5.9	-3.9	-5.9	-3.9
Return	12.3	11.5	1.5	1.0	3.5	3.0	4.5	3.8
Cumulative Return	12.3	11.5	4.4	3.1	18.9	16.0	55.3	44.7
Active Return	0.7	0.0	0.4	0.0	0.5	0.0	0.7	0.0
Risk Summary Statistics								
Beta	1.0	1.0	1.0	1.0	1.1	1.0	1.1	1.0
Upside Risk	1.6	1.6	4.6	4.6	4.6	4.3	3.9	3.6
Downside Risk	1.9	2.1	4.2	4.3	4.2	3.6	3.2	2.8
Risk/Return Summary Statis	stics							
Standard Deviation	5.0	5.1	6.2	6.3	6.2	5.5	4.9	4.4
Alpha	1.0	0.0	0.4	0.0	0.3	0.0	0.5	0.0
Sharpe Ratio	1.3	1.1	-0.3	-0.4	0.2	0.2	0.6	0.5
Active Return/Risk	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.0
Tracking Error	0.4	0.0	0.7	0.0	1.7	0.0	1.3	0.0
Information Ratio	1.7	-	0.6	-	0.3	-	0.6	-
Correlation Statistics								
R-Squared	1.0	1.0	1.0	1.0	0.9	1.0	0.9	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	66.7	100.0	63.9	100.0	70.0	100.0	68.3	100.0



# Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Consolidated Insurance Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Мо	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	3,484,213,896	100.0	4.1	4.1	6.3	12.3	1.5	3.5	4.0	4.5
Policy Index			4.2	4.2	5.7	11.5	1.1	3.0	3.6	3.7
Corridor Target Index			4.2	4.2	5.8	11.5	1.0	3.0	3.6	3.8
Total Equity	500,716,028	14.4	6.0	6.0	17.0	29.6	7.3	12.2	-	-
Total Equity Blend			7.0	7.0	-	-	-	-	-	-
Domestic Equity	303,614,583	8.7	6.1	6.1	19.3	33.1	9.9	14.5	12.5	12.2
Russell 3000 Index			6.2	6.2	20.6	35.2	10.3	15.3	13.7	12.8
Domestic Equity All Cap	8,465,545	0.2			•		-	•	-	-
Russell 3000 Index			-	-	-	-	-	-	-	-
Large Cap	273,554,448	7.9	6.1	6.1	22.5	36.8	11.8	16.5	14.4	13.4
Russell 1000 Index			6.1	6.1	21.2	35.7	10.8	15.6	14.2	13.1
Small Cap	21,594,590	0.6	7.2	7.2	4.4	16.2	2.0	6.7	5.4	7.5
Russell 2000 Index			9.3	9.3	11.2	26.8	1.8	9.4	7.4	8.8
International Equity	197,101,445	5.7	5.9	5.9	13.5	24.4	3.5	8.7	5.9	6.4
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	3.7	7.7	5.4	5.3
International All Cap	81,849,800	2.3	3.4	3.4	13.2	24.0				-
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	-	-	-	-
Developed International Large Cap	70,499,398	2.0	7.7	7.7	12.9	24.8				-
MSCI World ex U.S. (Net)			7.8	7.8	13.1	25.0	-	-	-	-
Developed International Small Cap	11,121,691	0.3	9.4	9.4	12.9	24.1				-
MSCI World ex U.S. Small Cap Index (Net)			10.4	10.4	11.5	23.4	-	-	-	-
Emerging Markets	33,630,557	1.0	7.4	7.4	15.7	24.7				-
MSCI Emerging Markets (Net)			8.7	8.7	16.9	26.1	-	-	-	-
Domestic Fixed Income	1,429,395,023	41.0	5.2	5.2	5.2	12.9	-0.9	1.1	2.3	3.1
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	1.5	1.8
Open Fixed Income	1,372,018,627	39.4	5.3	5.3	5.1	12.9	-1.1	0.9	2.2	
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	1.5	-
Closed Fixed Income	57,376,396	1.6	3.3	3.3	8.7	11.7	5.3	5.3	5.4	
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	1.5	-
Short Term Fixed Income	1,009,890,552	29.0	2.6	2.6	5.5	8.3	2.2	2.4	2.5	2.2
Bloomberg U.S. Gov/Credit 1-3 Year Index			3.0	3.0	4.4	7.2	1.5	1.7	1.9	1.6

# Total Fund Asset Allocation & Performance (Net of Fees)

NDSIB - Consolidated Insurance Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Real Assets	361,276,858	10.4	2.3	2.3	0.7	3.0	1.2	2.8		
Total Real Assets			1.8	1.8	-	-	-	-	-	-
Real Estate	96,424,680	2.8	-0.6	-0.6	-10.1	-9.9	0.3	1.5	2.7	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-0.8	-8.4	-10.3	1.1	2.6	3.8	5.8
Diversified Real Assets	264,852,178	7.6	3.3	3.3	5.2	8.6	1.7	3.4	4.1	3.5
Diversified Real Assets Blend			2.7	2.7	3.4	6.4	1.1	3.0	3.3	2.8
Cash & Equivalents	182,722,913	5.2	1.3	1.3	3.9	5.4	3.5	2.3	2.1	1.6
90 Day U.S. Treasury Bill			1.4	1.4	4.0	5.5	3.5	2.3	2.2	1.6

#### Total Fund Performance Summary (Net of Fees)

NDSIB - Consolidated Insurance Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	3,484,213,896	100.0	4.1	4.1	6.3	12.3	1.5	3.5	4.5
Policy Index			4.2	4.2	5.7	11.5	1.1	3.0	3.7
Corridor Target Index			4.2	4.2	5.8	11.5	1.0	3.0	3.8
Total Equity	500,716,028	14.4	6.0	6.0	17.0	29.6	7.3	12.2	-
Total Equity Blend			7.0	7.0	-	-	-	-	-
Domestic Equity	303,614,583	8.7	6.1	6.1	19.3	33.1	9.9	14.5	12.2
Russell 3000 Index			6.2	6.2	20.6	35.2	10.3	15.3	12.8
Domestic Equity All Cap	8,465,545	0.2							
Russell 3000 Index			-	-	-	-	-	-	-
Two Sigma Active Extension U.S. All Cap Equity	8,465,545	0.2	-	-	-	-	-	-	-
Large Cap	273,554,448	7.9	6.1	6.1	22.5	36.8	11.8	16.5	13.4
Russell 1000 Index			6.1	6.1	21.2	35.7	10.8	15.6	13.1
LA Capital Large Cap Growth	7,373,303	0.2	2.8	2.8	28.2	45.4	13.5	20.8	16.6
NTAM R1000 Index	75,738,978	2.2	6.1	6.1	21.2	35.7	-	-	-
NTAM Quant Enh R1000	40,086,248	1.2	6.2	6.2	22.9	36.9	-	-	-
Parametric-Clifton Enh R1000	42,479,550	1.2	5.9	5.9	21.6	36.0	10.9	15.3	13.1
LA Capital Enhanced Alpha Fund	51,860,541	1.5	7.2	7.2	23.7	38.2	13.1	16.6	13.9
LA Capital Enhanced ex Alpha Fd	56,015,828	1.6	5.6	5.6	22.9	36.4	11.8	17.1	13.6
Small Cap	21,594,590	0.6	7.2	7.2	4.4	16.2	2.0	6.7	7.5
Russell 2000 Index			9.3	9.3	11.2	26.8	1.8	9.4	8.8
Atlanta Capital	7,127,413	0.2	9.0	9.0	8.3	21.3	8.4	-	-
NTAM R2000 Index	409,556	0.0	9.3	9.3	11.3	26.9	-	-	-
Riverbridge Small Cap Growth	7,079,479	0.2	6.7	6.7	-0.2	9.6	-8.3	-	-
Sycamore Small Cap Value	6,978,141	0.2	5.4	5.4	3.8	16.1	5.5	-	-
International Equity	197,101,445	5.7	5.9	5.9	13.5	24.4	3.5	8.7	6.4
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	3.7	7.7	5.3
International All Cap	81,849,800	2.3	3.4	3.4	13.2	24.0			
MSCI AC World ex USA IMI (Net)			8.2	8.2	13.9	25.1	-	-	-
Arrowstreet ACWI ex US	51,551,653	1.5	3.5	3.5	15.8	24.7	-	-	-
William Blair Int'l Leaders	30,298,147	0.9	3.2	3.2	9.1	22.9	-2.9	6.8	-
Developed International Large Cap	70,499,398	2.0	7.7	7.7	12.9	24.8		•	
MSCI World ex U.S. (Net)			7.8	7.8	13.1	25.0	-	-	-
State St MSCI World exUS	70,499,398	2.0	7.8	7.8	13.0	24.9	-	-	-

Two Sigma Active Extension U.S. All Cap Equity funded 08/01/2024. State Street Gov Bond H funded 09/01/2024. Residual Holdings value of \$212,521 included in Total Fund value. Fiscal year 06/30.



# Total Fund Performance Summary (Net of Fees)

NDSIB - Consolidated Insurance Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Developed International Small Cap	11,121,691	0.3	9.4	9.4	12.9	24.1			
MSCI World ex U.S. Small Cap Index (Net)			10.4	10.4	11.5	23.4	-	-	-
DFA Intl Small Cap Value	4,876,150	0.1	8.5	8.5	15.4	26.2	7.7	9.8	6.2
State St MSCI exUS Small	6,245,541	0.2	10.3	10.3	11.4	23.1	-	-	-
Emerging Markets	33,630,557	1.0	7.4	7.4	15.7	24.7	-		-
MSCI Emerging Markets (Net)			8.7	8.7	16.9	26.1	-	-	-
DFA EM All Cap Core	16,657,795	0.5	6.6	6.6	15.2	24.3	-	-	-
State St MSCI EM China	4,741,596	0.1	23.5	23.5	29.5	24.0	-	-	-
State St MSCI EM ex China	12,231,166	0.4	3.1	3.1	11.1	25.3	-	-	-
Domestic Fixed Income	1,429,395,023	41.0	5.2	5.2	5.2	12.9	-0.9	1.1	3.1
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	1.8
Open Fixed Income	1,372,018,627	39.4	5.3	5.3	5.1	12.9	-1.1	0.9	
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	-
Allspring Med Quality Credit	116,377,295	3.3	6.0	6.0	6.6	16.3	-0.3	2.7	4.1
Manulife-Declaration TRBF	52,729	0.0	11.7	11.7	10.1	19.3	3.7	4.0	4.2
PIMCO Core Plus Constrained	352,338,113	10.1	4.8	4.8	5.4	12.7	-1.2	0.9	-
Prudential Core Plus	359,743,003	10.3	5.3	5.3	5.2	12.8	-1.2	0.9	2.8
Western Asset Core Plus	352,546,638	10.1	5.8	5.8	4.8	13.6	-1.8	0.3	2.5
State Street Credit Index	41,356,926	1.2	5.8	5.8	5.5	14.0	-	-	-
State Street Gov Index	148,740,406	4.3	4.7	4.7	4.0	9.7	-	-	-
State Street Gov Bond H	863,517	0.0	-	-	-	-	-	-	-
Closed Fixed Income	57,376,396	1.6	3.3	3.3	8.7	11.7	5.3	5.3	-
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	-
PIMCO Bravo II	1,322,896	0.0	4.0	4.0	6.5	12.4	-10.4	-5.4	1.0
PIMCO DISCO II	56,053,500	1.6	3.3	3.3	8.8	11.7	5.9	6.1	7.1
Short Term Fixed Income	1,009,890,552	29.0	2.6	2.6	5.5	8.3	2.2	2.4	2.2
Bloomberg U.S. Gov/Credit 1-3 Year Index			3.0	3.0	4.4	7.2	1.5	1.7	1.6
Barings Active Short Duration	504,937,850	14.5	2.2	2.2	6.1	8.5	2.1	2.4	-
JP Morgan Short Term Bond	504,952,702	14.5	3.0	3.0	4.9	8.0	2.2	2.5	2.1
Total Real Assets	361,276,858	10.4	2.3	2.3	0.7	3.0	1.2	2.8	-
Total Real Assets Blend			1.8	1.8	-	-	-	-	-
Real Estate	96,424,680	2.8	-0.6	-0.6	-10.1	-9.9	0.3	1.5	5.1
NFI-ODCE Equal-Weighted (Smoothed Monthly Return) 1Q Lag			-0.8	-0.8	-8.4	-10.3	1.1	2.6	5.8
Invesco Core Real Estate	53,231,112	1.5	-1.1	-1.1	-10.3	-10.3	0.2	1.8	5.4
JP Morgan Income & Growth Fd	43,193,567	1.2	0.0	0.0	-9.9	-9.4	0.4	1.2	4.8
•									

Two Sigma Active Extension U.S. All Cap Equity funded 08/01/2024. State Street Gov Bond H funded 09/01/2024. Residual Holdings value of \$212,521 included in Total Fund value. Fiscal year 06/30.



# Total Fund Performance Summary (Net of Fees)

NDSIB - Consolidated Insurance Trust Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Diversified Real Assets	264,852,178	7.6	3.3	3.3	5.2	8.6	1.7	3.4	3.5
Diversified Real Assets Blend			2.7	2.7	3.4	6.4	1.1	3.0	2.8
Grosvenor CIS Fund I	4,113,591	0.1	0.5	0.5	5.4	3.5	12.1	11.0	8.8
Grosvenor CIS Fund III	6,746,477	0.2	2.1	2.1	5.7	4.0	-	-	-
JP Morgan IIF Infrastructure	40,388,849	1.2	1.9	1.9	8.9	9.8	7.0	7.4	5.7
Macquarie Infrastructure Fund V	16,787,963	0.5	-0.7	-0.7	2.7	3.1	11.7	-	-
TIR Eastern Timber Opps	21,530,344	0.6	3.9	3.9	4.7	4.7	6.3	4.0	4.1
Western US TIPS	175,284,954	5.0	4.2	4.2	4.6	9.9	-1.1	2.2	2.2
Cash & Equivalents	182,722,913	5.2	1.3	1.3	3.9	5.4	3.5	2.3	1.6
90 Day U.S. Treasury Bill			1.4	1.4	4.0	5.5	3.5	2.3	1.6
BND Cash	22,550,545	0.6	1.3	1.3	4.1	5.5	3.6	2.4	-
Northern Trust Cash Account	160,172,368	4.6	1.3	1.3	3.9	5.5	3.4	2.2	1.5

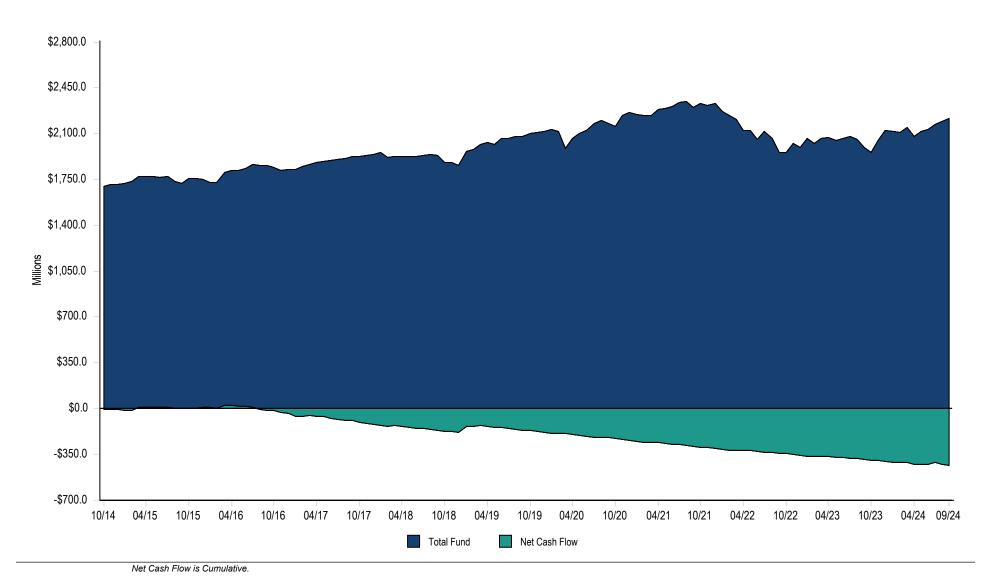
# **Workforce Safety & Insurance Fund**

**Investment Performance Review Period Ending: September 30, 2024** 



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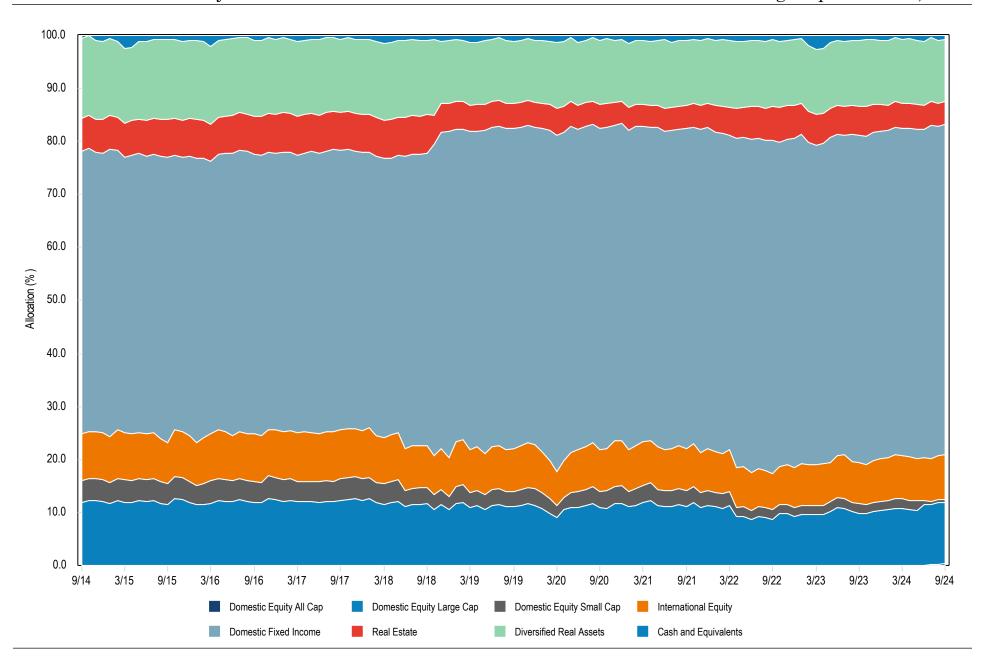


U.4 /0	U.3 /6
9.9%	
3.370	11.5%
2.0%	
Z.U%	U.O70
8.2%	8.4%
	0.470
62.5%	62.3%
4.3%	4.3%
11.7%	11.7%
1.0%	V 07/0
Policy	Actual
	Actual

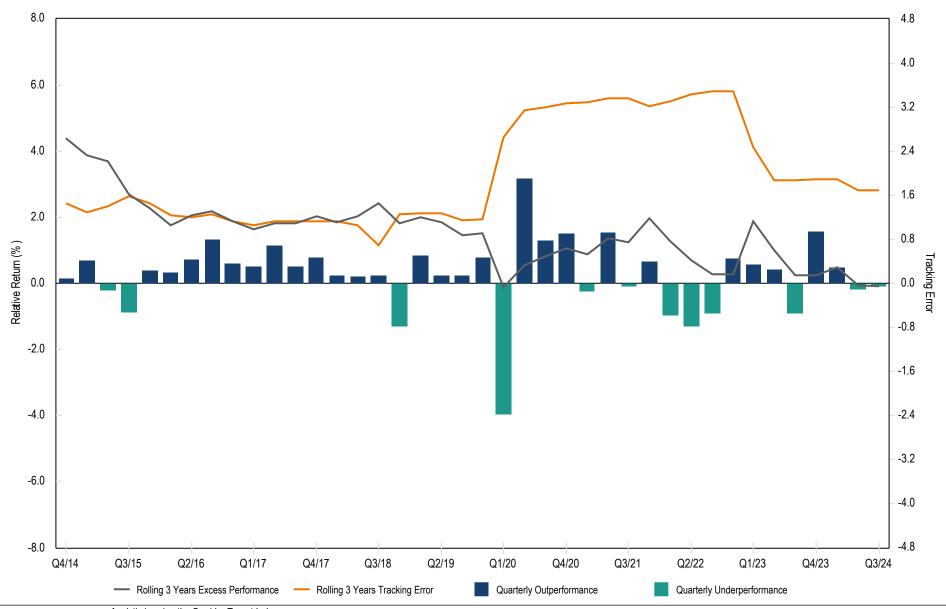
	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Differences (\$)
Domestic Equity All Cap	7,736,706	0.3	0.4	-173,940
Domestic Equity Large Cap	254,744,804	11.5	9.9	34,864,299
Domestic Equity Small Cap	13,635,834	0.6	2.0	-30,615,034
International Equity	186,004,225	8.4	8.2	4,657,652
Domestic Fixed Income	1,380,407,148	62.3	62.5	-3,645,676
Real Estate	96,061,738	4.3	4.3	3,894
Diversified Real Assets	260,208,500	11.7	11.7	-787
Cash and Equivalents	17,068,265	0.8	1.0	-5,090,407
Total	2,215,867,220	100.0	100.0	

Residual Holdings value of \$199,456 included in Domestic Equity Large Cap for styling purposes.



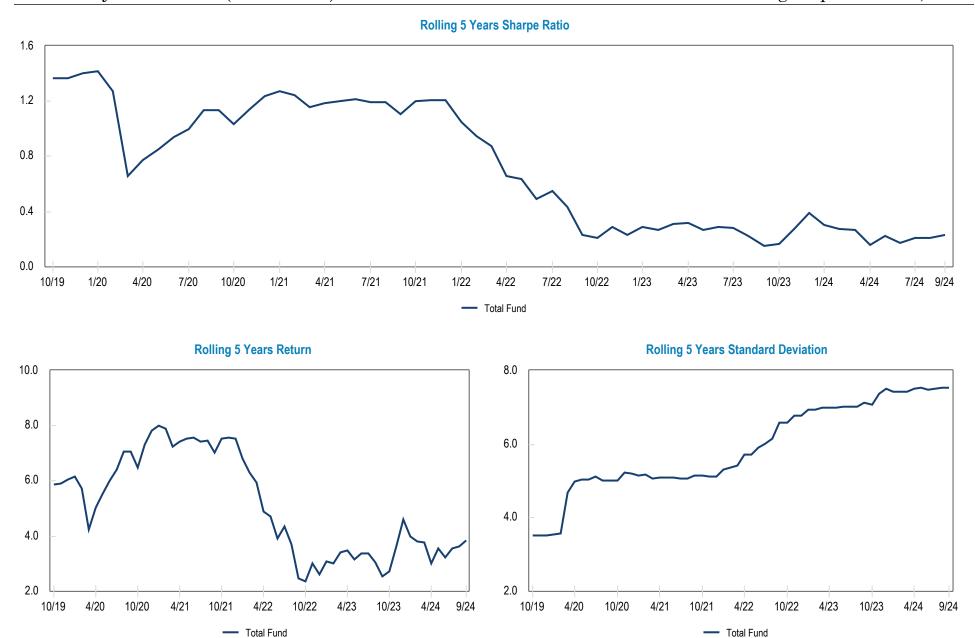


### **Rolling Annualized Excess Performance and Tracking Error**



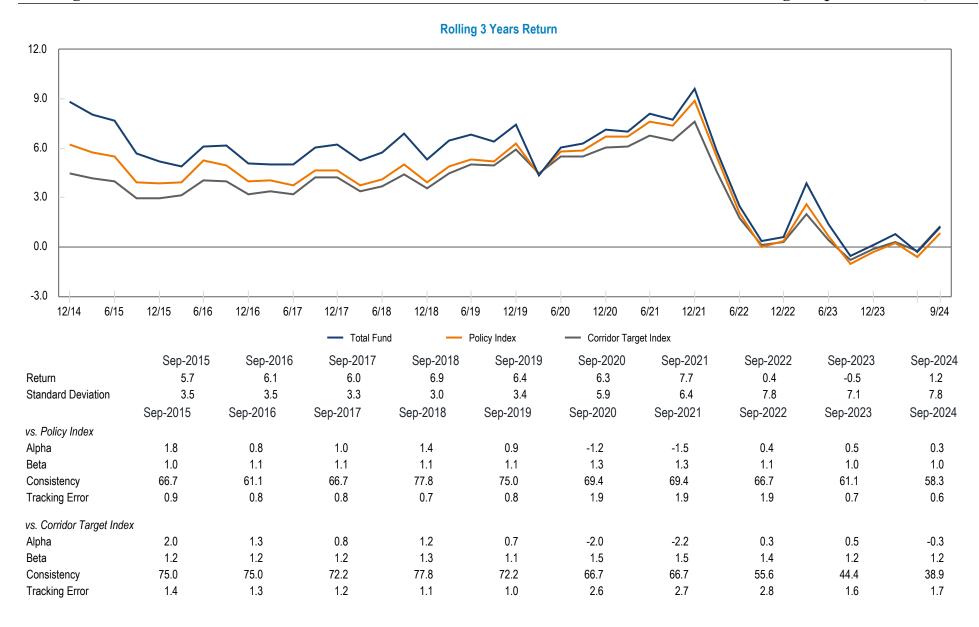
Analytic is using the Corridor Target Index



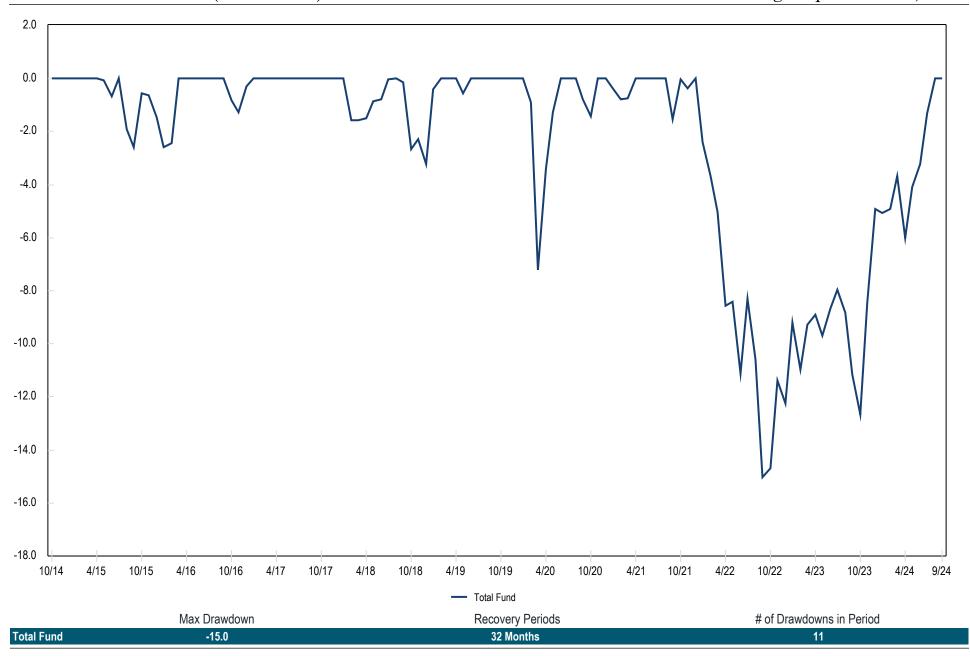












NDSIB - Workforce Safety & Insurance Period Ending: September 30, 2024

	1 Yr		3	Yrs	5	Yrs	10 Yrs		
	Total Fund	Policy Index							
Return Summary Statistics									
Up Market Periods	8	8	19	19	35	35	79	79	
Down Market Periods	4	4	17	17	25	25	41	41	
Maximum Return	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
Minimum Return	-2.4	-2.4	-5.0	-5.0	-6.4	-5.0	-6.4	-5.0	
Return	14.2	13.6	1.2	0.9	3.8	3.4	4.9	4.1	
Cumulative Return	14.2	13.6	3.6	2.6	20.8	18.1	60.8	49.7	
Active Return	0.6	0.0	0.3	0.0	0.5	0.0	0.7	0.0	
Risk Summary Statistics									
Beta	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	
Upside Risk	2.1	2.1	5.7	5.8	5.7	5.4	4.7	4.4	
Downside Risk	3.0	3.0	5.3	5.5	5.1	4.7	3.8	3.5	
Risk/Return Summary Statistics									
Standard Deviation	6.8	6.8	7.8	8.0	7.5	7.1	5.9	5.5	
Alpha	0.6	0.0	0.3	0.0	0.3	0.0	0.5	0.0	
Sharpe Ratio	1.2	1.1	-0.3	-0.3	0.2	0.2	0.6	0.5	
Active Return/Risk	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	
Tracking Error	0.3	0.0	0.6	0.0	1.5	0.0	1.2	0.0	
Information Ratio	1.7	-	0.5	-	0.3	-	0.6	-	
Correlation Statistics									
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Consistency	66.7	100.0	58.3	100.0	65.0	100.0	65.8	100.0	



NDSIB - Workforce Safety & Insurance Period Ending: September 30, 2024

		1 Yr		3 Yrs		5 Yrs		10 Yrs
	Total Fund	Corridor Target Index						
Return Summary Statistics								
Up Market Periods	8	8	19	19	35	35	78	78
Down Market Periods	4	4	17	17	25	25	42	42
Maximum Return	4.8	3.6	4.8	3.6	4.8	3.6	4.8	3.6
Minimum Return	-2.4	-1.7	-5.0	-3.9	-6.4	-3.9	-6.4	-3.9
Return	14.2	12.3	1.2	1.3	3.8	3.2	4.9	3.8
Cumulative Return	14.2	12.3	3.6	3.9	20.8	16.9	60.8	45.8
Active Return	1.8	0.0	0.0	0.0	0.8	0.0	1.1	0.0
Risk Summary Statistics								
Beta	1.3	1.0	1.2	1.0	1.3	1.0	1.3	1.0
Upside Risk	2.1	1.7	5.7	4.6	5.7	4.3	4.7	3.6
Downside Risk	3.0	2.1	5.3	4.3	5.1	3.6	3.8	2.8
Risk/Return Summary Stati	istics							
Standard Deviation	6.8	5.2	7.8	6.3	7.5	5.6	5.9	4.4
Alpha	-1.7	0.0	-0.3	0.0	-0.3	0.0	-0.1	0.0
Sharpe Ratio	1.2	1.3	-0.3	-0.3	0.2	0.2	0.6	0.5
Active Return/Risk	0.3	0.0	0.0	0.0	0.1	0.0	0.2	0.0
Tracking Error	1.8	0.0	1.7	0.0	2.4	0.0	1.9	0.0
Information Ratio	1.0	-	0.0	-	0.3	-	0.6	-
Correlation Statistics								
R-Squared	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0
Actual Correlation	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consistency	50.0	100.0	38.9	100.0	51.7	100.0	60.0	100.0



### Total Fund Asset Allocation & Performance

NDSIB - Workforce Safety & Insurance Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	2,215,867,220	100.0	4.9	4.9	6.7	14.2	1.2	3.8	4.9
Policy Index			4.9	4.9	6.4	13.6	0.9	3.4	4.1
Corridor Target Index			5.0	5.0	6.5	12.3	1.3	3.2	3.8
Total Equity	461,922,112	20.8	6.0	6.0	17.0	29.6	7.3	12.2	
Total Equity Blend			7.0	7.0	-	-	-	-	-
Fixed Income	1,380,407,148	62.3	5.2	5.2	5.2	12.9	-0.9	1.1	3.0
Blmbg. U.S. Aggregate Index			5.2	5.2	4.4	11.6	-1.4	0.3	1.8
Total Real Assets	356,270,238	16.1	2.3	2.3	0.6	3.0	1.3	2.9	
Total Real Assets Blend			1.7	1.7	-	-	-	-	-
Cash Equivalents	17,068,265	0.8	1.3	1.3	4.0	5.4	3.5	2.2	1.6
90 Day U.S. Treasury Bill			1.4	1.4	4.0	5.5	3.5	2.3	1.6

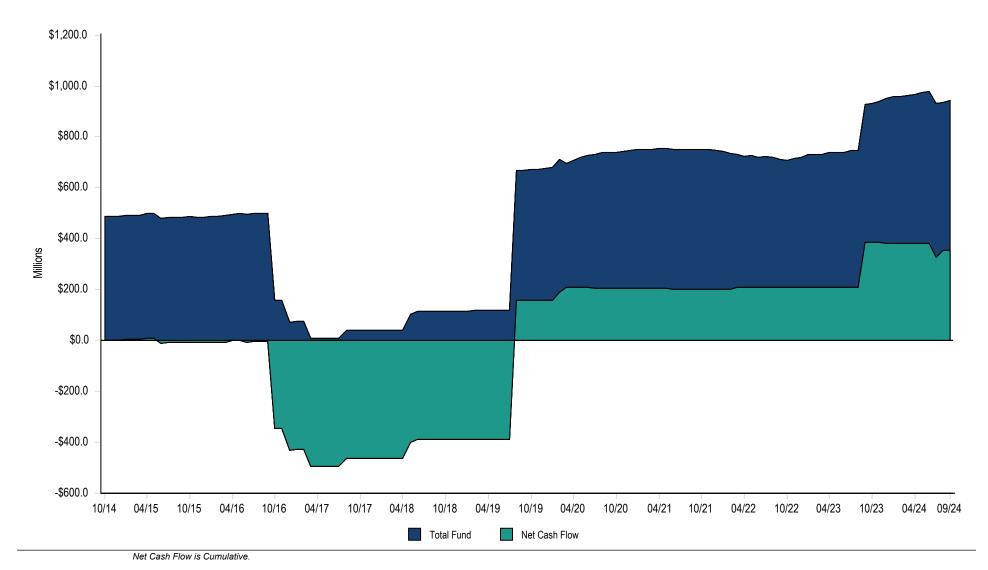
# **Budget Stabilization Fund**

**Investment Performance Review Period Ending: September 30, 2024** 

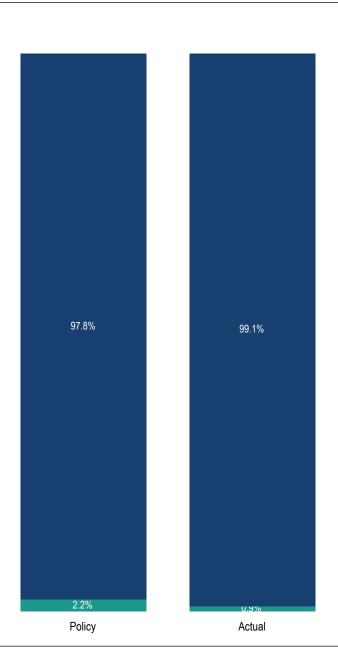


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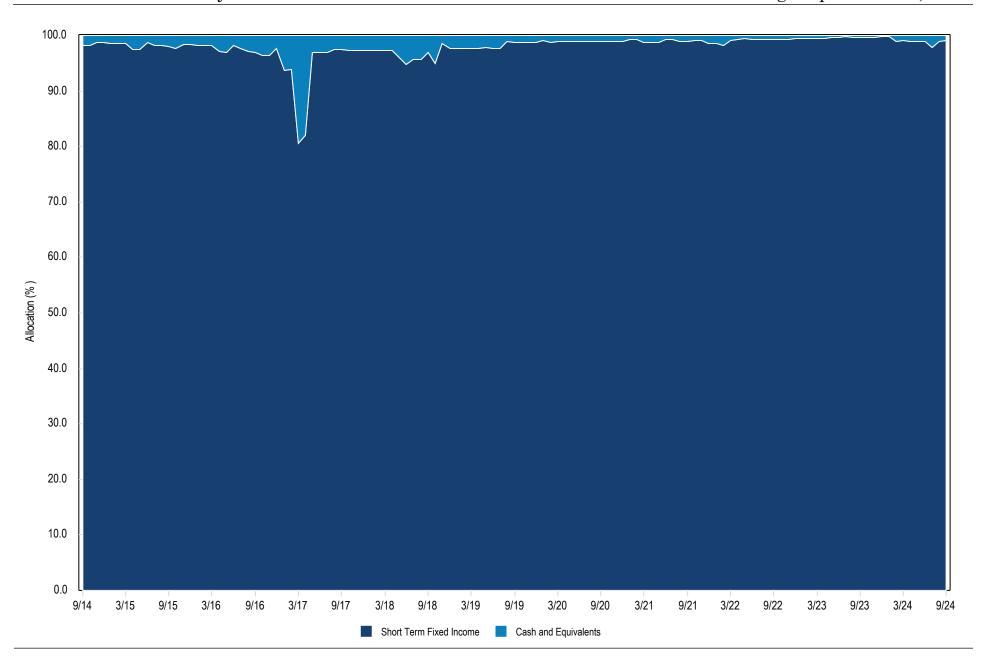
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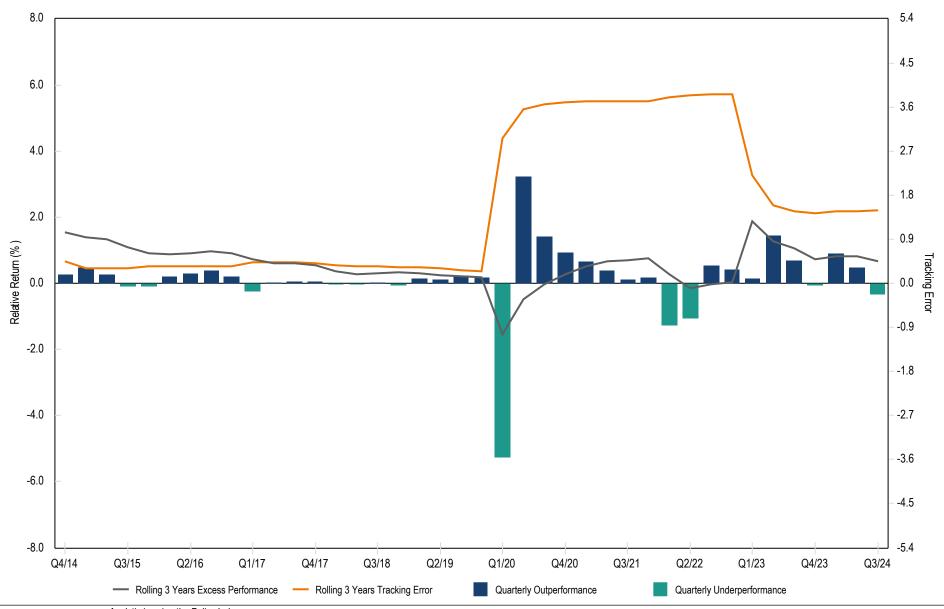
NDSIB - Budget Stabilization Fund Period Ending: September 30, 2024



	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Differences (\$)
Short Term Fixed Income	935,170,770	99.1	97.8	12,205,231
Cash and Equivalents	8,884,975	0.9	2.2	-12,205,231
Total	944,055,745	100.0	100.0	



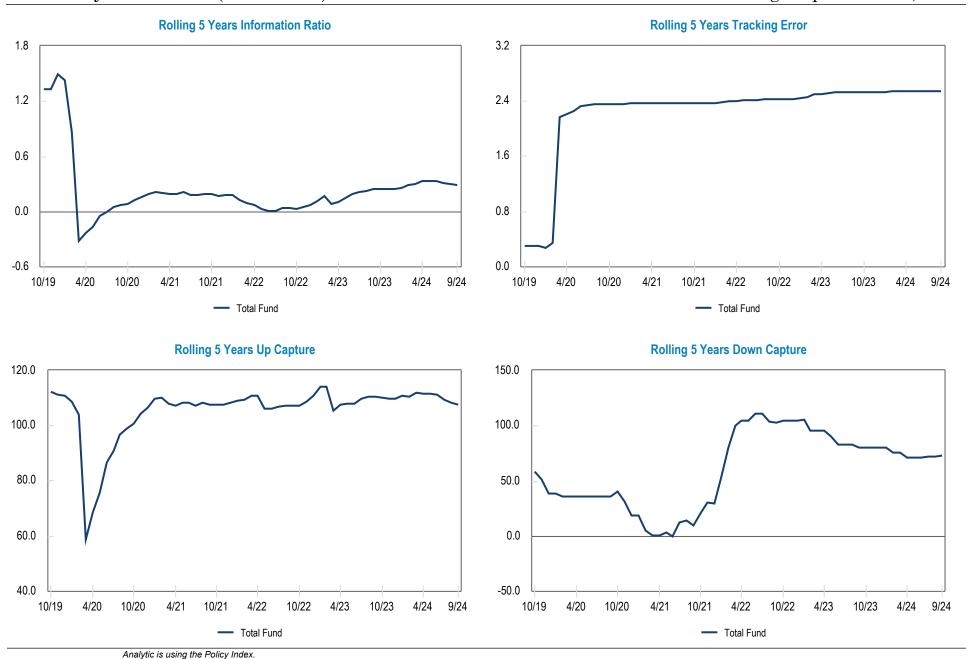
**Rolling Annualized Excess Performance and Tracking Error** 



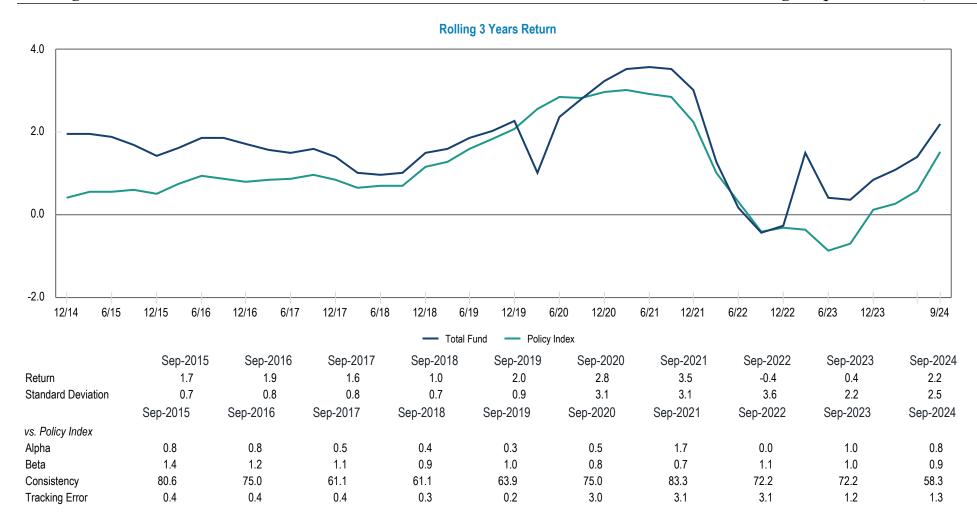
Analytic is using the Policy Index



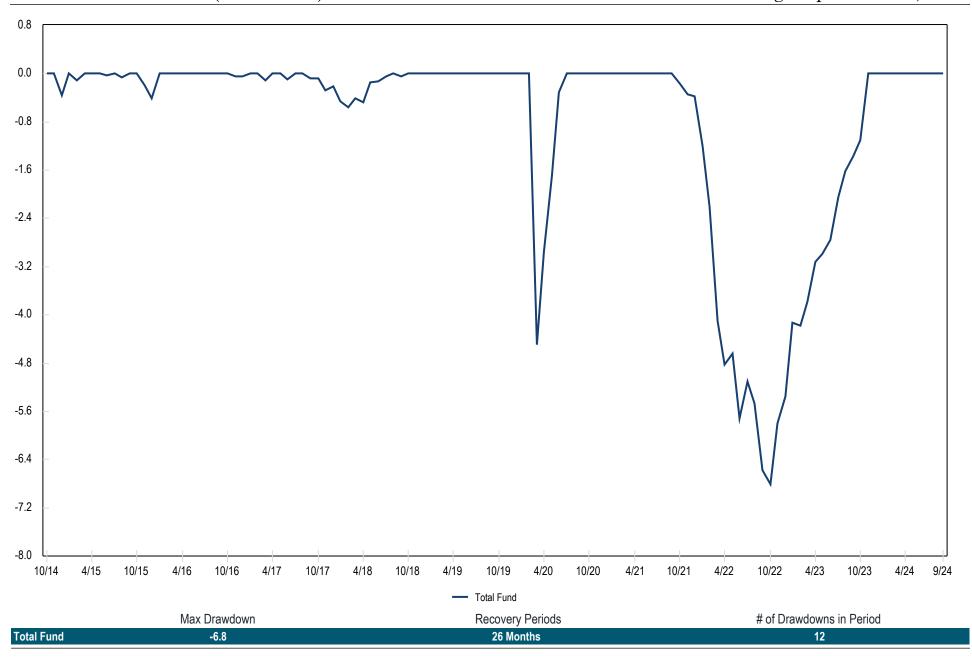












Total Fund Risk Statistics (Net of Fees)

NDSIB - Budget Stabilization Fund Period Ending: September 30, 2024

	1	Yr	3	Yrs	5	Yrs	10	Yrs
	Total Fund	Policy Index						
Return Summary Statistics								
Up Market Periods	10	10	19	19	38	38	78	78
Down Market Periods	2	2	17	17	22	22	42	42
Maximum Return	1.2	1.2	1.3	1.4	1.6	1.4	1.6	1.4
Minimum Return	0.1	-0.4	-1.9	-1.3	-4.5	-1.3	-4.5	-1.3
Return	8.2	7.2	2.2	1.5	2.4	1.7	2.2	1.6
Cumulative Return	8.2	7.2	6.7	4.6	12.7	8.8	24.6	17.5
Active Return	1.0	0.0	0.7	0.0	0.7	0.0	0.6	0.0
Risk Summary Statistics								
Beta	0.7	1.0	0.9	1.0	0.9	1.0	0.9	1.0
Upside Risk	2.6	0.8	2.0	2.0	2.0	1.6	1.6	1.3
Downside Risk	0.0	0.5	1.7	1.5	2.4	1.1	1.7	0.8
Risk/Return Summary Statistics	5							
Standard Deviation	1.2	1.8	2.5	2.4	3.1	1.9	2.3	1.5
Alpha	3.4	0.0	0.8	0.0	0.9	0.0	0.8	0.0
Sharpe Ratio	2.2	0.9	-0.6	-0.9	0.0	-0.3	0.3	0.0
Active Return/Risk	0.8	0.0	0.3	0.0	0.2	0.0	0.3	0.0
Tracking Error	0.7	0.0	1.3	0.0	2.6	0.0	1.8	0.0
Information Ratio	1.4	-	0.5	-	0.3	-	0.3	-
orrelation Statistics								
R-Squared	0.9	1.0	0.8	1.0	0.3	1.0	0.4	1.0
Actual Correlation	1.0	1.0	0.9	1.0	0.6	1.0	0.6	1.0
Consistency	50.0	100.0	58.3	100.0	70.0	100.0	67.5	100.0



## Total Fund Asset Allocation & Performance

NDSIB - Budget Stabilization Fund Period Ending: September 30, 2024

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	944,055,745	100.0	2.6	2.6	5.5	8.2	2.2	2.4	2.2
Policy Index			2.9	2.9	4.4	7.2	1.5	1.7	1.6
Short Term Fixed Income	935,170,770	99.1	2.6	2.6	5.5	8.3	2.2	2.4	2.2
Bloomberg U.S. Gov/Credit 1-3 Year Index			3.0	3.0	4.4	7.2	1.5	1.7	1.6
Cash & Equivalents	8,884,975	0.9	1.3	1.3	4.0	5.3	3.5	2.2	1.6
90 Day U.S. Treasury Bill			1.4	1.4	4.0	5.5	3.5	2.3	1.6

#### Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return [Risk free Rate + Portfolio Beta x (Market Return Risk free Rate)].

Benchmark R squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book to Market: The ratio of book value per share to market price per share. Growth managers typically have low book to market ratios while value managers typically have high book to market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of two securities move in lock step, a correlation of 1 means the returns of 1 me

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price to Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price to earnings ratios whereas value managers hold stocks with low price to earnings ratios.

R Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

Sortino Ratio: Measures the risk adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from 1 to 1 on each axis and are dependent on the Style Indices comprising the Map.



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