

OFFICE OF THE
ARIZONA STATE TREASURER



Kimberly Yee

TREASURER



AUGUST 2019

Presented To:

Arizona State Board of Investment

September 24, 2019

STATE BOARD OF INVESTMENT

A G E N D A

September 24, 2019

1. Call to Order; Opening RemarksThe Honorable Kimberly Yee, Chair
2. Approval of Minutes of August 27, 2019 BOI Meeting
3. Investment Outlook and Summary Review of Treasurer’s Monthly Reports
 - A. State Agency Earnings Distributions Dennis Stevenson, CIO
State Agency Operating Average Invested Balances
State Agency Investments and Performance Reports
 - B. LGIP Yield Analysis Jake Richardson, Portfolio Manager
LGIP Pools Investments and Performance Reports
 - C. Endowment Earnings Distributions Tim White, Director of Endowments
Land Sales Monthly Proceeds Endowment Funds
Endowment Investments and Performance Reports
4. Approval of July 2019 Report
5. Treasurer’s Report The Honorable Kimberly Yee, Chair
6. Market Outlook.....Harry Papp, Board Member
7. Call to the Public
8. Notice of Next Meeting
9. Adjournment

REPORT OF THE STATE TREASURER

FOR

September 24, 2019

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**Minutes of
BOARD OF INVESTMENT MEETING
August 27, 2019**

The regular meeting of the State Board of Investment was held on August 27, 2019 in the Office of the State Treasurer, 1700 West Washington, State Capitol, West Wing, Treasurer's Conference Room, Phoenix, Arizona. Treasurer Yee called the meeting to order at 1:30 p.m.

Members Present:

The Honorable Kimberly Yee, Chair, State Treasurer
Harry A. Papp, CFA & Managing Partner, L. Roy Papp & Associate
Beth Ford, Treasurer, Pima County, *Via Teleconference*
Andy Tobin, Director of Arizona Department of Administration

Designees Present:

Stephen Briggs, Legislative Liaison, for Keith Schraad, Interim Supervisor for Department of Financial Institution

Others Present:

Mark Swenson, Deputy Treasurer, Policy and Research, Arizona State Treasurer's Office
Dennis Stevenson, Chief Investment Officer, Arizona State Treasurer's Office
Tim White, Director of Endowments, Arizona State Treasurer's Office
Eric Stivers, Financial Analyst, Arizona State Treasurer's Office
Michael Leslein, Investment Accounting Manager, Arizona State Treasurer's Office
Ken Price, Human Resource Manager, Arizona State Treasurer's Office
Fareed Bailey, Director of Legislative Affairs, Arizona State Treasurer's Office
Nick Barnhiser, Information Systems Administrator, Arizona State Treasurer's Office
Rebecca Reigelsberger, Director of External Affairs, Arizona State Treasurer's Office

1. Call to Order

Treasurer Yee called the August 27, 2019 BOI meeting to order at 1:30 p.m.

Treasurer's Comments

Treasurer Yee welcomed the Board members and guests, acknowledging Treasurer Beth Ford's presence via teleconference and Superintendent Keith Schraad's designee, Stephen Briggs. She thanked everyone for attending the meeting.

2. Approval of Minutes

Director Tobin moved to approve the minutes of July 30, 2019; seconded by Mr. Papp. Motion carried unanimously.

3. Review of the Treasurer's Monthly Reports

A. State Agency Earning Distributions, Average Invested Balances, and Performance Reports

Chief Investment Officer, Dennis Stevenson, highlighted the results of the State Agencies performances for the month of July 2019. See memo.

B. LGIP Yield Analysis, Pool Investments and Performance Reports

Chief Investment Officer, Dennis Stevenson, highlighted the results for the Local Government Investment Pools performance for the month of July 2019. See memo.

C. Endowment Earnings Distributions, Land Sale Monthly Proceeds Endowment Funds, Endowment Investments and Performance Reports, Broker Activity Report

Director of Endowments, Tim White, highlighted the results for the Endowment performances for the month of July 2019. See memo.

4. Approval of July 2019 Monthly Report

Mr. Papp moved the approval of the Treasurer's July 2019 Monthly Report. Mr. Briggs seconded the motion. Motion carried unanimously.

5. Legislative Report and Approval of Statements to be Submitted to the Senate Finance Committee of Reference for the Consideration of Continuing the Board of Investment

Fareed Bailey, Director of Legislative Affairs, reviewed the Department's response to questions regarding the continuation of the Board of Investment to be submitted to the Senate Finance Committee of Reference.

Treasurer Beth Ford moved to approve the statements provided by the Treasury to be submitted to the Senate Finance COR. Mr. Briggs seconded the motion. Motion carried unanimously.

6. Treasurer's Report – The Honorable Kimberly Yee

Treasurer Yee thanked the Treasury staff for their work. In August she continued to meet with LGIP clients and co-hosted the National Association of Auditors, Comptrollers and Treasurers Conference held in Scottsdale. The Treasury is currently preparing for budget submittal this fall.

7. Market Outlook

Mr. Papp provided the Board with a brief Market Outlook.

8. Call to the Public

There was no public comment.

9. Notice of Next Meeting

Treasurer Yee advised the Board that the next regular meeting of the Board of Investment will be Tuesday, September 24, 2019 at 1:30 p.m. at 1700 West Washington, State Capitol, West Wing, Treasurer's Conference Room, Phoenix, Arizona.

10. Adjournment

Director Tobin moved for adjournment of the meeting. Mr. Papp seconded the motion. Motion carried unanimously.

The BOI Meeting was adjourned at approximately 2: 08 p.m.

Respectfully Submitted by:

Deborah Gomez
Executive Assistant

Approved by:

Kimberly Yee
Chair

Date



OFFICE OF THE ARIZONA STATE TREASURER

KIMBERLY YEE
TREASURER



Investment Summary | August 2019

Overall Performance – Where We Are Now |

➤ State Agency Pools:

- Total assets: \$6,702,698,510
- August earnings distributed: \$12,836,568 (+35.31% YoY)
- General Fund earnings distributed: \$3,688,529 (+41.16% YoY)

Outlook |

The Federal Open Market Committee (FOMC) voted to lower interest rates 25bps on September 18, 2019. This was widely expected but there was apparent dissension within the FOMC as to the necessity of the rate cut. The market is calling for another rate cut before the end of the year. The rationale is that these cuts are necessary to forestall a recession and prevent the dollar from advancing further against all major currencies. The U.S. dollar has appreciated more than 2% this quarter against major currencies. Although the U.S. economy continues to perform well with productivity increasing, building permits accelerating and a large increase in mortgage applications, the slower global growth is an ongoing concern. The Federal Reserve (Fed) successfully intervened multiple times this month to add liquidity to the markets to counteract interest rate spikes in the overnight REPO markets. This was the first time they have taken such actions in over a decade. The European sovereign bond markets continue to have negative yields as far out as 10 years.

Strategy: Monthly Commentary |

As was expected, a portion of the bonds we bought at a discount are being called at par. Although this often results in profits, we are reinvesting at progressively lower rates. We intend to continue this course of action and retain the ability to pivot out of overnight repos to longer duration securities opportunistically.

Alternative Scenarios |

There are several scenarios we continue to monitor which could change our expectations:

- Credit bottleneck causing interest rate spike
- The Chinese trade war has escalated
- A massive jolt to inflation due to rising world food or crude oil costs
- Brexit causes a full-blown recession throughout Europe
- Mideast tensions in the gulf restrict world oil trade

State Agency Investment Pool Balances |

	August 31, 2019	August 31, 2018	FY Change
Pool 2 FF&C	\$1,192,887,389	\$1,060,446,921	+\$132,440,468
Pool 3 Internal	\$2,535,639,073	\$1,450,216,371	+\$1,085,422,702
Pool 3 External	\$109,469,366	\$105,973,750	+\$3,495,616
Pool 4 Gov.	\$1,048,792,773	\$1,203,305,959	-\$154,513,186
Pool 10 Internal	\$948,863,935	\$1,203,305,959	-\$254,442,024
Pool 10 External	\$159,800,261	\$127,917,727	+\$31,882,534
Pool 12 CAWCD	\$372,942,063	\$396,067,862	-\$23,125,799
Pool 16 ECDHB	\$334,303,647	\$325,368,685	-\$8,934,962
TOTAL STATE AGENCY	\$6,702,698,510	\$5,714,240,221	+\$988,458,289

Overall Performance – Where We Are Now |

- **Local Government Investment Pools:**
 - Total assets: \$3,371,833,267
 - Total August earnings: \$6,696,760; +\$1.4MM over August 2018
 - Total fiscal year-to-date yields:
 - Pool 5: 2.36%; +28bps higher than August 2018
 - Pool 7: 2.26%; +41bps higher than August 2018
 - Pool 500: 2.47%; +19bps higher than August 2018
 - Pool 700: 2.18%; +34bps higher than August 2018

Strategy: Short-term Pools 5 & 7 |

The FOMC decreased rates by 25bps at the September 18, 2019 meeting and the market anticipates another 25bps by the end of the year. This has started to impact yield and earnings in Pools 5 and 7. As securities mature, we have no option but to reinvest at lower rates. The short-term investment pools will both look to target a 10% to 15% daily liquidity range and extend duration between 40 and 50 days. Pool 5 will be investing in high quality diversified securities. Pool 7, our full faith and credit fund, will continue laddering U.S. Treasury bills.

Strategy: Intermediate Pools 500 & 700 |

We will continue to be patient in our intermediate pools and opportunistically add duration through the remainder of 2019. We started adding duration in Pool 500 at the end of July and continued into early September. Pool 500 will continue to target 5% monthly liquidity for participants. Pool 700, our full faith and credit fund, will maintain a 10% to 15% monthly liquidity target. We will continue to manage Pool 700's duration to manage the cash flow needs in this fund.

LGIP Investment Pool Balances |

	August 31, 2019	August 31, 2018	FY Change
Pool 5 LGIP	\$1,497,055,615	\$1,316,763,260	+\$180,292,355
Pool 7 LGIP FF&C	\$1,372,185,162	\$1,112,034,841	+\$260,150,321
Pool 500 LGIP Med.	\$363,370,886	\$345,702,370	+\$17,668,516
Pool 700 LGIP Med FF&C	\$139,221,604	\$135,846,782	+\$3,374,822
TOTAL LGIP	\$3,371,833,267	\$2,910,347,253	+\$461,486,014

Endowment Summary

Overall Performance – Where Are We Now |

- Highlights:
 - PLETF 10-year annualized total return now 8.90%
 - PLETF total return in August trailed benchmark by 38bps
 - Prop 123 monthly distributions highest ever at \$30.7 million

Big Picture:

- PLETF fair market value at \$6,011,912,838
- FYTD2020 distributions increased to \$61.3MM MoM; up \$3.8MM vs FY2019
- PLETF 1 year return trailed benchmark by 90bps
- Calendar YTD return was 11.90% vs Benchmark 13.03%
- Annualized 10-Year total return through August is 8.90% versus July at 9.24%; -34 basis points MoM
- Fair Market Value down \$81.0MM MoM; down \$159.6MM YoY
- Unrealized Gains: \$3.3BN (Down \$60.7MM or 1.81% YoY)
- August Realized Gains: \$15.4MM; +\$10.7MM vs August 2018
- August TRR PLETF -0.99% vs Benchmark -0.61%; -38bps vs benchmark

Equity Strategy: Unchanged Stay the Course; Long-Term Horizon |

We continue to view our equity exposure as a long-term driver of returns for the PLETF. Exposure to U.S. equities has been a tremendous value-add over time and though markets periodically move through market correction phases, long-term equilibrium has rewarded patient investors with positive returns that outpace inflation and build trust value in *real* terms. Though volatile, the current period appears to be no exception as the S&P 500 is back to October 2018 levels. Our equity exposure was 59.91% at month-end. SmallCaps have historically outperformed the asset classes we hold, though they have trailed in this latest rally. As the PLETF is invested in perpetuity, our goal is to take advantage of this historic outperformance over time. Since inception, our SmallCap exposure has returned 10.73% (-72bps MoM), still outperforming the MidCap exposure at 9.03% (-30bps MoM), our LargeCap exposure at 5.37% (-11bps MoM), and our fixed income return of 4.71% (+6bp MoM). We will continue to passively invest equities in the individual components of the various indices per our investment policy on a market cap-weighted basis for the PLETF and will look for strategic entry points for new AETF cash to add exchanged traded funds (ETFs) as we ramp up.

Fixed Income Strategy: Add UST Duration; Hedge MBS Pre-Payments |

Our shorter duration, higher credit-quality strategy is defensively positioned to perform better in rising rate scenarios. This includes periods of economic expansion and tight labor markets with upward perceived inflation and corresponding higher long-end interest rates. That is what happened during the first half of FY2019 as the Fed was raising rates. The Fed then took a dovish pivot at the April meeting and cut rates 25bps at both the July and September meetings, signaling a willingness to do what is necessary to continue the economic expansion. As a result, long bonds continued to rally (rates fell) and this helped our absolute bond returns. However, this action reversed our large FYTD relative outperformance in Pool 205 from the first eight months of FY2019, when rates were rising. We feel this had much to do with money inflows from foreign countries where rates are negative or much lower than the U.S., driving U.S. yields down, and to a lesser extent, a statement about low domestic inflation and a softer domestic growth outlook in the U.S. Slowing global growth perceptions (especially Europe) are also keeping

Tim White, Director of Endowments

U.S. rates low for the time being while U.S. domestic equities have rallied on good consumer conditions since Christmas, creating very divergent market sentiments between fixed income and equities. In fact, tariffs, tight labor, increasing wages and better than expected corporate earnings in the second half of the year could create a scenario where inflation begins to tick up again and the curve could steepen modestly. Pool 205 is positioned for this type of move while paying special attention to natural duration extension from increased Prop 123 distributions. Further, credit default and corporate (OAS) spreads have tightened as the Fed's dovish stance provides support for credit. Hence, we feel our corporate exposures are on better footing. We did add longer USTs before the rates rally. We will let bonds mature and move into short cash equivalents within Pool 123, UST and mortgage-backed securities with good structures in Pool 205 with an eye on hedging faster pre-payment speeds from MBS. We now hold nearly three months of liquidity in Pool 123 for timely school payments. We recently added bond ETFs with new AETF cash.

Long interest rates may still eventually rise modestly in a scenario if higher inflation surfaces and a U.S./Chinese trade agreement is reached, and the curve may steepen in line with wall street economists' consensus (below). We feel it is prudent to keep room for duration extension in Pool 205 from maturities/paydown cashflows migrating into Pool 123 for distribution requirements. For comparison, month-end duration on pool 205 was at 2.99 years (-0.12 MoM) versus 5.75 (+0.07) for the SBBIG Index. Note the forward-looking Bloomberg Bond Yield Forecast compiled by averaging 56 wall street economist's forecasts:

Rate	Market Yld	Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
United States											
US 30-Year	2.20	2.18	2.15	2.21	2.28	2.37	2.42	2.53	2.61	2.68	2.75
US 10-Year	1.76	1.69	1.67	1.74	1.80	1.87	1.95	2.08	2.16	2.24	2.31
US 5-Year	1.63	1.59	1.54	1.59	1.65	1.72	1.77	1.87	1.94	2.01	2.06
US 2-Year	1.71	1.63	1.55	1.55	1.56	1.61	1.64	1.73	1.79	1.85	1.87
US 3-Month Libor	2.16	2.07	1.90	1.78	1.70	1.69	1.71	1.73	1.84	1.85	1.91
Fed Funds Rate - Upper Bound	2.00	2.00	1.80	1.65	1.65	1.60	1.60	1.60	1.65	1.65	1.75
Fed Funds Rate - Lower Bound	1.75	1.76	1.54	1.43	1.38	1.33	1.33	1.35	1.41	1.42	1.49
2 Year - 10 Year Spread	0.05	0.06	0.12	0.19	0.24	0.26	0.31	0.35	0.38	0.38	0.44

*Table presented as-of 08/22/2019.

Endowment Monthly Land Sale Proceeds |

- +\$10.04MM in August
- +\$5.68M vs July
- -\$20.37MM FYoY

Endowment Prop 123 Distributions |

- \$30.7MM total/\$28.5MM for K-12 successfully distributed on time from Pool 123
- FYTD K-12 distribution \$57.0MM; up \$3.5MM YoY
- Pool 123 mechanism working well (3-4 months laddered liquidity)

Pool Performance |

Portfolio 3Yr standard deviation was 7.97 versus benchmark at 8.00; portfolio is less risky/volatile versus benchmark.

Equity/Fixed Income Pools:

- Pool 201 LargeCap Equity matched the S&P 500 MoM at -1.58%
- Pool 203 MidCap Equity outperformed the S&P 400 by 10bps MoM at -4.10%
- Pool 204 SmallCap Equity matched the S&P 600 MoM at -4.51%
- Pool 205 underperformed the FTSE BIG Index by 104bps MoM at +1.62%
- Pool 123 returned +0.19% for August, matching the Pool 5 benchmark

**EARNINGS DISTRIBUTION - INVESTMENT POOLS
AUGUST 2019**

Recipient	Earnings Distributed				Fiscal YTD Investment Management Fees Received
	AUGUST 2019	Fiscal YTD 19/20	Fiscal YTD 18/19	Change from Previous Year	
General Fund (1)	\$3,688,529	\$8,911,330	\$5,689,898	56.6%	
2 State Agencies - Full Faith & Credit (2)	1,790,644	3,709,364	2,798,095	32.6%	98,079
3 State Agencies - Diversified (2) (3)	2,373,637	4,666,915	3,600,215	29.6%	238,395
4 State Agencies - Gov (2)	1,614,326	3,158,522	2,468,241	28.0%	93,831
5 LGIP (2)	2,894,374	6,055,256	4,999,062	21.1%	143,184
7 LGIP Gov (2)	2,647,688	5,698,152	3,768,708	51.2%	141,139
9A Public School Credit Enhancement (4)	0	0	0	0	9,701
10 Restricted Operating (2)	1,862,662	3,452,414	1,544,925	123.5%	102,967
12 CAWCD Medium-Term	811,488	1,663,797	1,496,819	11.2%	35,027
16 ECDH Medium-Term	695,282	1,400,508	1,370,769	2.2%	34,242
Subtotal	\$18,378,631	\$38,716,258	\$27,736,731	39.6%	\$896,564
NAV POOL					
500 LGIP - Med Term	761,399	1,520,337	1,337,489	13.7%	33,689
700 LGIP - FF&C Med Term (2)	201,392	399,233	359,550	11.0%	12,934
Total	\$19,341,422	\$40,635,828	\$29,433,771	38.1%	\$943,188
AUGUST 2018 TOTALS	\$14,669,450				\$798,740

- (1) Pool 15 AHCCCS Operating Earnings are reported in General Fund
- (2) Earnings are net of operating earnings, which are reported in the General Fund
- (3) Pool 15 AHCCCS Operating Management Fees are reported in Pool 3 State Agencies Diversified (Combined)
- (4) Pool 9A represents \$80 million invested in School Funding Obligations; earnings on this investment revert to the General Fund

OPERATING MONIES
AVERAGE INVESTED BALANCE
Through August 31, 2019
(in millions)

<u>Month</u>	Fiscal Year <u>2017/2018</u>	Fiscal Year <u>2018/2019</u>	Fiscal Year <u>2019/2020</u>
JULY	\$1,635	\$1,824	\$2,483
AUGUST	1,303	1,495	1,840
SEPTEMBER	1,455	1,594	
OCTOBER	1,473	1,813	
NOVEMBER	1,417	1,912	
DECEMBER	1,400	2,007	
JANUARY	2,140	2,348	
FEBRUARY	2,244	2,185	
MARCH	1,937	2,050	
APRIL	1,980	2,236	
MAY	2,279	2,963	
JUNE	2,407	3,195	
Y-T-D Average	\$1,469	\$1,660	\$2,162
Full Year Average	\$1,806	\$2,135	

**STATE AGENCY POOLS
PORTFOLIO EARNINGS ANALYSIS
AUGUST 2019**

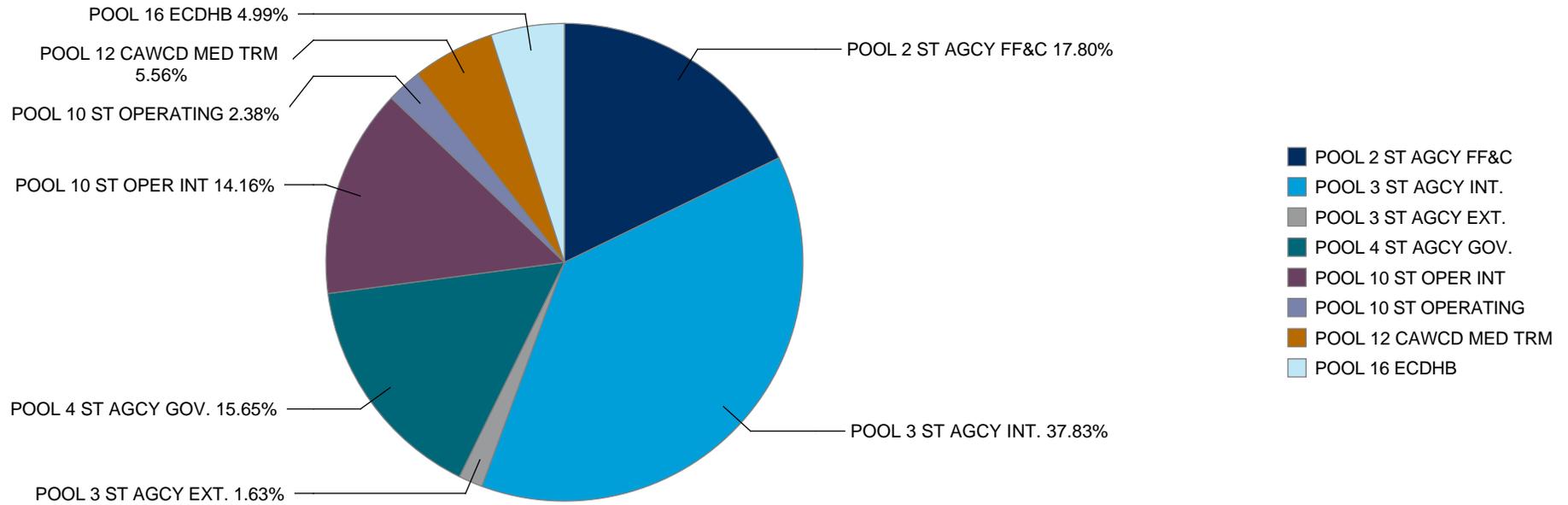
FUND	DESCRIPTION	Current Month 08/31/19	Prior Month 07/31/19	Prior Year 08/31/18	Net Asset Value Per Share
2	STATE AGENCIES - FULL FAITH & CREDIT	1,953,311	2,101,829	1,458,474	1.0016
3	STATE AGENCIES - DIVERSIFIED				
	INTERNAL MANAGERS	4,599,827	5,452,366	2,462,271	1.0023
	EXTERNAL MANAGERS	222,853	222,836	187,137	1.0056
	FUND 3 TOTAL	4,822,680	5,675,201	2,649,407	1.0024
4	STATE AGENCIES - GOV	2,078,204	2,096,868	1,553,647	1.0057
9A	PUBLIC SCHOOL CREDIT ENHANCEMENT	189,982	211,245	160,035	1.0016
10	RESTRICTED OPERATING				
	INTERNAL MANAGERS	1,857,249	1,965,271	1,894,399	1.0020
	EXTERNAL MANAGERS	169,860	151,907	157,270	1.0038
	FUND 10 TOTAL	2,027,109	2,117,179	2,051,669	1.0022
12	CAWCD MEDIUM-TERM	811,488	852,309	751,433	1.0089
15	AHCCCS OPERATING	66,606	209,070	102,968	N/A
16	ECDH MEDIUM-TERM	695,282	705,226	660,898	1.0085
	TOTAL STATE AGENCIES	12,644,662	13,968,927	9,388,531	

STATE AGENCY POOLS
PORTFOLIO YIELD ANALYSIS
AUGUST 2019

FUND	DESCRIPTION	Current Month 08/31/19	Prior Month 07/31/19	Prior Year 08/31/18
2	STATE AGENCIES - FULL FAITH & CREDIT 50% Trailing 3-mo T-bill / 50% Bloomberg Barclays 1-3 year UST	2.21% 1.86%	2.32% 2.05%	1.96% 2.31%
3	STATE AGENCIES - DIVERSIFIED INTERNAL MANAGERS EXTERNAL MANAGERS COMBINED 50% 1 month T-bill / 50% Bloomberg Barclays 1-3 year US Agg	2.41% 2.41% 2.41% 1.95%	2.55% 2.42% 2.55% 2.10%	2.17% 2.07% 2.16% 2.36%
4	STATE AGENCIES - GOV 50% Trailing 3-mo T-bill / 50% Bloomberg Barclays 1-3 year US Gov	2.43% 1.86%	2.45% 2.06%	2.02% 2.31%
9A	PUBLIC SCHOOL CREDIT ENHANCEMENT	2.21%	2.32%	1.96%
10	RESTRICTED OPERATING INTERNAL MANAGERS EXTERNAL MANAGERS COMBINED 50% Trailing 3-mo T-bill / 50% Bloomberg Barclays 1-3 year US Agg	2.31% 1.26% 2.16% 1.98%	2.39% 1.33% 2.26% 2.15%	2.14% 1.35% 2.05% 2.39%
12	CAWCD MEDIUM-TERM 25% S&P LGIP Index / 75% Bloomer Barclays 1-3 year US Agg	2.57% 1.95%	2.64% 2.13%	2.27% 2.59%
15	AHCCCS OPERATING	0.58%	1.41%	1.02%
16	ECDH MEDIUM-TERM 25% S&P LGIP Index / 75% Bloomer Barclays 1-3 year US Agg	2.47% 1.95%	2.51% 2.13%	2.36% 2.59%

NOTE - all benchmark measurements were revised in October 2018; prior period benchmarks were also changed to reflect the revised measures

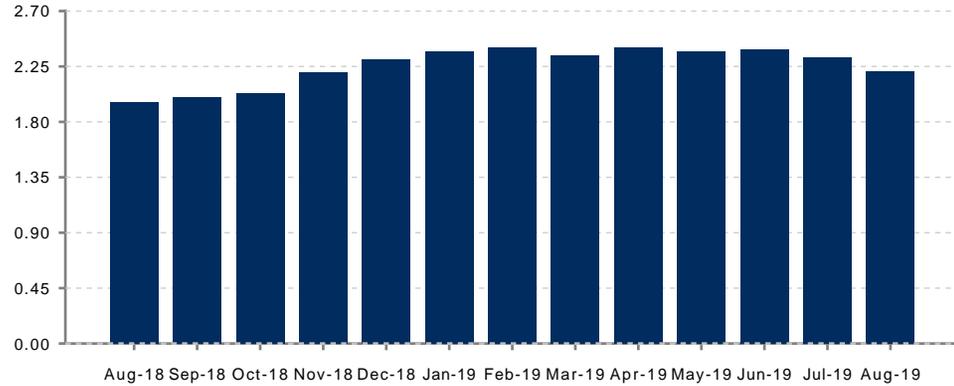
Manager Allocation



	Market Value	% of Portfolio
POOL 2 ST AGCY FF&C	1,192,887,389	17.8
POOL 3 ST AGCY INT.	2,535,639,073	37.8
POOL 3 ST AGCY EXT.	109,469,366	1.6
POOL 4 ST AGCY GOV.	1,048,792,773	15.6
POOL 10 ST OPER INT	948,863,935	14.2
POOL 10 ST OPERATING	159,800,261	2.4
POOL 12 CAWCD MED TRM	372,942,063	5.6
POOL 16 ECDHB	334,303,647	5.0
TOTAL STATE AGENCY	6,702,698,510	100.0



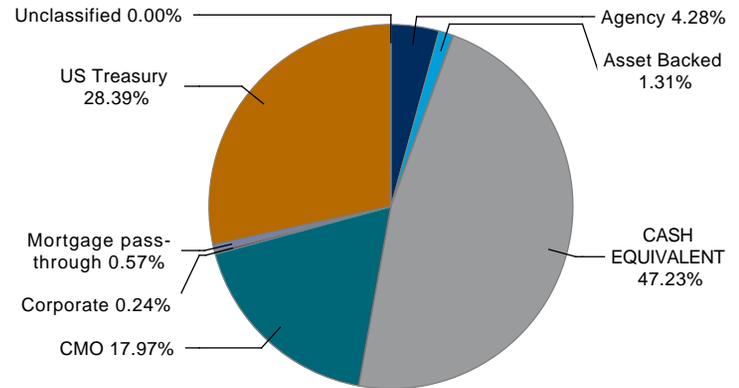
Net Yield



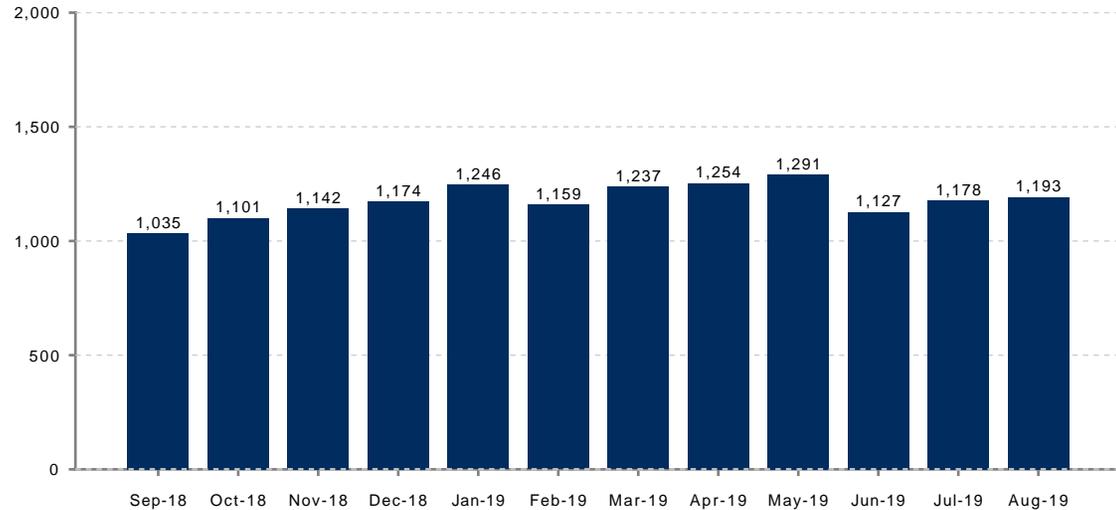
	Current Mth	Prior Mth	1 Year Ago
POOL 2 ST AGCY FF&C	2.21	2.32	1.96

Asset Allocation

	Ending Market Value
POOL 2 ST AGCY FF&C	1,192,887,389



Net Asset Values over Time (\$MM)

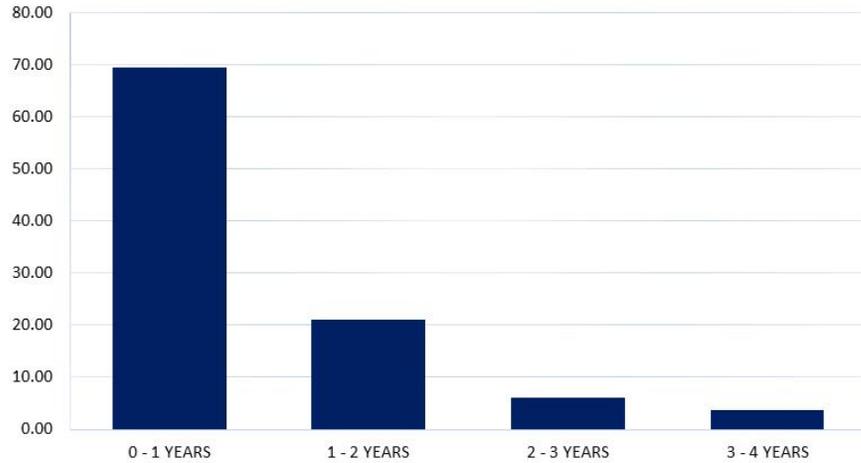


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 2 ST AGCY FF&C		
DAIWA CAPITAL MARKETS	200,023,667	16.77
US TREASURY N/B	81,696,395	6.85
WELLS FARGO REPO	70,020,903	5.87
TREASURY BILL	64,594,834	5.41
TREASURY BILL	44,690,404	3.75
US TREASURY N/B	40,790,446	3.42
TREASURY BILL	39,954,925	3.35
BANK OF AMERICA REPO	32,143,324	2.69
US TREASURY N/B	30,168,699	2.53
TREASURY BILL	29,852,731	2.50



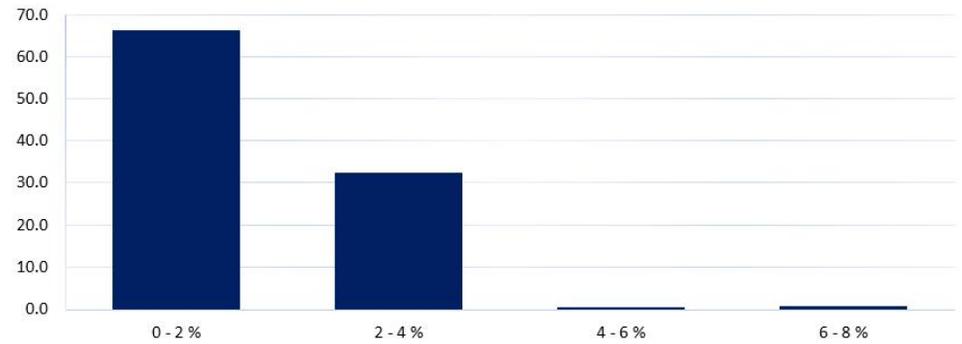
Duration Distribution



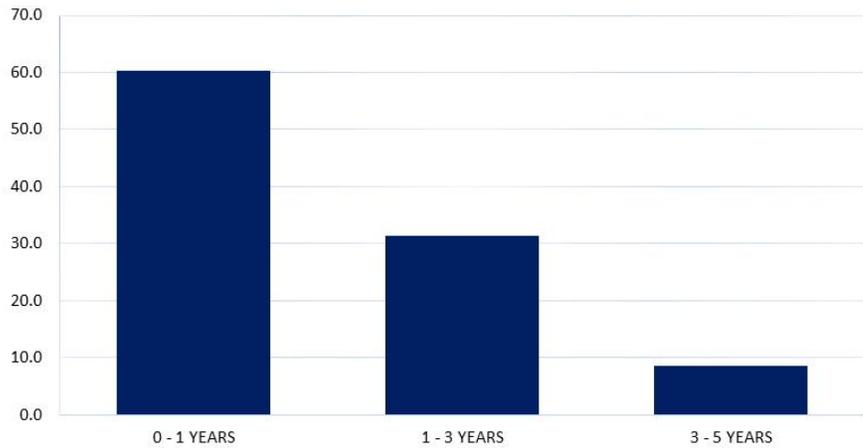
Portfolio Level Characteristics

	POOL 2 ST AGCY FF&C
Effective Maturity	1.28
Coupon	1.67
Effective Duration	0.80
Quality Rating (Moody's)	AAA

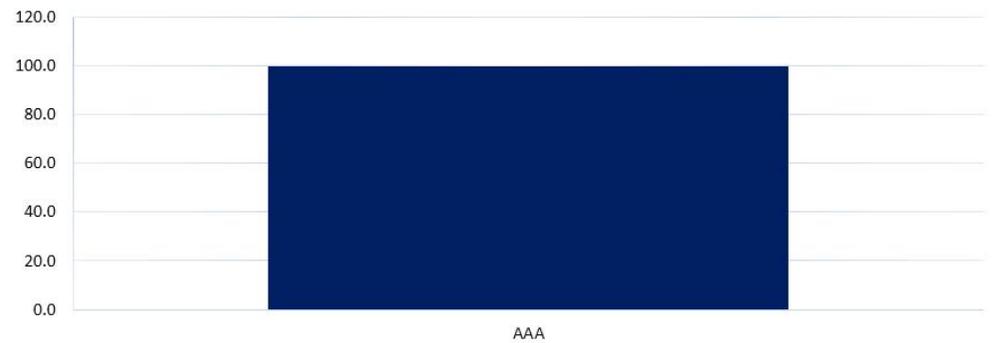
Coupon Distribution



Expected Maturity Distribution



Rating Distribution

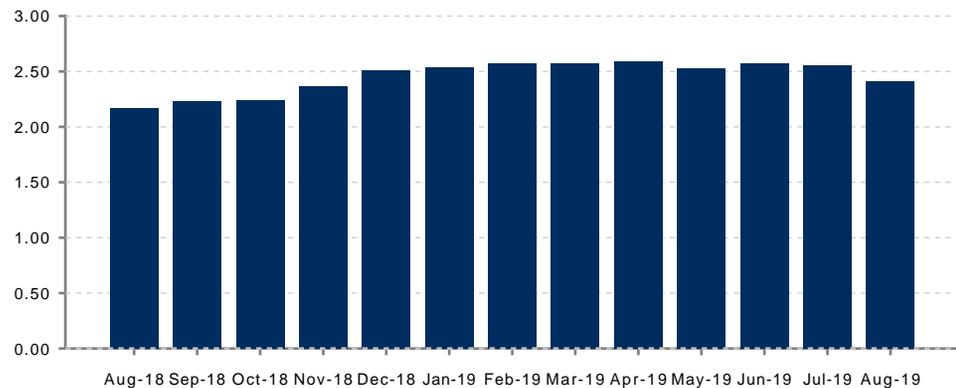


August 31, 2019

POOL 3 ST AGCY INT.



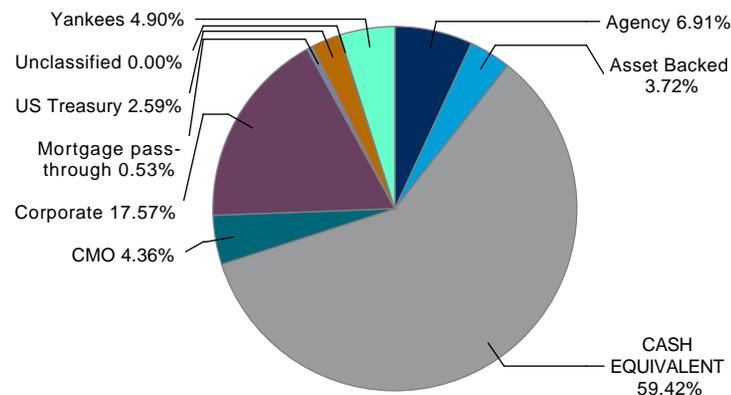
Net Yield



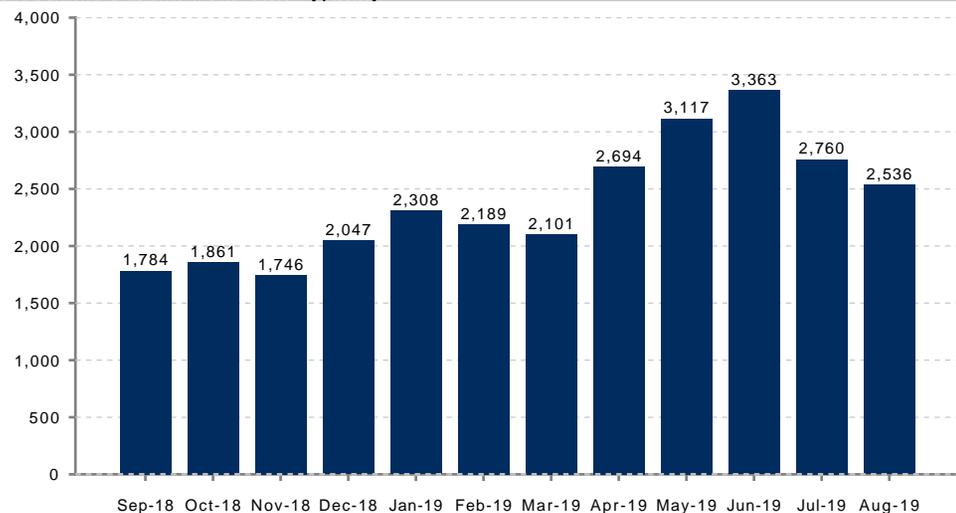
	Current Mth	Prior Mth	1 Year Ago
POOL 3 ST AGCY INT.	2.41	2.55	2.17

Asset Allocation

	Ending Market Value
POOL 3 ST AGCY INT.	2,535,639,073



Net Asset Values over Time (\$MM)

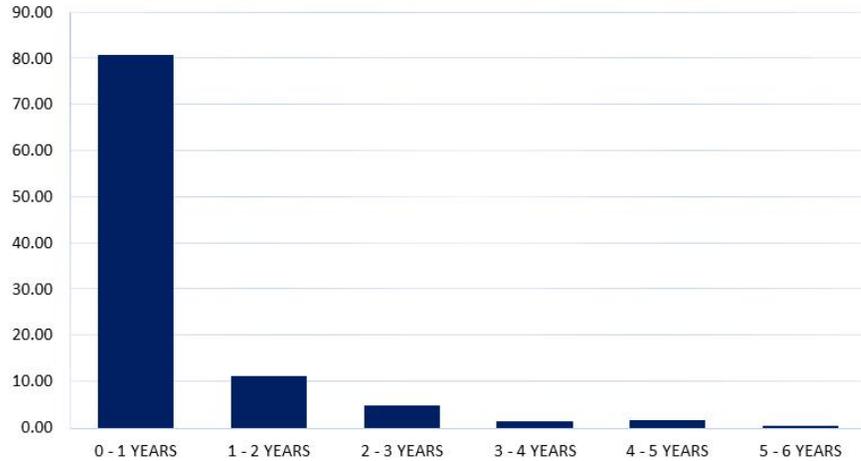


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY INT.		
AMHERST PIERPONT	275,033,306	10.85
SOUTH STREET REPO	211,424,993	8.34
CANTOR FITZGERALD REPO	150,018,333	5.92
SOUTH STREET REPO	60,006,667	2.37
GUGGENHEIM SECURITIES REPO	59,201,857	2.33
TREASURY BILL	54,657,167	2.16
SUNTRUST BKS INC DTC CP GENERIC CUSIP	50,095,583	1.98
DISNEY (WALT) CO THE	49,922,917	1.97
US TREASURY N/B	40,881,592	1.61
SANOFI	39,970,000	1.58



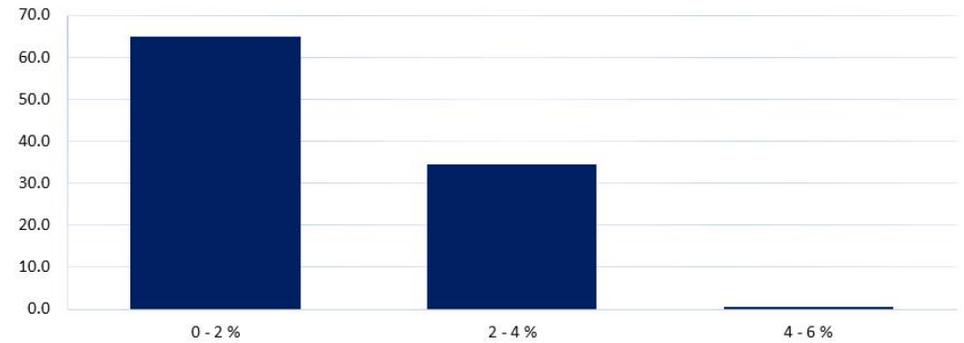
Duration Distribution



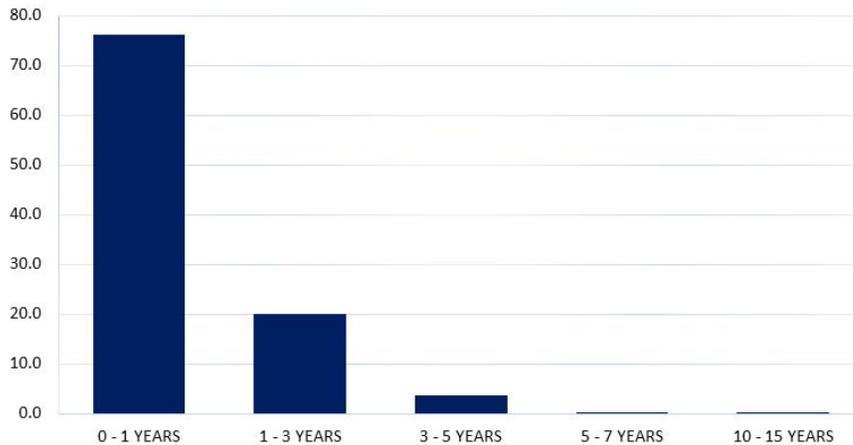
Portfolio Level Characteristics

	POOL 3 ST AGCY INT.
Effective Maturity	0.83
Coupon	1.32
Effective Duration	0.54
Quality Rating (Moody's)	AA-1

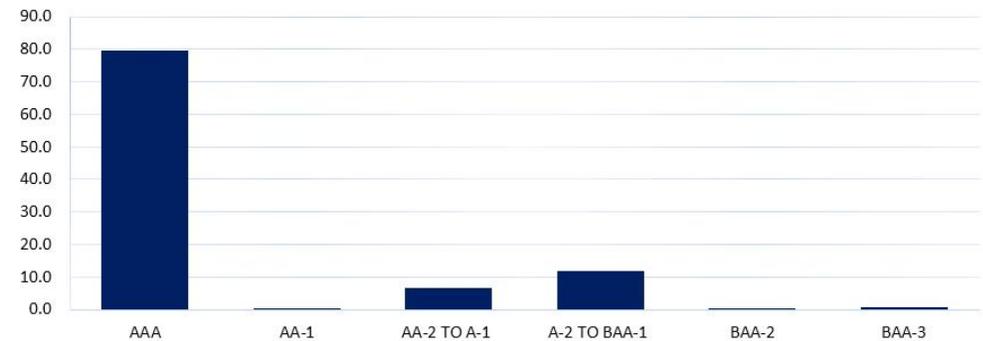
Coupon Distribution



Expected Maturity Distribution

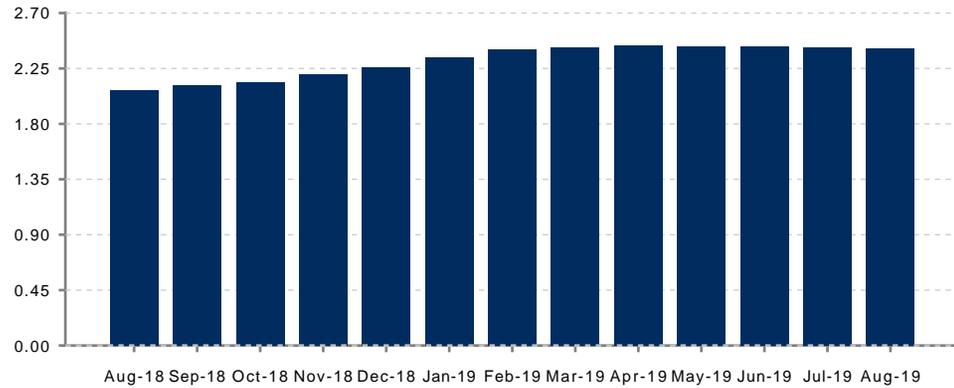


Rating Distribution





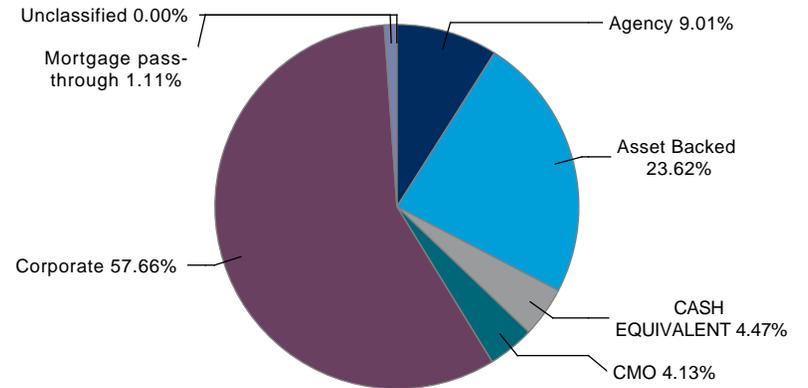
Net Yield



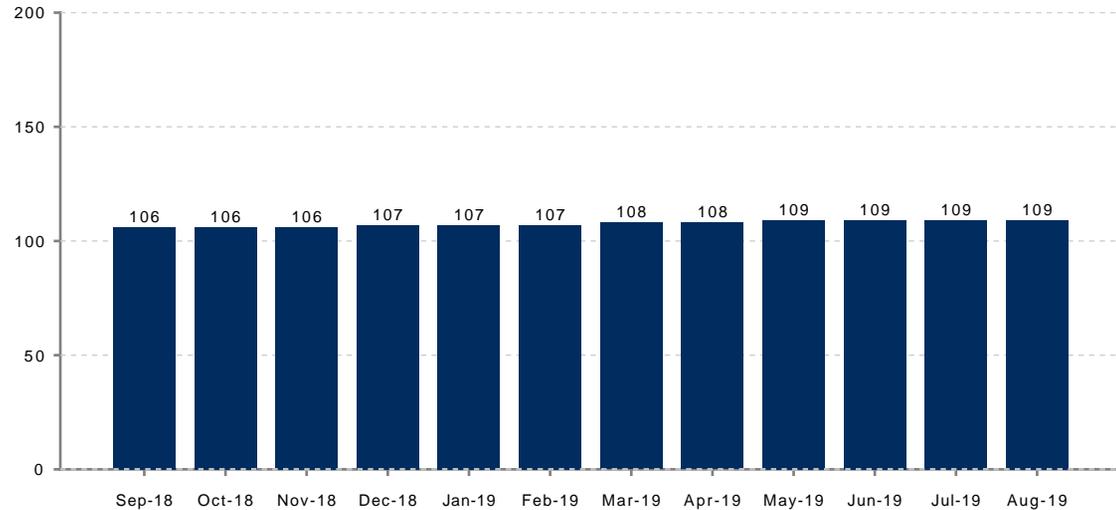
	Current Mth	Prior Mth	1 Year Ago
POOL 3 ST AGCY EXT.	2.41	2.42	2.07

Asset Allocation

	Ending Market Value
POOL 3 ST AGCY EXT.	109,469,366



Net Asset Values over Time (\$MM)

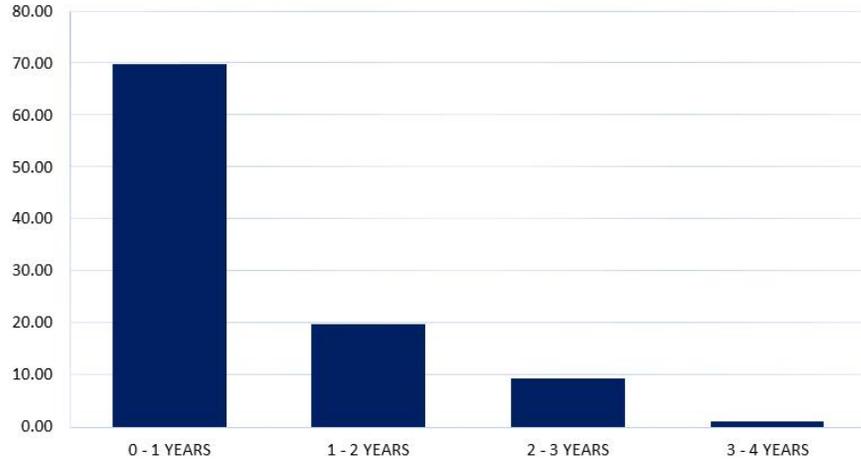


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY EXT.		
BLACKROCK PROV TEMP	4,436,715	4.05
FREDDIE MAC	3,034,141	2.77
FREDDIE MAC	2,175,610	1.99
DISCOVER CARD EXECUTION NOTE T	2,120,745	1.94
PACCAR FINANCIAL CORP	2,083,747	1.90
FHLMC MULTIFAMILY STRUCTURED P	2,038,106	1.86
CISCO SYSTEMS INC	2,017,840	1.84
FREDDIE MAC	2,003,108	1.83
FREDDIE MAC	2,000,318	1.83
FHLMC MULTIFAMILY STRUCTURED P	1,965,426	1.80



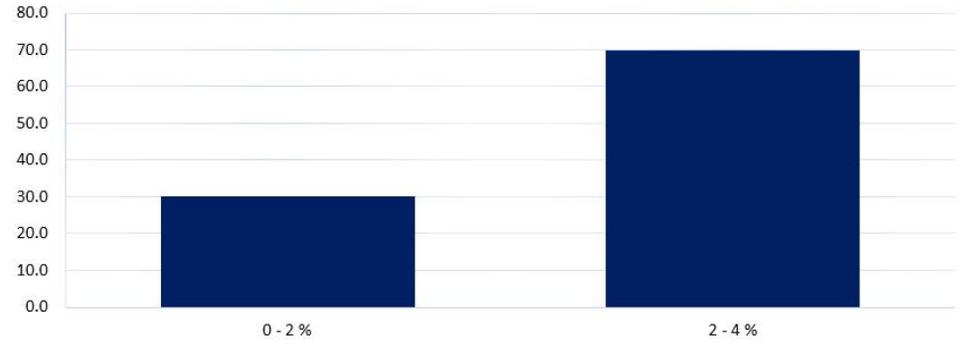
Duration Distribution



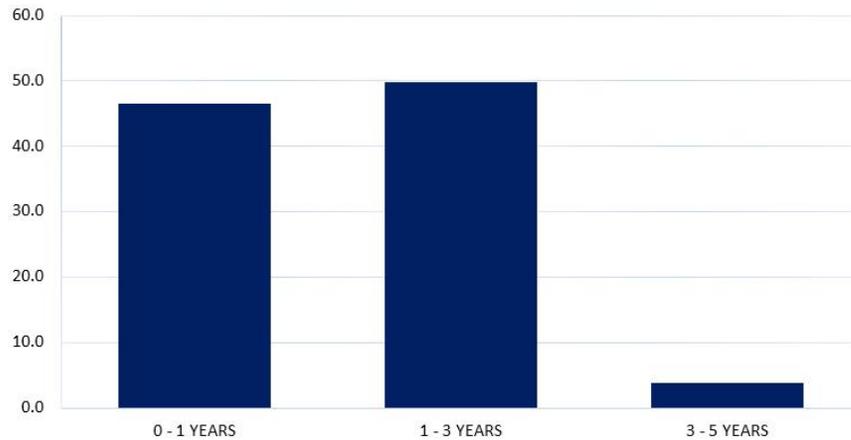
Portfolio Level Characteristics

	POOL 3 ST AGCY EXT.
Effective Maturity	1.22
Coupon	2.39
Effective Duration	0.77
Quality Rating (Moody's)	AA-3

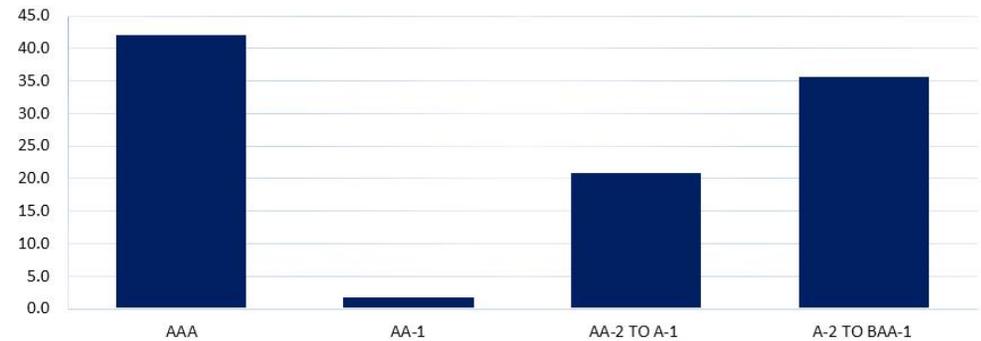
Coupon Distribution



Expected Maturity Distribution

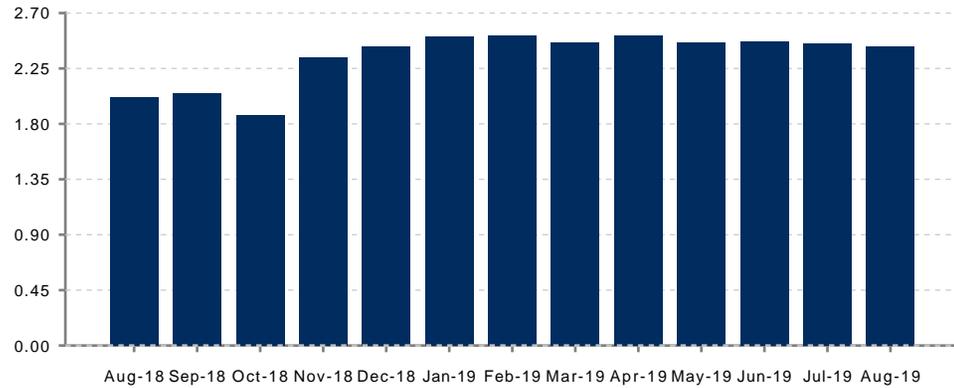


Rating Distribution





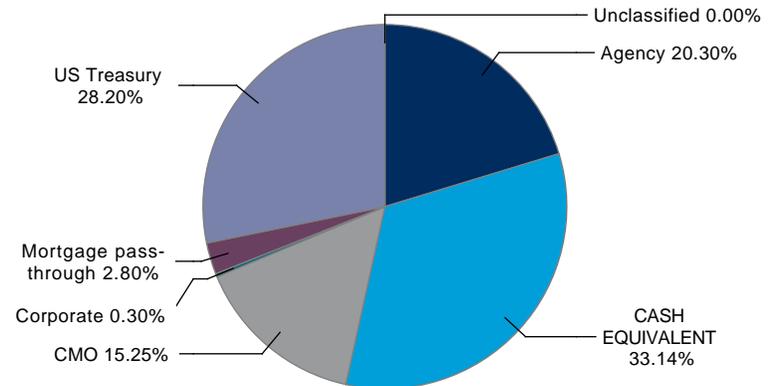
Net Yield



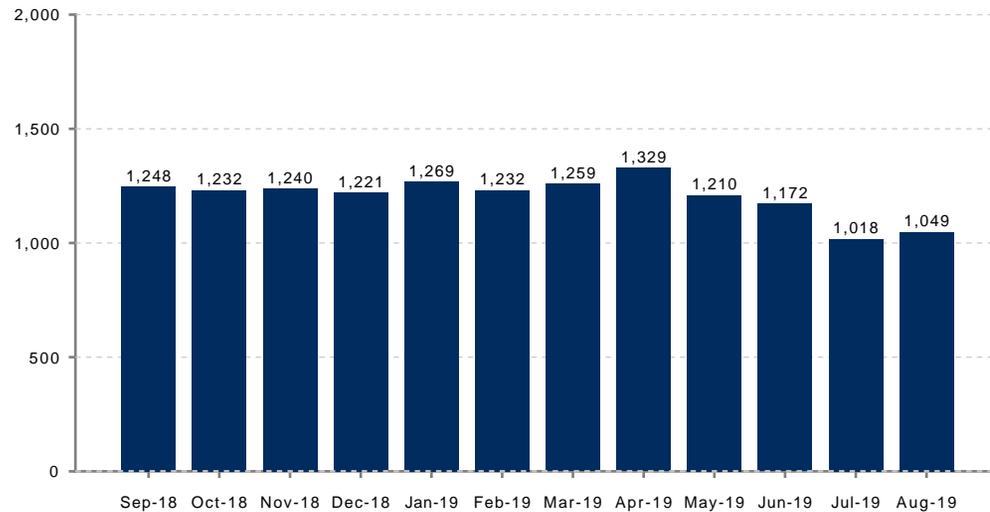
	Current Mth	Prior Mth	1 Year Ago
POOL 4 ST AGCY GOV.	2.43	2.45	2.02

Asset Allocation

	Ending Market Value
POOL 4 ST AGCY GOV.	1,048,792,773



Net Asset Values over Time (\$MM)

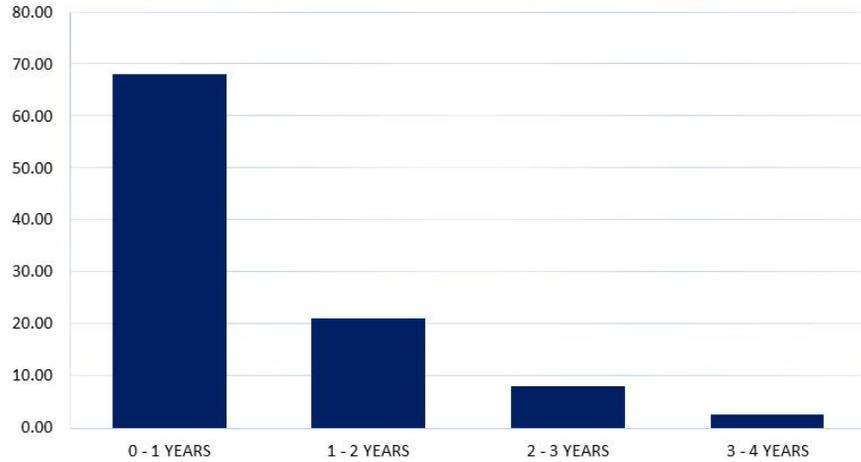


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 4 ST AGCY GOV.		
SOUTH STREET REPO	198,780,152	18.95
US TREASURY N/B	66,378,321	6.33
US TREASURY N/B	56,212,188	5.36
SUNTRUST BKS INC DTC CP GENERIC CUSIP	50,095,583	4.78
US TREASURY N/B	40,375,680	3.85
US TREASURY N/B	25,340,481	2.42
US TREASURY N/B	25,244,693	2.41
TREASURY BILL	24,850,903	2.37
TREASURY BILL	24,844,167	2.37
FEDERAL HOME LOAN BANK	20,834,963	1.99



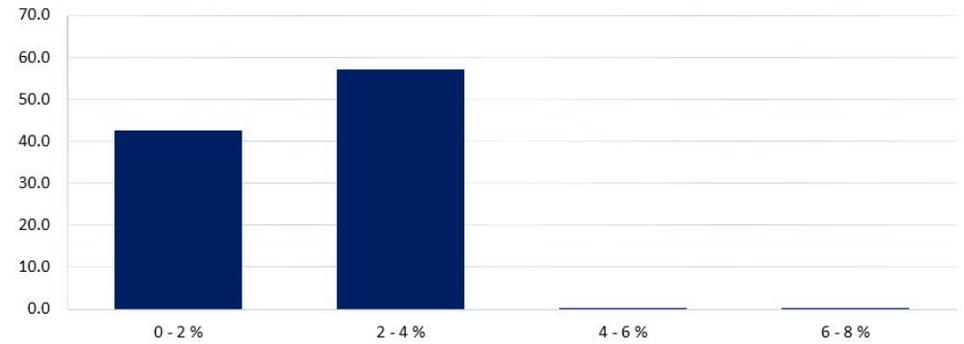
Duration Distribution



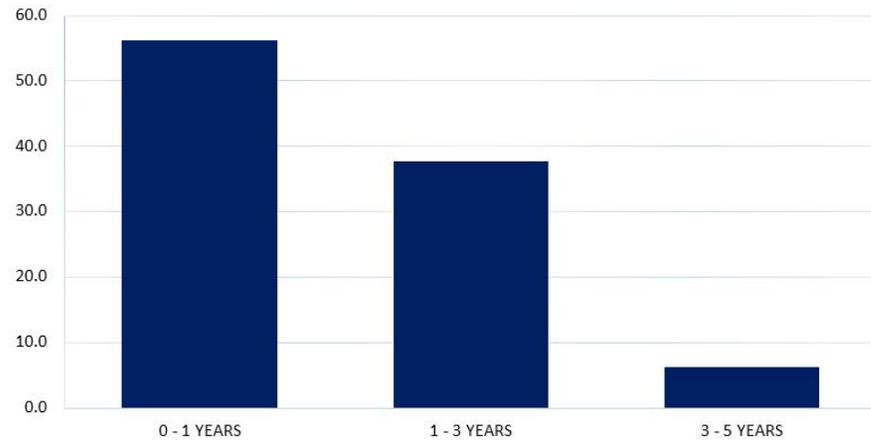
Portfolio Level Characteristics

	POOL 4 ST AGCY GOV.
Effective Maturity	1.24
Coupon	2.15
Effective Duration	0.77
Quality Rating (Moody's)	AAA

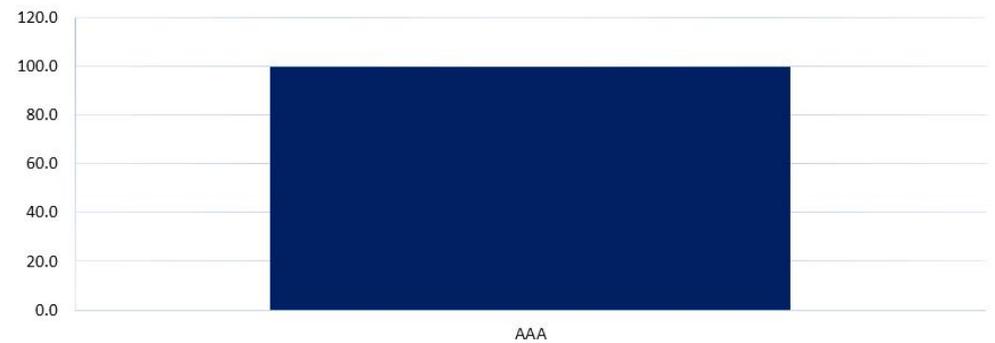
Coupon Distribution



Expected Maturity Distribution

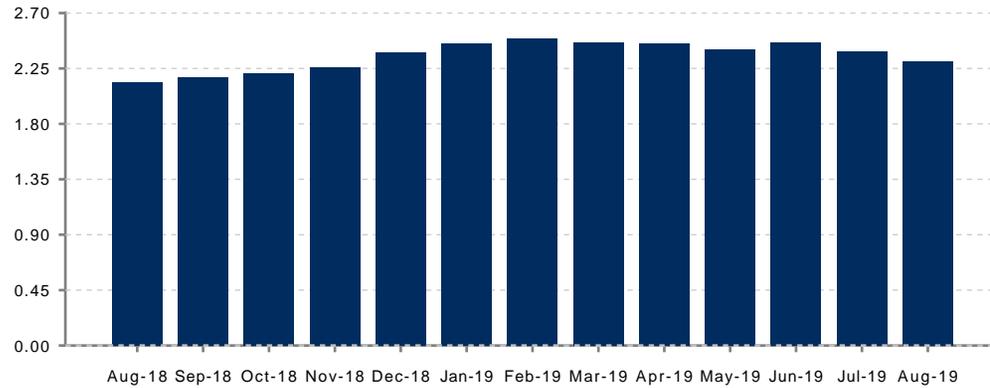


Rating Distribution





Net Yield

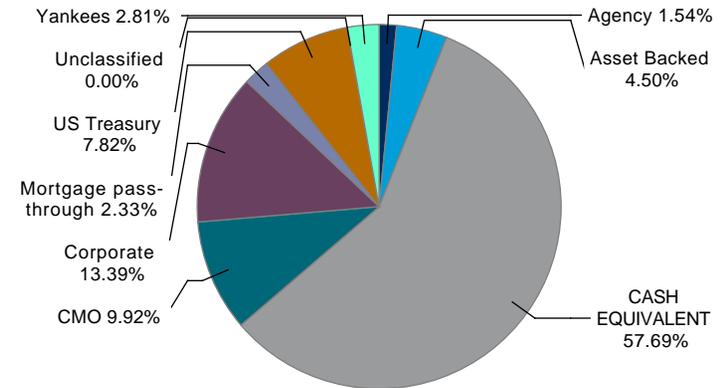


Current Mth **Prior Mth** **1 Year Ago**

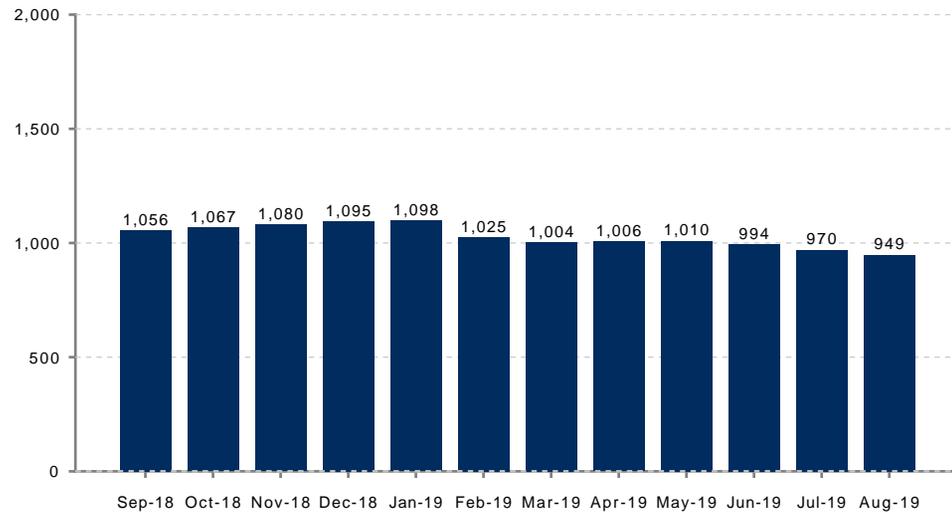
POOL 10 ST OPER INT	2.31	2.39	2.14
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Asset Allocation

POOL 10 ST OPER INT	Ending Market Value 948,863,935
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Net Asset Values over Time (\$MM)

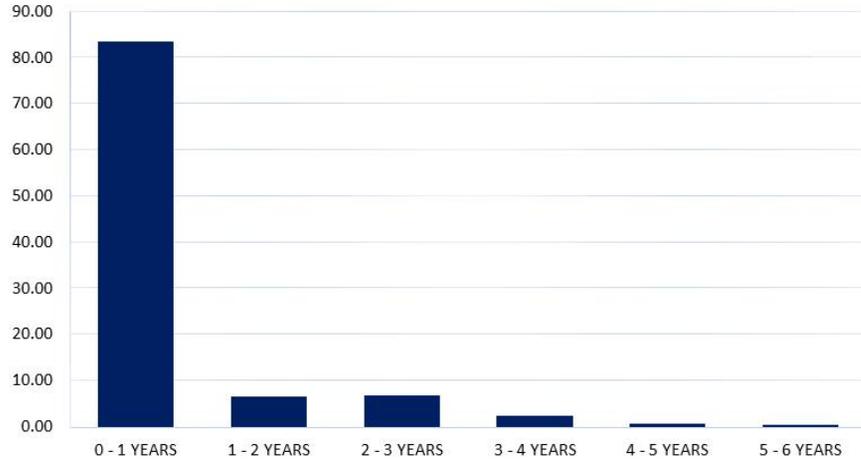


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPER INT		
CANTOR FITZGERALD REPO	50,101,181	5.28
US TREASURY N/B	30,243,750	3.19
INSTITUTIONAL SECURED	29,965,950	3.16
ANGLESEA FDG PLC and ANG	29,943,750	3.16
CROWN POINT CAP CO.	25,042,584	2.64
GOTHAM FDG CORP	24,996,833	2.63
VICTORY RECEIVABLES	24,995,229	2.63
ATLANTIC ASSET SECUR	24,952,500	2.63
MOUNTCLIFF	24,911,090	2.63
BEDFORD ROW FDG CORP	20,036,062	2.11



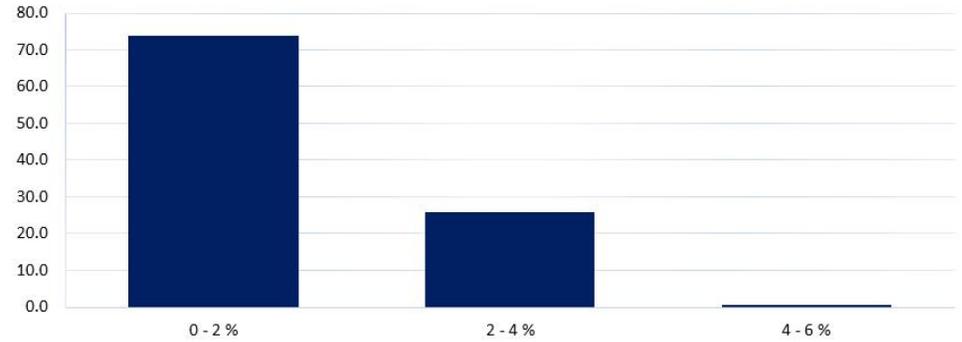
Duration Distribution



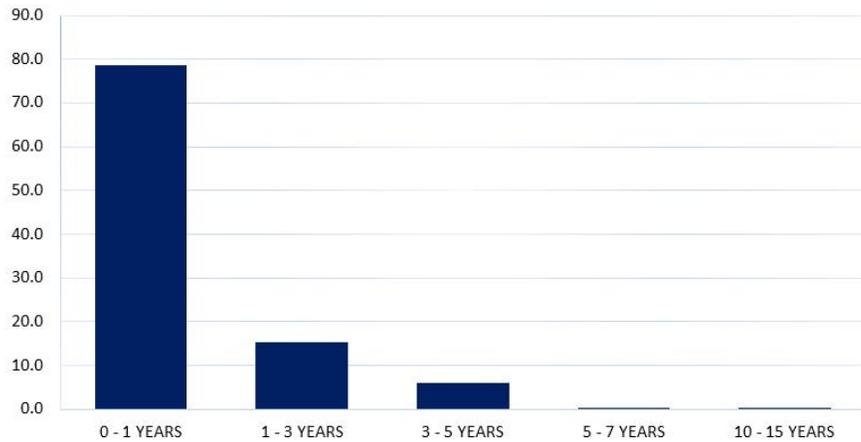
Portfolio Level Characteristics

	POOL 10 ST OPERATING INT
Effective Maturity	0.77
Coupon	1.04
Effective Duration	0.58
Quality Rating (Moody's)	AA-1

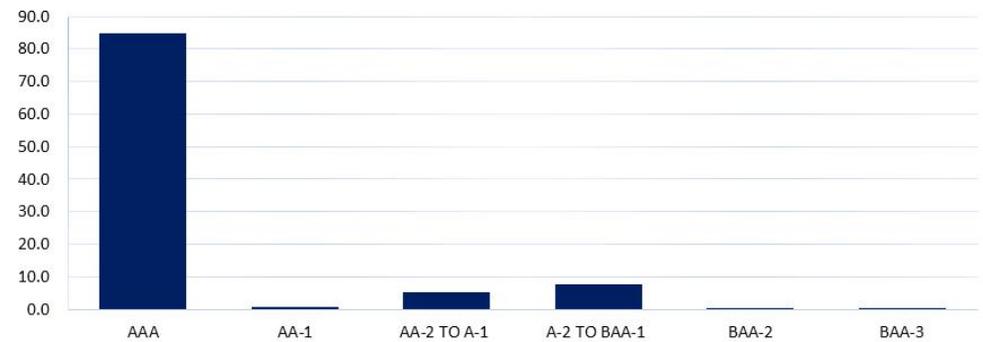
Coupon Distribution



Expected Maturity Distribution

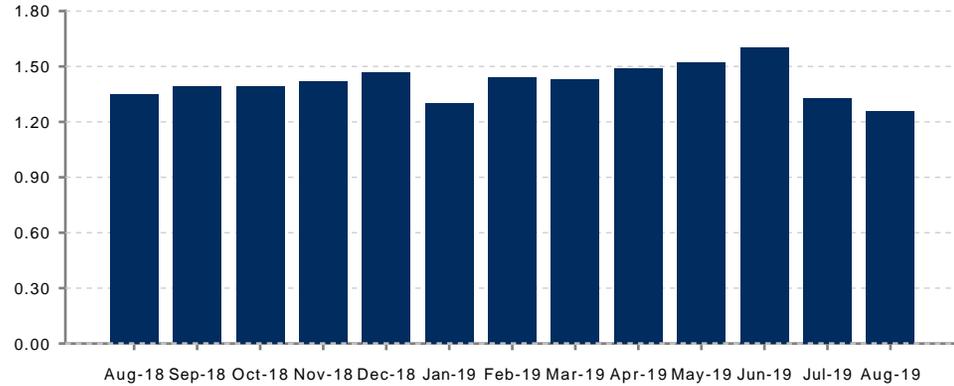


Rating Distribution





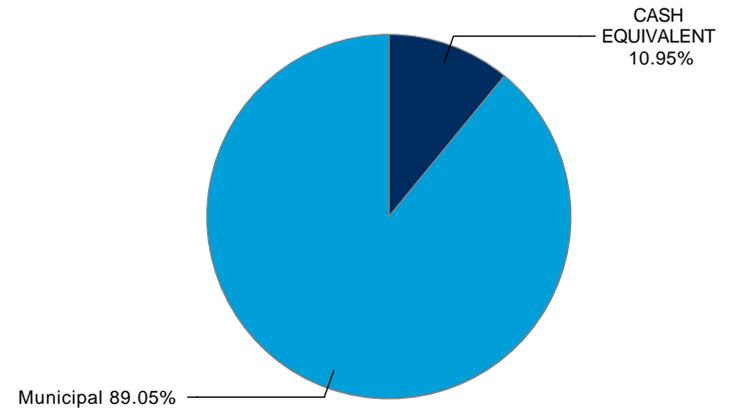
Net Yield



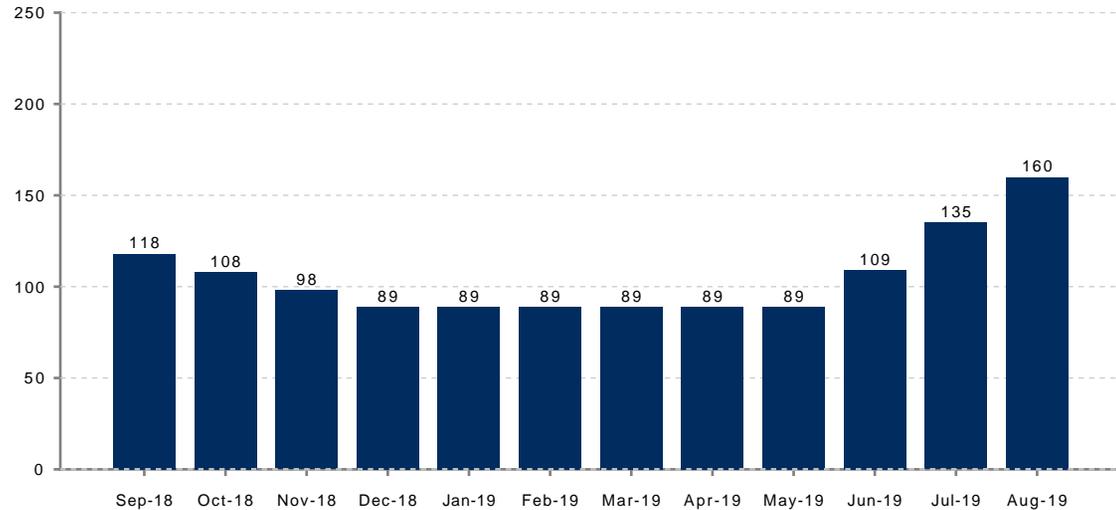
	Current Mth	Prior Mth	1 Year Ago
POOL 10 ST OPERATING	1.26	1.33	1.35

Asset Allocation

	Ending Market Value
POOL 10 ST OPERATING	159,800,261



Net Asset Values over Time (\$MM)

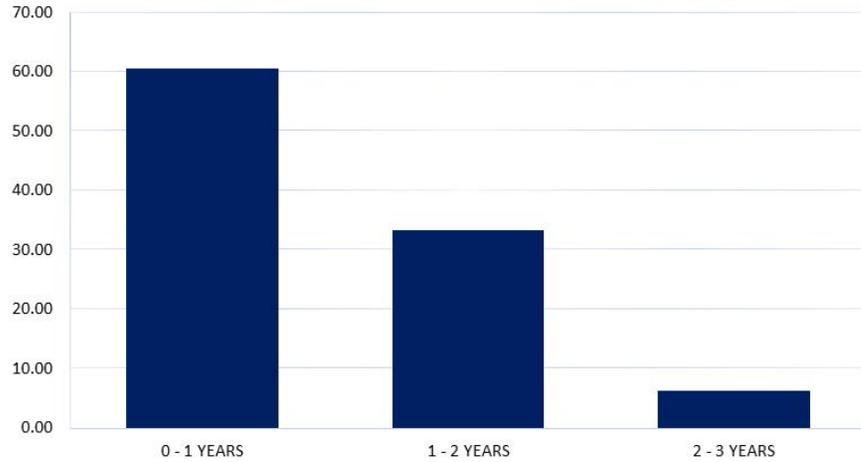


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPERATING		
DREYFUS TAX EXEMPT CA	17,515,047	10.96
GLYNN BRUNSWICK GA M	6,007,134	3.76
LOUDOUN CNTY VA INDL	6,006,876	3.76
SAINT PAUL MN HSG RED	6,006,717	3.76
UNIV OF TEXAS TX	6,006,707	3.76
ORANGE CNTY FL HLTH F	5,931,857	3.71
COLUMBUS OH	5,297,822	3.32
HOUSTON TX UTILITY SYS	5,005,796	3.13
FORT WORTH TX	4,834,340	3.03
VIRGINIA MN INDEP SCH D	4,512,999	2.82



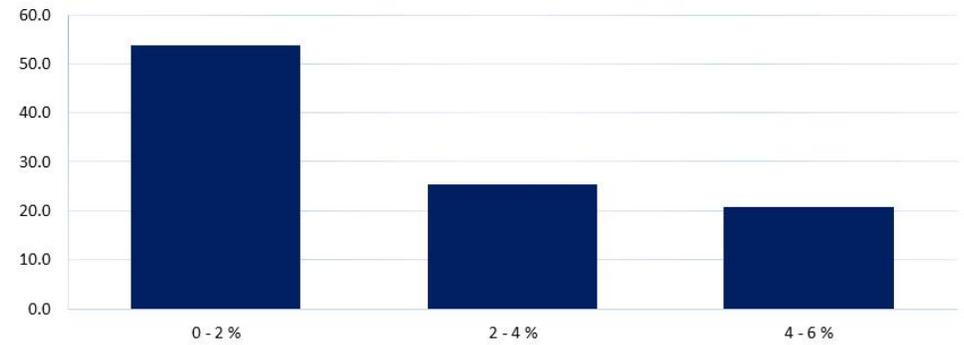
Duration Distribution



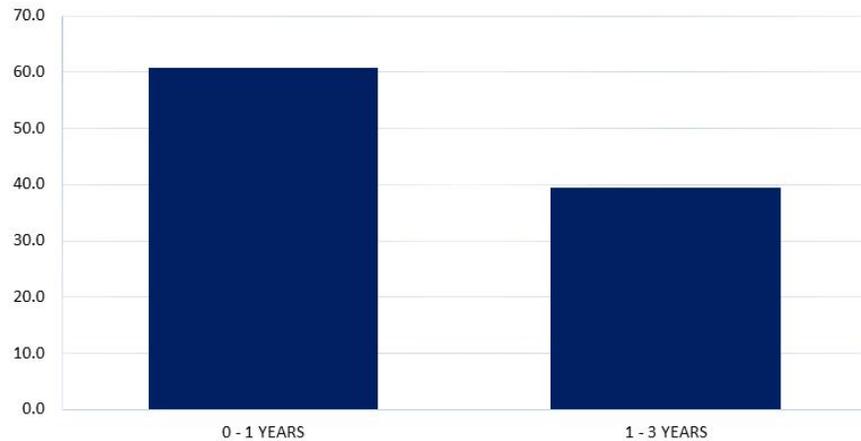
Portfolio Level Characteristics

	POOL 10 ST OPERATING
Effective Maturity	0.81
Coupon	2.80
Effective Duration	0.78
Quality Rating (Moody's)	AA-1

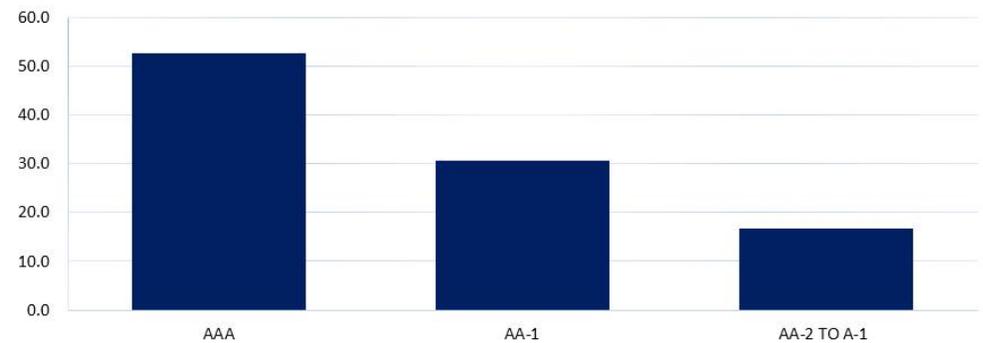
Coupon Distribution



Expected Maturity Distribution

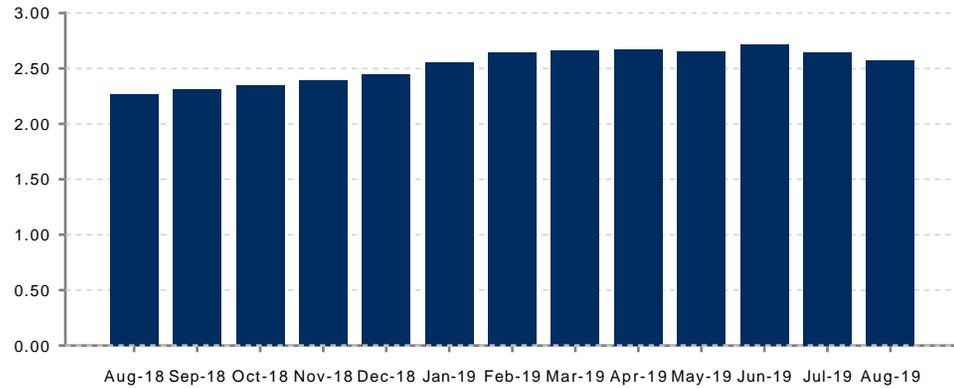


Rating Distribution





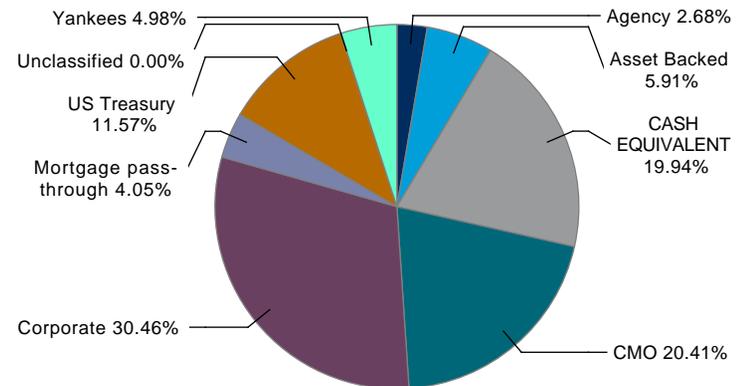
Net Yield



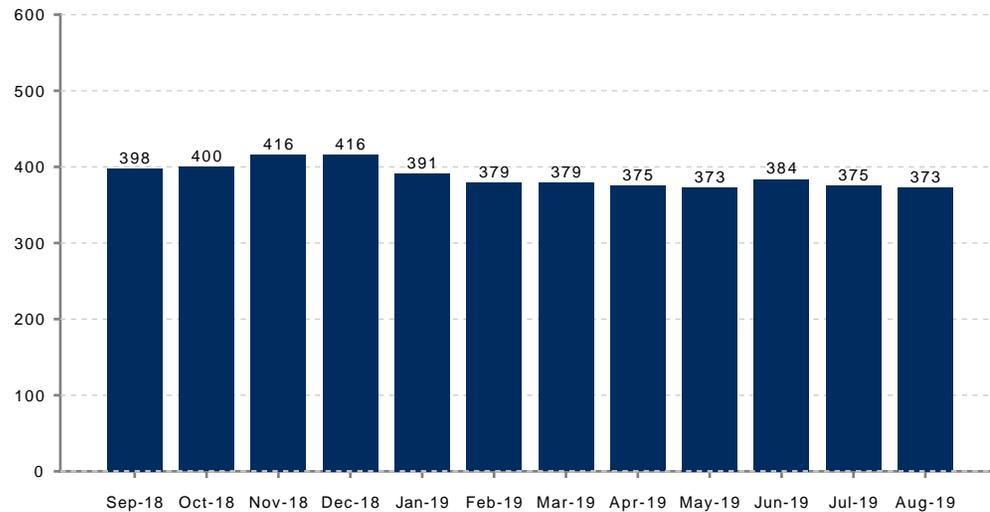
	Current Mth	Prior Mth	1 Year Ago
POOL 12 CAWCD MED TRM	2.57	2.64	2.27

Asset Allocation

	Ending Market Value
POOL 12 CAWCD MED TRM	372,942,063



Net Asset Values over Time (\$MM)

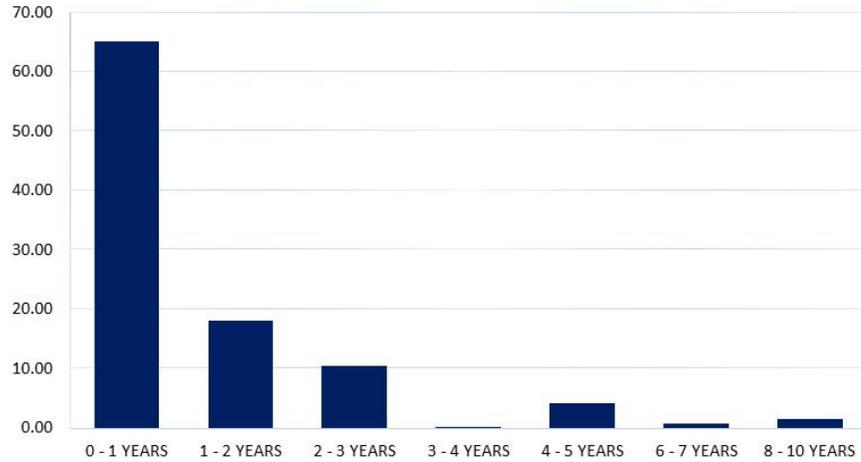


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 12 CAWCD MED TRM		
US TREASURY N/B	10,226,172	2.74
CANTOR FITZGERALD REPO	10,020,236	2.69
CROWN POINT CAP CO.	10,017,034	2.69
TREASURY BILL	9,937,667	2.66
WI TREASURY SEC	7,612,080	2.04
GOVERNMENT NATIONAL MORTGAGE A	6,063,315	1.63
BANK OF AMERICA CORP	5,555,141	1.49
SOUTH STREET REPO	5,500,694	1.47
JP MORGAN CHASE BANK NA	5,323,970	1.43
WASTE MANAGEMENT INC	5,240,942	1.41



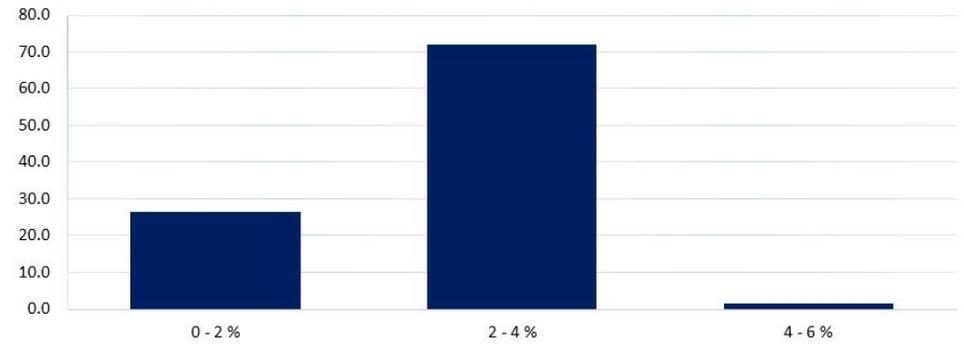
Duration Distribution



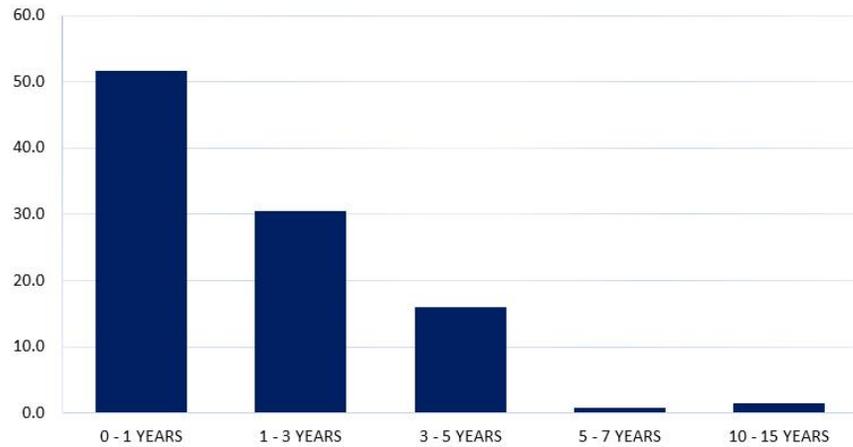
Portfolio Level Characteristics

	POOL 12 CAWCD MED TRM
Effective Maturity	1.73
Coupon	2.39
Effective Duration	0.89
Quality Rating (Moody's)	AA-2

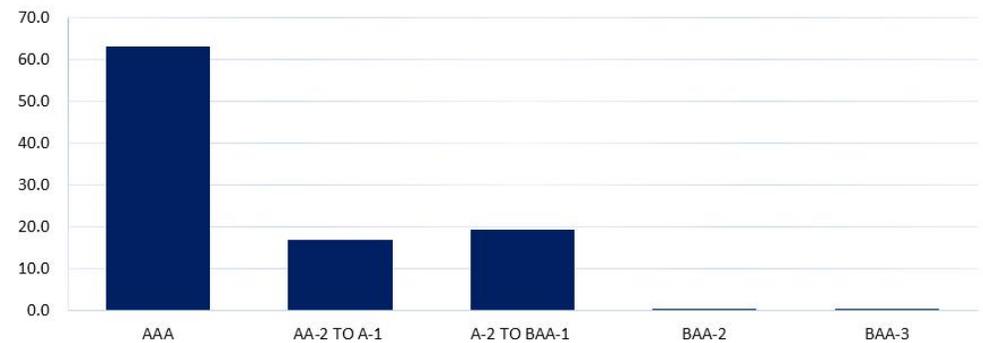
Coupon Distribution



Expected Maturity Distribution

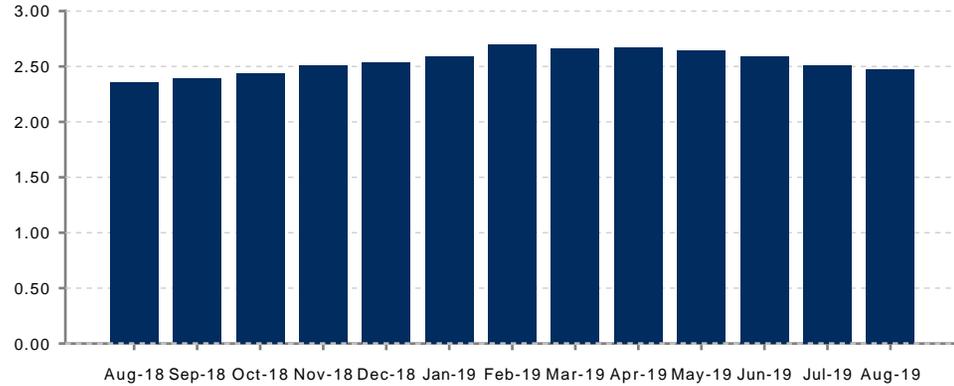


Rating Distribution





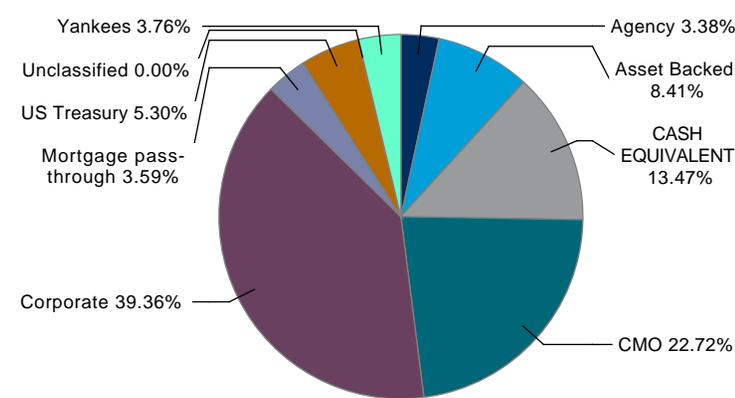
Net Yield



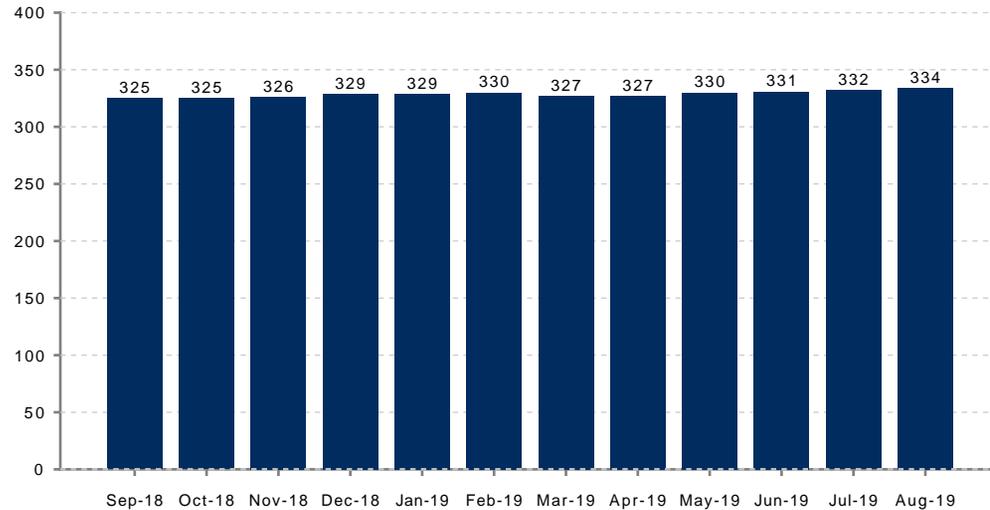
	Current Mth	Prior Mth	1 Year Ago
POOL 16 ECDHB	2.47	2.51	2.36

Asset Allocation

	Ending Market Value
POOL 16 ECDHB	334,303,647



Net Asset Values over Time (\$MM)

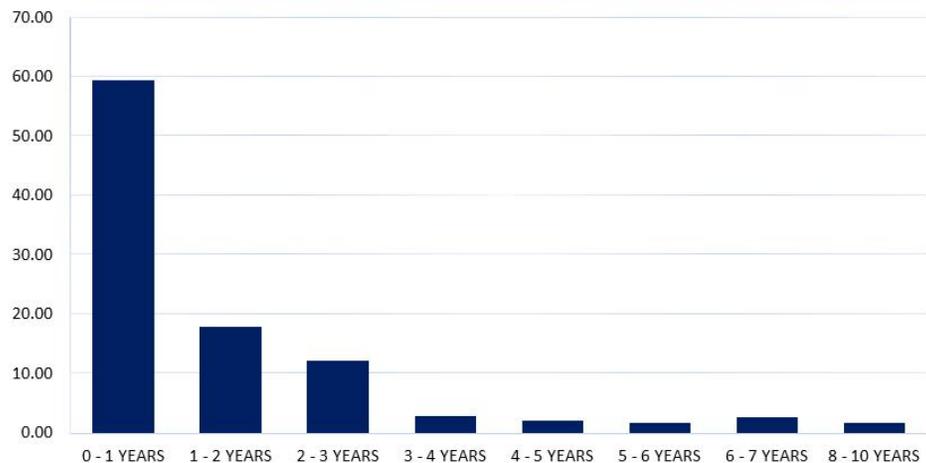


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 16 ECDHB		
CANTOR FITZGERALD REPO	10,020,236	3.00
FANNIE MAE	5,806,679	1.74
BANK OF AMERICA CORP	5,449,089	1.63
BANK OF NY MELLON CORP	5,330,902	1.59
JP MORGAN CHASE BANK NA	5,324,972	1.59
BRISTOL MYERS SQUIBB CO	5,225,446	1.56
BOEING CO	5,225,084	1.56
FREDDIE MAC	5,197,632	1.55
FANNIE MAE	5,115,513	1.53
US TREASURY N/B	5,113,086	1.53



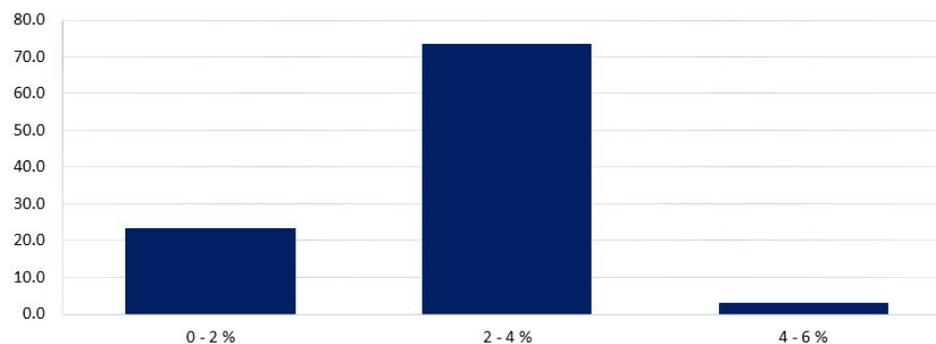
Duration Distribution



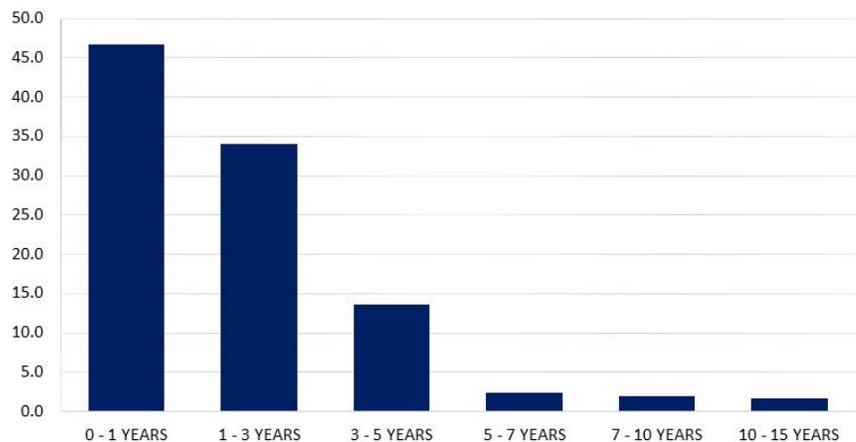
Portfolio Level Characteristics

	POOL 16 ECDHB
Effective Maturity	2.01
Coupon	2.56
Effective Duration	1.22
Quality Rating (Moody's)	AA-2

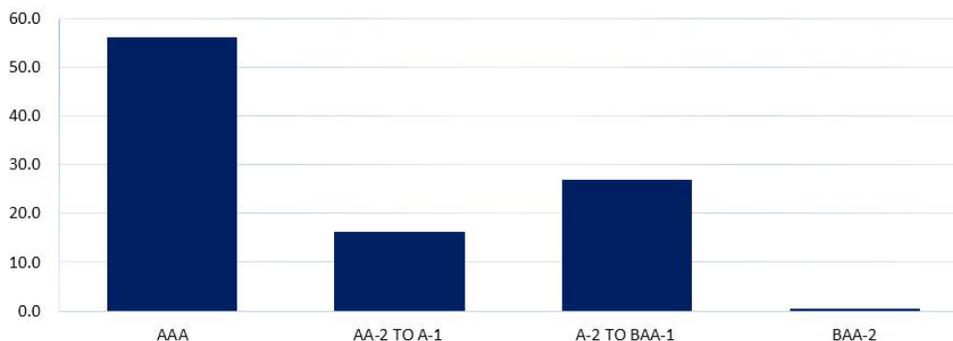
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



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**LGIP & LGIP- GOV
PORTFOLIO YIELD ANALYSIS
AUGUST 2019**

NET EARNINGS

FUND	DESCRIPTION	Current Month 08/31/19	Prior Month 07/31/19	Prior Year 08/31/18	Net Asset Value Per Share
5	LGIP	2,970,543	3,199,046	2,476,958	1.0000
7	LGIP - GOV (1)	2,705,152	3,112,407	1,902,906	1.0000
	TOTAL LGIP & LGIP-GOV	5,675,695	6,311,454	4,379,864	

YIELDS

<u>MONTHLY</u>		Current Month 08/31/19	Prior Month 07/31/19	Prior Year 8/31/18
5	LGIP (NET)	2.30%	2.43%	2.09%
	S&P LGIP Index	2.23%	2.33%	1.96%
7	LGIP - GOV (NET) (1)	2.17%	2.34%	1.87%
	Trailing 3-mo T-bill	2.10%	2.24%	1.98%

FISCAL YEAR TO DATE

5	LGIP (NET)	2.36%	2.43%	2.08%
	S&P LGIP Index	2.28%	2.33%	1.94%
7	LGIP - GOV (NET) (1)	2.26%	2.34%	1.85%
	Trailing 3-mo T-bill	2.10%	2.24%	1.95%

NOTE - the Pool 7 benchmark measurement was revised in October 2018; prior period benchmarks were also changed to reflect the revised measure.

(1) The LGIP-GOV Pool consists of only securities explicitly backed by the full faith & credit of the US Government.

**LGIP & LGIP- GOV MEDIUM TERM POOLS
PORTFOLIO YIELD ANALYSIS
AUGUST 2019**

NET EARNINGS

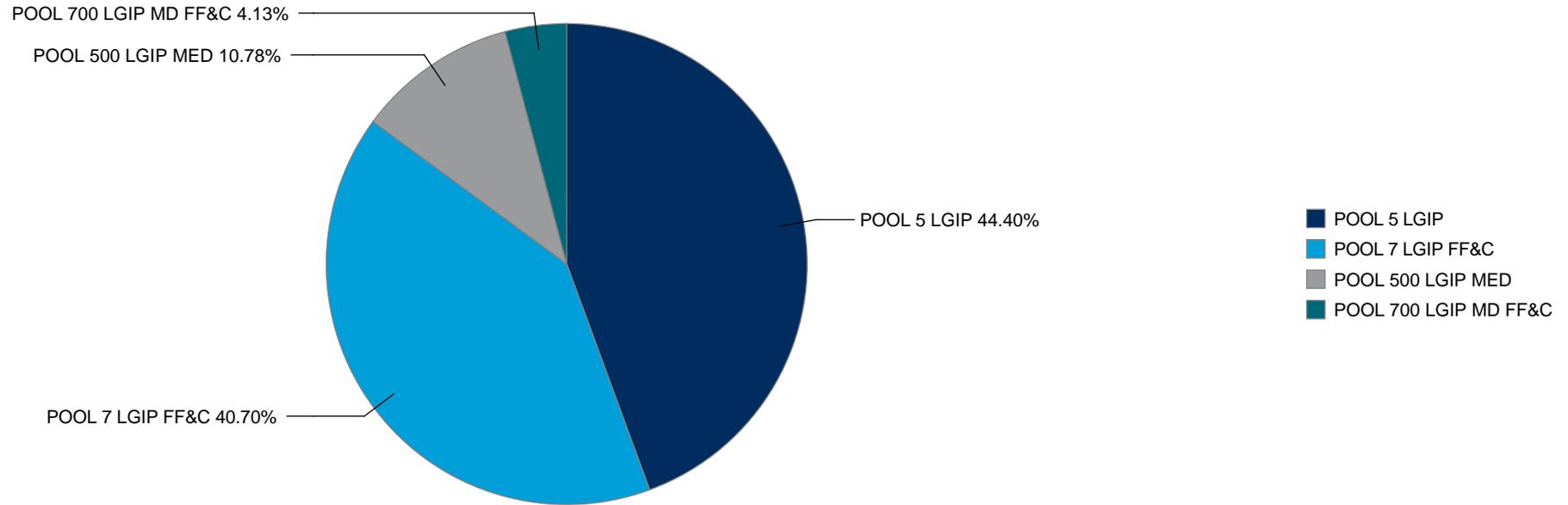
FUND	DESCRIPTION	Current Month 08/31/19	Prior Month 07/31/19	Prior Year 08/31/18	Net Asset Value Per Share
500	LGIP - MED TERM POOL	761,399	758,939	673,157	1.0359
700	LGIP - FF&C MED TERM POOL	259,666	255,087	227,898	1.0130
	TOTAL LGIP MEDIUM TERM POOLS	1,021,065	1,014,026	901,055	

YIELDS

<u>MONTHLY</u>		Current Month 08/31/19	Prior Month 07/31/19	Prior Year 8/31/18
500	LGIP - MED TERM (NET)	2.47%	2.48%	2.29%
	20% S&P LGIP Index /	1.93%	2.11%	2.63%
	80% Bloomberg Barclays 1-3 year US Agg			
700	LGIP - FF&C MED TERM (NET)	2.20%	2.17%	1.98%
	20% Trailing 3-mo T-bill /	1.72%	1.96%	2.50%
	80% Barclay 1-3 year UST			
<u>FISCAL YEAR TO DATE</u>				
500	LGIP - MED TERM (NET)	2.47%	2.48%	2.28%
	20% S&P LGIP Index /	2.02%	2.11%	2.62%
	80% Bloomberg Barclays 1-3 year US Agg			
700	LGIP - FF&C MED TERM (NET)	2.18%	2.17%	1.84%
	20% Trailing 3-mo T-bill /	1.84%	1.96%	2.48%
	80% Bloomberg Barclays 1-3 year UST			

NOTE - all benchmark measurements were revised in October 2018; prior period benchmarks were also changed

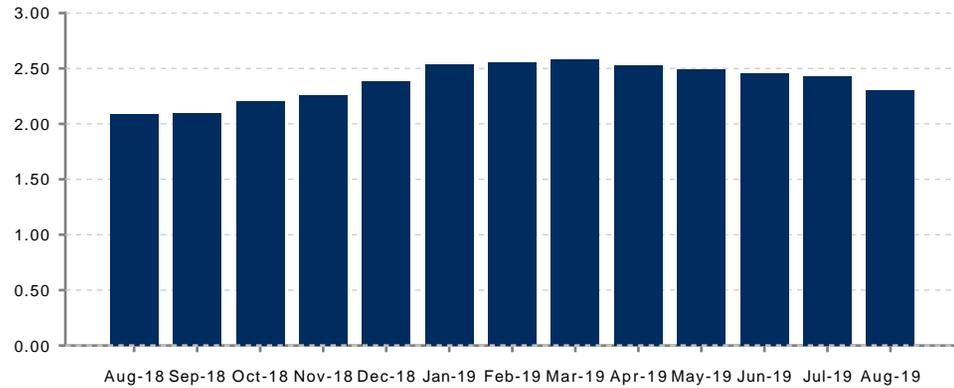
Manager Allocation



	Market Value	% of Portfolio
POOL 5 LGIP	1,497,055,615	44.4
POOL 7 LGIP FF&C	1,372,185,162	40.7
POOL 500 LGIP MED	363,370,886	10.8
POOL 700 LGIP MD FF&C	139,221,604	4.1
TOTAL LGIP	3,371,833,267	100.0



Net Yield

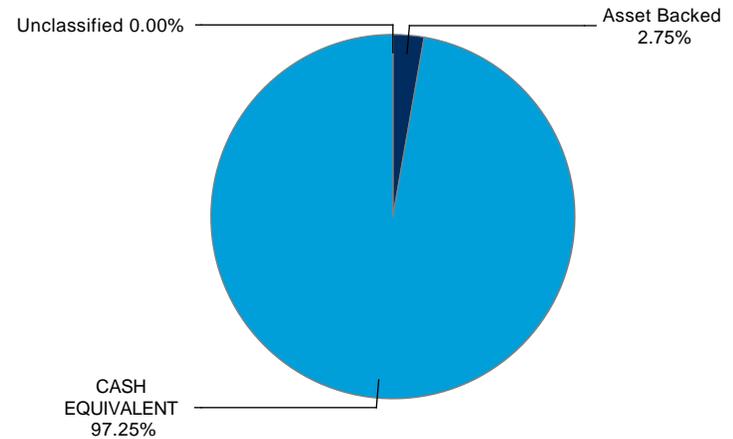


Current Mth **Prior Mth** **1 Year Ago**

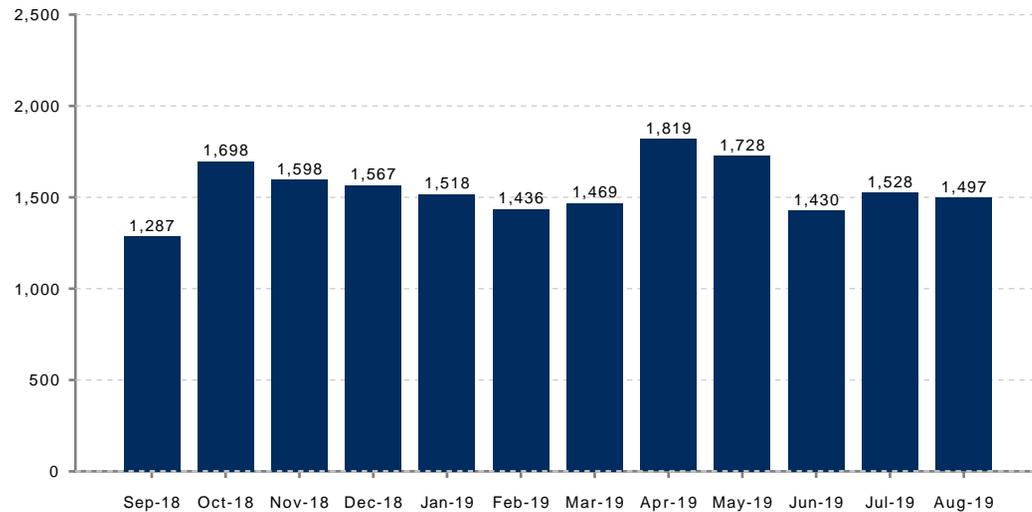
POOL 5 LGIP	2.30	2.43	2.09
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Asset Allocation

	Ending Market Value
POOL 5 LGIP	1,497,055,615



Net Asset Values over Time (\$MM)

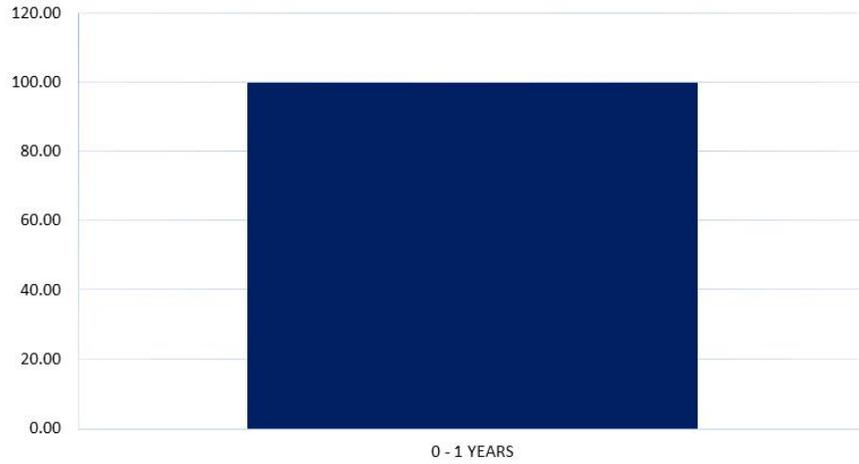


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 5 LGIP		
BANK OF AMERICA REPO	67,868,454	4.53
RBC CAPITAL MARKETS REPO	50,005,778	3.34
GLENCOVE FDG DAC/LLC	25,001,547	1.67
ANGLESEA FDG PLC and ANG	24,996,861	1.67
INSTITUTIONAL SECURED	24,996,847	1.67
CONCORD MIN CPTL CO	24,995,271	1.67
UNITED HEALTHCARE CO	24,992,222	1.67
ANGLESEA FDG PLC and ANG	24,991,736	1.67
VICTORY RECEIVABLES	24,988,000	1.67
GOTHAM FDG CORP	24,987,445	1.67



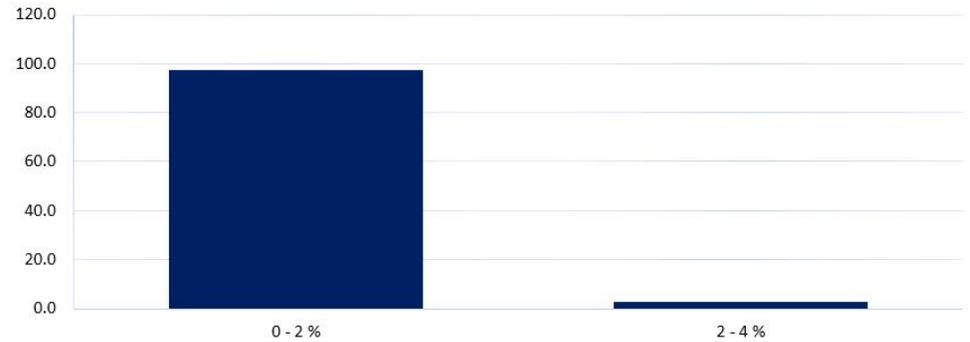
Duration Distribution



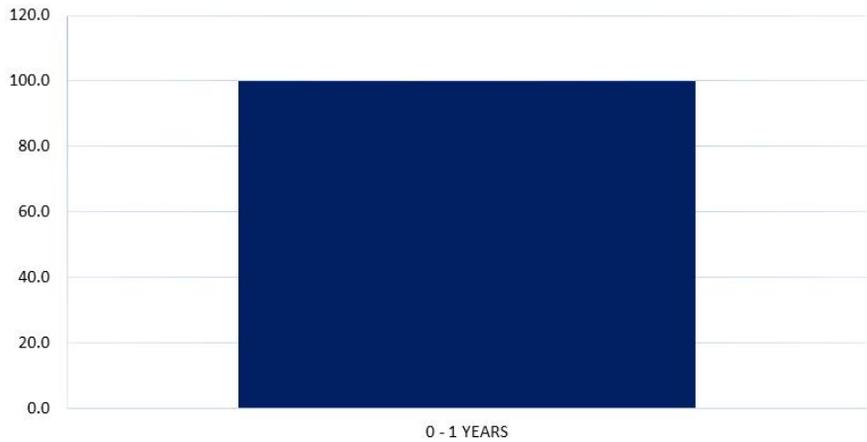
Portfolio Level Characteristics

	POOL 5 LGIP
Effective Maturity	0.14
Coupon	0.07
Effective Duration	0.13
Quality Rating (Moody's)	AAA

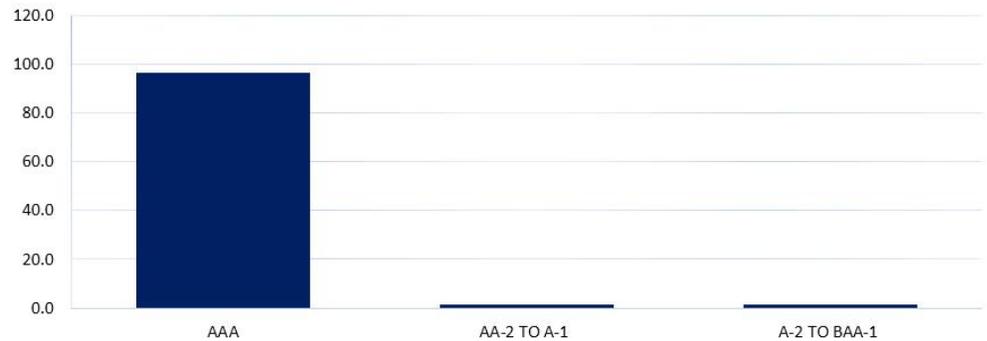
Coupon Distribution



Expected Maturity Distribution



Rating Distribution

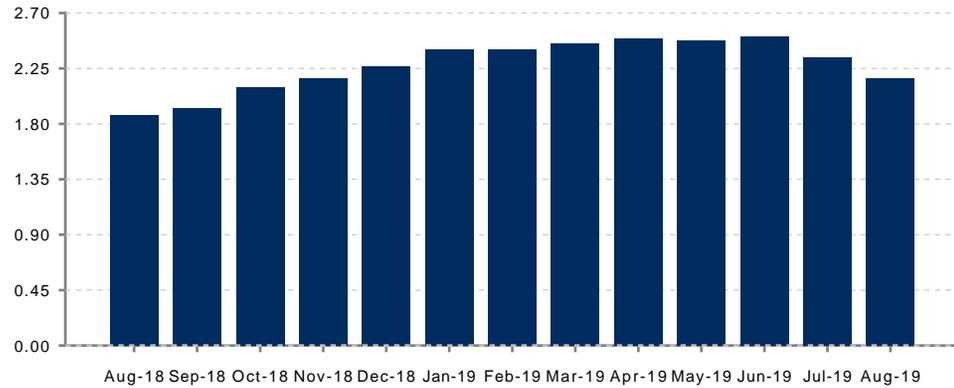


OFFICE OF THE ARIZONA STATE TREASURER

August 31, 2019
 POOL 7 LGIP FF&C



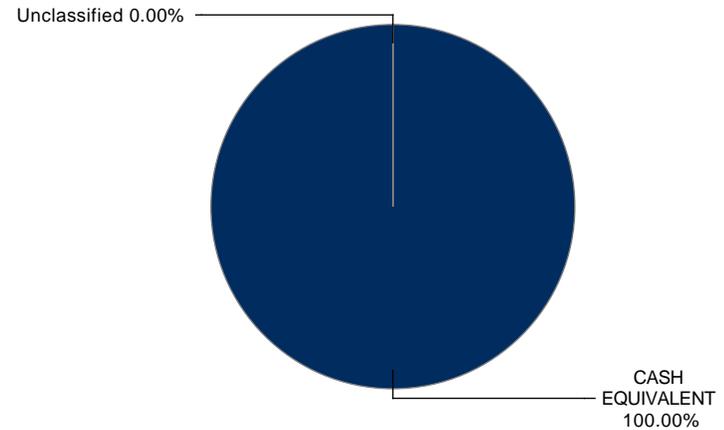
Net Yield



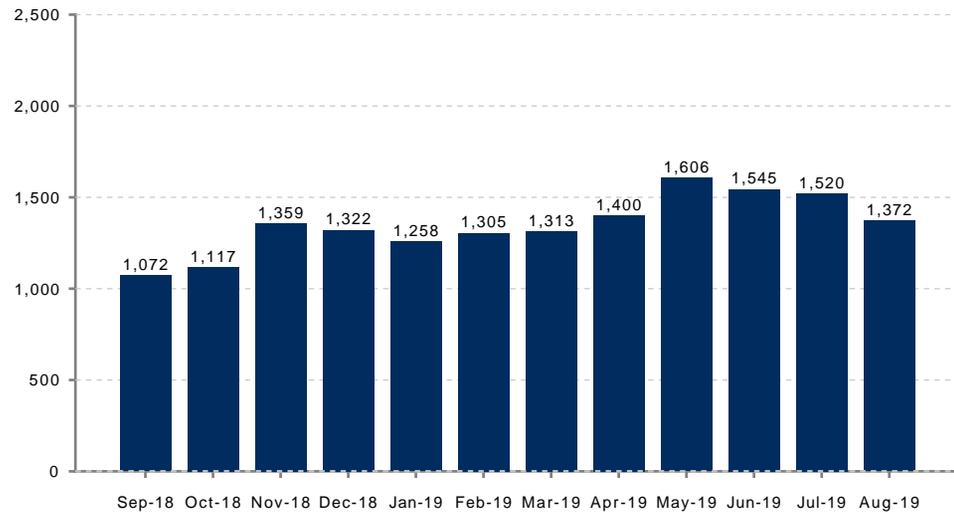
	Current Mth	Prior Mth	1 Year Ago
POOL 7 LGIP FF&C	2.17	2.34	1.87

Asset Allocation

	Ending Market Value
POOL 7 LGIP FF&C	1,372,185,162



Net Asset Values over Time (\$MM)

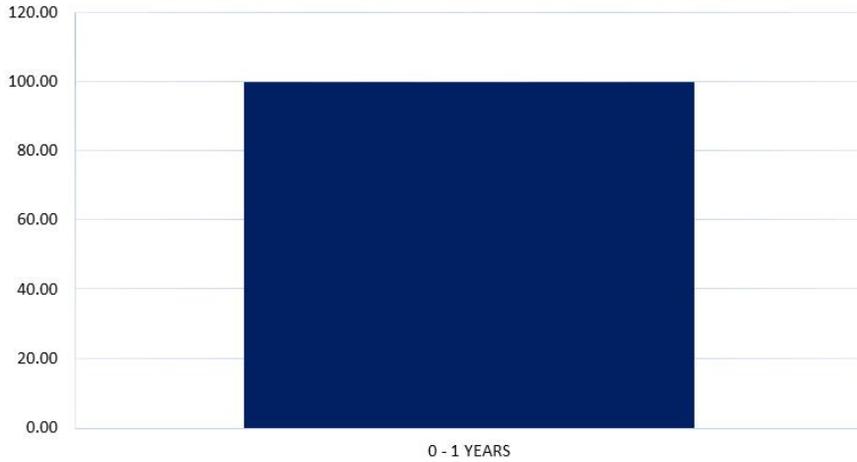


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 7 LGIP FF&C		
WELLS FARGO REPO	150,044,792	10.93
CREDIT AGRICOLE REPO	100,011,833	7.29
TREASURY BILL	79,904,935	5.82
TREASURY BILL	74,837,809	5.45
TREASURY BILL	74,679,953	5.44
TREASURY BILL	69,926,211	5.10
TREASURY BILL	69,867,244	5.09
TREASURY BILL	69,670,943	5.08
TREASURY BILL	59,992,794	4.37
TREASURY BILL	59,702,539	4.35



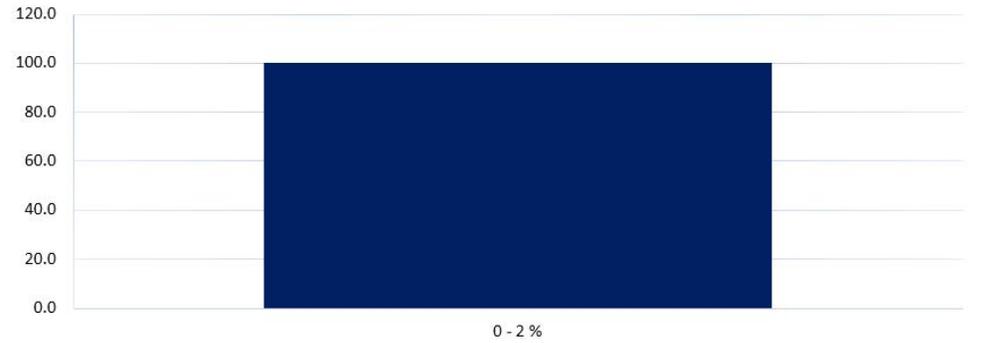
Duration Distribution



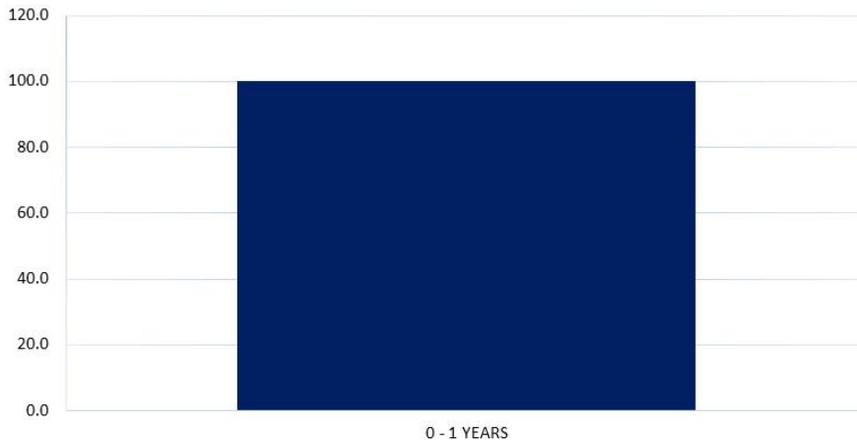
Portfolio Level Characteristics

	POOL 7 LGIP FF&C
Effective Maturity	0.16
Coupon	0.00
Effective Duration	0.12
Quality Rating (Moody's)	AAA

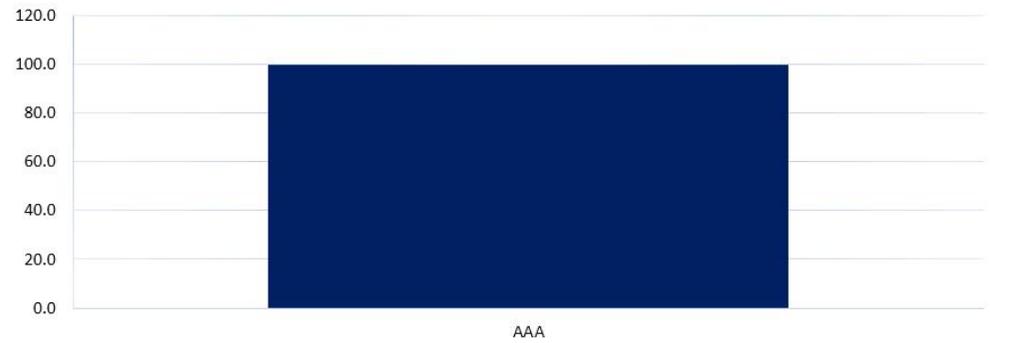
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



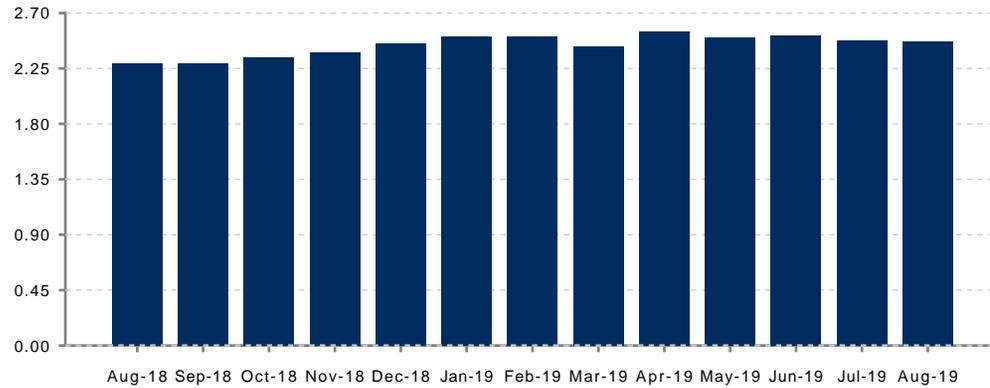
OFFICE OF THE ARIZONA STATE TREASURER

August 31, 2019

POOL 500 LGIP MED



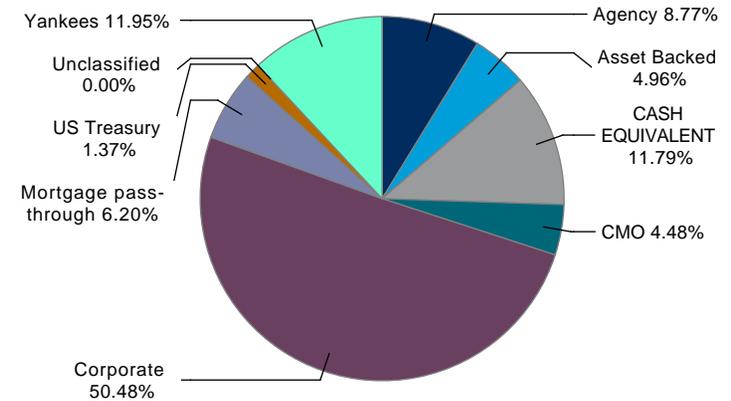
Net Yield



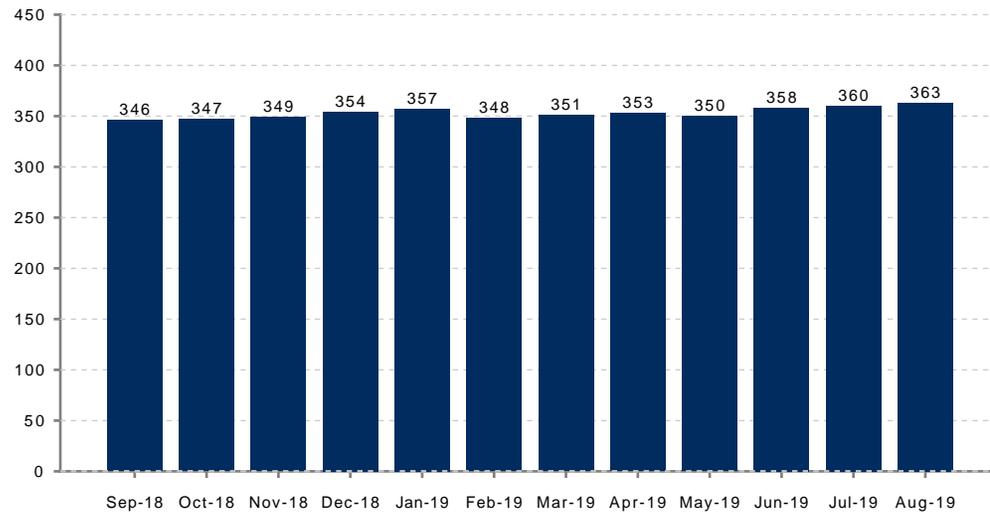
	Current Mth	Prior Mth	1 Year Ago
POOL 500 LGIP MED	2.47	2.48	2.29

Asset Allocation

	Ending Market Value
POOL 500 LGIP MED	363,370,886



Net Asset Values over Time (\$MM)

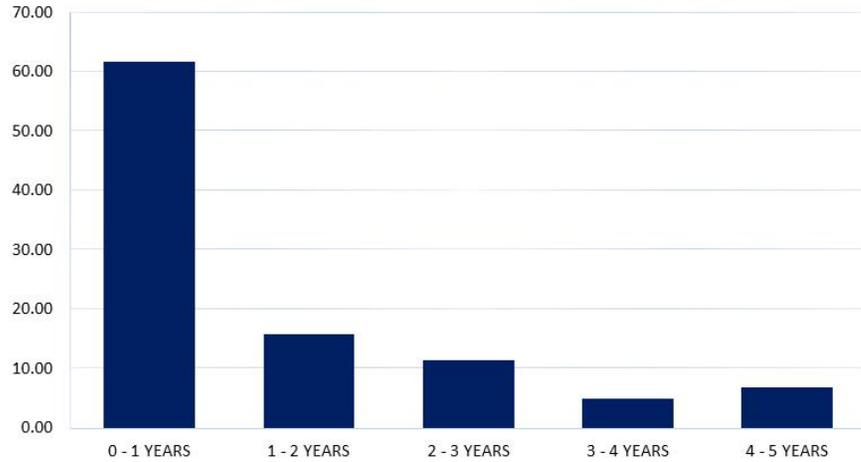


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 500 LGIP MED		
CANTOR FITZGERALD REPO	15,030,354	4.14
MICROSOFT CORP	8,004,462	2.20
APPLE INC	7,039,649	1.94
MANUF + TRADERS TRUST CO	7,017,990	1.93
BANK OF AMERICA CORP	5,910,770	1.63
MERCK + CO INC	5,518,357	1.52
AMERICAN EXPRESS CO	5,107,680	1.41
US BANCORP	5,105,781	1.41
ROYAL BANK OF CANADA	5,098,311	1.40
TENN VALLEY AUTHORITY	5,059,725	1.39



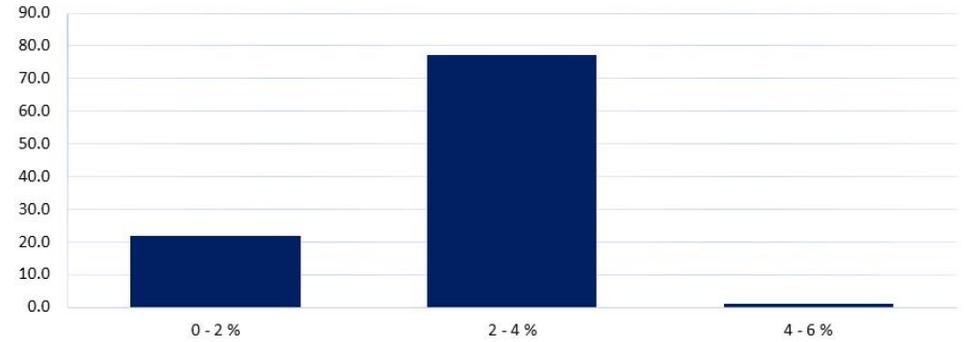
Duration Distribution



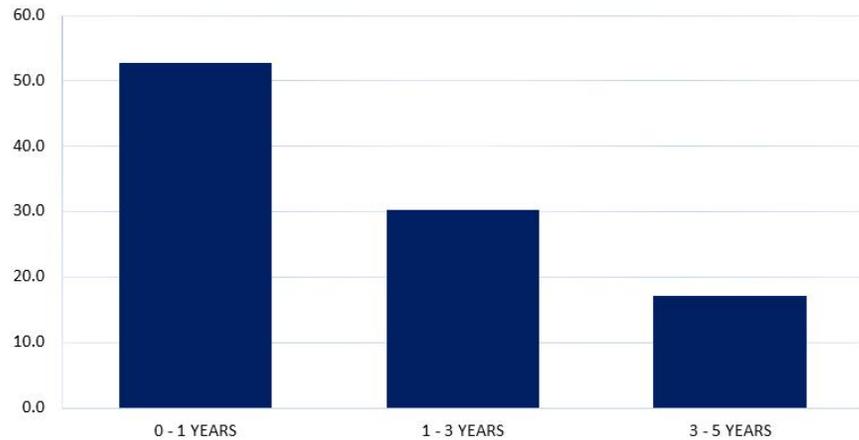
Portfolio Level Characteristics

	POOL 500 LGIP MED
Effective Maturity	1.55
Coupon	2.36
Effective Duration	1.15
Quality Rating (Moody's)	AA-3

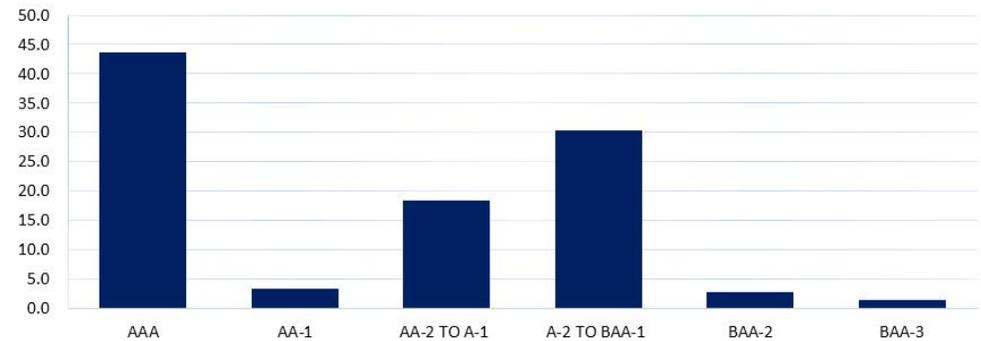
Coupon Distribution



Expected Maturity Distribution

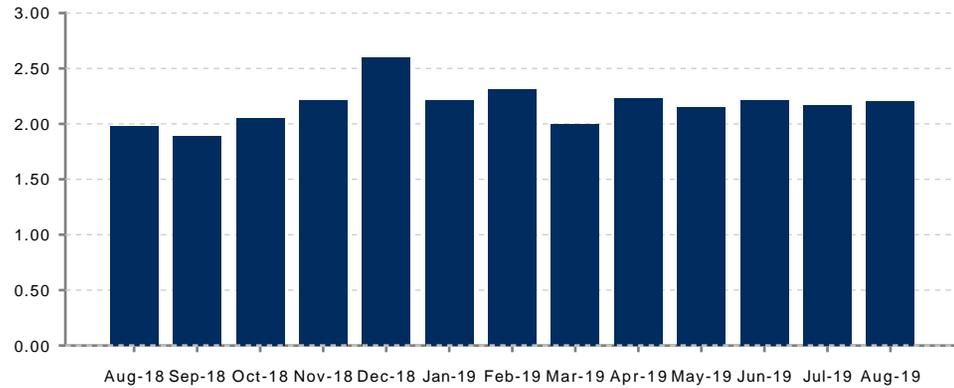


Rating Distribution





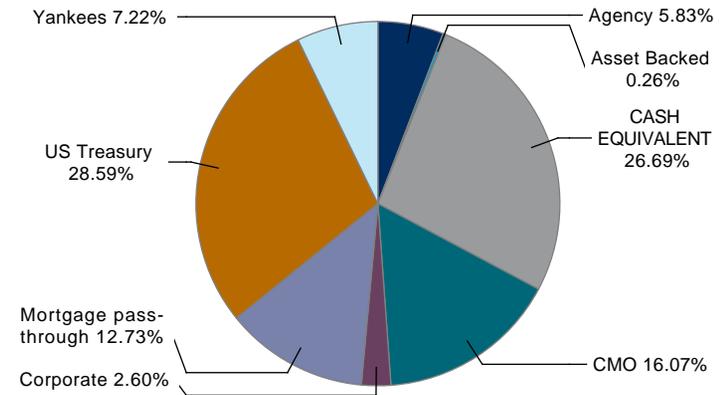
Net Yield



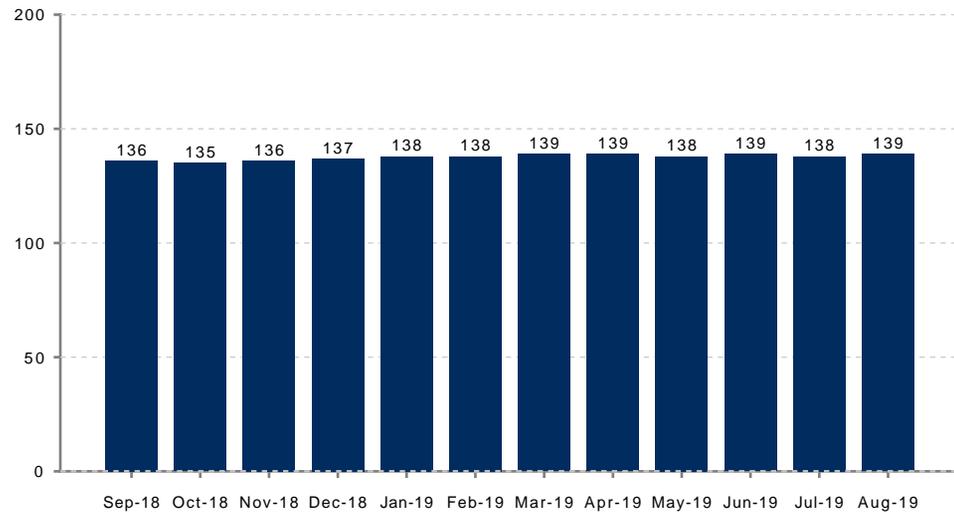
	Current Mth	Prior Mth	1 Year Ago
POOL 700 LGIP MD FF&C	2.20	2.17	1.98

Asset Allocation

	Ending Market Value
POOL 700 LGIP MD FF&C	139,221,604



Net Asset Values over Time (\$MM)

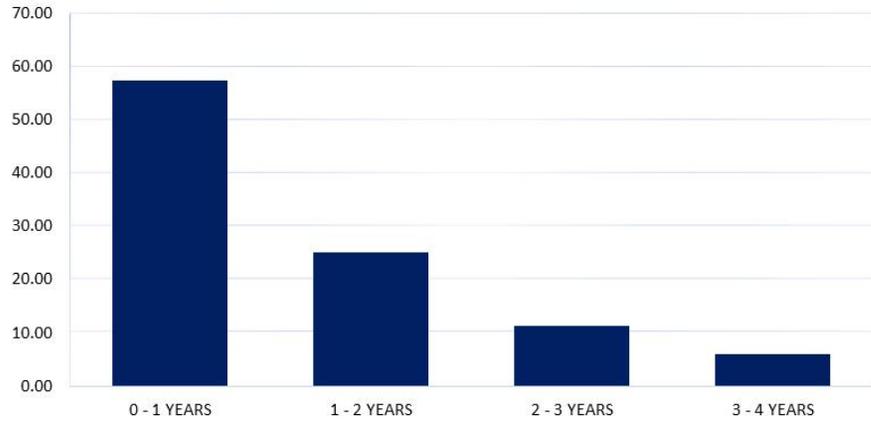


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 700 LGIP MD FF&C		
GUGGENHEIM SECURITIES REPO	29,500,783	21.19
GOVERNMENT NATIONAL MORTGAGE A	6,886,752	4.95
AID JORDAN	6,383,677	4.59
OVERSEAS PRIVATE INV COR	5,247,132	3.77
US TREASURY N/B	5,027,870	3.61
US TREASURY N/B	5,020,522	3.61
US TREASURY N/B	5,014,251	3.60
US TREASURY N/B	5,005,863	3.60
TREASURY BILL	4,984,525	3.58
US TREASURY N/B	4,039,151	2.90



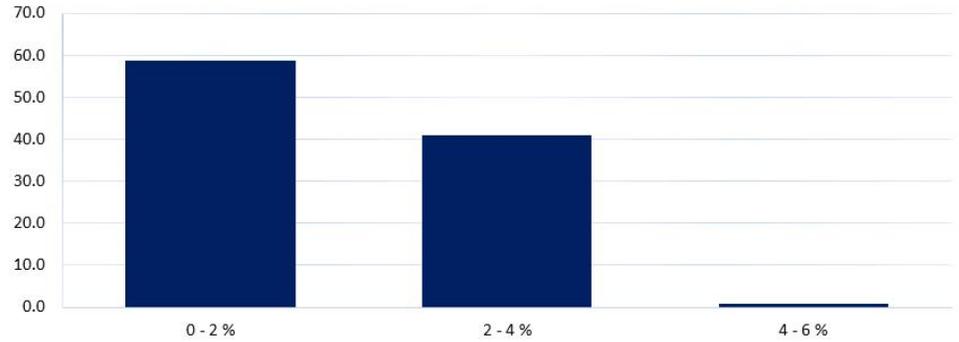
Duration Distribution



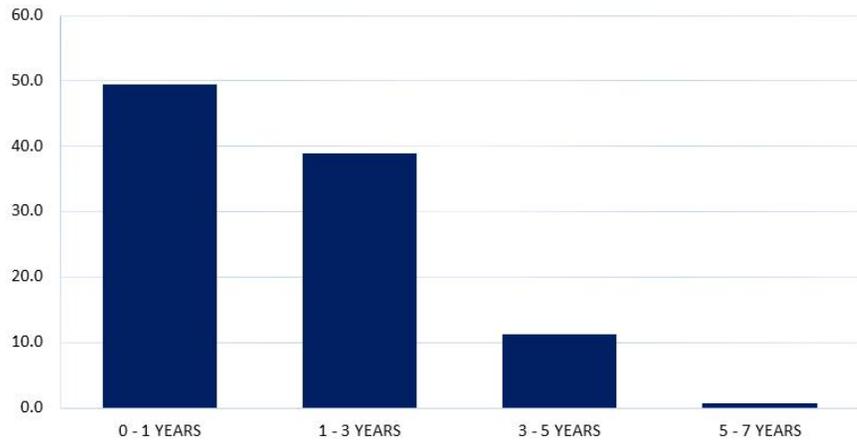
Portfolio Level Characteristics

	POOL 700 LGIP MD FF&C
Effective Maturity	1.52
Coupon	1.90
Effective Duration	0.97
Quality Rating (Moody's)	AAA

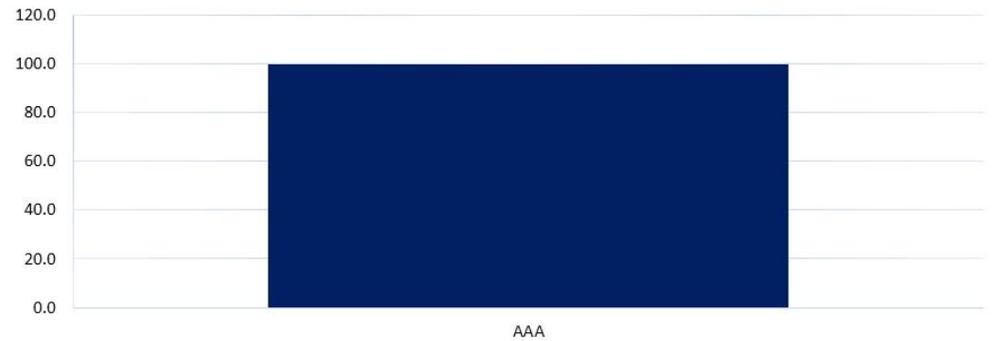
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



**EARNINGS DISTRIBUTED
ENDOWMENT FUNDS
AUGUST 2019**

Distributed in Current Month

Recipient	AUGUST 2019	Fiscal YTD 19/20	Fiscal YTD 18/19	Fiscal YTD Change
101 A & M Colleges	\$73,227	\$146,454	\$140,810	\$5,644
102 State Hospital	51,319	102,638	94,170	8,468
103 Leg., Exec., & Jud.	60,756	121,512	116,641	4,871
104 Military Institute	4,049	8,098	7,735	363
105 Miners Hospital	170,411	340,821	316,236	24,585
107 Normal School ASU/NAU	31,311	62,622	57,710	4,912
108 Penitentiaries	113,987	227,973	212,167	15,806
109 Permanent Common School	28,518,181	57,036,363	53,540,939	3,495,424
110 School for Deaf & Blind	41,371	82,741	77,212	5,529
111 School of Mines	83,229	166,458	159,732	6,727
112 State Charitable-Pioneers Home	412,187	824,373	788,232	36,142
112 State Charitable-Corrections	206,093	412,187	394,116	18,071
112 State Charitable-Youth Treatment	206,093	412,187	394,116	18,071
113 University Fund	151,327	302,654	286,773	15,882
114 U of A Land - 1881	541,028	1,082,055	984,073	97,982
Total	\$30,664,569	\$61,329,137	\$57,570,663	\$3,758,475

**Land Sales Monthly Proceeds
 Endowment Funds**

Month	2014	2015	2016	2017	2018	2019	2020
January	29,493,046	7,126,212	5,108,687	2,960,815	809,822	30,671,107	
February	33,969,801	2,535,244	1,083,178	1,103,303	744,295	875,823	
March	1,323,549	1,096,232	1,106,860	3,045,043	8,296,029	997,479	
April	2,252,527	1,968,281	28,981,969	78,134,289	22,707,772	12,816,140	
May	1,100,261	19,123,417	20,147,116	27,642,672	16,234,823	590,432	
June	4,564,719	33,179,898	31,844,678	2,451,110	6,799,100	3,654,938	
July	4,196,738	6,092,396	2,469,997	13,838,188	27,835,379	4,356,585	
August	24,838,430	1,038,971	13,094,287	5,746,802	6,932,754	10,038,331	
September	1,960,673	1,967,125	(12,580,728)	19,937,751	8,293,343		
October	3,150,170	2,366,519	10,614,885	480,710	24,823,636		
November	34,193,583	1,358,711	28,490,238	9,500,048	42,245,892		
December	1,136,538	4,264,354	6,127,407	3,869,818	2,283,305		
Calendar Year	142,180,034	82,117,360	136,488,573	168,710,549	168,006,150	64,000,836	-
Fiscal Year (July 1st to June 30th)	104,912,840	134,505,415	105,360,563	163,553,318	108,965,158	162,020,229	14,394,916

NET REALIZED CAPITAL GAINS / LOSSES - ENDOWMENT FUNDS

Endowment Fund	August 2019 NET GAIN(LOSS)	August 2018 NET GAIN(LOSS)
Fixed Income Pool	(\$423,739)	(\$378,496)
500 Large-Cap Fund	9,482,389	(\$612,511)
400 Mid-Cap Fund	6,906,640	\$2,740,208
600 Small-Cap Fund	(523,476)	\$2,991,529
Totals	\$15,441,813	\$4,740,730

Endowment Fund	2019/2020 FISCAL YEAR TO DATE GAINS(LOSSES)	2018/2019 FISCAL YEAR TO DATE GAINS(LOSSES)
Fixed Income Pool	(\$928,212)	(\$790,792)
500 Large-Cap Fund	12,495,056	(612,922)
400 Mid-Cap Fund	9,343,763	4,257,388
600 Small-Cap Fund	2,475,111	3,859,036
Totals	\$23,385,717	\$6,712,709

**ENDOWMENT FUNDS FIXED-INCOME POOLS
PURCHASES & SALES
AUGUST 2019**

I. Endowment Funds Purchases

<u>POOL</u>	<u>SECURITY DESCRIPTION</u>	<u>RATE</u>	<u>MATURITY</u>	<u>WAL YEARS (1)</u>	<u>PAR VALUE</u>	<u>PURCHASE COST</u>	<u>YIELD</u>	<u>MOODY'S RATING</u>
205	ATLANTIC	0.00	10/28/2019	NA	\$10,000,000	\$9,952,000	2.17%	P-1
205	CONCORD	0.00	09/13/2019	NA	11,000,000	10,976,151	2.23%	P-1
205	EXXON MOBIL	2.28	08/16/2026	NA	5,000,000	5,000,000	2.28%	Aaa
205	GNMA	3.00	08/20/2049	3.87	10,000,000	10,191,797	2.44%	Aaa
205	GNMA	3.22	08/20/2069	0.06	10,000,000	10,285,547	2.97%	Aaa
205	HARLEY-DAVIDSON	0.00	10/09/2019	NA	9,000,000	8,973,960	2.18%	P-2
205	INSTITUTIONAL SECURED	0.00	09/19/2019	NA	10,000,000	9,969,103	2.28%	P-1
205	LEXINGTON PARKER	0.00	09/13/2019	NA	10,000,000	9,993,944	2.18%	P-1
205	MOUNTCLIFF	0.00	08/30/2019	NA	20,000,000	19,986,739	2.17%	P-1
205	NORTHWESTERN UNIV	0.00	11/18/2019	NA	9,211,000	9,163,269	2.06%	P-1
205	UNITED HEALTHCARE	0.00	09/06/2019	NA	5,000,000	4,992,844	2.24%	P-2
205	WELLS FARGO	3.29	07/26/2021	NA	5,000,000	5,063,550	2.50%	A2
205	WHEELS	0.00	10/28/2019	NA	10,000,000	9,965,583	2.11%	P-1
123	ATLANTIC	0.00	10/28/2019	NA	5,000,000	4,976,000	2.17%	P-1
123	CONCORD	0.00	09/13/2019	NA	4,000,000	3,991,328	2.23%	P-1
123	CROWN POINT	2.42	02/18/2020	NA	6,000,000	6,000,000	2.42%	P-1
123	HARLEY-DAVIDSON	0.00	09/19/2019	NA	5,000,000	4,985,750	2.29%	P-2
123	HARLEY-DAVIDSON	0.00	10/09/2019	NA	6,000,000	5,982,640	2.18%	P-2
123	INSTITUTIONAL SECURED	0.00	09/19/2019	NA	10,000,000	9,969,103	2.28%	P-1
123	NORTHWESTERN UNIV	0.00	11/18/2019	NA	6,789,000	6,753,820	2.06%	P-1
123	TREASURY	2.01	09/24/2019	NA	5,000,000	4,991,089	2.04%	Aaa
123	TREASURY	1.97	10/22/2019	NA	5,000,000	4,984,717	2.00%	Aaa
123	UNITED HEALTHCARE	0.00	09/06/2019	NA	5,000,000	4,992,844	2.24%	P-2
123	WALT DISNEY	0.00	01/24/2020	NA	5,000,000	4,959,506	1.99%	P-1
123	WHEELS	0.00	10/28/2019	NA	5,000,000	4,982,792	2.11%	P-1
TOTAL ENDOWMENT FUNDS PURCHASES					\$192,000,000	\$192,084,076		

II. Endowment Funds Sales

<u>POOL</u>	<u>SECURITY DESCRIPTION</u>	<u>MATURITY</u>	<u>WAL YEARS (1)</u>	<u>PAR VALUE</u>	<u>AMORTIZED COST/PROCEEDS</u>	<u>SALES GAINS/(LOSSES)</u>	<u>MOODY'S RATING</u>
205	TREASURY	09/30/2019	NA	\$10,000,000	\$9,987,891	(\$2,205)	Aaa
TOTAL ENDOWMENT FUNDS SALES				\$10,000,000	\$9,987,891	(\$2,205)	

(1) WAL is the weighted average life of the security based on the Bloomberg calculation at the time the trade is executed. The calculation is used only with mortgage-backed pass-through/CMO securities.

**EQUITY FUNDS
PURCHASES & SALES
AUGUST 2019**

I. Equity Fund Purchases

	<u>SHARES</u>	<u>PURCHASE COST</u>	<u>COMMISSIONS</u>
400 Mid-Cap Fund	352,177	\$14,746,799	\$2,642
500 Large-Cap Fund	76,486	16,316,542	574
600 Small-Cap Fund	634,537	14,164,751	4,760
TOTAL EQUITY PURCHASES	1,063,200	\$45,228,092	\$7,976

II. Equity Funds Sales

	<u>SHARES</u>	<u>SALES AMOUNT</u>	<u>COMMISSIONS</u>
400 Mid-Cap Fund	142,837	\$18,507,339	\$1,071
500 Large-Cap Fund	206,585	17,842,007	1,550
600 Small-Cap Fund	172,339	11,501,281	1,293
TOTAL EQUITY SALES	521,761	\$47,850,627	\$3,914

ENDOWMENT FUNDS
INVESTMENTS OUTSTANDING
AUGUST 31, 2019
(In Thousands)

State Treasurer's Report
September 24, 2019
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FUND NAME OF FUND	SHARES OUTSTANDING	BOOK VALUE	MARKET VALUE	UNREALIZED GAINS (LOSSES)	Mkt Value/ Book Value
101 A & M Colleges					
<i>Shares in Equity Pools</i>	365	\$2,570	\$7,948	\$5,378	
<i>Shares in Fixed Income Pools</i>	3,646	2,611	5,273	2,663	
Total	4,012	5,181	13,222	8,041	2.552
102 State Hospital					
<i>Shares in Equity Pools</i>	292	2,530	6,344	3,813	
<i>Shares in Fixed Income Pools</i>	3,000	2,493	4,339	1,846	
Total	3,292	5,023	10,682	5,659	2.127
103 Leg., Exec, & Jud					
<i>Shares in Equity Pools</i>	299	2,255	6,495	4,240	
<i>Shares in Fixed Income Pools</i>	3,203	2,295	4,632	2,337	
Total	3,502	4,550	11,127	6,577	2.445
104 Military Institute					
<i>Shares in Equity Pools</i>	20	158	438	280	
<i>Shares in Fixed Income Pools</i>	221	156	320	164	
Total	241	313	758	444	2.418
105 Miners Hospital					
<i>Shares in Equity Pools</i>	908	8,156	19,760	11,604	
<i>Shares in Fixed Income Pools</i>	9,128	7,994	13,199	5,205	
Total	10,036	16,150	32,959	16,808	2.041
107 Normal School ASU/NAU					
<i>Shares in Equity Pools</i>	176	1,526	3,824	2,298	
<i>Shares in Fixed Income Pools</i>	1,815	1,458	2,625	1,167	
Total	1,991	2,984	6,449	3,465	2.161
108 Penitentiaries					
<i>Shares in Equity Pools</i>	591	5,012	12,866	7,853	
<i>Shares in Fixed Income Pools</i>	6,050	4,982	8,748	3,766	
Total	6,641	9,995	21,614	11,619	2.163

ENDOWMENT FUNDS
INVESTMENTS OUTSTANDING
AUGUST 31, 2019
(In Thousands)

State Treasurer's Report
September 24, 2019
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NAME OF FUND	SHARES OUTSTANDING	BOOK VALUE	MARKET VALUE	UNREALIZED GAINS (LOSSES)	Mkt Value/ Book Value
109 Permanent Common School					
<i>Shares in Equity Pools</i>	154,084	1,258,704	3,351,725	2,093,021	
<i>Shares in Fixed Income Pools</i>	1,550,821	1,271,241	2,242,593	971,351	
Total	1,704,905	2,529,945	5,594,318	3,064,373	2.211
110 School for Deaf & Blind					
<i>Shares in Equity Pools</i>	214	1,774	4,646	2,872	
<i>Shares in Fixed Income Pools</i>	2,414	1,897	3,490	1,593	
Total	2,627	3,671	8,137	4,465	2.216
111 School of Mines					
<i>Shares in Equity Pools</i>	414	3,110	9,013	5,903	
<i>Shares in Fixed Income Pools</i>	4,261	3,164	6,162	2,998	
Total	4,676	6,274	15,175	8,901	2.419
112 State Charitable					
<i>Shares in Equity Pools</i>	4,394	34,406	95,583	61,177	
<i>Shares in Fixed Income Pools</i>	42,667	34,391	61,699	27,308	
Total	47,061	68,797	157,282	88,485	2.286
113 University Fund					
<i>Shares in Equity Pools</i>	935	9,834	20,330	10,496	
<i>Shares in Fixed Income Pools</i>	9,648	8,527	13,952	5,425	
Total	10,583	18,361	34,281	15,921	1.867
114 U Of A Land - 1881					
<i>Shares in Equity Pools</i>	2,892	28,161	62,906	34,745	
<i>Shares in Fixed Income Pools</i>	29,738	25,679	43,003	17,324	
Total	32,630	53,839	105,909	52,070	1.967
TOTALS - ALL FUNDS					
<i>Shares in Equity Pools</i>	165,584	1,358,197	3,601,878	2,243,682	
<i>Shares in Fixed Income Pools</i>	1,666,612	1,366,888	2,410,035	1,043,147	
Grand Total	\$1,832,196	\$2,725,085	\$6,011,913	\$3,286,828	
PRIOR YEAR:					
AUGUST 2018 BALANCES	\$1,906,580	\$2,823,942	\$6,171,479	\$3,347,536	

**ENDOWMENT FUNDS
INVESTMENTS OUTSTANDING
AUGUST 31, 2019**

State Treasurer's Report
September 24, 2019
Page 40

ASSET ALLOCATION PERCENTAGE

	SHARES OUTSTANDING	BOOK VALUE	MARKET VALUE	AUGUST 2018 MARKET VALUE
<i>Shares in Equity Pools</i>	9.04%	49.84%	59.91%	61.88%
<i>Shares in Fixed Income Pools</i>	90.96%	50.16%	40.09%	38.12%
	-----	-----	-----	-----
Total	100.00%	100.00%	100.00%	100.00%
	=====	=====	=====	=====



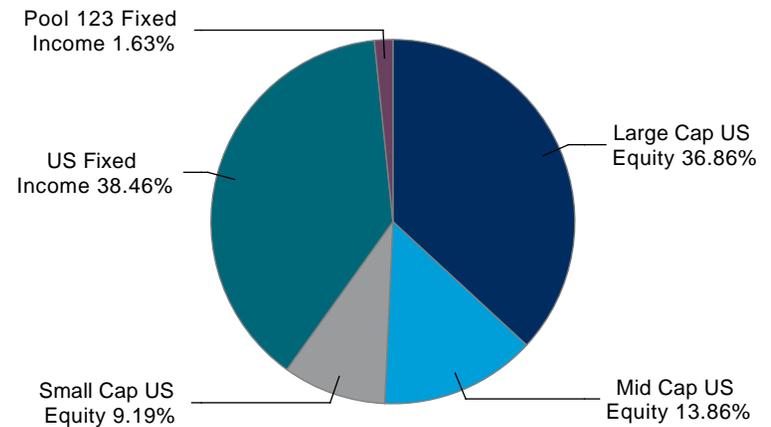
Performance



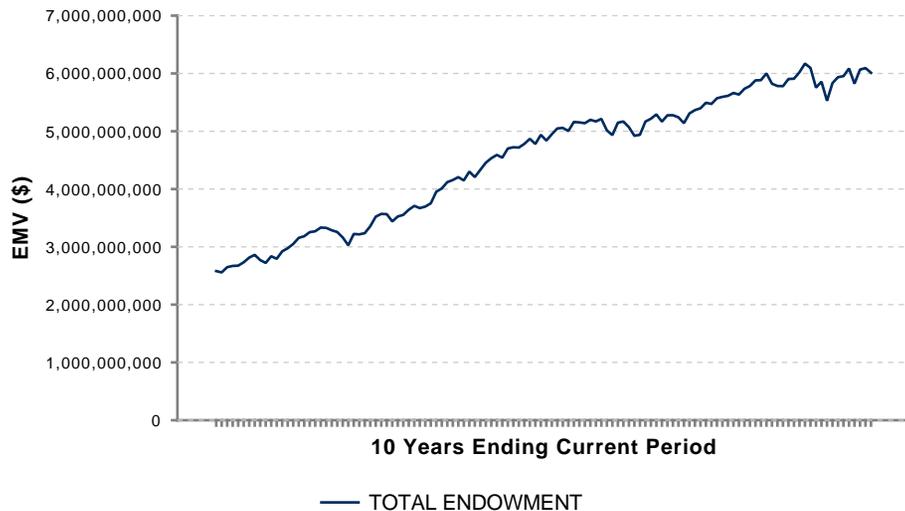
	1 Mth	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Incept Date
TOTAL ENDOWMENT RETURN	-0.99	11.90	1.32	7.67	6.62	8.90	6.43	07/99
TOTAL ENDOWMENT BENCHMARK	-0.61	13.03	2.22	7.85	6.86	9.27	6.63	07/99
	-0.38	-1.13	-0.90	-0.18	-0.24	-0.37	-0.21	

Asset Allocation

	Ending Market Value
TOTAL ENDOWMENT RETURN	6,011,912,838

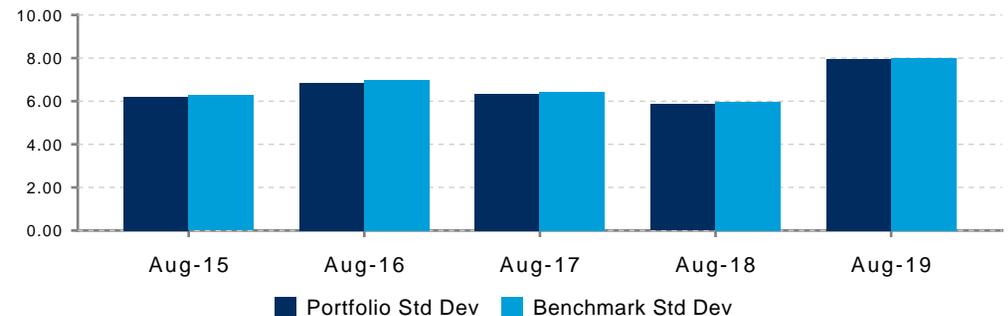


Ending Market Value



3 Year Risk Statistics

	Return	Portfolio Std Dev	Benchmark Std Dev	Sharpe Ratio	Beta	Tracking Error	Information Ratio
TOTAL ENDOWMENT RETURN	7.67	7.97	8.00	0.77	1.00	0.46	-0.39



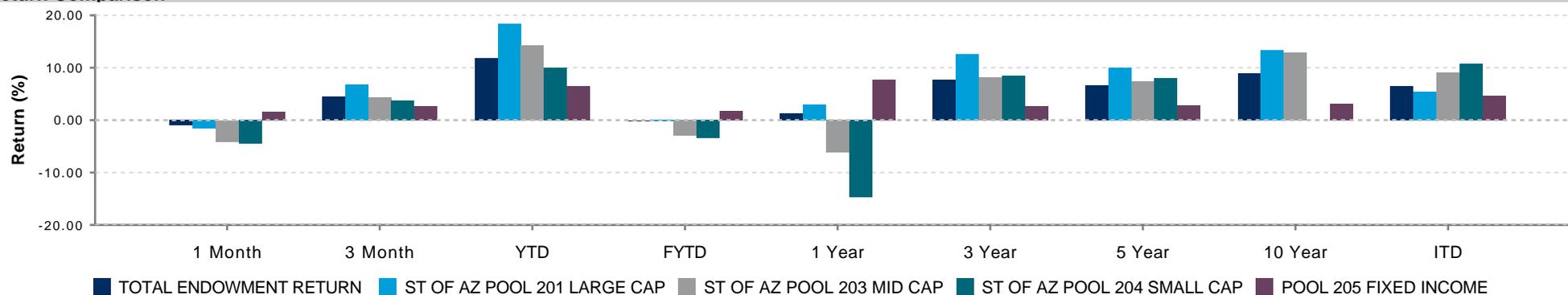
OFFICE OF THE ARIZONA STATE TREASURER

August 31, 2019

Total Returns Net Mgr



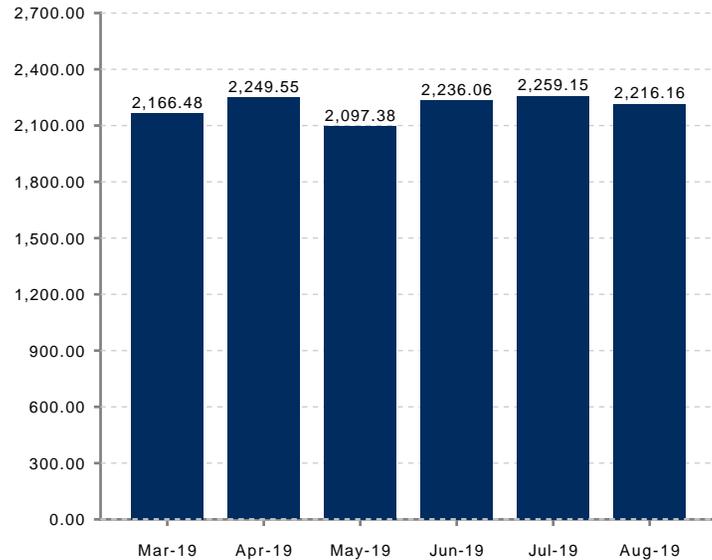
Return Comparison



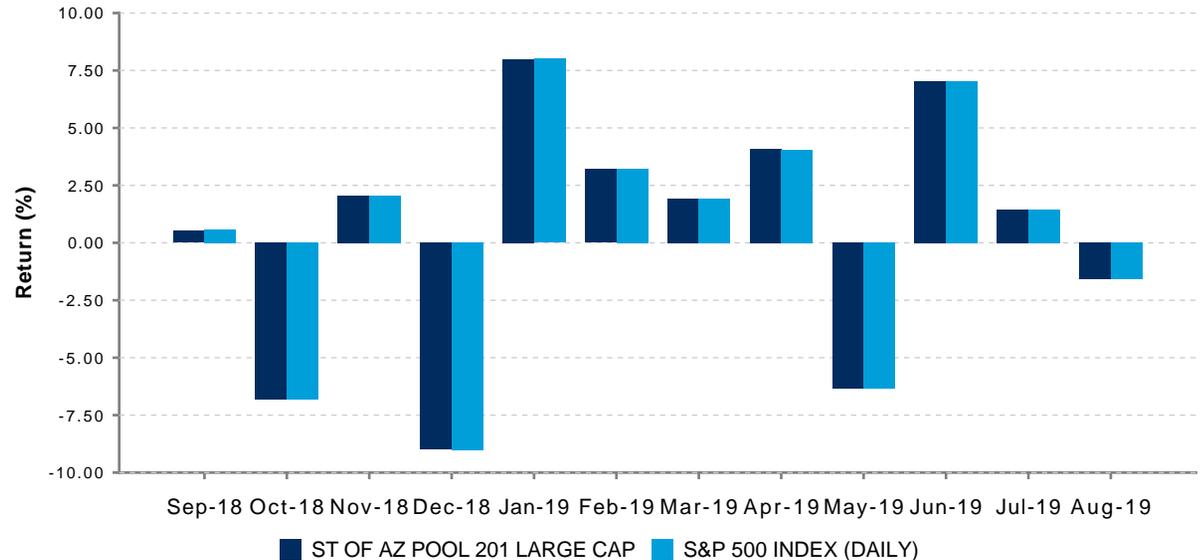
	Market Value	Actual Weight	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	10 Year	ITD	Inc Date
TOTAL ENDOWMENT RETURN	6,011,912,838	100.00	-0.99	4.48	11.90	-0.13	1.32	7.67	6.62	8.90	6.43	Jul-01-99
TOTAL ENDOWMENT BENCHMARK			-0.61	5.09	13.03	0.30	2.22	7.85	6.86	9.27	6.63	Jul-01-99
ST OF AZ POOL 201 LARGE CAP	2,216,163,656	36.86	-0.38	-0.62	-1.13	-0.43	-0.90	-0.18	-0.24	-0.37	-0.21	Jul-01-99
S&P 500 INDEX (DAILY)			-1.58	6.87	18.34	-0.17	2.92	12.66	10.05	13.41	5.37	Jul-01-99
ST OF AZ POOL 203 MID CAP	833,323,188	13.86	0.00	-0.01	0.01	0.01	0.01	-0.04	-0.06	-0.03	-0.47	Aug-01-01
S&P 400 MIDCAP INDEX (DAILY)			-4.10	4.41	14.30	-2.97	-6.18	8.21	7.36	12.88	9.03	Aug-01-01
ST OF AZ POOL 204 SMALL CAP	552,391,421	9.19	0.10	0.05	-0.07	0.08	0.25	0.16	0.14	0.04	0.02	Mar-01-11
S&P SM 600 TR			-4.19	4.35	14.37	-3.06	-6.43	8.06	7.22	12.85	9.01	Mar-01-11
POOL 205 FIXED INCOME	2,312,074,131	38.46	-0.00	-0.01	0.19	0.01	0.38	0.08	0.06		0.05	Jul-01-99
FTSE BIG (DAILY)			1.62	2.63	6.43	1.76	7.67	2.73	2.82	3.14	4.71	Jul-01-99
POOL 123 FIXED INCOME	97,960,442	1.63	2.66	4.21	9.26	2.94	10.32	3.13	3.37	3.88	5.10	Jun-01-16
ASTO-POOL 5 BENCHMARK			-1.04	-1.58	-2.83	-1.18	-2.65	-0.40	-0.55	-0.74	-0.38	Jun-01-16
			0.19	0.62	1.74	0.41	2.76	1.72			1.63	Jun-01-16
			0.19	0.60	1.67	0.39	2.43	1.57			1.48	Jun-01-16
			0.00	0.02	0.07	0.02	0.33	0.16			0.15	



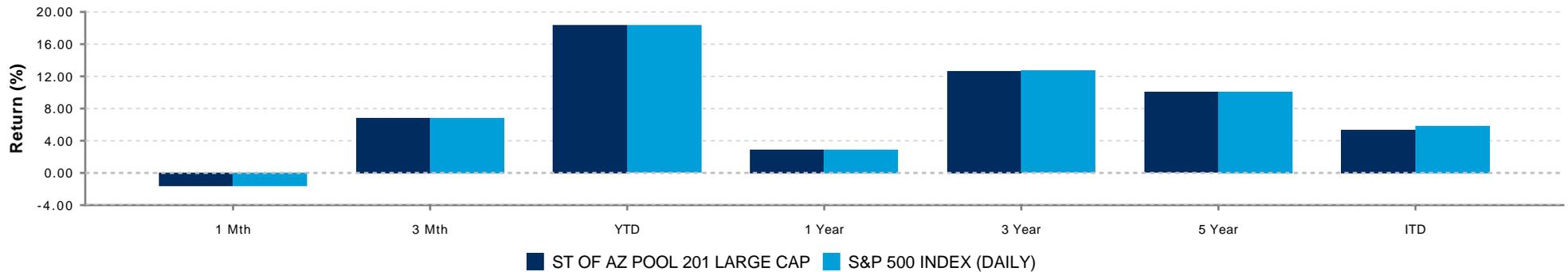
Net Asset Values over Time (\$MM)



Monthly Returns



Rates of Return

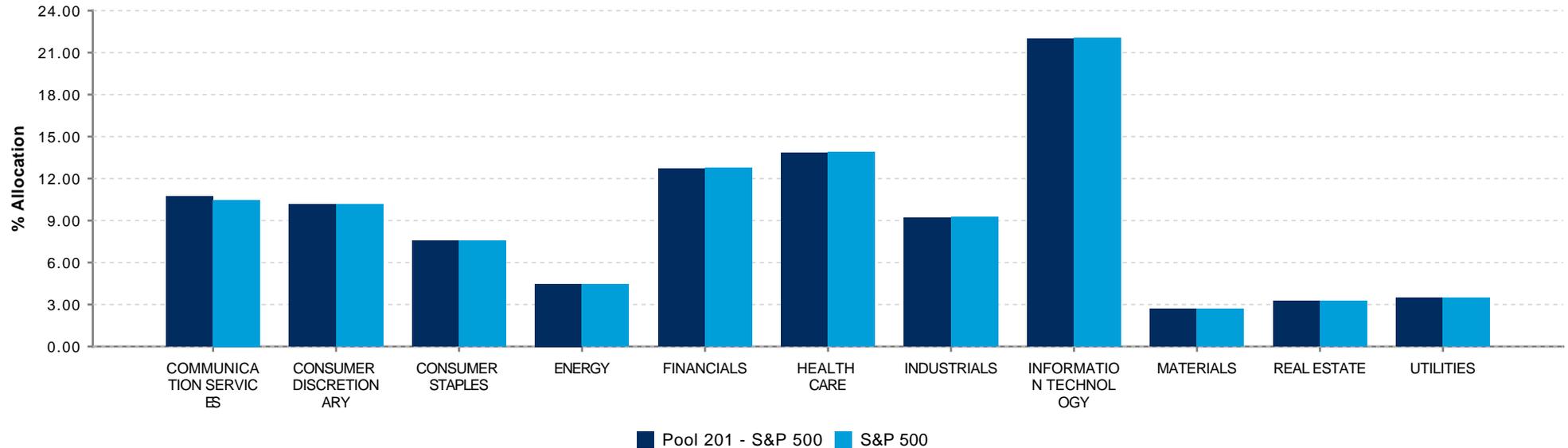


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Aug 31 2017	Aug 31 2018	Aug 31 2019
ST OF AZ POOL 201 LARGE CAP	-1.58	6.86	18.35	2.93	12.66	10.05	5.37	16.23	19.54	2.93
S&P 500 INDEX (DAILY)	-1.58	6.87	18.34	2.92	12.70	10.11	5.84	16.23	19.66	2.92
	0.00	-0.01	0.01	0.01	-0.04	-0.06	-0.47	-0.01	-0.12	0.01

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August 31, 2019

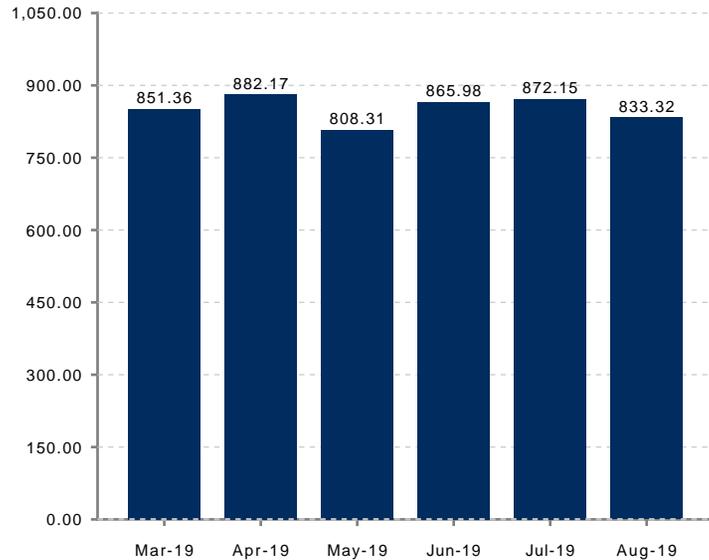
ST OF AZ POOL 201 LARGE CAP
Sector Allocation vs S&P 500



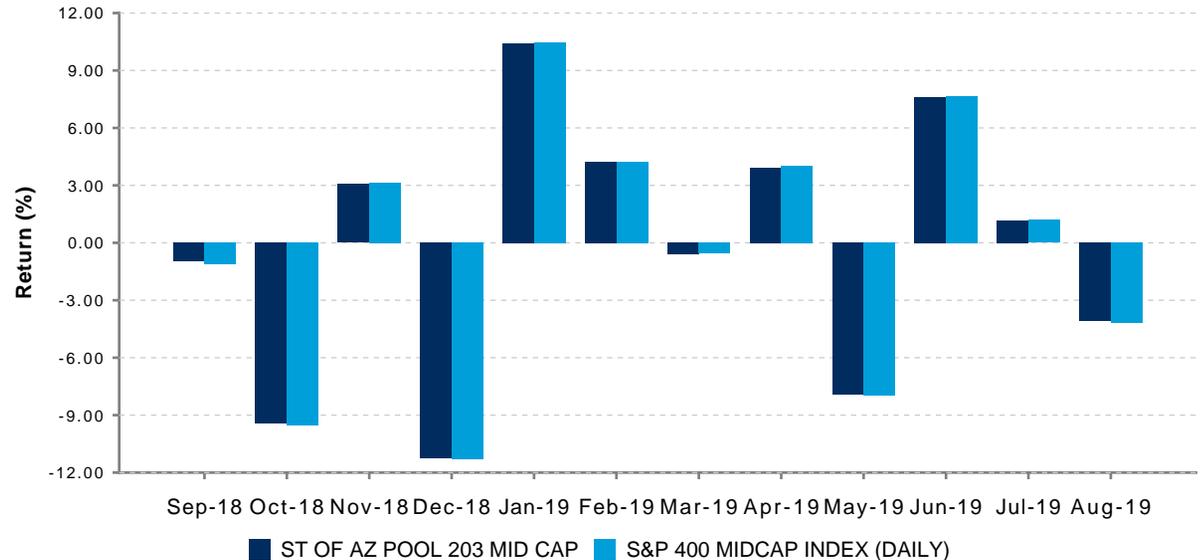
	Fund Weight	Benchmark Weight	Relative Weight
ST OF AZ POOL 201 LARGE CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	10.70	10.47	0.24
CONSUMER DISCRETIONARY	10.14	10.16	-0.02
CONSUMER STAPLES	7.55	7.58	-0.03
ENERGY	4.47	4.42	0.05
FINANCIALS	12.73	12.77	-0.04
HEALTH CARE	13.85	13.90	-0.05
INDUSTRIALS	9.19	9.23	-0.04
INFORMATION TECHNOLOGY	21.97	22.05	-0.08
MATERIALS	2.69	2.70	-0.01
REAL ESTATE	3.24	3.26	-0.02
UTILITIES	3.47	3.47	-0.00



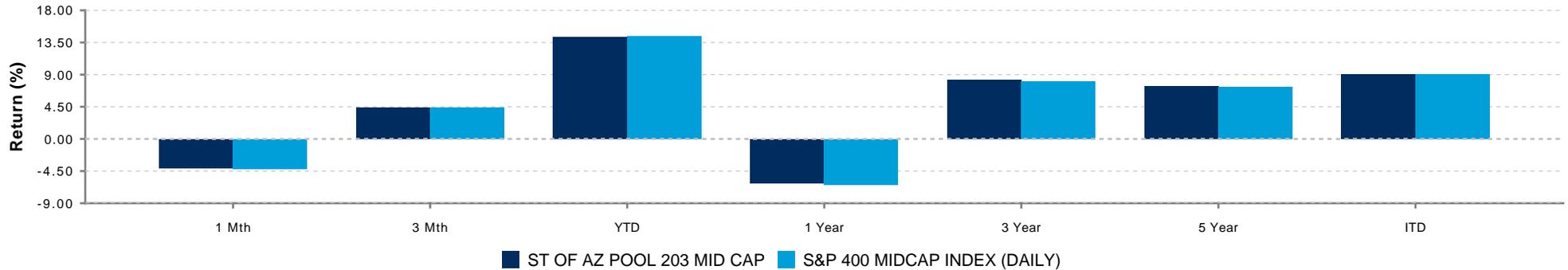
Net Asset Values over Time (\$MM)



Monthly Returns



Rates of Return

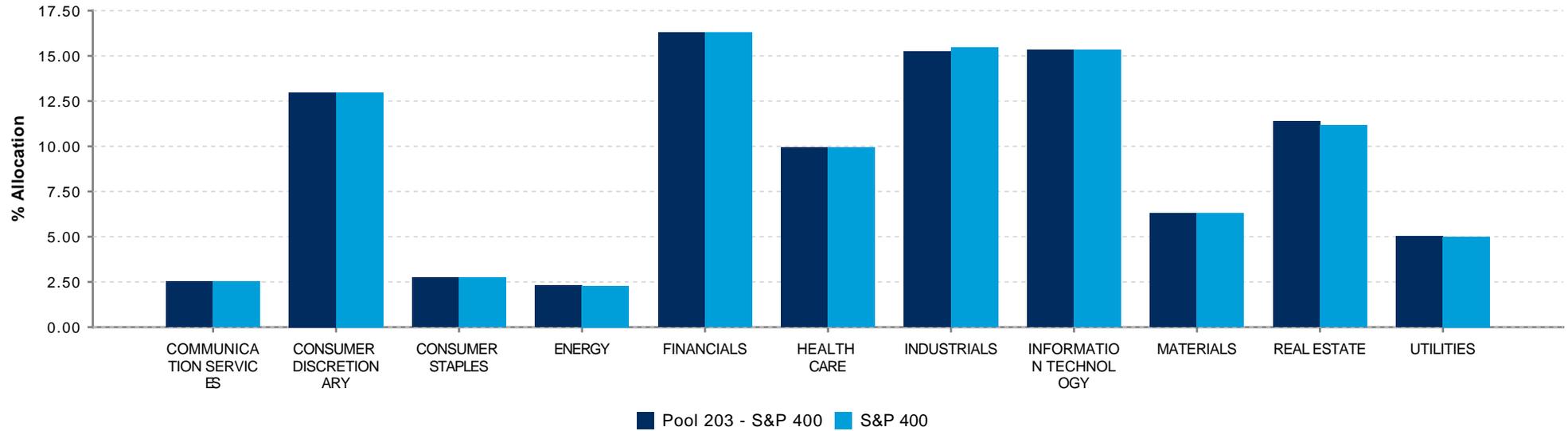


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Aug 31 2017	Aug 31 2018	Aug 31 2019
ST OF AZ POOL 203 MID CAP	-4.10	4.41	14.30	-6.18	8.21	7.36	9.03	12.55	20.01	-6.18
S&P 400 MIDCAP INDEX (DAILY)	-4.19	4.35	14.37	-6.43	8.06	7.22	9.01	12.37	20.00	-6.43
	0.10	0.05	-0.07	0.25	0.16	0.14	0.02	0.18	0.01	0.25

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August 31, 2019

ST OF AZ POOL 203 MID CAP
Sector Allocation vs S&P MID CAP 400



	Weight Fund	Weight Benchmark	Weight Relative
ST OF AZ POOL 203 MID CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	2.52	2.52	-0.00
CONSUMER DISCRETIONARY	12.98	12.98	-0.00
CONSUMER STAPLES	2.75	2.75	0.00
ENERGY	2.29	2.28	0.00
FINANCIALS	16.27	16.28	-0.00
HEALTH CARE	9.94	9.95	-0.01
INDUSTRIALS	15.25	15.45	-0.21
INFORMATION TECHNOLOGY	15.33	15.34	-0.01
MATERIALS	6.29	6.28	0.01
REAL ESTATE	11.38	11.17	0.22
UTILITIES	5.01	5.00	0.01

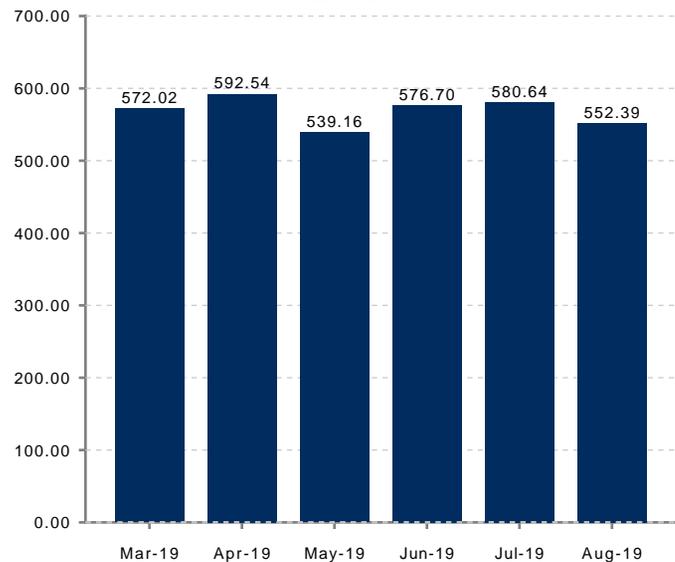
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ST OF AZ POOL 204 SMALL CAP



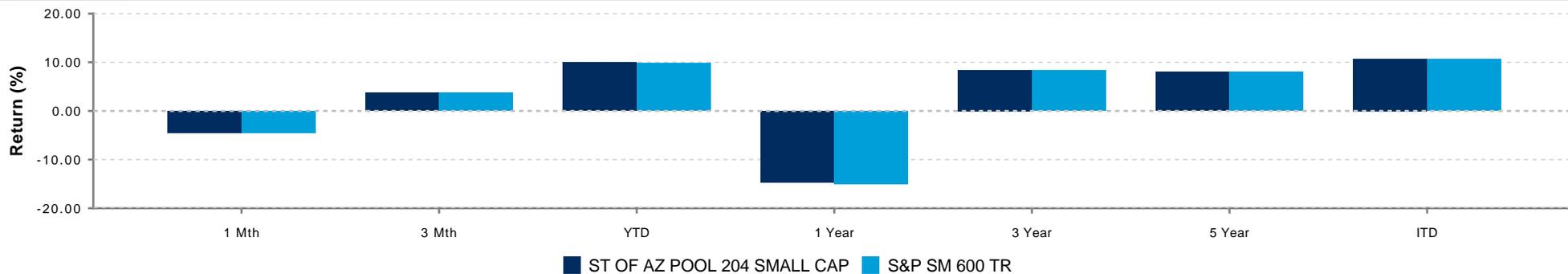
Net Asset Values over Time (\$MM)



Monthly Returns



Rates of Return

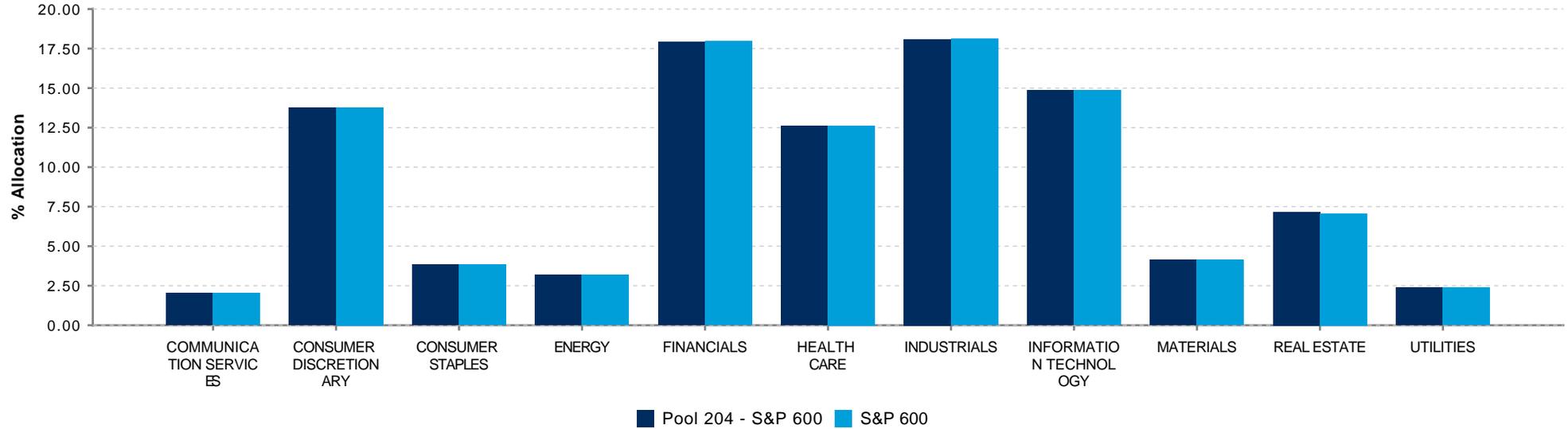


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Aug 31 2017	Aug 31 2018	Aug 31 2019
ST OF AZ POOL 204 SMALL CAP	-4.51	3.76	9.99	-14.68	8.45	8.03	10.73	13.23	32.03	-14.68
S&P SM 600 TR	-4.51	3.77	9.80	-15.06	8.37	7.97	10.68	13.11	32.46	-15.06
	-0.00	-0.01	0.19	0.38	0.08	0.06	0.05	0.12	-0.43	0.38

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August 31, 2019

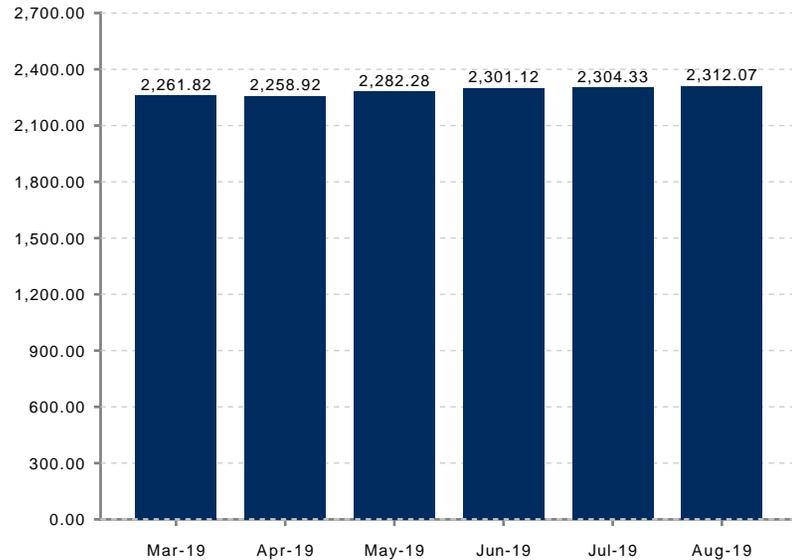
ST OF AZ POOL 204 SMALL CAP
Sector Allocation vs S&P SMALLCAP 600



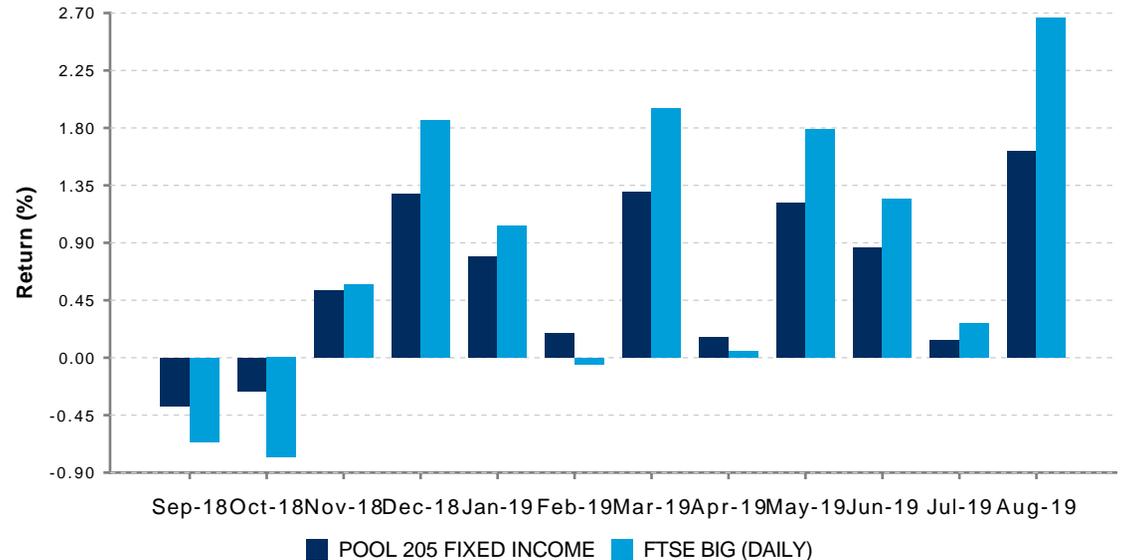
	Weight Fund	Weight Benchmark	Weight Relative
ST OF AZ POOL 204 SMALL CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	2.05	2.05	-0.00
CONSUMER DISCRETIONARY	13.76	13.78	-0.02
CONSUMER STAPLES	3.82	3.82	-0.01
ENERGY	3.19	3.17	0.01
FINANCIALS	17.93	17.95	-0.02
HEALTH CARE	12.61	12.63	-0.02
INDUSTRIALS	18.09	18.11	-0.02
INFORMATION TECHNOLOGY	14.84	14.87	-0.03
MATERIALS	4.14	4.14	-0.00
REAL ESTATE	7.17	7.07	0.11
UTILITIES	2.40	2.40	-0.00



Net Asset Values over Time (\$MM)



Monthly Returns



Rates of Return



	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Aug 31 2019	Aug 31 2018	Aug 31 2017
POOL 205 FIXED INCOME	1.62	2.63	6.43	7.67	2.73	2.82	4.71	7.67	-0.28	0.96
FTSE BIG (DAILY)	2.66	4.21	9.26	10.32	3.13	3.37	5.10	10.32	-1.05	0.47
	-1.04	-1.58	-2.83	-2.65	-0.40	-0.55	-0.38	-2.65	0.77	0.49

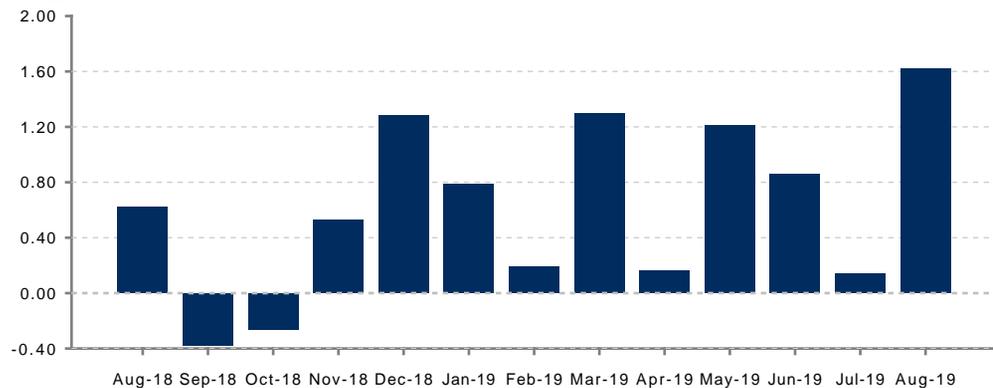
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August 31, 2019

POOL 205 FIXED INCOME



Net Mqr Return



Current Mth **Prior Mth** **1 Year Ago**

POOL 205 FIXED INCOME

1.62

0.14

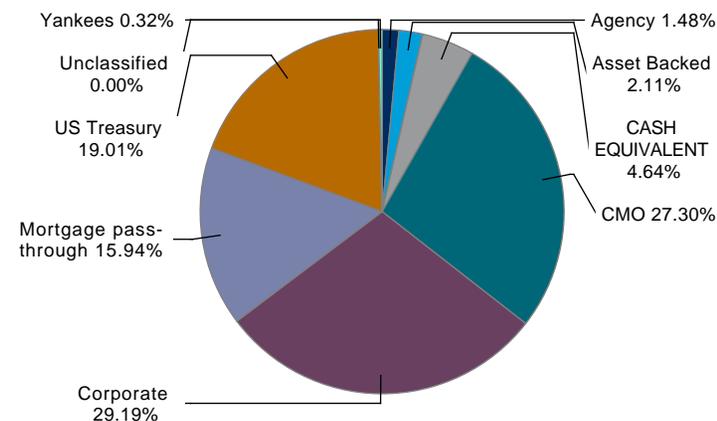
0.62

Asset Allocation

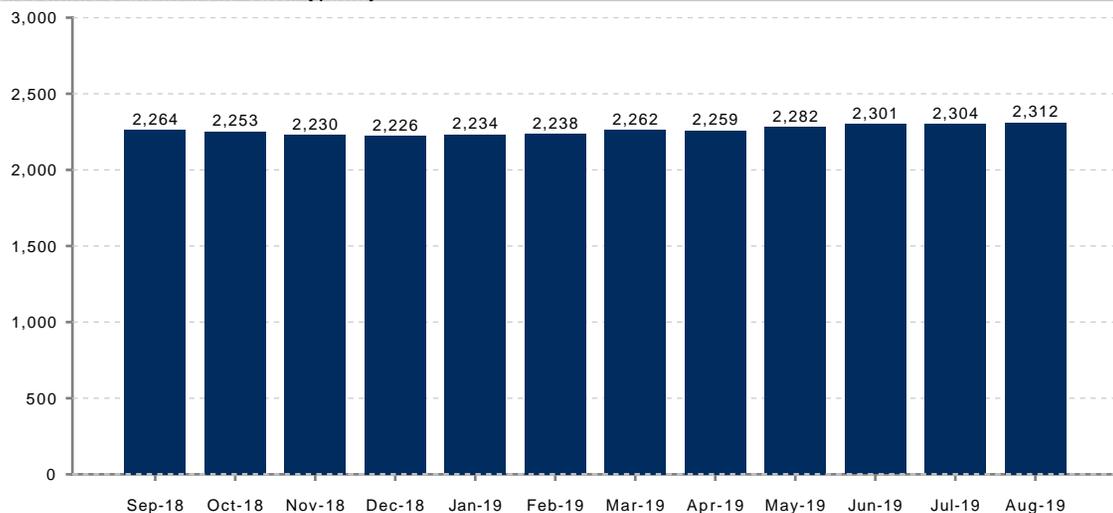
POOL 205 FIXED INCOME

Ending Market Value

2,312,074,131



Net Asset Values over Time (\$MM)

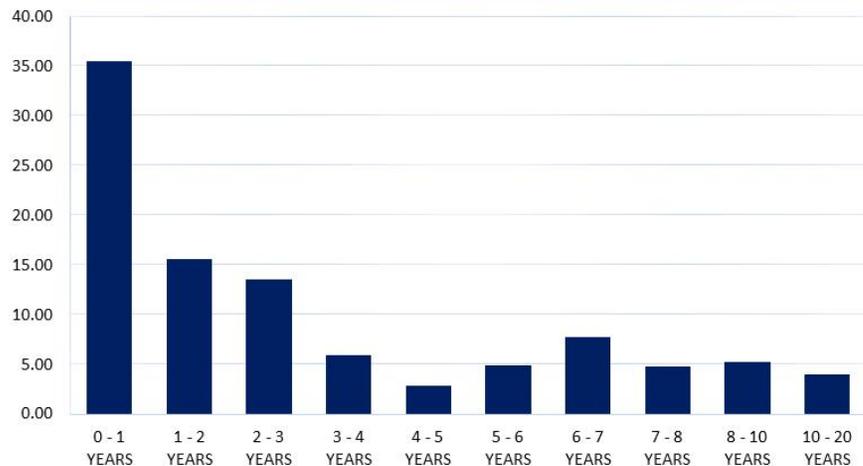


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 205 FIXED INCOME		
US TREASURY N/B	48,257,311	2.09
US TREASURY N/B	36,794,187	1.59
US TREASURY N/B	28,564,402	1.24
US TREASURY N/B	27,063,145	1.17
US TREASURY N/B	26,658,662	1.15
US TREASURY N/B	23,409,727	1.01
US TREASURY N/B	20,656,309	0.89
US TREASURY N/B	20,554,331	0.89
FORD MOTOR CREDIT CO	20,163,805	0.87
PEPSICO INC	20,125,998	0.87



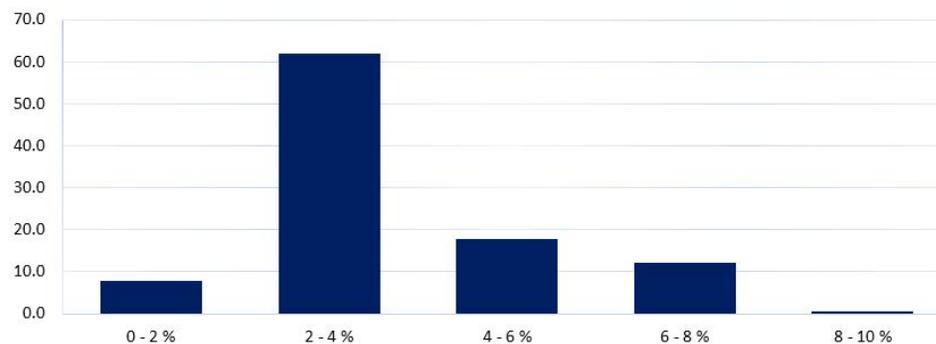
Duration Distribution



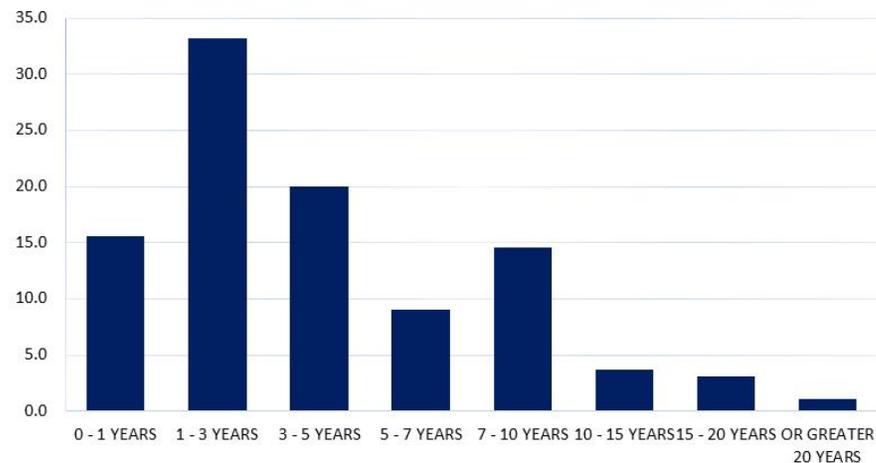
Portfolio Level Characteristics

	POOL 205 FIXED INCOME
Effective Maturity	4.51
Coupon	3.68
Effective Duration	2.99
Quality Rating (Moody's)	AA-2

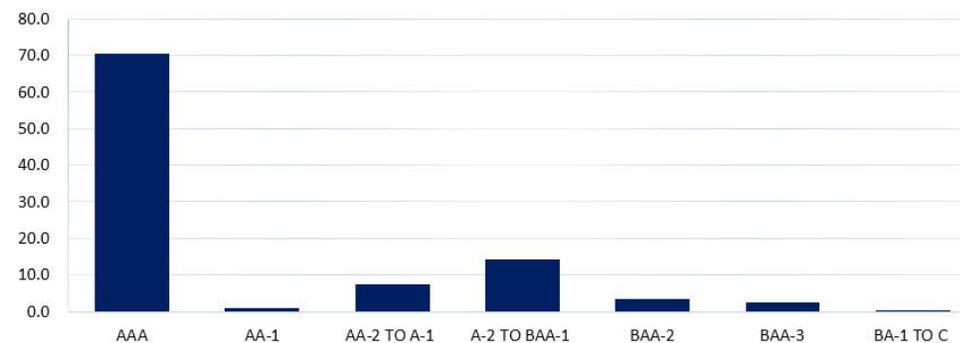
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



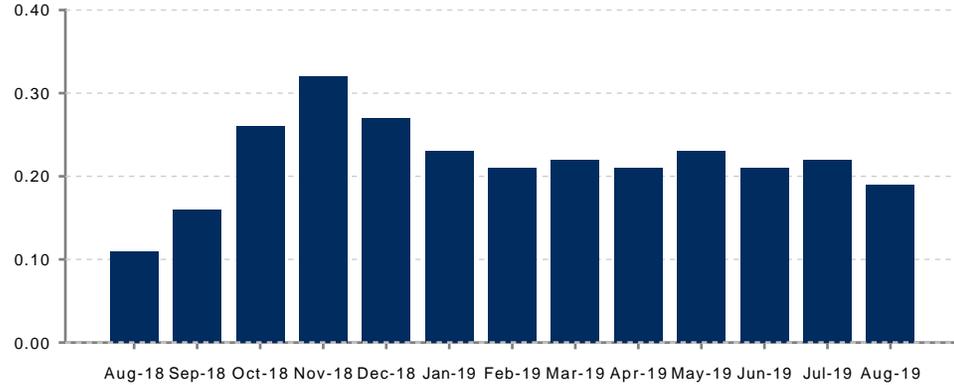
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August 31, 2019

POOL 123 ST



Net Yield

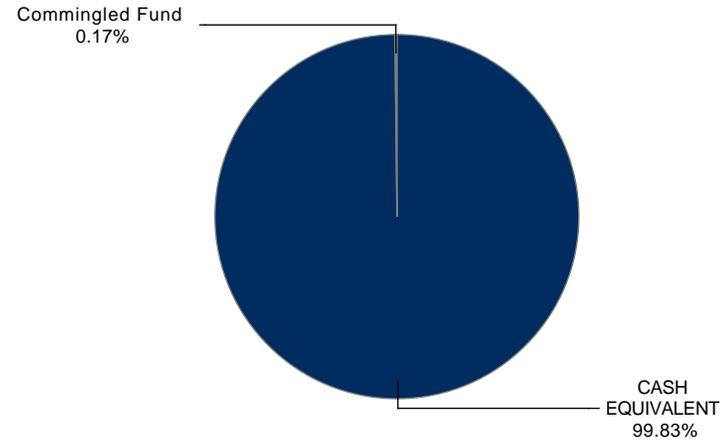


Current Mth **Prior Mth** **1 Year Ago**

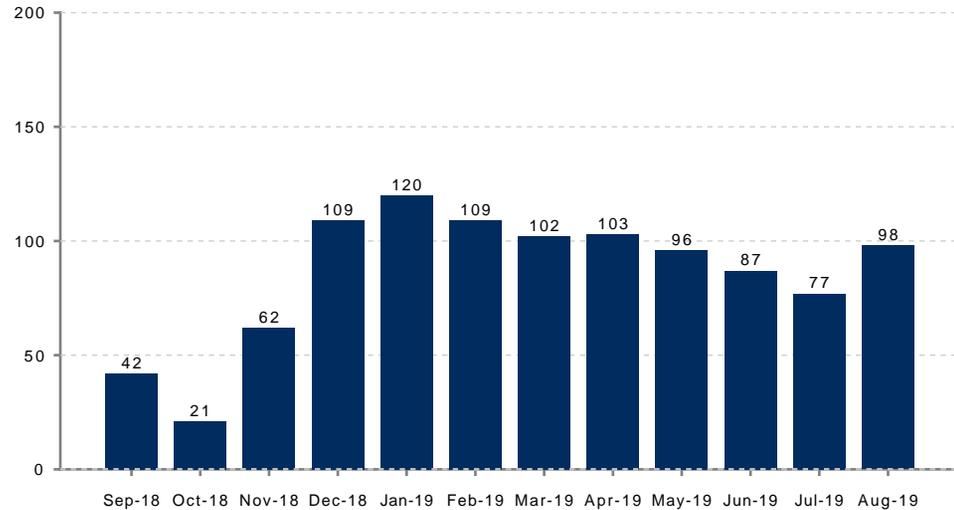
ST OF AZ POOL 123 ST FIXED INC	0.19	0.22	0.11
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Asset Allocation

	Ending Market Value
ST OF AZ POOL 123 ST FIXED INC	97,960,442



Net Asset Values over Time (\$MM)

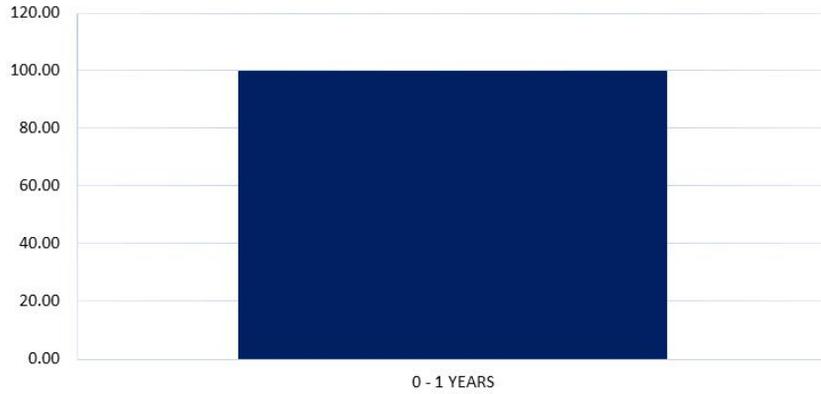


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
ST OF AZ POOL 123 ST FIXED INC		
CANTOR FITZGERALD REPO	15,030,354	15.34
INSTITUTIONAL SECURED	9,988,650	10.20
ANGLESEA FDG PLC and ANG	9,986,067	10.19
NORTHWESTERN UNIVERS	6,758,846	6.90
CROWN POINT CAP CO.	6,000,022	6.12
HARLEY-DAVIDSON FND CP	5,986,257	6.11
BOEING CO.	4,998,929	5.10
UNITED HEALTHCARE CO	4,998,444	5.10
HARLEY-DAVIDSON FND CP	4,994,300	5.10
TREASURY BILL	4,993,595	5.10



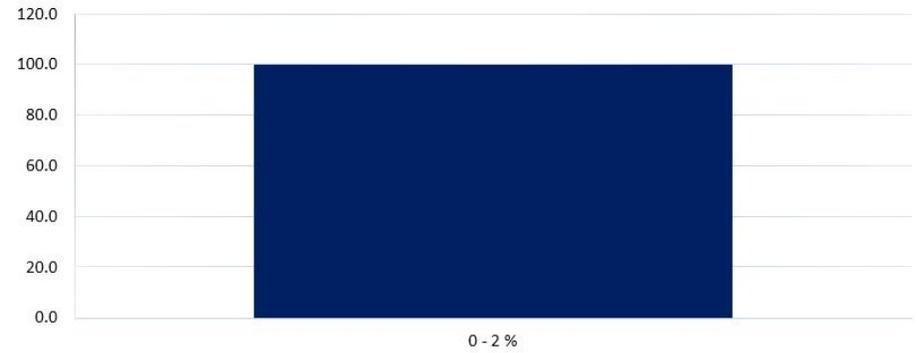
Duration Distribution



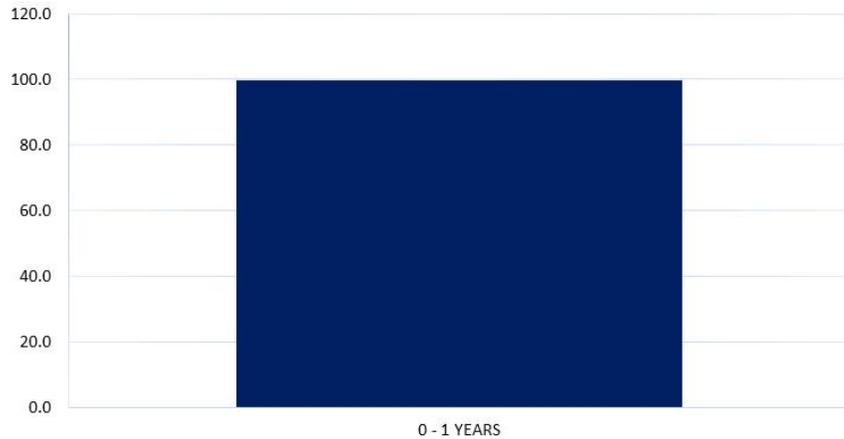
Portfolio Level Characteristics

	POOL 123 ST
Effective Maturity	0.14
Coupon	0.00
Effective Duration	0.12
Quality Rating (Moody's)	AA-1

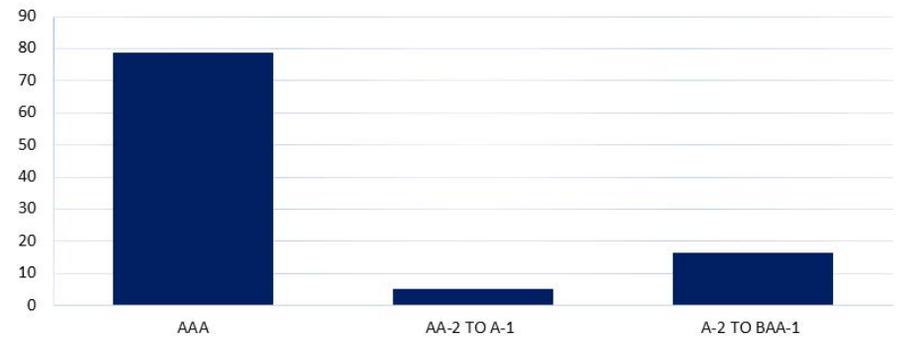
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



Permanent Land Endowment Fund Market Value

