

OFFICE OF THE
ARIZONA STATE TREASURER



Kimberly Yee

TREASURER



JULY 2019

Presented To:

Arizona State Board of Investment

August 27, 2019

STATE BOARD OF INVESTMENT

A G E N D A

August 27, 2019

1. Call to Order; Opening RemarksThe Honorable Kimberly Yee, Chair
2. Approval of Minutes of July 30, 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
Broker Activity Report
4. Approval of July 2019 Report
5. Legislative Report..... Fareed Bailey, Director of Legislative Affairs
.....Adoption of Response to the Sunset Review Process
6. Treasurer’s Report The Honorable Kimberly Yee, Chair
7. Market Outlook.....Harry Papp, Board Member
8. Call to the Public
9. Notice of Next Meeting
10. Adjournment

REPORT OF THE STATE TREASURER

FOR

August 27, 2019

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**Minutes of
BOARD OF INVESTMENT MEETING
July 30, 2019**

The regular meeting of the State Board of Investment was held on June 25, 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
Lorraine Jones, Deputy Treasurer of Operations, 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
Shaandiin Parrish, Public Information Officer, Arizona State Treasurer's Office

1. Call to Order

Treasurer Yee called the July 30, 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' 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 June 25, 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 June 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 June 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 June 2019. See memo.

4. Approval of May 2019 Monthly Report

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

5. Treasurer's Report – The Honorable Kimberly Yee

Treasurer Yee thanked the Treasury staff for their work. In July she visited with the Navajo Nation, Gila River Indian Community, and the Ak-Chin governance and participated in a State Land Selection Board Meeting.

6. Annual Performance Review and Market Outlook – U.S. Bancorp Asset Management – Tom Moore, Managing Director, Institutional Sales; Jim Palmer, Chief Investment Officer; and Mike Welle, Portfolio Manager

U.S. Bancorp Asset Management gave an overview on Pool 3 and Pool 10.

8. Market Outlook

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

9. Call to the Public

There was no public comment.

10. Notice of Next Meeting

Treasurer Yee advised the Board that the next regular meeting of the Board of Investment will be Tuesday, August 27, 2019 at 1:30 p.m. at 1700 West Washington, State Capitol, West Wing, Treasurer's Conference Room, Phoenix, Arizona.

11. Adjournment

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

State Treasurer's Report
August 27, 2019 Meeting
Minutes of the July 30, 2019 Meeting

The BOI Meeting was adjourned at approximately 2: 32 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 | July 2019

Overall Performance – Where We Are Now |

➤ State Agency Pools:

- Total assets: \$6,876,093,923
- July earnings distributed: \$14,126,281 (+48.98% YoY)
- General Fund earnings distributed: \$5,222,801 (+69.74% YoY)

Outlook |

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. Capital flows from China, Japan and Europe continue to accelerate to U.S. dollar denominated debt. The European sovereign bond markets continue to have negative yields as far out as 10 years. The 10-year U.S. Treasury bond broke below the 2% level on 8/14/19 and now is down to the 1.60% level. It is widely anticipated that against this backdrop the FOMC will cut benchmark rates by 25 bps during the September 18 meeting.

Strategy: Monthly Commentary |

We have already added duration with U.S. Treasuries over 2% yield shortly before the last Federal Reserve meeting. 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:

- Consumer sentiment craters and recession becomes a self-fulfilling prophecy
- 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 |

	July 31, 2019	July 31, 2018	FY Change
Pool 2 FF&C	\$1,177,559,266	\$1,000,433,715	+\$177,125,551
Pool 3 Internal	\$2,760,174,028	\$1,625,789,749	+\$1,134,384,279
Pool 3 External	\$109,039,801	\$105,668,915	+\$3,370,886
Pool 4 Gov.	\$1,018,139,015	\$852,902,888	+\$165,236,127
Pool 10 Internal	\$970,052,607	\$1,032,069,096	-\$62,016,489
Pool 10 External	\$134,607,710	\$137,885,365	-\$3,277,655
Pool 12 CAWCD	\$374,729,942	\$384,997,570	-\$10,267,628
Pool 16 ECDHB	\$331,791,553	\$341,866,048	-\$10,074,495
TOTAL STATE AGENCY	\$6,876,093,923	\$5,481,613,347	+\$1,394,480,576

Local overnment Investment Pools (LIP) Summary

Overall Performance – Where We Are Now |

➤ Local Government Investment Pools:

- Total assets: \$3,546,562,685
- Total July earnings: \$7,325,479; +\$1.9MM over July 2018
- Total fiscal year-to-date yields:
 - Pool 5: 2.43%; +36bps higher than July 2018
 - Pool 7: 2.34%; +51bps higher than July 2018
 - Pool 500: 2.48%; +20bps higher than July 2018
 - Pool 700: 2.17%; +46bps higher than July 2018

Strategy: Short-term Pools 5 & 7 |

The FOMC decreased rates by 25bps at the July 31st, 2019 meeting and will likely decrease rates by another 25bps in the September meeting. The market is pricing in at least two more rate cuts by the end of the year. This will impact yield and earnings in Pools 5 and 7 much quicker; as securities mature, we will 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 some duration in Pool 500 at the end of July and in August. 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.

LGIP Investment Pool Balances |

	July 31, 2019	July 31, 2018	FY Change
Pool 5 LGIP	\$1,528,117,921	\$1,421,251,883	+\$106,866,038
Pool 7 LGIP FF&C	\$1,519,686,293	\$1,292,354,399	+\$227,331,894
Pool 500 LGIP Med.	\$360,298,988	\$343,570,941	+\$16,728,047
Pool 700 LGIP Med FF&C	\$138,459,484	\$118,008,955	+\$20,450,529
TOTAL LGIP	\$3,546,562,685	\$3,175,186,178	+\$371,376,508

Endowment Summary

Overall Performance – Where Are We Now |

- Highlights:
 - PLETF 10-year annualized total return now 9.24%
 - PLETF total return in July trailed benchmark by 5bps
 - Prop 123 monthly distributions highest ever at \$30.7 million

Big Picture:

- PLETF fair market value at \$6,092,910,315
- FYTD2020 distribution increased from \$28.8MM to \$30.7MM MoM; up \$1.9MM vs FY2019
- PLETF 1 year return trailed benchmark by 56bps
- Calendar YTD return was 13.02% vs Benchmark 13.72%
- Annualized 10-Year total return through July is 9.24% versus June at 9.55%; -31 basis points MoM
- Fair Market Value up \$26.1MM MoM; up \$71.3MM YoY
- Unrealized Gains: \$3.4BN (Up \$169.5MM or 5.31% YoY)
- July Realized Gains: \$7.9MM; +\$5.97MM vs July 2018
- July TRR PLETF 0.87% vs Benchmark 0.91%; -05bps 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 at October 2018 levels. Our equity exposure was 60.92% 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 11.45% (+3bps MoM), still outperforming the MidCap exposure at 9.33% (+3bps MoM), our LargeCap exposure at 5.48% (+6bps MoM), and our fixed income return of 4.65% (-1bp 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.

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, so we have added duration before the rates rally. 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 and the Federal Reserve was raising rates. The Fed then took a dovish pivot at the April meeting and cut rates 25bps at the July 31st meeting, recently 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 FY 2019, 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 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

Tim White, Director of Endowments

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 and we were able to reduce exposure to lesser rated bonds. 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.

Long interest rates may still eventually rise modestly in a scenario if higher inflation surfaces and a US/Chinese trade agreement and the curve may steepen in line with wall street economist's consensus (below). We feel it prudent to keep room for duration extension in Pool 205 from maturities/paydown cashflows migrating into Pool 123 for distribution requirements. We added duration before the rally in longer USTs which brought us 0.12 years closer to the benchmark at 3.11 years (+0.07 MoM) versus 5.68 (-0.04) for the SBBIG Index. Note the forward-looking Bloomberg Bond Yield Forecast compiled by averaging 56 Wall Street economists' 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												
1)	US 30-Year	2.14	2.46	2.49	2.55	2.59	2.61	2.63	2.70	2.76	2.81	2.88
2)	US 10-Year	1.64	1.91	1.98	2.06	2.11	2.14	2.17	2.25	2.31	2.37	2.44
3)	US 5-Year	1.52	1.75	1.81	1.86	1.91	1.95	1.97	2.02	2.08	2.10	2.17
4)	US 2-Year	1.63	1.71	1.74	1.75	1.77	1.79	1.82	1.88	1.91	1.93	1.99
5)	US 3-Month Libor	2.15	2.12	2.02	1.94	1.88	1.88	1.88	1.92	1.97	2.01	2.07
6)	Fed Funds Rate - Upper Bound	2.25	2.10	1.95	1.90	1.85	1.85	1.85	1.85	1.90	1.90	2.00
7)	Fed Funds Rate - Lower Bound	2.00	1.85	1.68	1.61	1.57	1.55	1.56	1.57	1.60	1.62	1.67
	2 Year - 10 Year Spread	0.01	0.20	0.24	0.31	0.34	0.34	0.35	0.37	0.40	0.44	0.44

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

Endowment Monthly Land Sale Proceeds |

- +\$4.36MM in July
- +\$702K vs June
- --\$23.5MM FYoY

Endowment Prop 123 Distributions |

- \$30.7MM total/\$28.5MM for K-12 successfully distributed on time from Pool 123
- FYTD K-12 distribution \$28.5MM; up \$1.7MM YoY
- Pool 123 mechanism working well (3-4 months laddered liquidity)

Pool Performance |

Portfolio 3Yr standard deviation was 7.92 versus benchmark at 7.97; Portfolio is less risky/volatile versus benchmark.

Equity/Fixed Income Pools:

- Pool 201 LargeCap Equity outperformed the S&P 500 by 1bps MoM at +1.44%
- Pool 203 MidCap Equity underperformed the S&P 400 by 1bps MoM at +1.18%
- Pool 204 SmallCap Equity outperformed the S&P 600 by 1bps MoM at +1.15%
- Pool 205 underperformed the FTSE BIG Index by 13bps MoM at +0.14%
- Pool 123 returned +0.22% for July, outperforming the Pool 5 benchmark

EARNINGS DISTRIBUTION - INVESTMENT POOLS
JULY 2019

Recipient	Earnings Distributed				Fiscal YTD Investment Management Fees Received
	JULY 2019	Fiscal YTD 19/20	Fiscal YTD 18/19	Change from Previous Year	
General Fund (1)	\$5,222,801	\$5,222,801	\$3,076,957	69.7%	
2 State Agencies - Full Faith & Credit (2)	1,918,720	1,918,720	1,372,549	39.8%	49,683
3 State Agencies - Diversified (2) (3)	2,293,278	2,293,278	1,710,325	34.1%	126,834
4 State Agencies - Gov (2)	1,544,196	1,544,196	1,105,412	39.7%	46,858
5 LGIP (2)	3,160,882	3,160,882	2,522,170	25.3%	72,288
7 LGIP Gov (2)	3,050,465	3,050,465	1,922,220	58.7%	72,802
9A Public School Credit Enhancement (4)	0	0	0	0	4,993
10 Restricted Operating (2)	1,589,751	1,589,751	761,447	108.8%	51,434
12 CAWCD Medium-Term	852,309	852,309	745,386	14.3%	17,699
16 ECDH Medium-Term	705,226	705,226	709,871	-0.7%	17,105
Subtotal	\$20,337,627	\$20,337,627	\$13,926,338	46.0%	\$459,697
NAV POOL					
500 LGIP - Med Term	758,939	758,939	664,333	14.2%	16,780
700 LGIP - FF&C Med Term (2)	197,841	197,841	173,650	13.9%	6,451
Total	\$21,294,406	\$21,294,406	\$14,764,320	44.2%	\$482,928
JULY 2018 TOTALS		\$14,764,320			\$406,208

(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 July 31, 2019
 (in millions)

<u>Month</u>	<u>Fiscal Year</u> <u>2017/2018</u>	<u>Fiscal Year</u> <u>2018/2019</u>	<u>Fiscal Year</u> <u>2019/2020</u>
JULY	\$1,635	\$1,824	\$2,483
AUGUST	1,303	1,495	
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	\$1,635	\$1,824	\$2,483
Full Year Average	\$1,806	\$2,135	

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

FUND	DESCRIPTION	Current Month 07/31/19	Prior Month 06/30/19	Prior Year 07/31/18	Net Asset Value Per Share
2	STATE AGENCIES - FULL FAITH & CREDIT	2,101,829	2,204,608	1,447,988	0.9990
3	STATE AGENCIES - DIVERSIFIED				
	INTERNAL MANAGERS	5,452,366	5,842,874	2,701,363	1.0007
	EXTERNAL MANAGERS	222,836	216,949	194,561	1.0038
	FUND 3 TOTAL	5,675,201	6,059,822	2,895,924	1.0008
4	STATE AGENCIES - GOV	2,096,868	2,441,782	1,347,491	1.0031
9A	PUBLIC SCHOOL CREDIT ENHANCEMENT	211,245	231,640	171,817	0.9990
10	RESTRICTED OPERATING				
	INTERNAL MANAGERS	1,965,271	2,010,880	1,840,080	1.0000
	EXTERNAL MANAGERS	151,907	142,912	120,115	1.0042
	FUND 10 TOTAL	2,117,179	2,153,791	1,960,195	1.0005
12	CAWCD MEDIUM-TERM	852,309	836,373	745,386	1.0043
15	AHCCCS OPERATING	209,070	65,490	109,268	N/A
16	ECDH MEDIUM-TERM	705,226	703,065	709,871	1.0031
	TOTAL STATE AGENCIES	13,968,927	14,696,572	9,387,938	

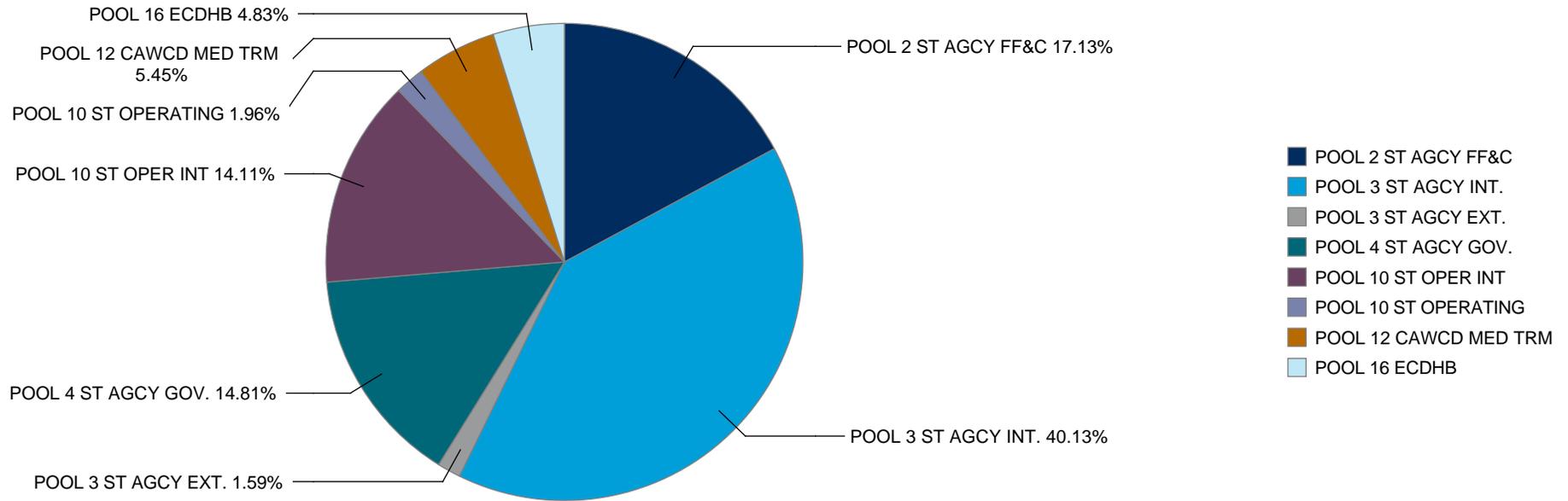
**STATE AGENCY POOLS
PORTFOLIO YIELD ANALYSIS
JULY 2019**

FUND	DESCRIPTION	Current Month 07/31/19	Prior Month 06/30/19	Prior Year 07/31/18
2	STATE AGENCIES - FULL FAITH & CREDIT 50% Trailing 3-mo T-bill / 50% Bloomberg Barclays 1-3 year UST	2.32% 2.05%	2.39% 2.10%	1.94% 2.26%
3	STATE AGENCIES - DIVERSIFIED INTERNAL MANAGERS EXTERNAL MANAGERS COMBINED 50% 1 month T-bill / 50% Bloomberg Barclays 1-3 year US Agg	2.55% 2.42% 2.55% 2.10%	2.57% 2.43% 2.57% 2.14%	2.08% 2.16% 2.08% 2.33%
4	STATE AGENCIES - GOV 50% Trailing 3-mo T-bill / 50% Bloomberg Barclays 1-3 year US Gov	2.45% 2.06%	2.47% 2.10%	1.84% 2.26%
9A	PUBLIC SCHOOL CREDIT ENHANCEMENT	2.32%	2.39%	1.94%
10	RESTRICTED OPERATING INTERNAL MANAGERS EXTERNAL MANAGERS COMBINED 50% Trailing 3-mo T-bill / 50% Bloomberg Barclays 1-3 year US Agg	2.39% 1.33% 2.26% 2.15%	2.46% 1.60% 2.38% 2.21%	2.10% 0.96% 1.96% 2.35%
12	CAWCD MEDIUM-TERM 25% S&P LGIP Index / 75% Bloomber Barclays 1-3 year US Agg	2.64% 2.13%	2.72% 2.15%	2.26% 2.57%
15	AHCCCS OPERATING	1.41%	0.65%	0.72%
16	ECDH MEDIUM-TERM 25% S&P LGIP Index / 75% Bloomber Barclays 1-3 year US Agg	2.51% 2.13%	2.59% 2.15%	2.37% 2.57%

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	1,177,559,266	17.1
POOL 3 ST AGCY INT.	2,760,174,028	40.1
POOL 3 ST AGCY EXT.	109,039,801	1.6
POOL 4 ST AGCY GOV.	1,018,139,015	14.8
POOL 10 ST OPER INT	970,052,607	14.1
POOL 10 ST OPERATING	134,607,710	2.0
POOL 12 CAWCD MED TRM	374,729,942	5.4
POOL 16 ECDHB	331,791,553	4.8
TOTAL STATE AGENCY	6,876,093,923	100.0

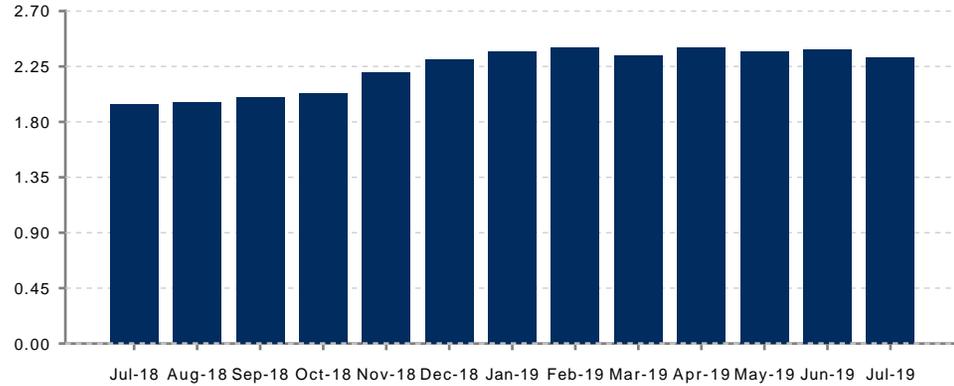
OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2019

POOL 2 ST AGCY FF&C



Net Yield



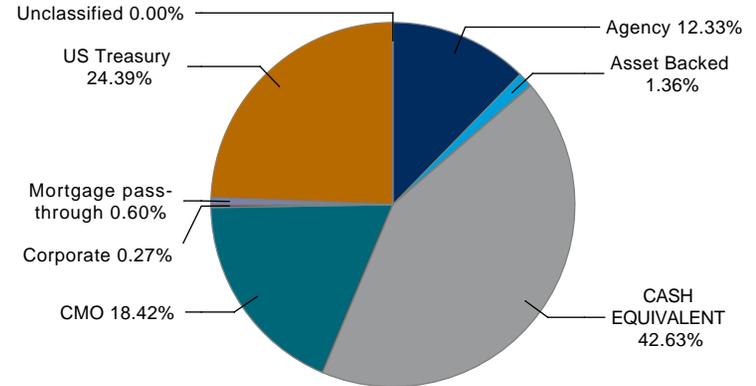
	Current Mth	Prior Mth	1 Year Ago
POOL 2 ST AGCY FF&C	2.32	2.39	1.94

Asset Allocation

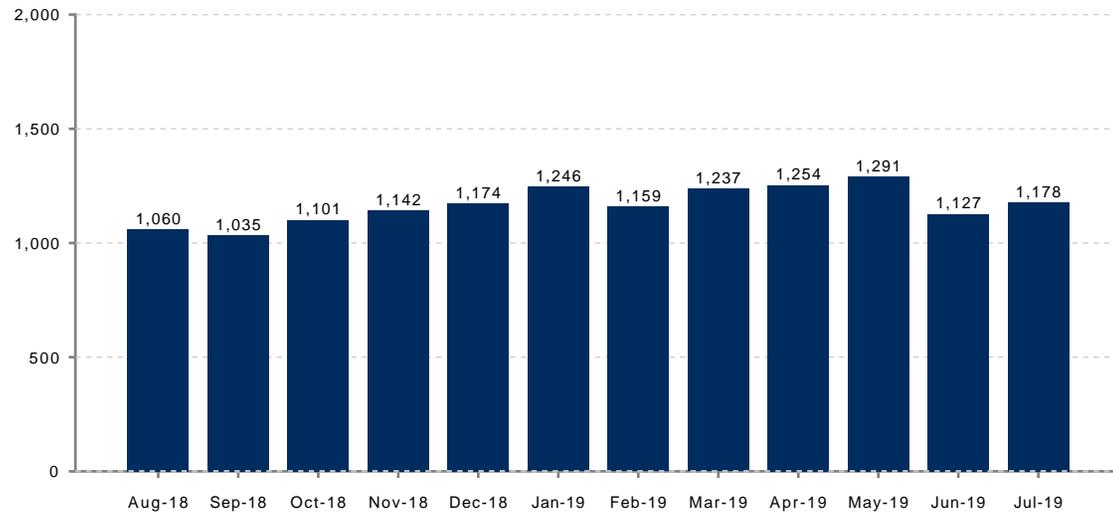
POOL 2 ST AGCY FF&C

Ending Market Value

1,177,559,266



Net Asset Values over Time (\$MM)

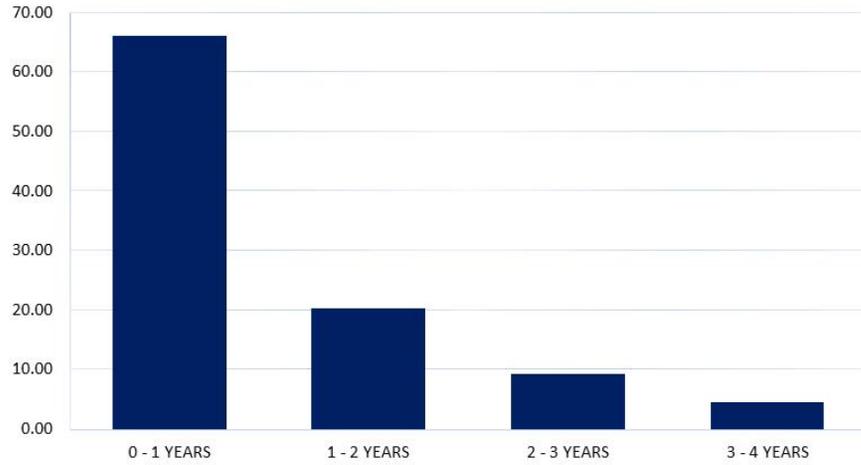


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 2 ST AGCY FF&C		
DAIWA CAPITAL MARKETS	200,013,611	16.99
WELLS FARGO REPO	110,014,056	9.34
US TREASURY N/B	81,325,680	6.91
CREDIT AGRICOLE REPO	68,308,710	5.80
TREASURY BILL	64,450,216	5.47
US TREASURY N/B	40,580,089	3.45
TREASURY BILL	39,938,290	3.39
TREASURY BILL	39,877,296	3.39
TREASURY BILL	29,790,191	2.53
US TREASURY N/B	25,148,098	2.14



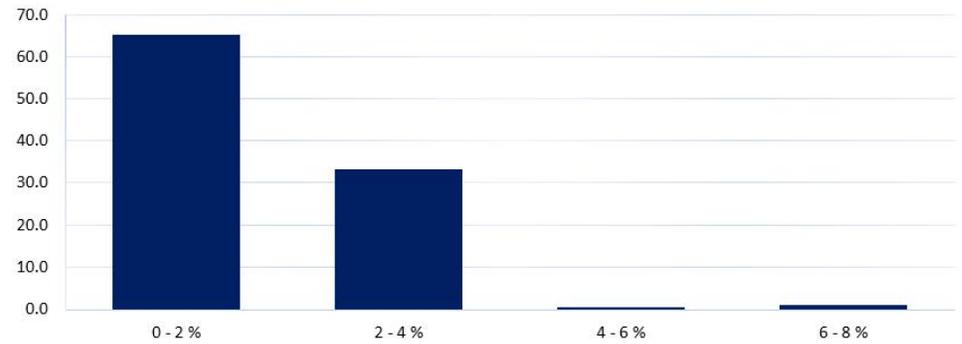
Duration Distribution



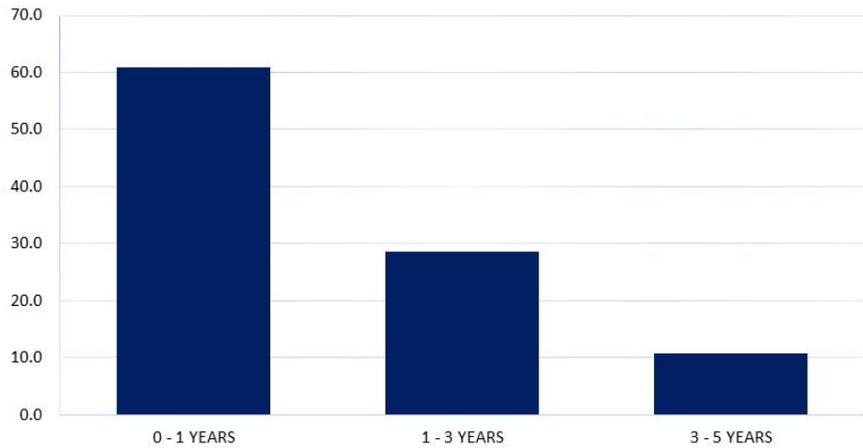
Portfolio Level Characteristics

	POOL 2 ST AGCY FF&C
Effective Maturity	1.43
Coupon	1.79
Effective Duration	0.82
Quality Rating (Moody's)	AAA

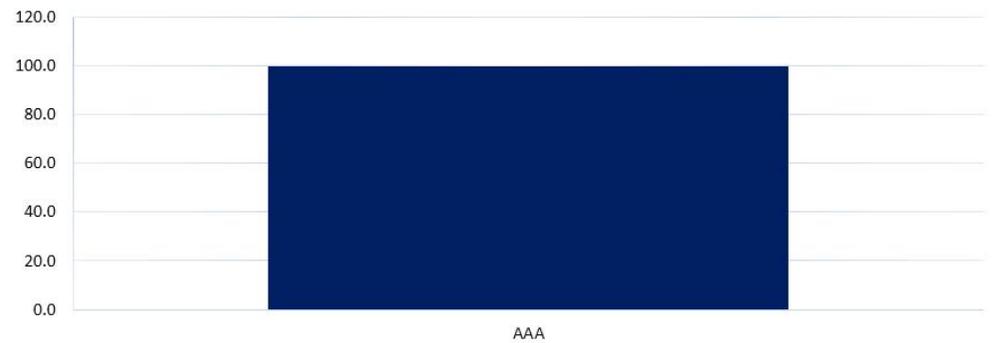
Coupon Distribution



Expected Maturity Distribution

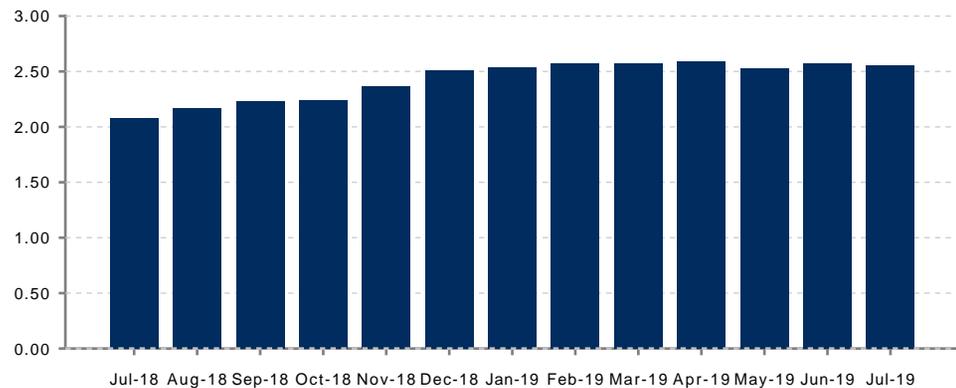


Rating Distribution





Net Yield

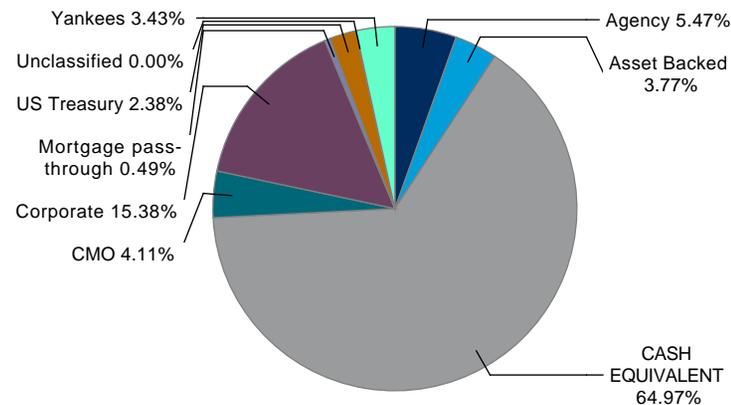


Current Mth **Prior Mth** **1 Year Ago**

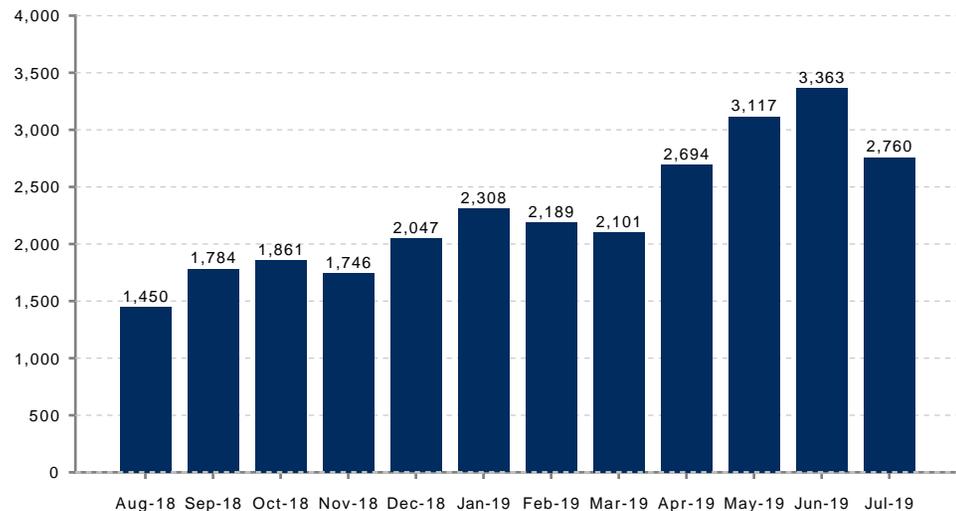
POOL 3 ST AGCY INT.	2.55	2.57	2.08
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Asset Allocation

Ending Market Value	2,760,174,028
POOL 3 ST AGCY INT.	



Net Asset Values over Time (\$MM)

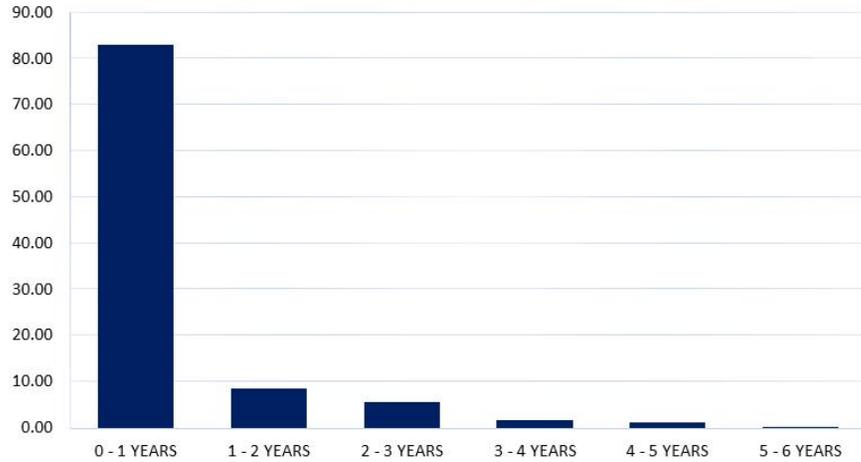


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY INT.		
AMHERST PIERPONT	225,015,750	8.15
CANTOR FITZGERALD REPO	200,014,556	7.25
SOUTH STREET REPO	195,149,057	7.07
SOUTH STREET REPO	155,009,731	5.62
SOUTH STREET REPO	84,028,309	3.04
SUNTRUST BKS INC DTC CP GENERIC CUSIP	70,138,153	2.54
TREASURY BILL	54,534,798	1.98
DISNEY (WALT) CO THE	49,827,334	1.81
US TREASURY N/B	40,699,360	1.47
NESTLE FIN FRANCE S.	39,989,956	1.45



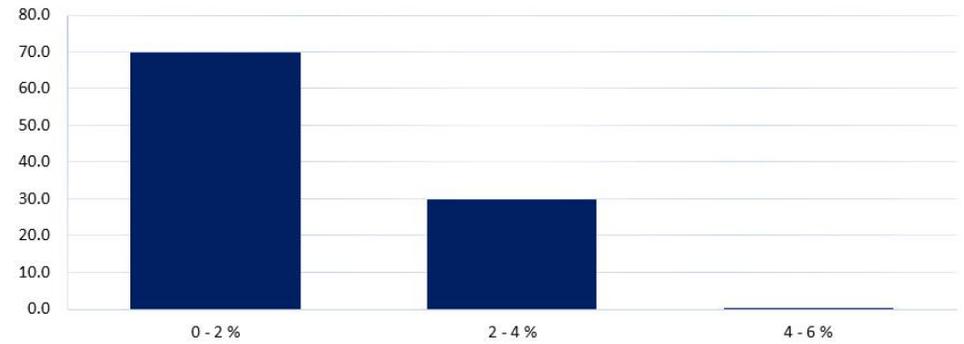
Duration Distribution



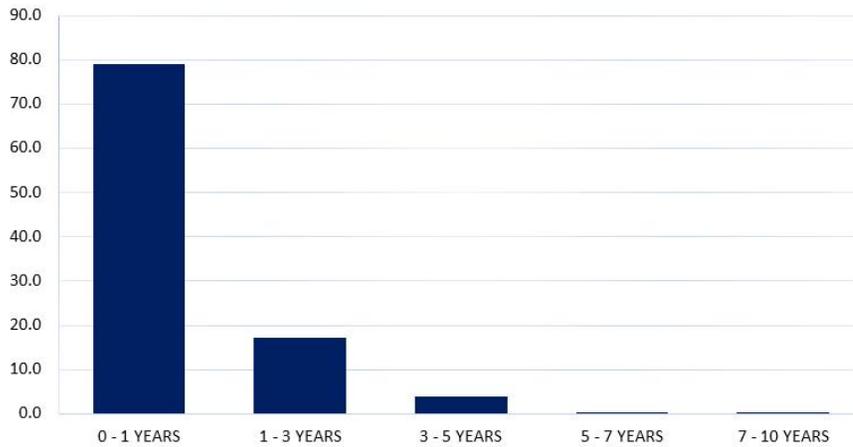
Portfolio Level Characteristics

	POOL 3 ST AGCY INT.
Effective Maturity	0.77
Coupon	1.22
Effective Duration	0.47
Quality Rating (Moody's)	AA-1

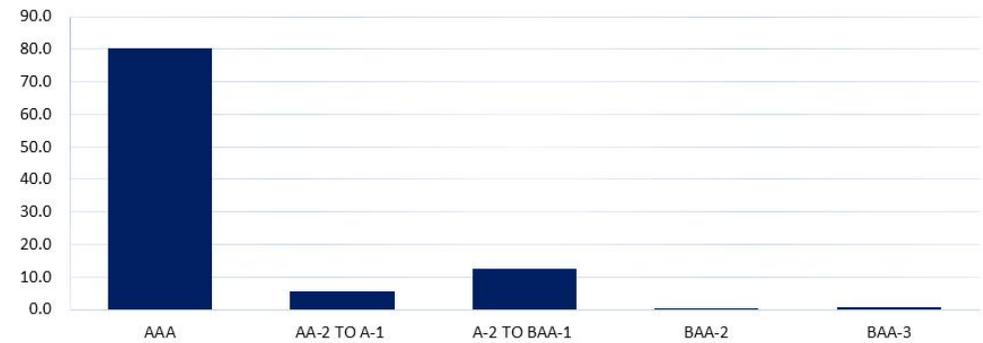
Coupon Distribution



Expected Maturity Distribution

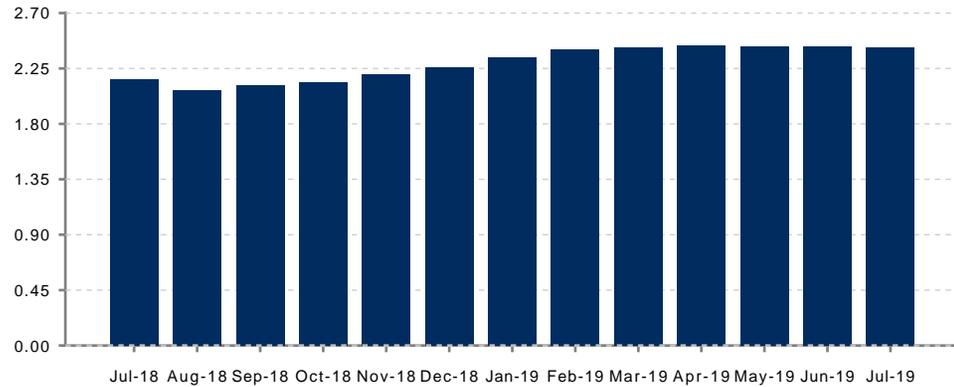


Rating Distribution





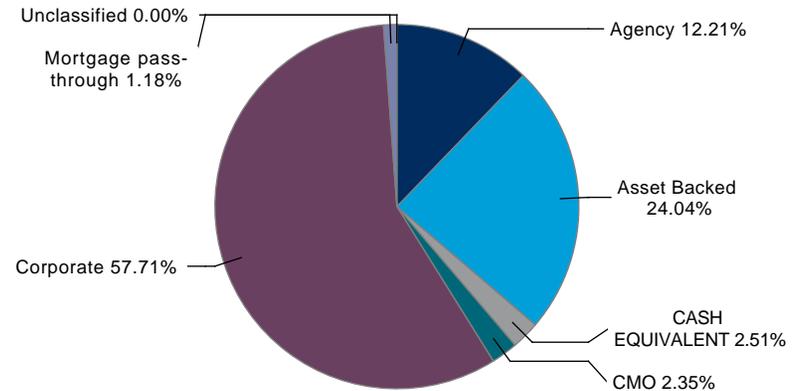
Net Yield



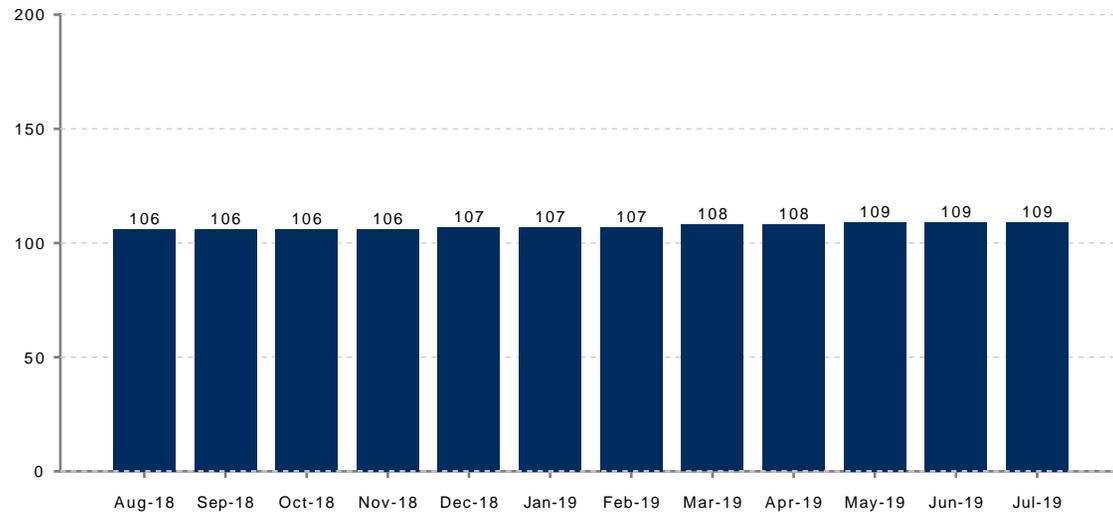
	Current Mth	Prior Mth	1 Year Ago
POOL 3 ST AGCY EXT.	2.42	2.43	2.16

Asset Allocation

	Ending Market Value
POOL 3 ST AGCY EXT.	109,039,801



Net Asset Values over Time (\$MM)

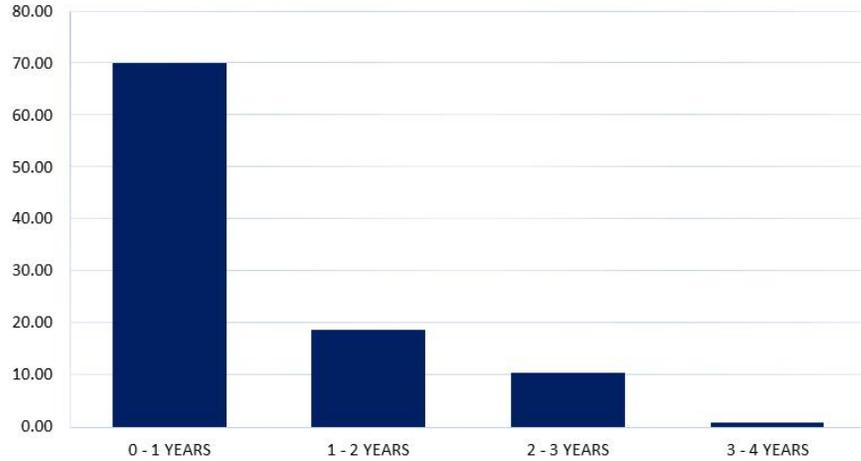


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY EXT.		
FREDDIE MAC	3,027,466	2.78
FANNIE MAE	3,016,482	2.77
FREDDIE MAC	2,171,087	1.99
DISCOVER CARD EXECUTION NOTE T	2,118,718	1.94
PACCAR FINANCIAL CORP	2,097,076	1.92
FANNIE MAE	2,010,975	1.84
CISCO SYSTEMS INC	2,009,788	1.84
FHLMC MULTIFAMILY STRUCTURED P	1,948,690	1.79
BANK OF AMERICA CREDIT CARD TR	1,943,516	1.78
BRANCH BANKING + TRUST	1,854,853	1.70



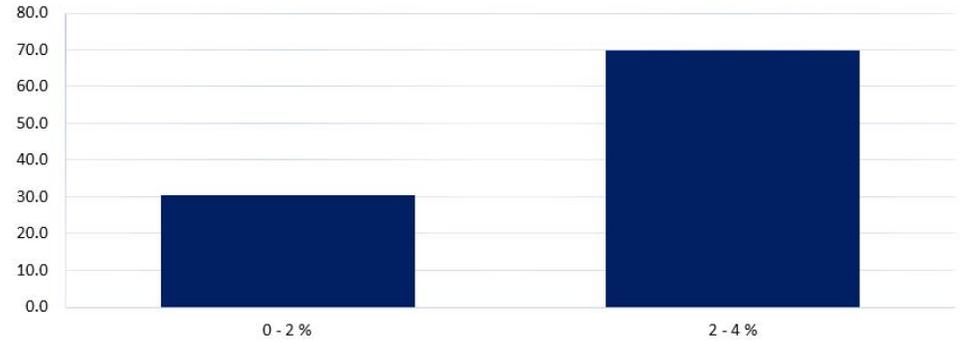
Duration Distribution



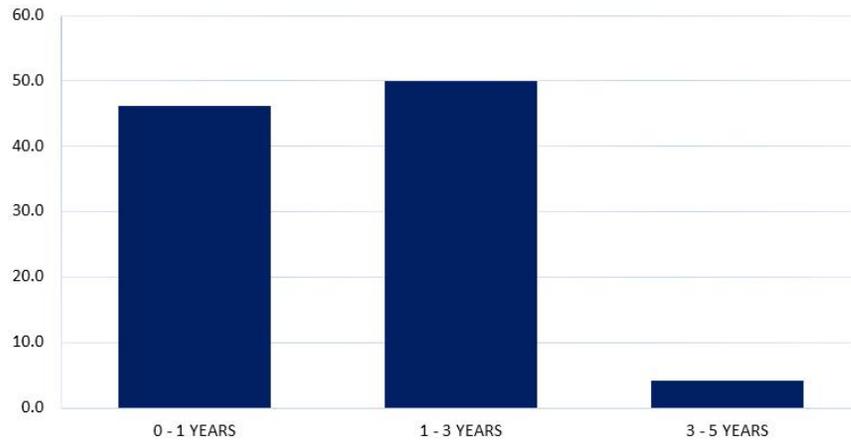
Portfolio Level Characteristics

	POOL 3 ST AGCY EXT.
Effective Maturity	1.22
Coupon	2.39
Effective Duration	0.75
Quality Rating (Moody's)	AA-3

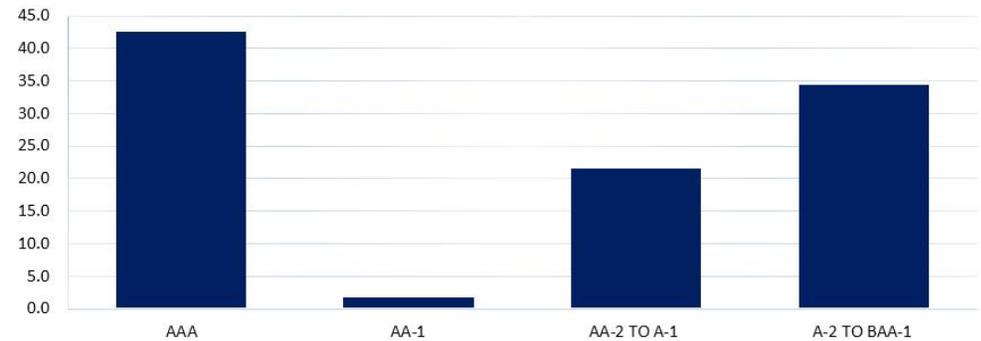
Coupon Distribution



Expected Maturity Distribution

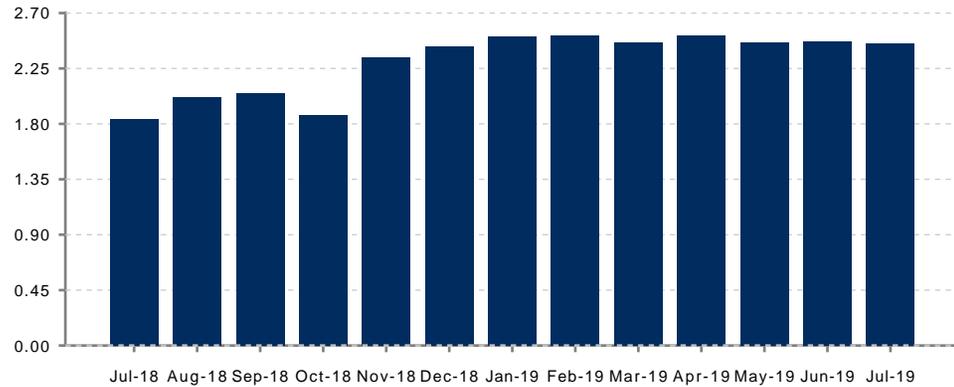


Rating Distribution





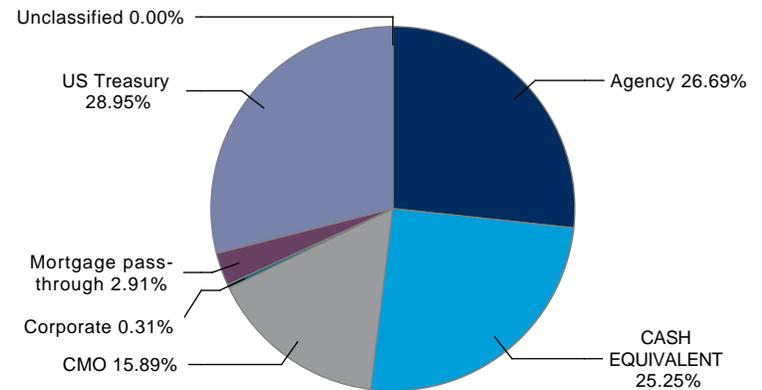
Net Yield



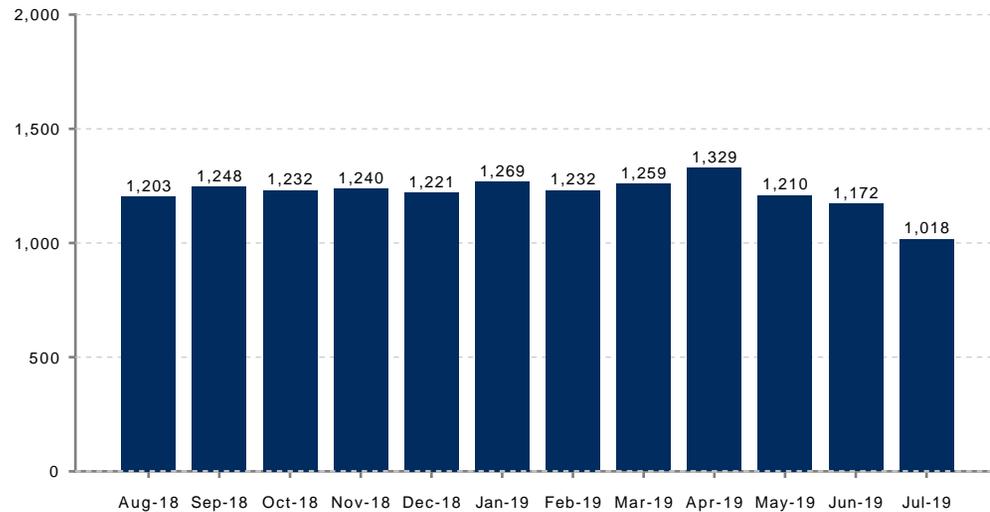
	Current Mth	Prior Mth	1 Year Ago
POOL 4 ST AGCY GOV.	2.45	2.47	1.84

Asset Allocation

	Ending Market Value
POOL 4 ST AGCY GOV.	1,018,139,015



Net Asset Values over Time (\$MM)

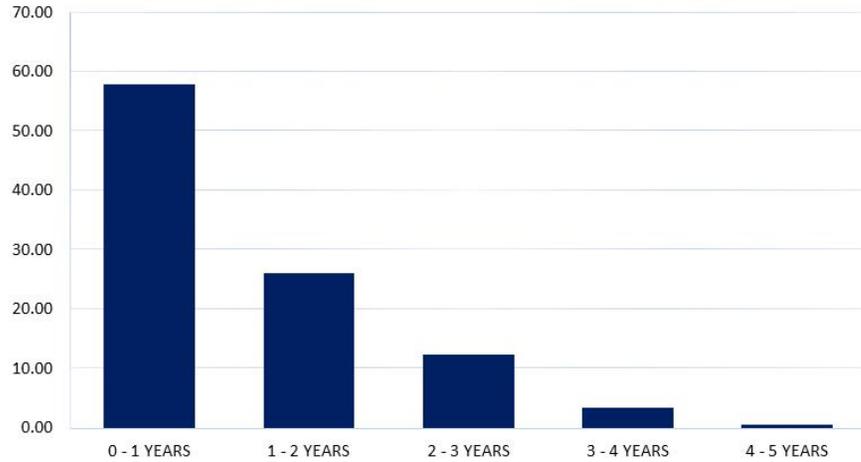


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 4 ST AGCY GOV.		
SOUTH STREET REPO	182,567,725	17.93
US TREASURY N/B	66,077,115	6.49
US TREASURY N/B	55,961,620	5.50
US TREASURY N/B	40,223,166	3.95
SUNTRUST BKS INC DTC CP GENERIC CUSIP	30,059,208	2.95
US TREASURY N/B	25,198,964	2.48
US TREASURY N/B	25,148,098	2.47
TREASURY BILL	24,796,023	2.44
TREASURY BILL	24,788,545	2.43
FEDERAL HOME LOAN BANK	20,644,029	2.03



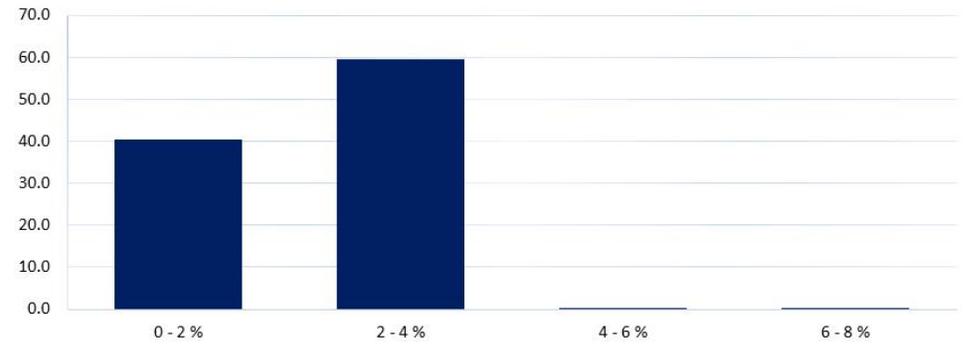
Duration Distribution



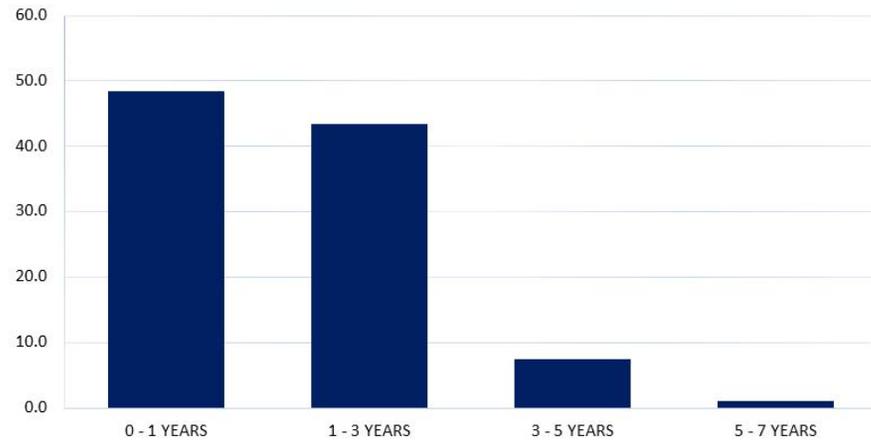
Portfolio Level Characteristics

	POOL 4 ST AGCY GOV.
Effective Maturity	1.47
Coupon	2.21
Effective Duration	0.98
Quality Rating (Moody's)	AAA

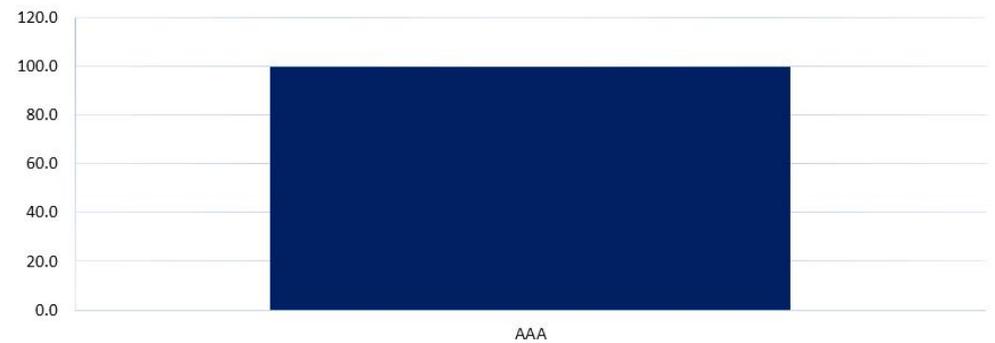
Coupon Distribution



Expected Maturity Distribution

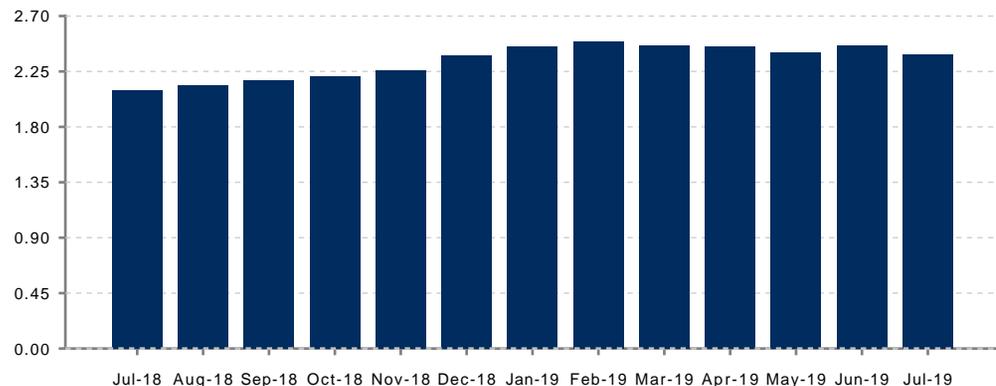


Rating Distribution





Net Yield

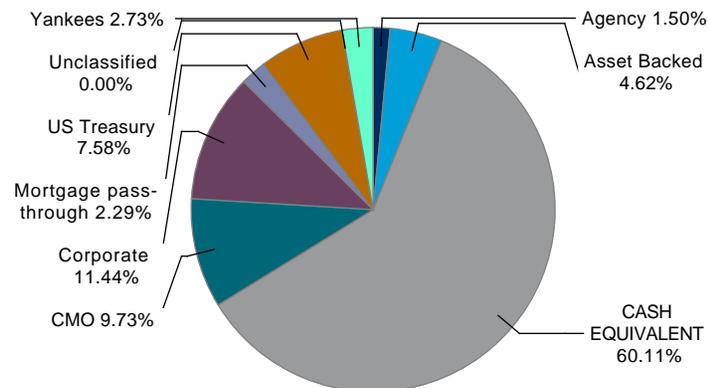


Current Mth **Prior Mth** **1 Year Ago**

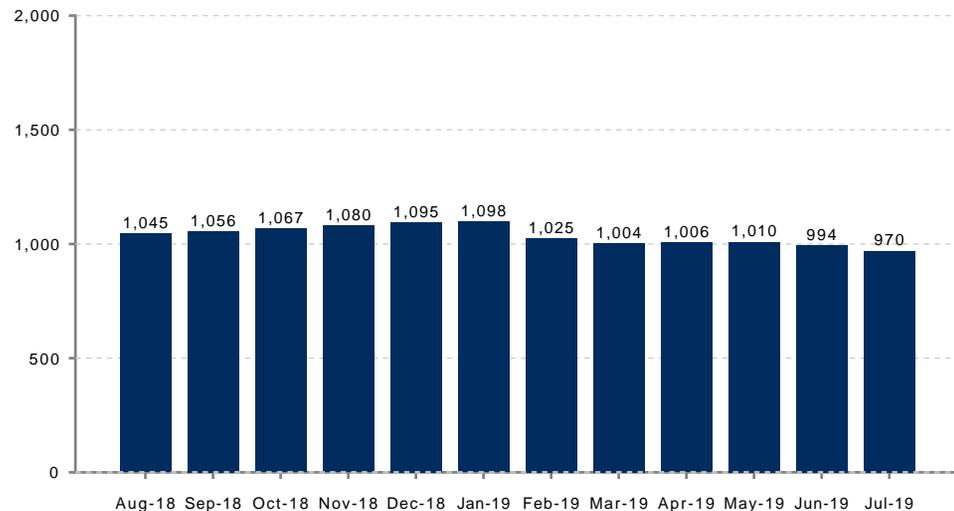
POOL 10 ST OPER INT	2.39	2.46	2.10
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Asset Allocation

POOL 10 ST OPER INT	Ending Market Value 970,052,607
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Net Asset Values over Time (\$MM)

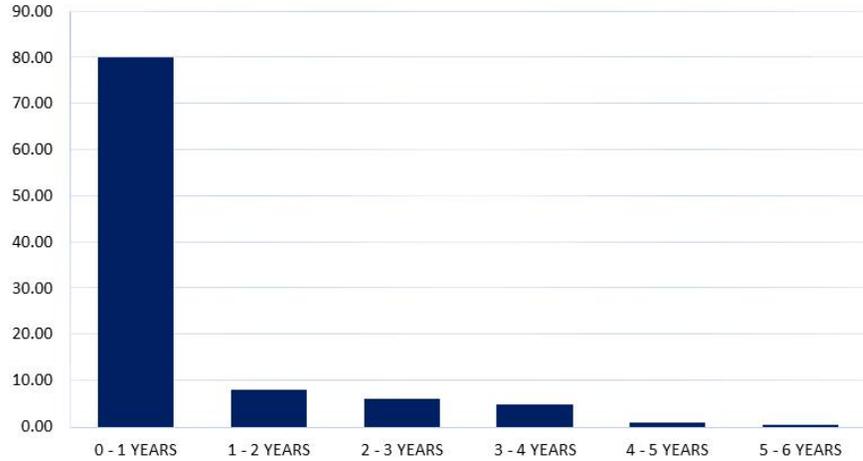


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPER INT		
SOUTH STREET REPO	53,802,681	5.55
INSTITUTIONAL SECURED	35,000,000	3.61
UNITED HEALTHCARE CO	35,000,000	3.61
US TREASURY N/B	30,190,343	3.11
ANGLESEA FDG PLC and ANG	30,000,000	3.09
ANGLESEA FDG PLC and ANG	29,885,625	3.08
CROWN POINT CAP CO.	25,036,438	2.58
CONCORD MIN CPTL CO	25,000,000	2.58
GOTHAM FDG CORP	24,947,750	2.57
VICTORY RECEIVABLES	24,945,931	2.57



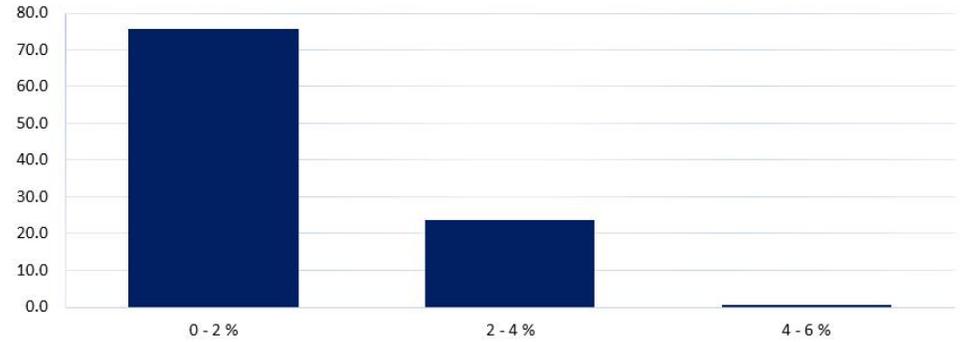
Duration Distribution



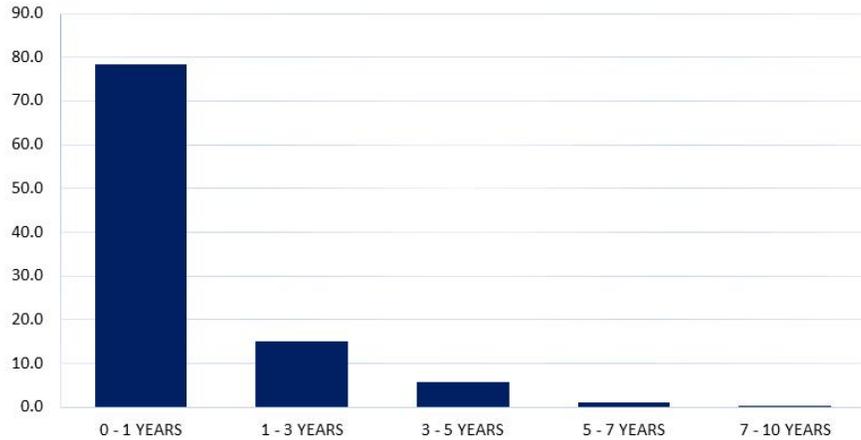
Portfolio Level Characteristics

	POOL 10 ST OPERATING INT
Effective Maturity	0.81
Coupon	0.97
Effective Duration	0.64
Quality Rating (Moody's)	AA-1

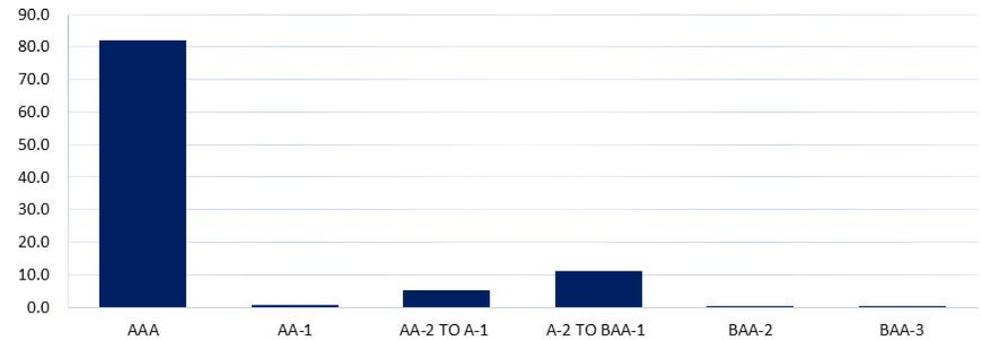
Coupon Distribution



Expected Maturity Distribution

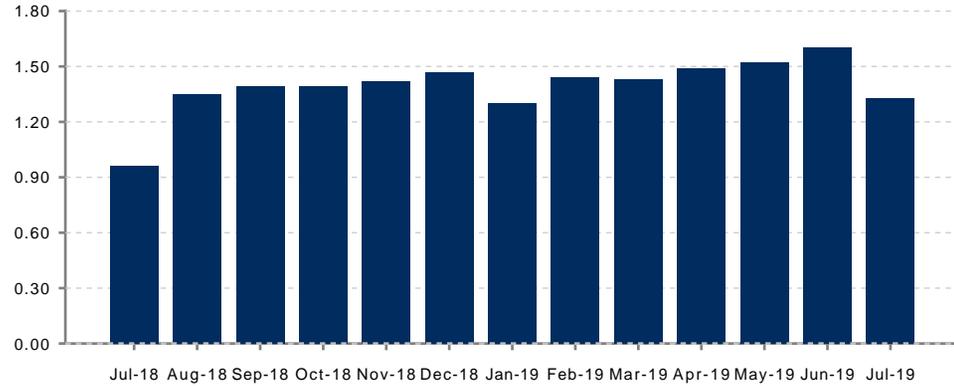


Rating Distribution





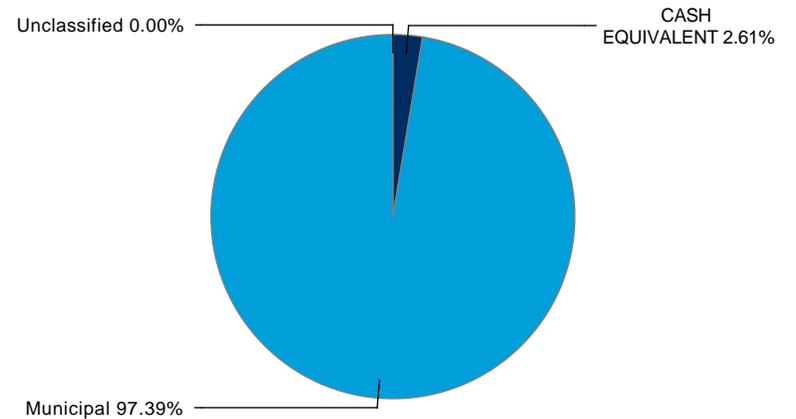
Net Yield



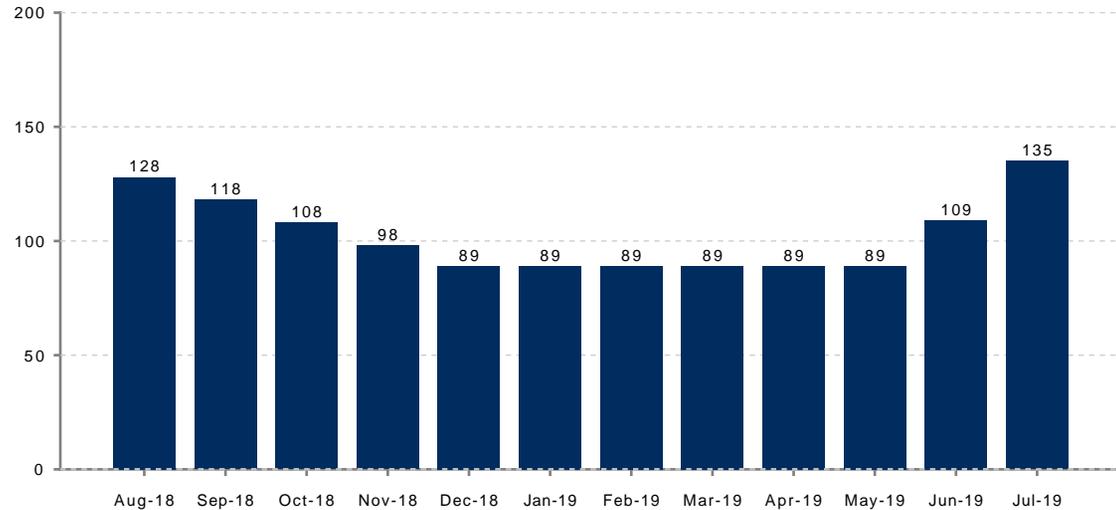
	Current Mth	Prior Mth	1 Year Ago
POOL 10 ST OPERATING	1.33	1.60	0.96

Asset Allocation

	Ending Market Value
POOL 10 ST OPERATING	134,607,710



Net Asset Values over Time (\$MM)

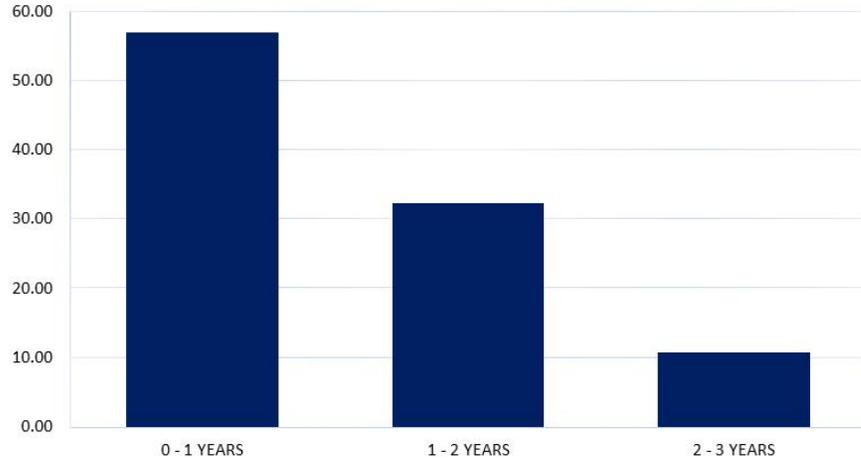


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPERATING		
ROUND ROCK TX INDEP S	5,340,250	3.97
COLUMBUS OH	5,285,486	3.93
TEXAS ST	5,190,922	3.86
MARYLAND ST	5,073,750	3.77
BYRON WI INDL DEV REVE	5,013,553	3.72
HOUSTON TX UTILITY SYS	5,005,937	3.72
FORT WORTH TX	4,823,200	3.58
IRVING TX	4,506,641	3.35
VIRGINIA MN INDEP SCH D	4,502,855	3.35
MASSACHUSETTS ST	4,299,951	3.19



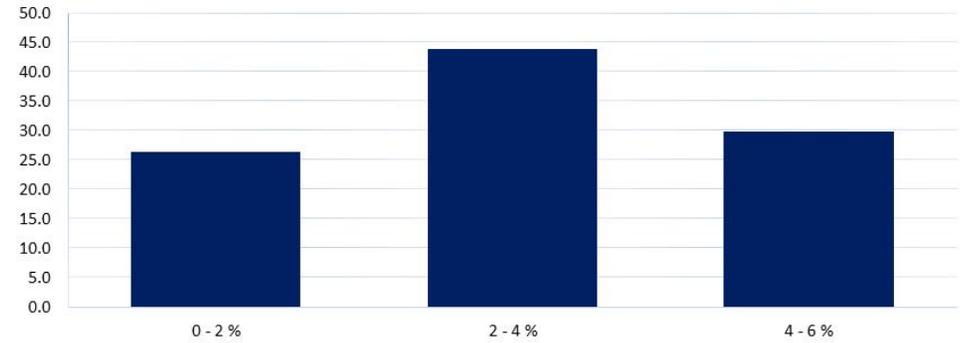
Duration Distribution



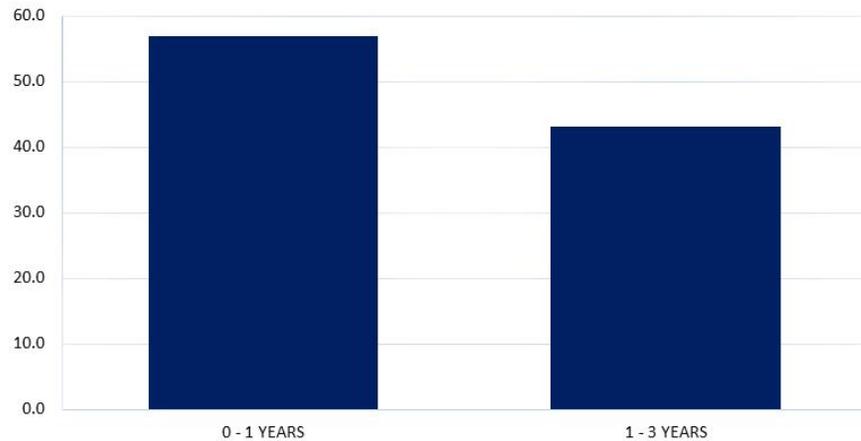
Portfolio Level Characteristics

	POOL 10 ST OPERATING
Effective Maturity	0.85
Coupon	3.35
Effective Duration	0.82
Quality Rating (Moody's)	AA-1

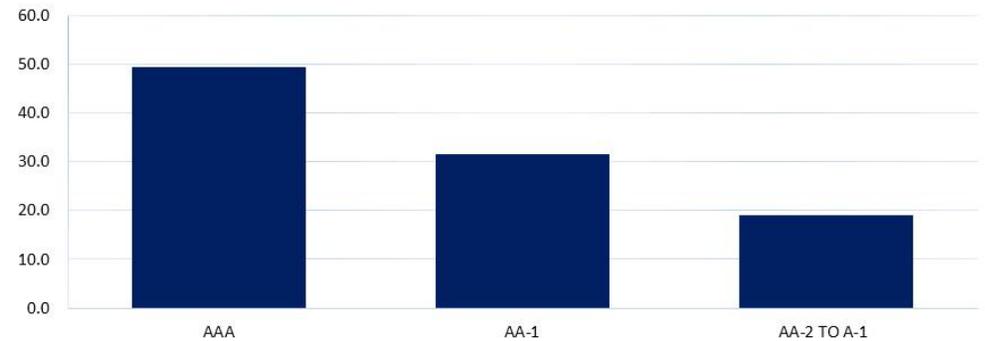
Coupon Distribution



Expected Maturity Distribution

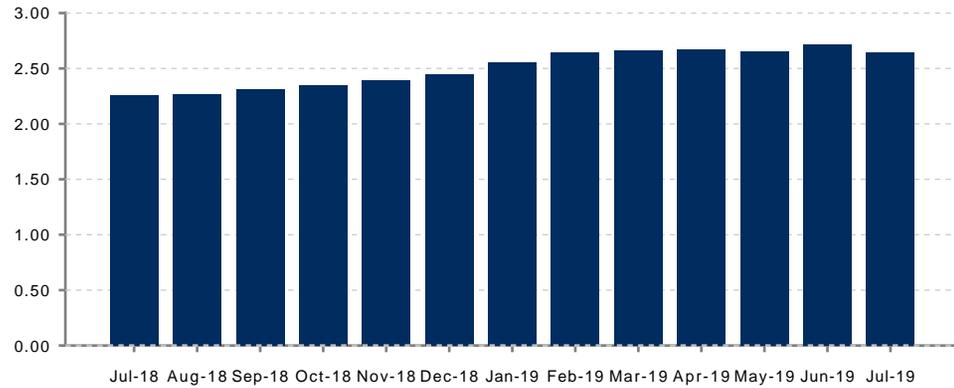


Rating Distribution





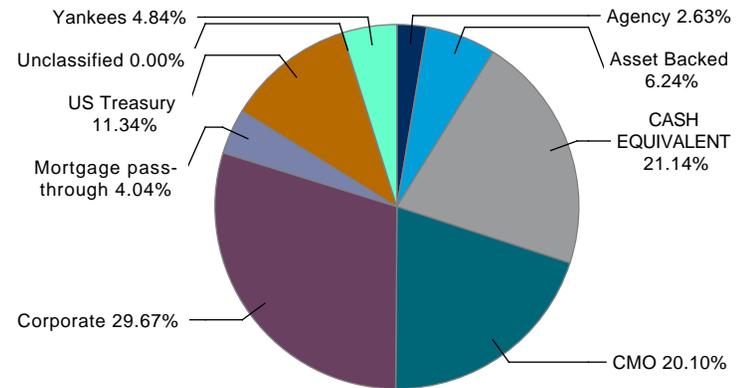
Net Yield



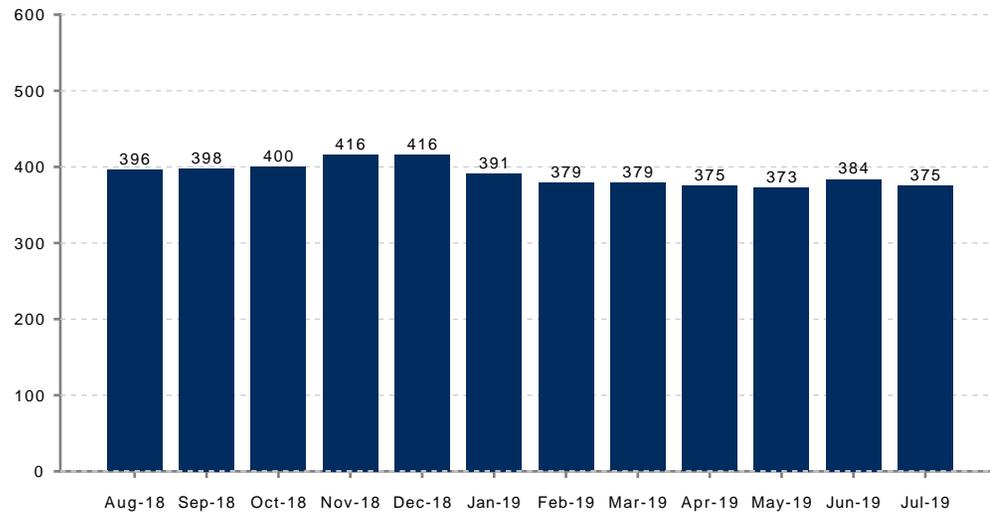
	Current Mth	Prior Mth	1 Year Ago
POOL 12 CAWCD MED TRM	2.64	2.72	2.26

Asset Allocation

	Ending Market Value
POOL 12 CAWCD MED TRM	374,729,942



Net Asset Values over Time (\$MM)

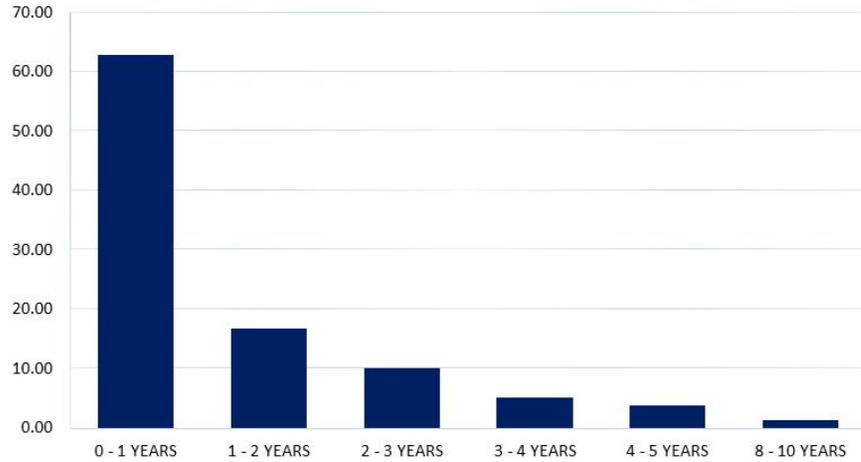


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 12 CAWCD MED TRM		
SOUTH STREET REPO	13,506,825	3.60
US TREASURY N/B	10,177,344	2.72
CROWN POINT CAP CO.	10,014,575	2.67
UNITED HEALTHCARE CO	10,000,000	2.67
TREASURY BILL	9,915,418	2.65
WI TREASURY SEC	7,569,332	2.02
GOVERNMENT NATIONAL MORTGAGE A	6,052,031	1.62
BANK OF AMERICA CORP	5,539,191	1.48
JP MORGAN CHASE BANK NA	5,350,313	1.43
WASTE MANAGEMENT INC	5,147,351	1.37



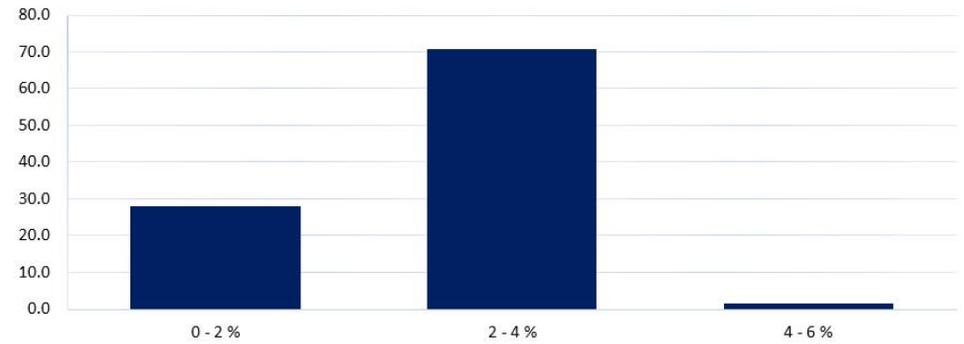
Duration Distribution



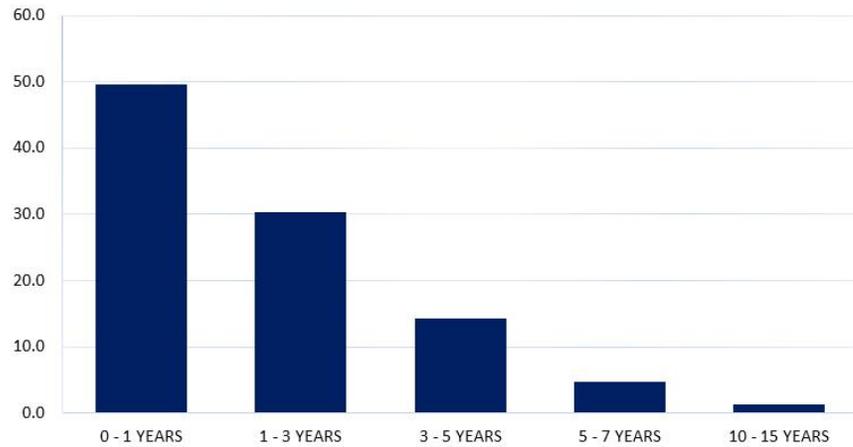
Portfolio Level Characteristics

POOL 12 CAWCD MED TRM	
Effective Maturity	1.81
Coupon	2.39
Effective Duration	1.04
Quality Rating (Moody's)	AA-2

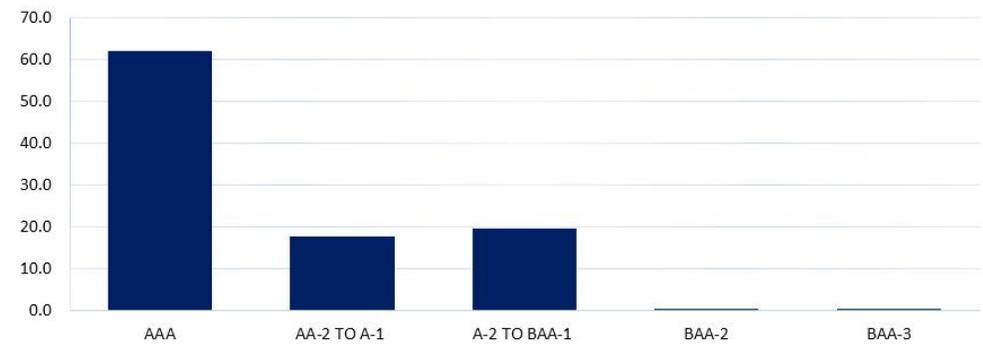
Coupon Distribution



Expected Maturity Distribution

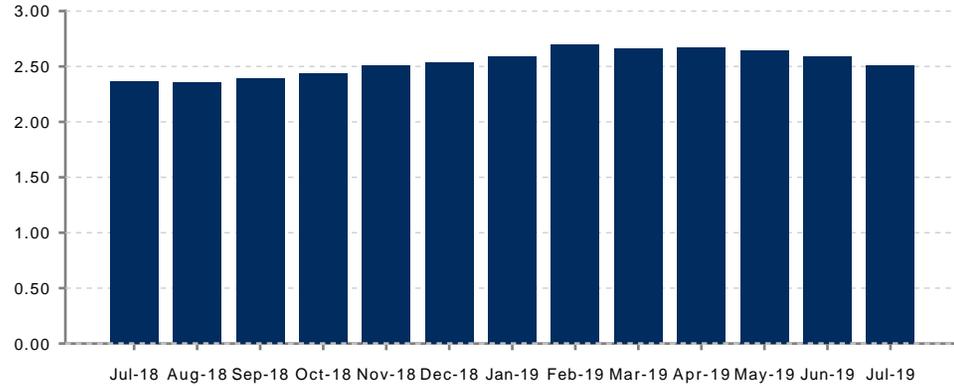


Rating Distribution





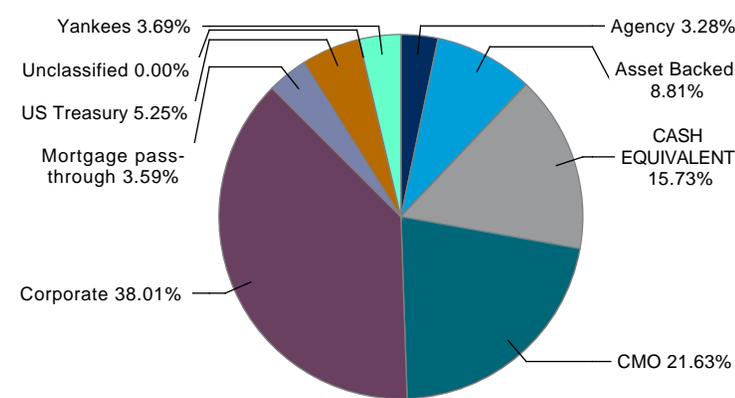
Net Yield



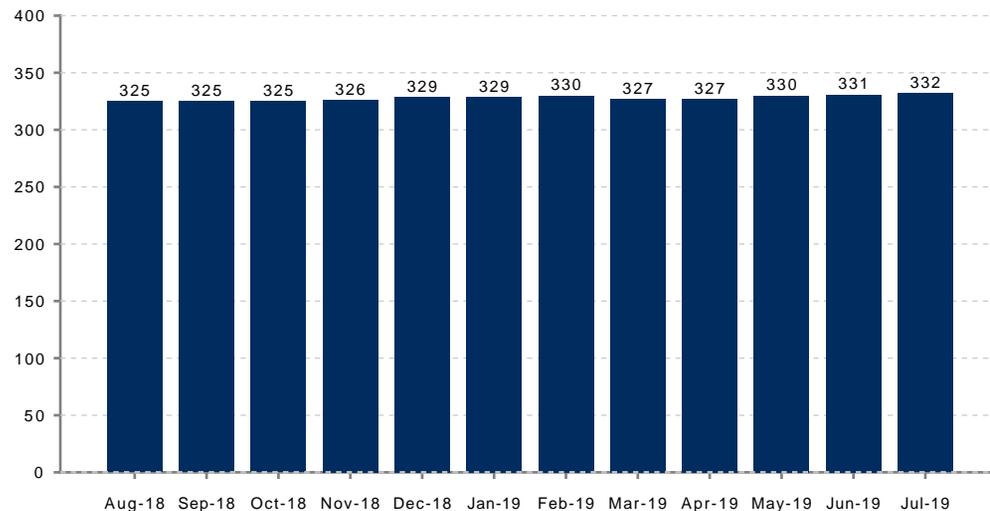
	Current Mth	Prior Mth	1 Year Ago
POOL 16 ECDHB	2.51	2.59	2.37

Asset Allocation

	Ending Market Value
POOL 16 ECDHB	331,791,553



Net Asset Values over Time (\$MM)

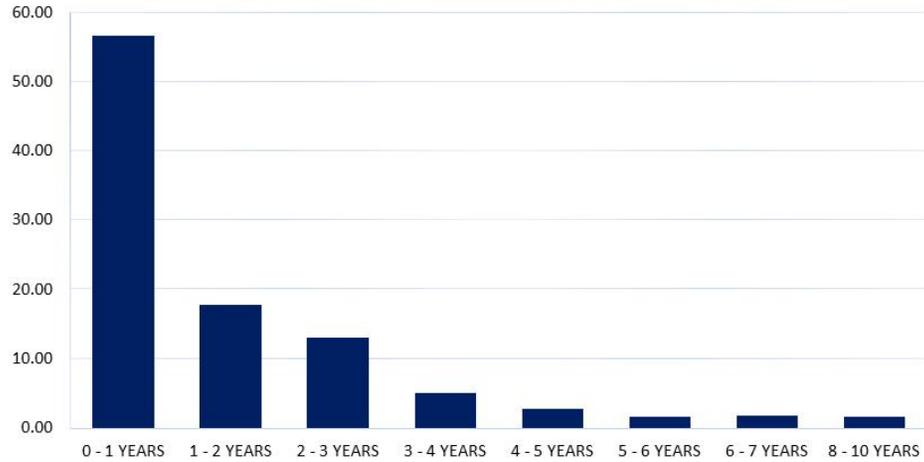


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 16 ECDHB		
SOUTH STREET REPO	9,506,537	2.87
FANNIE MAE	5,849,228	1.76
INSTITUTIONAL SECURED	5,500,000	1.66
BANK OF AMERICA CORP	5,433,442	1.64
JP MORGAN CHASE BANK NA	5,351,321	1.61
BANK OF NY MELLON CORP	5,243,149	1.58
BRISTOL MYERS SQUIBB CO	5,143,388	1.55
FANNIE MAE	5,095,370	1.54
US TREASURY N/B	5,090,041	1.53
US TREASURY N/B	5,088,672	1.53



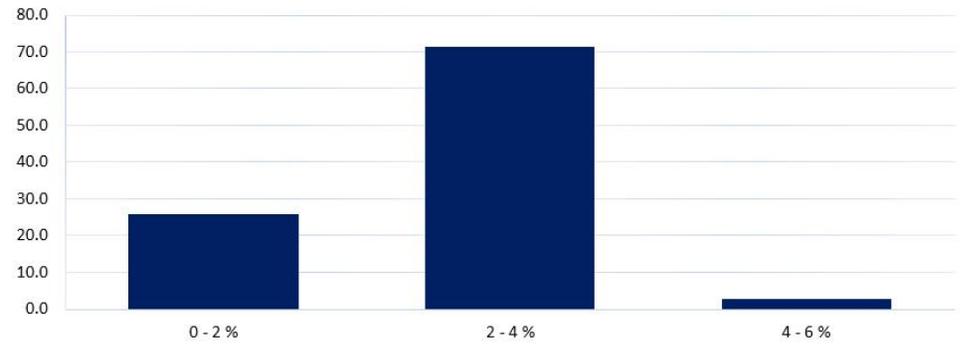
Duration Distribution



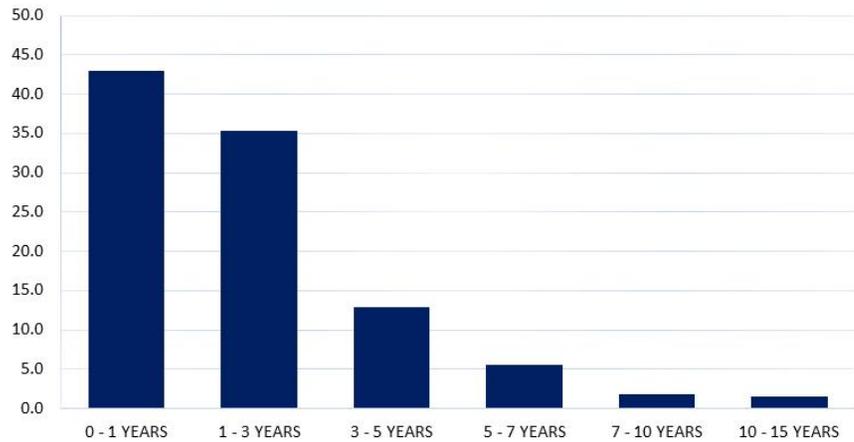
Portfolio Level Characteristics

	POOL 16 ECDHB
Effective Maturity	2.05
Coupon	2.51
Effective Duration	1.28
Quality Rating (Moody's)	AA-2

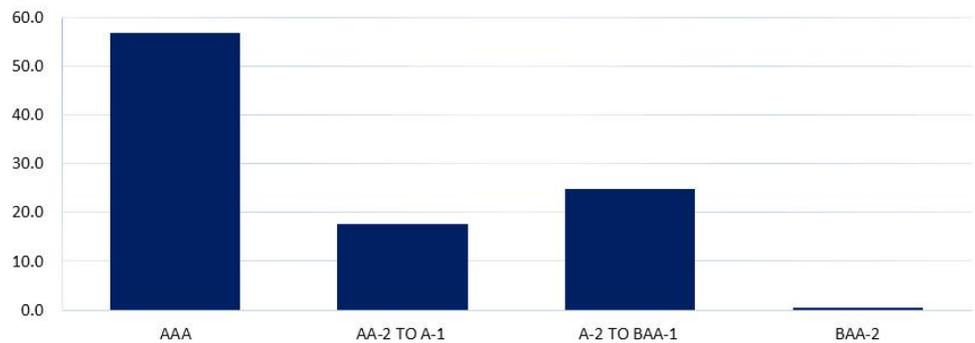
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



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

NET EARNINGS

FUND	DESCRIPTION	Current Month 07/31/19	Prior Month 06/30/19	Prior Year 07/31/18	Net Asset Value Per Share
5	LGIP	3,199,046	3,415,093	2,522,236	1.0000
7	LGIP - GOV (1)	3,112,407	3,310,504	2,016,164	1.0000
	TOTAL LGIP & LGIP-GOV	6,311,454	6,725,597	4,538,400	

YIELDS

<u>MONTHLY</u>		Current Month 07/31/19	Prior Month 06/30/19	Prior Year 7/31/18
5	LGIP (NET)	2.43%	2.46%	2.07%
	S&P LGIP Index	2.33%	2.36%	1.92%
7	LGIP - GOV (NET) (1)	2.34%	2.51%	1.83%
	Trailing 3-mo T-bill	2.24%	2.34%	1.92%

FISCAL YEAR TO DATE

5	LGIP (NET)	2.43%	2.35%	2.07%
	S&P LGIP Index	2.33%	2.22%	1.92%
7	LGIP - GOV (NET) (1)	2.34%	2.24%	1.83%
	Trailing 3-mo T-bill	2.24%	2.26%	1.92%

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
JULY 2019**

NET EARNINGS

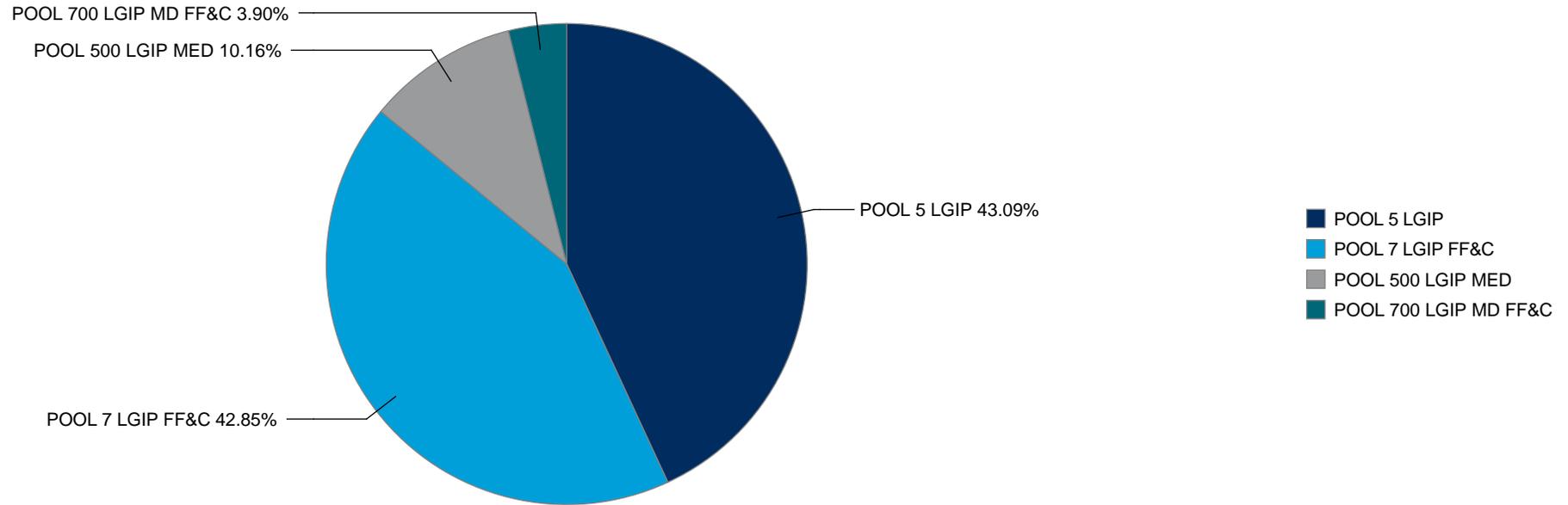
FUND	DESCRIPTION	Current Month 07/31/19	Prior Month 06/30/19	Prior Year 07/31/18	Net Asset Value Per Share
500	LGIP - MED TERM POOL	758,939	740,153	664,333	1.0321
700	LGIP - FF&C MED TERM POOL	255,087	251,142	173,650	1.0094
	TOTAL LGIP MEDIUM TERM POOLS	1,014,026	991,296	837,983	

YIELDS

<u>MONTHLY</u>		Current Month 07/31/19	Prior Month 06/30/19	Prior Year 7/31/18
500	LGIP - MED TERM (NET)	2.48%	2.52%	2.28%
	20% S&P LGIP Index /	2.11%	2.14%	2.62%
	80% Bloomberg Barclays 1-3 year US Agg			
700	LGIP - FF&C MED TERM (NET)	2.17%	2.21%	1.71%
	20% Trailing 3-mo T-bill /	1.96%	1.96%	2.46%
	80% Barclay 1-3 year UST			
<u>FISCAL YEAR TO DATE</u>				
500	LGIP - MED TERM (NET)	2.48%	2.42%	2.28%
	20% S&P LGIP Index /	2.11%	2.62%	2.62%
	80% Bloomberg Barclays 1-3 year US Agg			
700	LGIP - FF&C MED TERM (NET)	2.17%	2.13%	1.71%
	20% Trailing 3-mo T-bill /	1.96%	2.48%	2.46%
	80% Bloomberg Barclays 1-3 year UST			

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

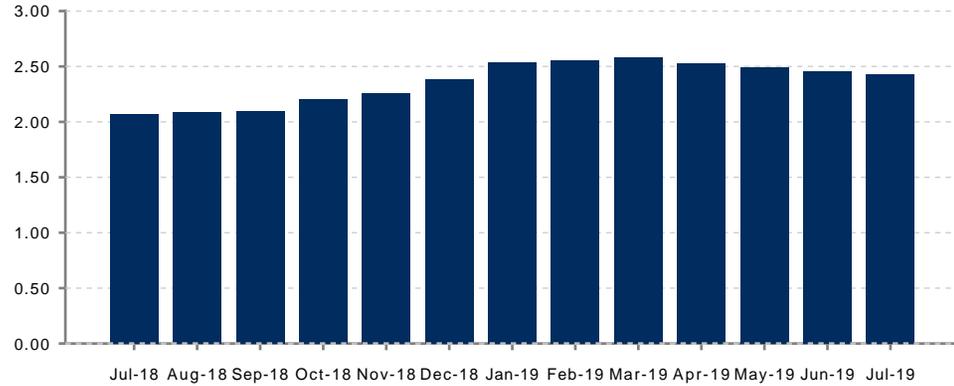
Manager Allocation



	Market Value	% of Portfolio
POOL 5 LGIP	1,528,117,921	43.1
POOL 7 LGIP FF&C	1,519,686,293	42.8
POOL 500 LGIP MED	360,298,988	10.2
POOL 700 LGIP MD FF&C	138,459,484	3.9
TOTAL LGIP	3,546,562,685	100.0



Net Yield

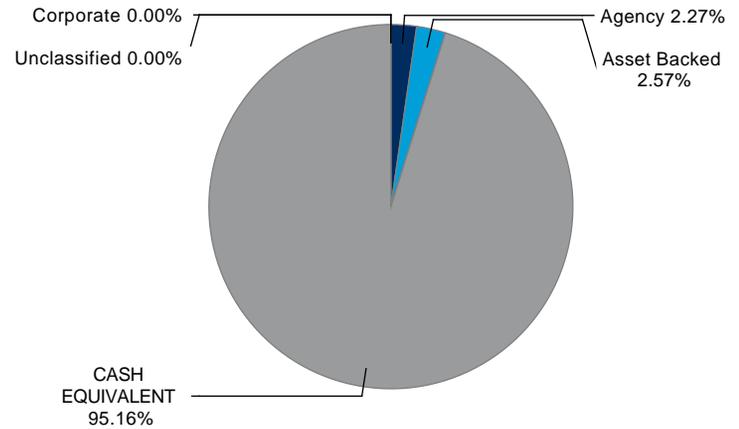


Current Mth Prior Mth 1 Year Ago

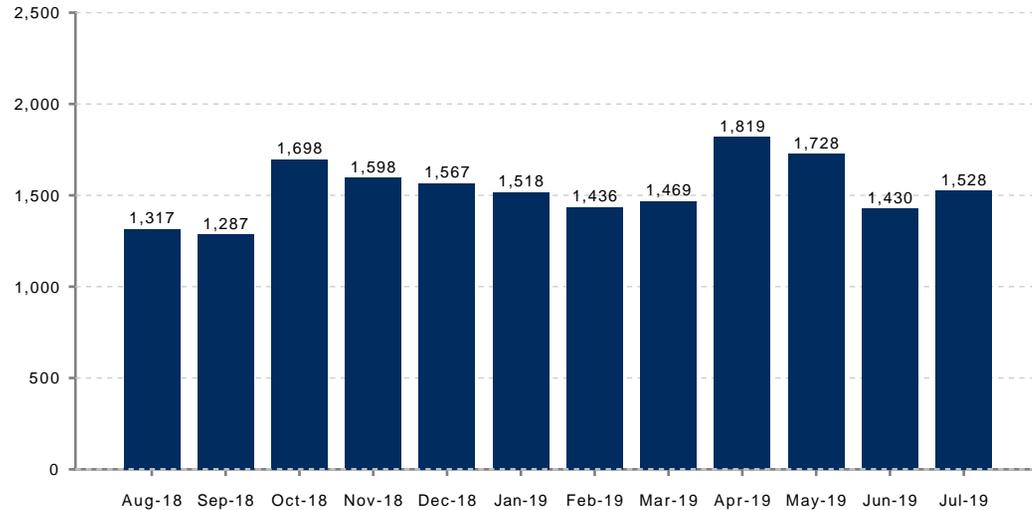
POOL 5 LGIP	2.43	2.46	2.07
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Asset Allocation

Ending Market Value	1,528,117,921
POOL 5 LGIP	1,528,117,921



Net Asset Values over Time (\$MM)

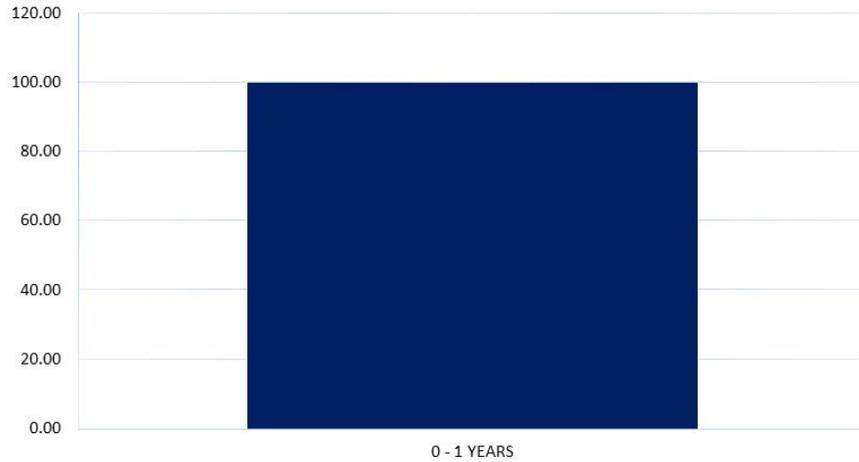


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 5 LGIP		
BANK OF AMERICA REPO	100,007,000	6.54
BMO TRIPARTY MTGE	50,003,444	3.27
RBC CAPITAL MARKETS REPO	50,003,403	3.27
TREASURY BILL	29,976,616	1.96
NORTHWESTERN UNIVERS	29,942,833	1.96
BANK OF MONTREAL-	25,040,167	1.64
GLENCOVE FDG DAC/LLC	25,003,296	1.64
MANHATTAN ASSET FDG.	24,998,333	1.64
INSTITUTIONAL SECURED	24,998,299	1.64
INSTITUTIONAL SECURED	24,990,583	1.64



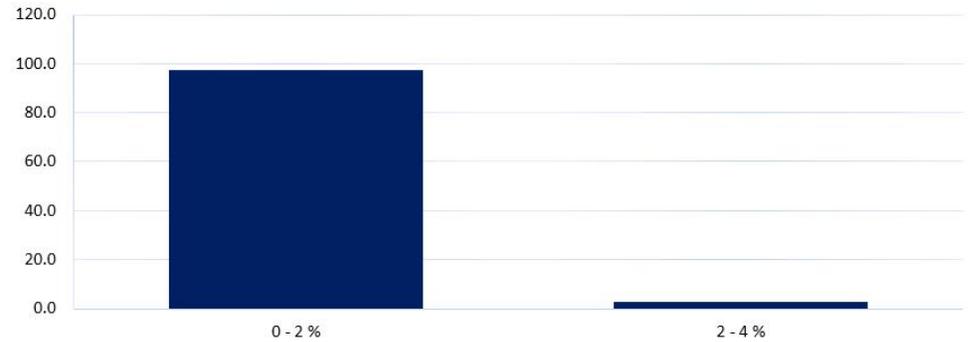
Duration Distribution



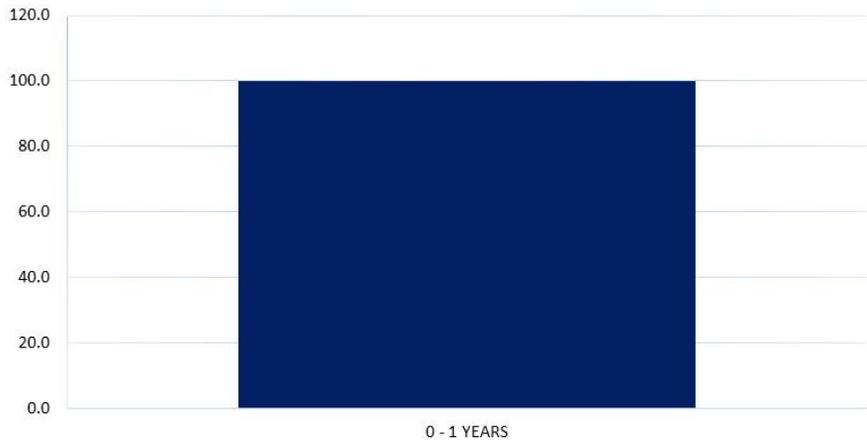
Portfolio Level Characteristics

	POOL 5 LGIP
Effective Maturity	0.11
Coupon	0.07
Effective Duration	0.10
Quality Rating (Moody's)	AAA

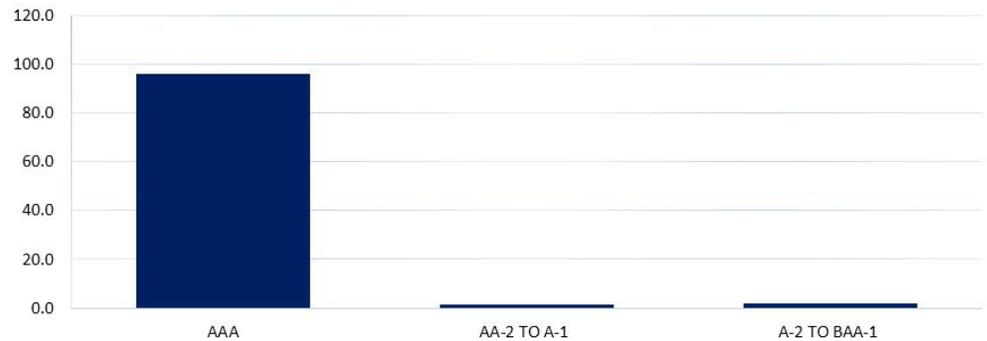
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



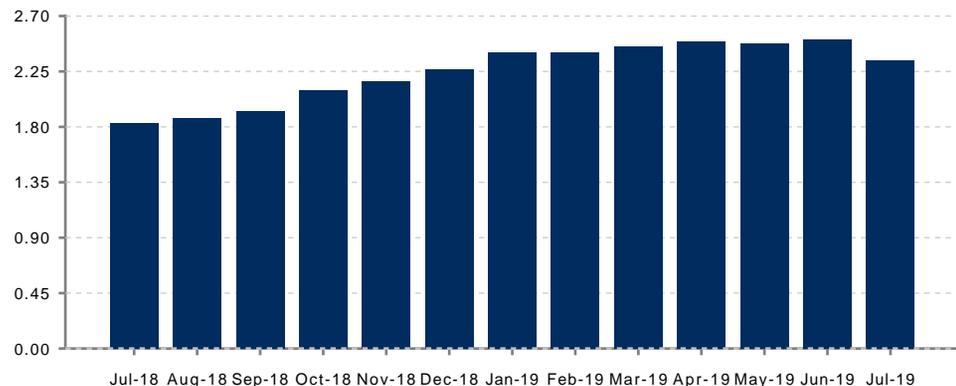
OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2019

POOL 7 LGIP FF&C



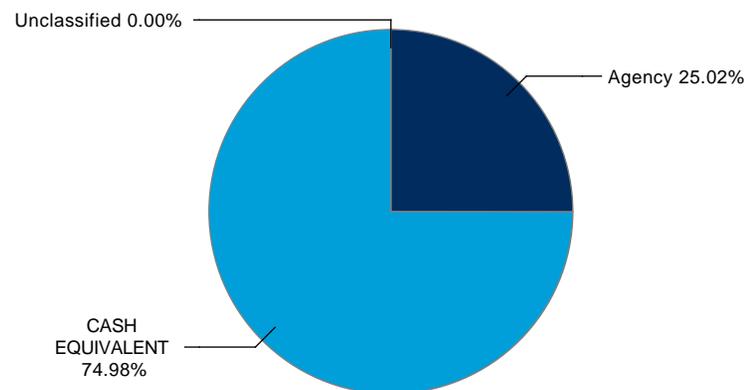
Net Yield



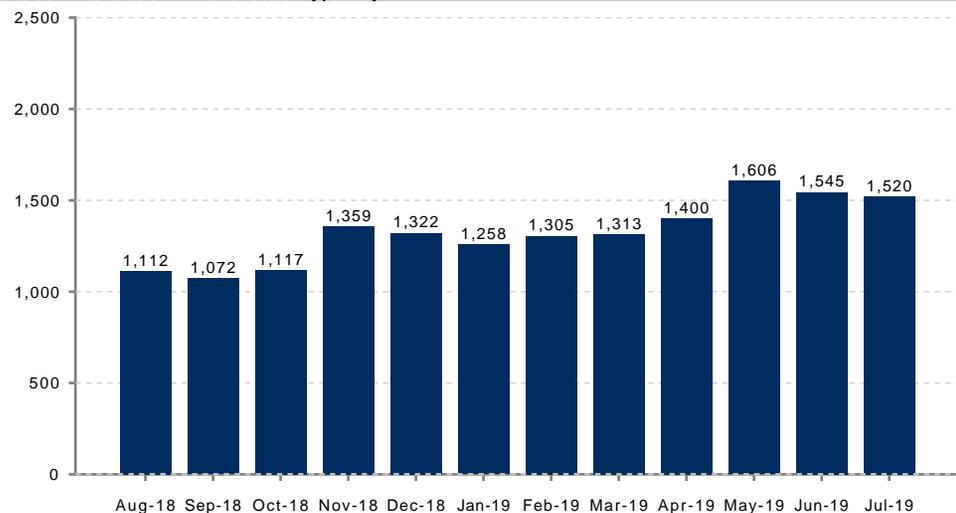
	Current Mth	Prior Mth	1 Year Ago
POOL 7 LGIP FF&C	2.34	2.51	1.83

Asset Allocation

	Ending Market Value
POOL 7 LGIP FF&C	1,519,686,293



Net Asset Values over Time (\$MM)

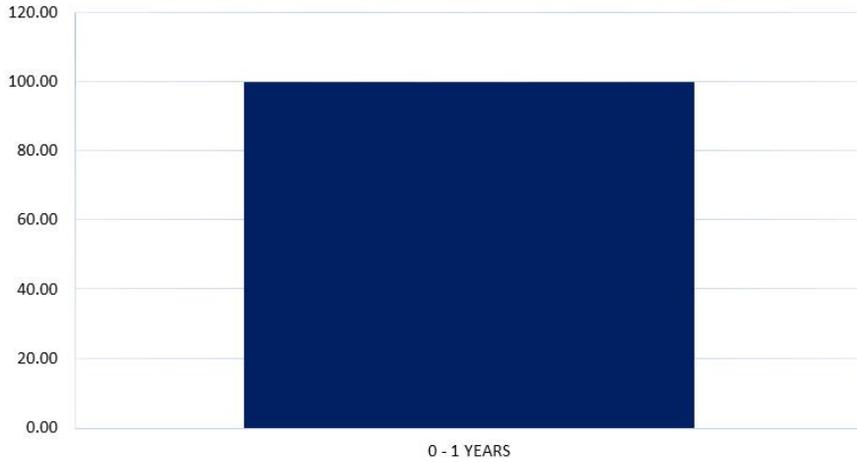


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 7 LGIP FF&C		
GUGGENHEIM SECURITIES REPO	200,013,889	13.16
WELLS FARGO REPO	110,014,056	7.24
CREDIT AGRICOLE REPO	82,753,161	5.45
TREASURY BILL	79,977,676	5.26
TREASURY BILL	79,759,064	5.25
AMHERST PIERPONT	75,145,000	4.94
TREASURY BILL	74,691,460	4.91
TREASURY BILL	69,795,888	4.59
TREASURY BILL	69,738,638	4.59
TREASURY BILL	59,935,738	3.94



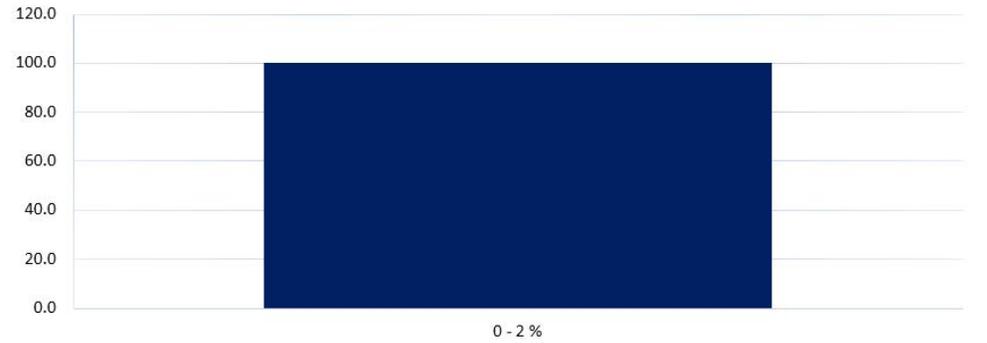
Duration Distribution



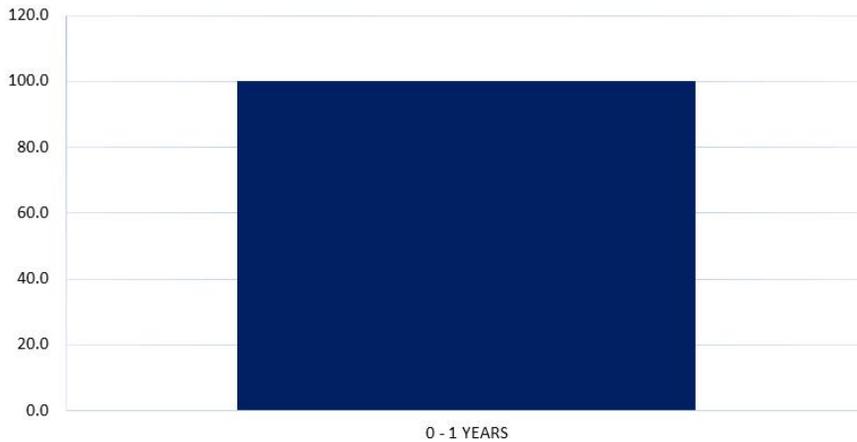
Portfolio Level Characteristics

	POOL 7 LGIP FF&C
Effective Maturity	0.14
Coupon	0.00
Effective Duration	0.10
Quality Rating (Moody's)	AAA

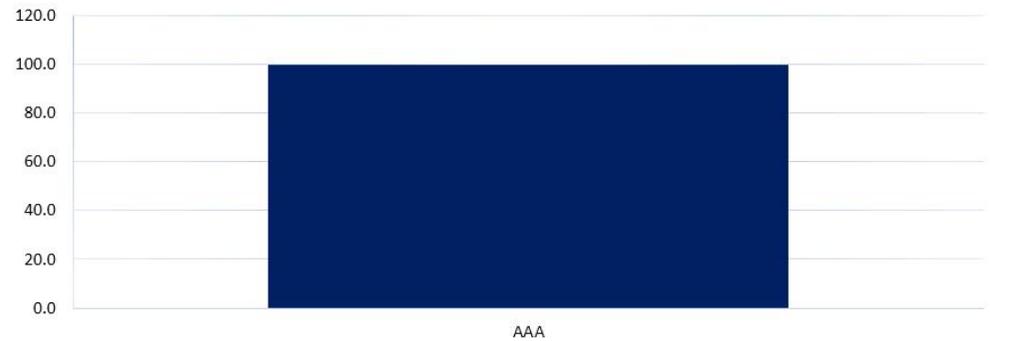
Coupon Distribution



Expected Maturity Distribution

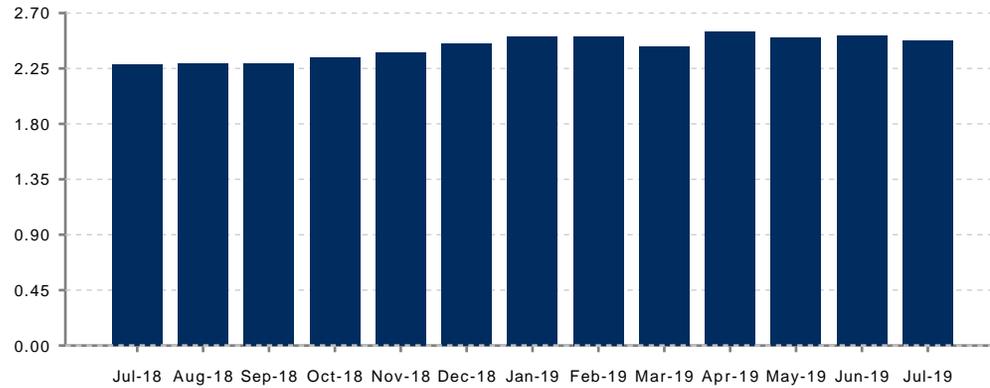


Rating Distribution





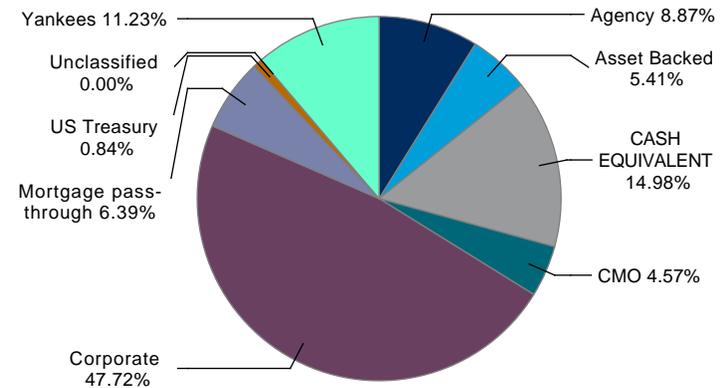
Net Yield



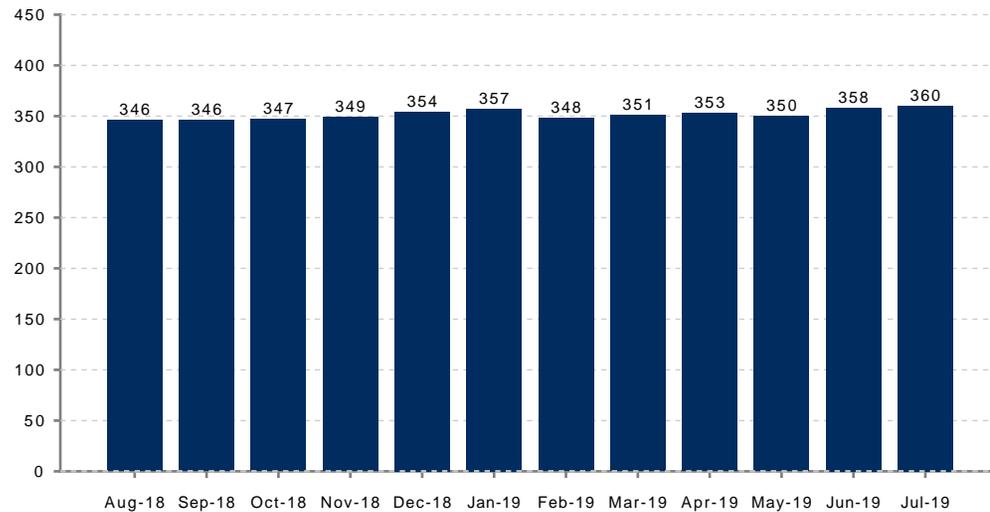
	Current Mth	Prior Mth	1 Year Ago
POOL 500 LGIP MED	2.48	2.52	2.28

Asset Allocation

	Ending Market Value
POOL 500 LGIP MED	360,298,988



Net Asset Values over Time (\$MM)

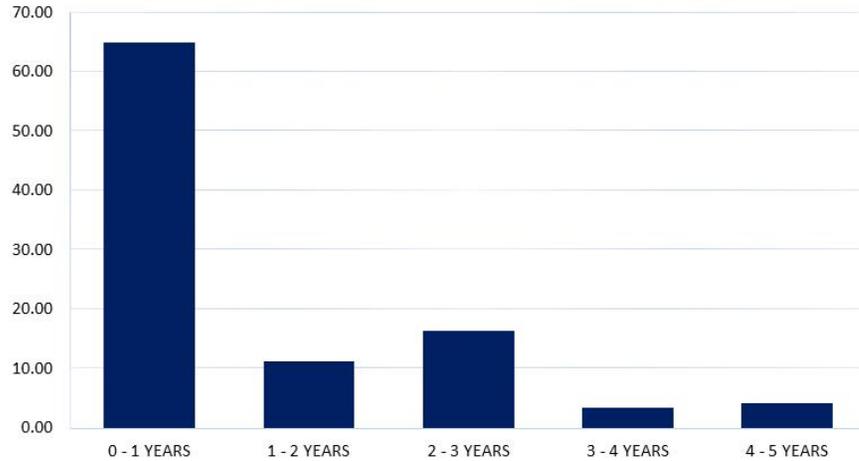


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 500 LGIP MED		
SOUTH STREET REPO	10,500,758	2.91
CANTOR FITZGERALD REPO	10,001,394	2.78
MICROSOFT CORP	8,051,412	2.23
APPLE INC	7,078,552	1.96
MANUF + TRADERS TRUST CO	6,998,665	1.94
BANK OF AMERICA CORP	5,880,652	1.63
MERCK + CO INC	5,547,281	1.54
TENN VALLEY AUTHORITY	5,044,289	1.40
APPLE INC	5,041,246	1.40
TOYOTA MOTOR CREDIT CORP	5,036,289	1.40



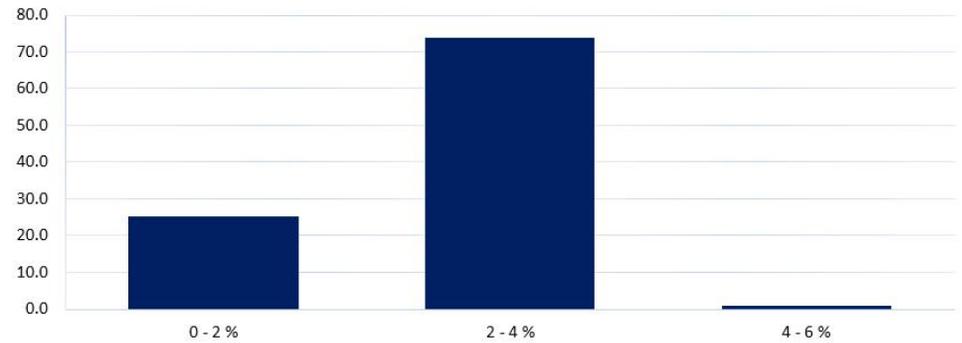
Duration Distribution



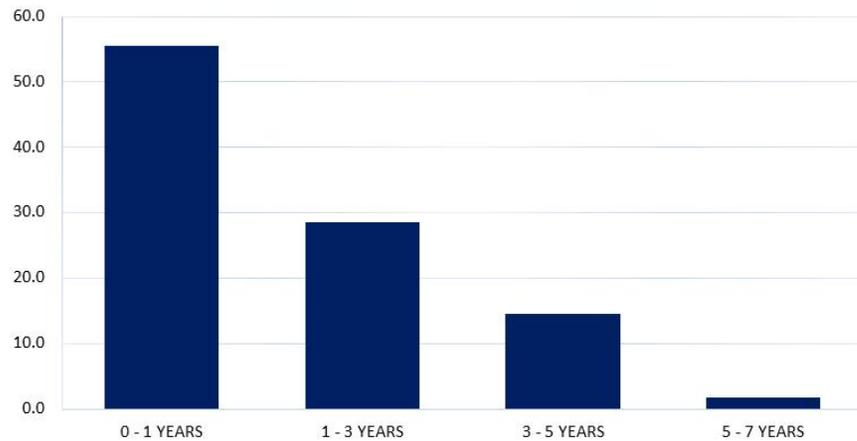
Portfolio Level Characteristics

	POOL 500 LGIP MED
Effective Maturity	1.54
Coupon	2.35
Effective Duration	1.07
Quality Rating (Moody's)	AA-3

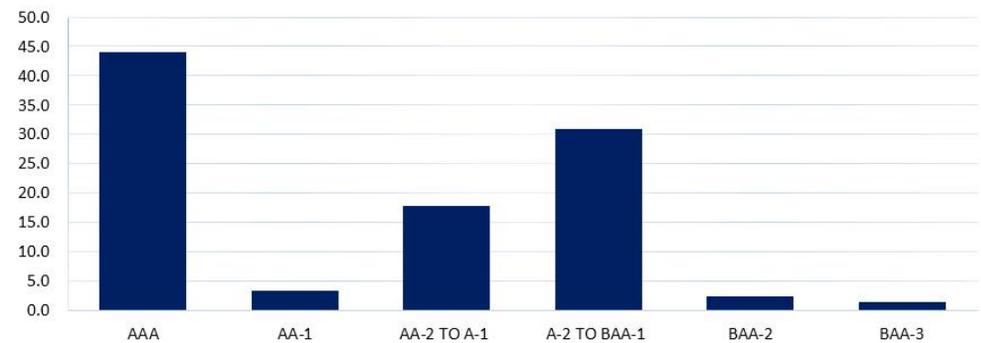
Coupon Distribution



Expected Maturity Distribution

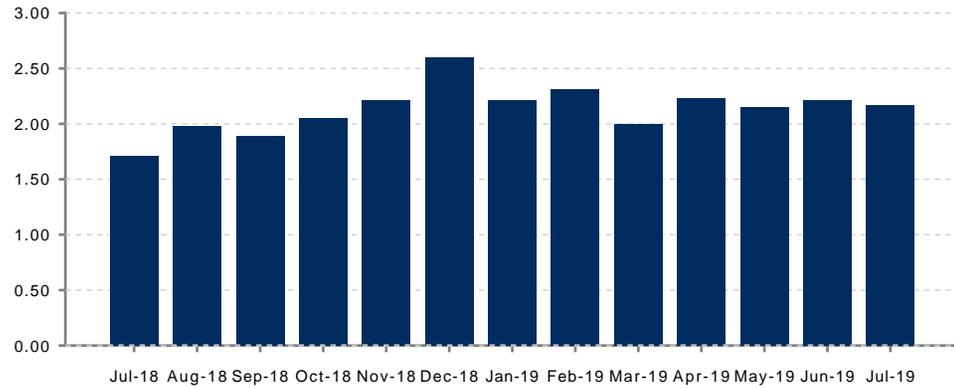


Rating Distribution





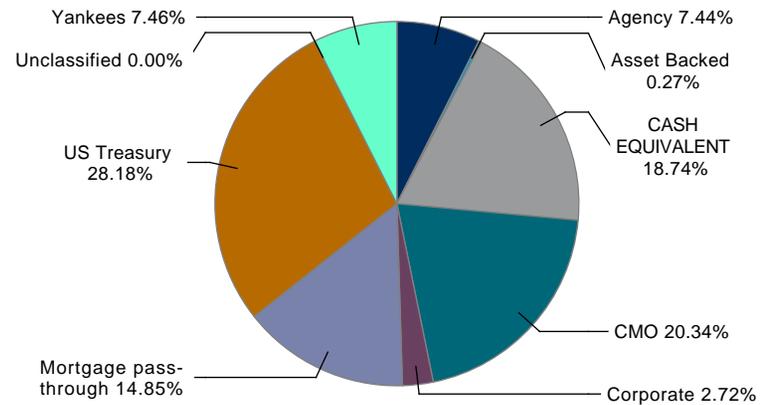
Net Yield



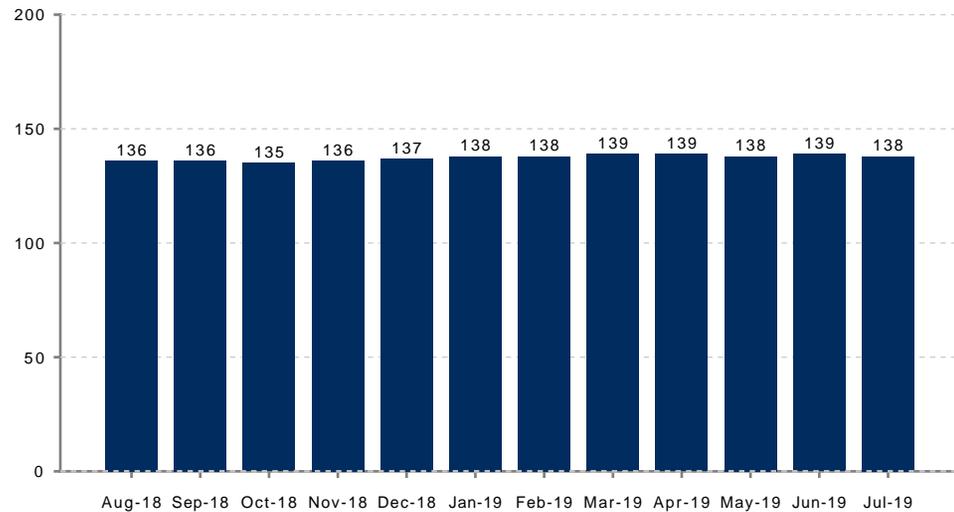
	Current Mth	Prior Mth	1 Year Ago
POOL 700 LGIP MD FF&C	2.17	2.21	1.71

Asset Allocation

	Ending Market Value
POOL 700 LGIP MD FF&C	138,459,484



Net Asset Values over Time (\$MM)

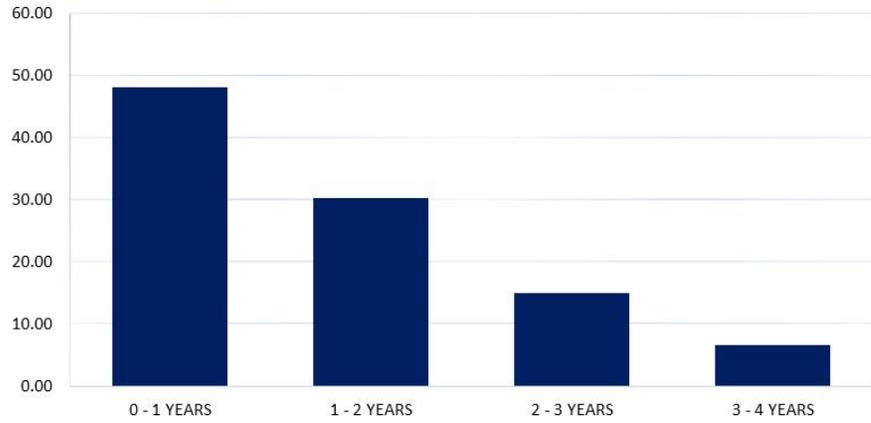


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 700 LGIP MD FF&C		
SOUTH STREET REPO	18,001,275	13.00
GOVERNMENT NATIONAL MORTGAGE A	6,807,807	4.92
AID JORDAN	6,353,524	4.59
OVERSEAS PRIVATE INV COR	5,210,207	3.76
US TREASURY N/B	5,009,774	3.62
US TREASURY N/B	5,001,945	3.61
US TREASURY N/B	4,994,375	3.61
US TREASURY N/B	4,992,833	3.61
US TREASURY N/B	4,023,696	2.91
GNMA II POOL MA0213	3,768,758	2.72



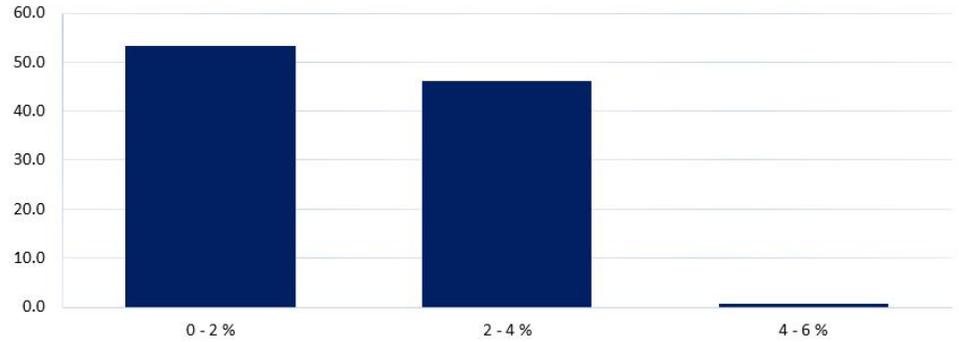
Duration Distribution



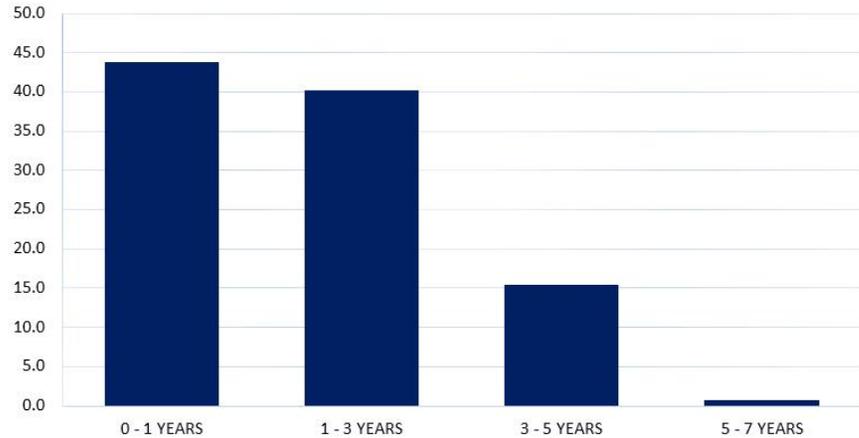
Portfolio Level Characteristics

	POOL 700 LGIP MD FF&C
Effective Maturity	1.64
Coupon	1.95
Effective Duration	1.15
Quality Rating (Moody's)	AAA

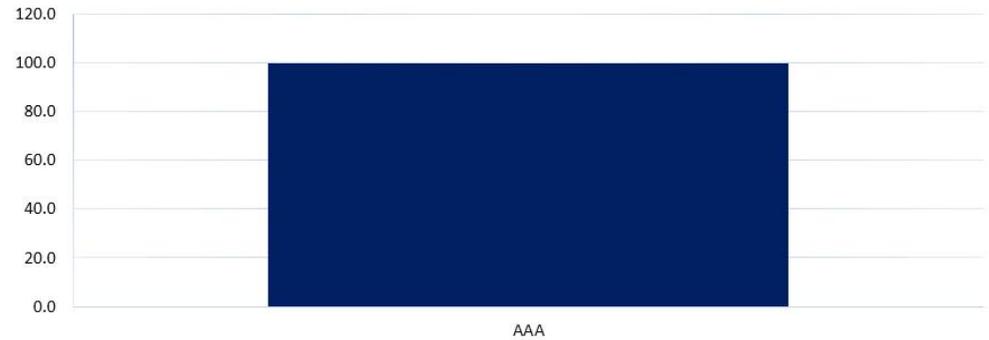
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



**EARNINGS DISTRIBUTED
 ENDOWMENT FUNDS
 JULY 2019**

Distributed in Current Month

Recipient	JULY 2019	Fiscal YTD 19/20	Fiscal YTD 18/19	Fiscal YTD Change
101 A & M Colleges	\$73,227	\$73,227	\$70,405	\$2,822
102 State Hospital	51,319	51,319	47,085	4,234
103 Leg., Exec., & Jud.	60,756	60,756	58,321	2,435
104 Military Institute	4,049	4,049	3,868	181
105 Miners Hospital	170,411	170,411	158,118	12,293
107 Normal School ASU/NAU	31,311	31,311	28,855	2,456
108 Penitentiaries	113,987	113,987	106,084	7,903
109 Permanent Common School	28,518,181	28,518,181	26,770,470	1,747,712
110 School for Deaf & Blind	41,371	41,371	38,606	2,765
111 School of Mines	83,229	83,229	79,866	3,363
112 State Charitable-Pioneers Home	412,187	412,187	394,116	18,071
112 State Charitable-Corrections	206,093	206,093	197,058	9,035
112 State Charitable-Youth Treatment	206,093	206,093	197,058	9,035
113 University Fund	151,327	151,327	143,386	7,941
114 U of A Land - 1881	541,028	541,028	492,037	48,991
Total	\$30,664,569	\$30,664,569	\$28,785,331	\$1,879,237

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		
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	53,962,505	-
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	4,356,585

NET REALIZED CAPITAL GAINS / LOSSES - ENDOWMENT FUNDS

Endowment Fund	July 2019 NET GAIN(LOSS)	July 2018 NET GAIN(LOSS)
Fixed Income Pool	(\$504,472)	(\$412,297)
500 Large-Cap Fund	3,012,667	(\$411)
400 Mid-Cap Fund	2,437,123	\$1,517,181
600 Small-Cap Fund	2,998,587	\$867,506
Totals	\$7,943,904	\$1,971,979

Endowment Fund	2019/2020 FISCAL YEAR TO DATE GAINS(LOSSES)	2018/2019 FISCAL YEAR TO DATE GAINS(LOSSES)
Fixed Income Pool	(\$504,472)	(\$412,297)
500 Large-Cap Fund	3,012,667	(411)
400 Mid-Cap Fund	2,437,123	1,517,181
600 Small-Cap Fund	2,998,587	867,506
Totals	\$7,943,904	\$1,971,979

**ENDOWMENT FUNDS FIXED-INCOME POOLS
PURCHASES & SALES
JULY 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	ANGELSEA	2.43	08/01/2019	NA	\$10,000,000	\$9,993,250	2.43%	P-1
205	ANGELSEA	2.45	08/01/2019	NA	10,000,000	9,986,389	2.50%	P-1
205	ANGELSEA	2.25	10/01/2019	NA	10,000,000	9,961,875	2.26%	P-1
205	CONCORD	2.55	07/09/2019	NA	3,650,000	3,648,966	2.55%	P-1
205	CONCORD	2.50	07/29/2019	NA	10,000,000	9,993,056	2.50%	P-1
205	CONCORD	2.43	08/02/2019	NA	10,000,000	9,997,975	2.43%	P-1
205	FANNIE MAE	6.63	11/15/2030	11.30	5,000,000	7,122,050	2.34%	Aaa
205	GOTHAM	2.28	09/03/2019	NA	10,000,000	9,978,467	2.29%	P-1
205	GINNIE MAE	4.85	06/20/2034	2.51	6,317,173	6,636,980	2.74%	Aaa
205	INSTITUTIONAL SECURED	2.52	07/18/2019	NA	5,000,000	4,996,850	2.52%	P-1
205	INSTITUTIONAL SECURED	2.54	08/01/2019	NA	5,000,000	4,989,769	2.55%	P-1
205	INSTITUTIONAL SECURED	2.53	08/01/2019	NA	10,000,000	9,992,972	2.53%	P-1
205	NORTHWESTERN UNIV	2.21	10/21/2019	NA	8,000,000	7,956,291	2.22%	P-1
205	NORTHWESTERN UNIV	2.36	07/23/2019	NA	10,000,000	9,997,378	2.36%	P-1
205	UNITED HEALTHCARE	2.49	08/01/2019	NA	10,000,000	9,991,008	2.49%	A3
205	TREASURY	2.63	02/28/2023	NA	5,000,000	5,137,109	1.84%	Aaa
205	TREASURY	2.63	02/15/2029	NA	5,000,000	5,267,383	2.01%	Aaa
205	TREASURY	4.50	02/15/2036	NA	5,000,000	6,592,383	2.19%	Aaa
205	TREASURY	2.38	05/15/2029	NA	5,000,000	5,138,672	2.06%	Aaa
205	TREASURY	1.63	06/30/2021	NA	5,000,000	4,979,492	1.84%	Aaa
205	TREASURY	1.63	08/15/2029	NA	5,000,000	4,988,286	2.03%	Aaa
123	ANGELSEA	2.28	09/23/2019	NA	10,000,000	9,960,100	2.29%	P-1
123	INSTITUTIONAL SECURED	2.54	08/01/2019	NA	4,500,000	4,490,793	2.55%	P-1
123	INSTITUTIONAL SECURED	2.52	07/18/2019	NA	5,000,000	4,996,850	2.52%	P-1
123	INSTITUTIONAL SECURED	2.53	08/01/2019	NA	10,000,000	9,992,972	2.53%	P-1
123	VICTORY	2.42	07/30/2019	NA	2,500,000	2,498,656	2.42%	P-1
TOTAL ENDOWMENT FUNDS PURCHASES					\$184,967,173	\$189,285,971		

II. Endowment Funds Sales

<u>POOL</u>	<u>SECURITY DESCRIPTION</u>	<u>RATE</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	2.40	07/25/2019	NA	\$5,000,000	\$4,998,380	\$410	Aaa
TOTAL ENDOWMENT FUNDS SALES					\$5,000,000	\$4,998,380	\$410	

(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
 JULY 2019**

I. Equity Fund Purchases

	<u>SHARES</u>	<u>PURCHASE COST</u>	<u>COMMISSIONS</u>
400 Mid-Cap Fund	131,543	\$8,340,493	\$662
500 Large-Cap Fund	76,880	8,724,511	577
600 Small-Cap Fund	296,215	7,789,173	2,222
TOTAL EQUITY PURCHASES	504,638	\$24,854,177	\$3,461

II. Equity Funds Sales

	<u>SHARES</u>	<u>SALES AMOUNT</u>	<u>COMMISSIONS</u>
400 Mid-Cap Fund	89,193	\$9,005,970	\$669
500 Large-Cap Fund	32,111	9,009,172	241
600 Small-Cap Fund	43,343	3,685,302	0
TOTAL EQUITY SALES	164,647	\$21,700,444	\$910

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

State Treasurer's Report
August 27, 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>	367	\$2,585	\$8,208	\$5,624	
<i>Shares in Fixed Income Pools</i>	3,667	2,625	5,221	2,595	
Total	4,034	5,210	13,429	8,219	2.578
102 State Hospital					
<i>Shares in Equity Pools</i>	293	2,543	6,547	4,004	
<i>Shares in Fixed Income Pools</i>	3,015	2,504	4,292	1,788	
Total	3,308	5,047	10,839	5,792	2.147
103 Leg., Exec, & Jud					
<i>Shares in Equity Pools</i>	300	2,268	6,708	4,440	
<i>Shares in Fixed Income Pools</i>	3,220	2,307	4,584	2,277	
Total	3,520	4,575	11,292	6,717	2.468
104 Military Institute					
<i>Shares in Equity Pools</i>	20	159	452	294	
<i>Shares in Fixed Income Pools</i>	222	157	317	160	
Total	243	315	769	454	2.440
105 Miners Hospital					
<i>Shares in Equity Pools</i>	913	8,198	20,399	12,201	
<i>Shares in Fixed Income Pools</i>	9,175	8,036	13,063	5,027	
Total	10,088	16,234	33,461	17,227	2.061
107 Normal School ASU/NAU					
<i>Shares in Equity Pools</i>	177	1,534	3,947	2,413	
<i>Shares in Fixed Income Pools</i>	1,824	1,465	2,597	1,132	
Total	2,001	2,998	6,544	3,545	2.183
108 Penitentiaries					
<i>Shares in Equity Pools</i>	595	5,039	13,283	8,244	
<i>Shares in Fixed Income Pools</i>	6,081	5,008	8,658	3,650	
Total	6,676	10,047	21,942	11,894	2.184

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

State Treasurer's Report
 August 27, 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>	154,594	1,262,868	3,453,697	2,190,829	
<i>Shares in Fixed Income Pools</i>	1,555,933	1,275,431	2,215,273	939,841	
Total	1,710,526	2,538,299	5,668,970	3,130,671	2.233
110 School for Deaf & Blind					
<i>Shares in Equity Pools</i>	215	1,784	4,798	3,014	
<i>Shares in Fixed Income Pools</i>	2,425	1,906	3,453	1,546	
Total	2,640	3,690	8,250	4,560	2.236
111 School of Mines					
<i>Shares in Equity Pools</i>	417	3,127	9,308	6,181	
<i>Shares in Fixed Income Pools</i>	4,284	3,181	6,100	2,919	
Total	4,701	6,309	15,408	9,099	2.442
112 State Charitable					
<i>Shares in Equity Pools</i>	4,417	34,584	98,674	64,090	
<i>Shares in Fixed Income Pools</i>	42,895	34,575	61,072	26,497	
Total	47,312	69,159	159,746	90,587	2.310
113 University Fund					
<i>Shares in Equity Pools</i>	939	9,878	20,972	11,095	
<i>Shares in Fixed Income Pools</i>	9,690	8,564	13,796	5,232	
Total	10,629	18,442	34,768	16,327	1.885
114 U Of A Land - 1881					
<i>Shares in Equity Pools</i>	2,907	28,306	64,940	36,633	
<i>Shares in Fixed Income Pools</i>	29,887	25,808	42,553	16,745	
Total	32,794	54,114	107,492	53,378	1.986
TOTALS - ALL FUNDS					
<i>Shares in Equity Pools</i>	166,153	1,362,871	3,711,933	2,349,063	
<i>Shares in Fixed Income Pools</i>	1,672,317	1,371,568	2,380,977	1,009,409	
Grand Total	\$1,838,470	\$2,734,438	\$6,092,910	\$3,358,472	
PRIOR YEAR:					
JULY 2018 BALANCES	\$1,913,616	\$2,832,572	\$6,021,576	\$3,189,004	

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

State Treasurer's Report
August 27, 2019
Page 40

ASSET ALLOCATION PERCENTAGE

	SHARES OUTSTANDING	BOOK VALUE	MARKET VALUE	JULY 2018 MARKET VALUE
<i>Shares in Equity Pools</i>	9.04%	49.84%	60.92%	61.48%
<i>Shares in Fixed Income Pools</i>	90.96%	50.16%	39.08%	38.52%
	-----	-----	-----	-----
Total	100.00%	100.00%	100.00%	100.00%
	=====	=====	=====	=====



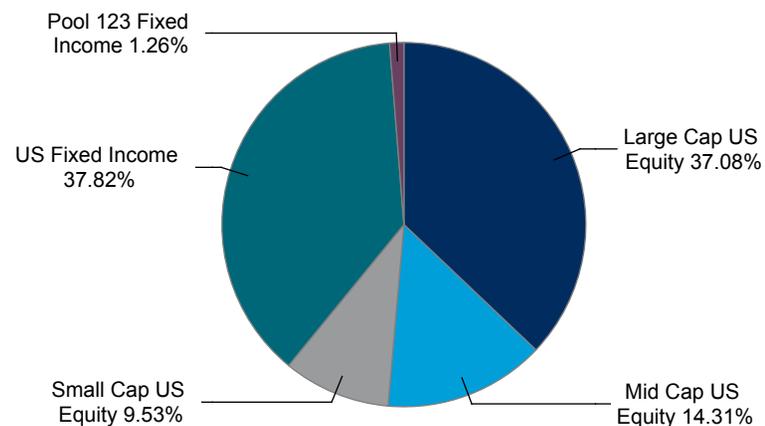
Performance



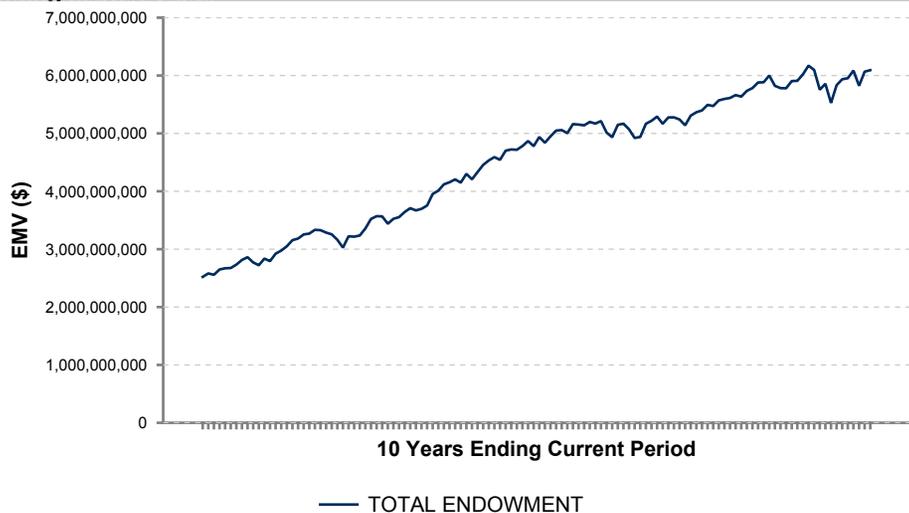
	1 Mth	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Incept Date
TOTAL ENDOWMENT RETURN	0.87	13.02	4.77	8.12	7.45	9.24	6.51	07/99
TOTAL ENDOWMENT BENCHMARK	0.91	13.72	5.32	8.16	7.64	9.58	6.69	07/99
	-0.05	-0.70	-0.56	-0.04	-0.19	-0.34	-0.19	

Asset Allocation

	Ending Market Value
TOTAL ENDOWMENT RETURN	6,092,910,315

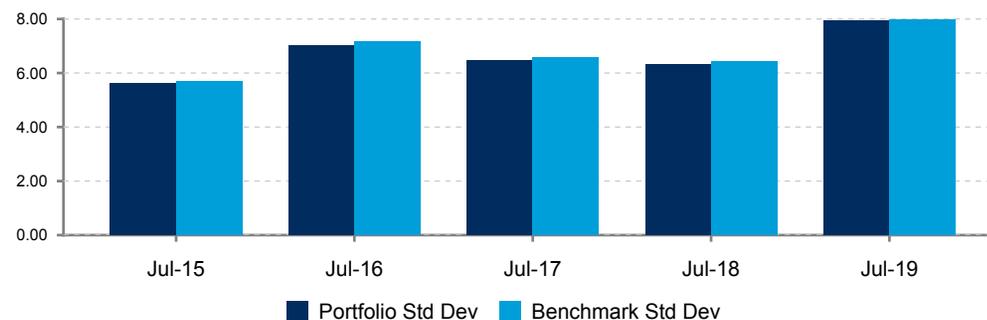


Ending Market Value



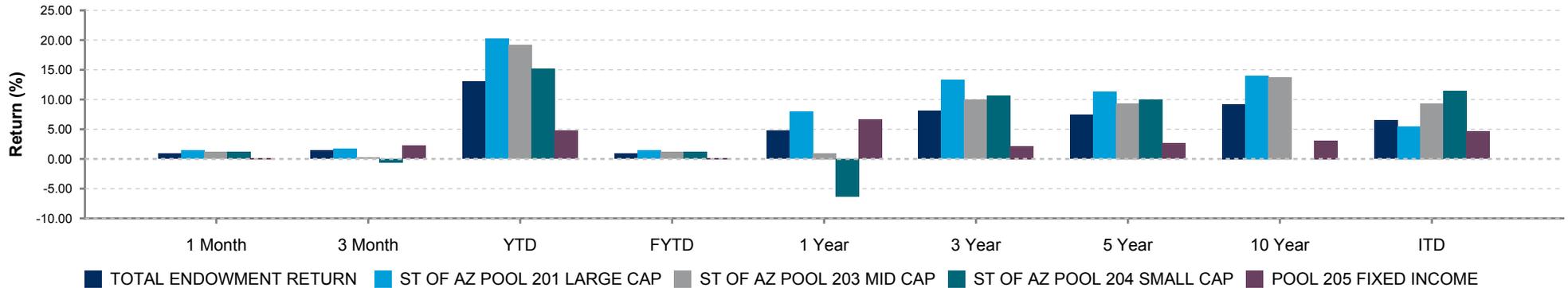
3 Year Risk Statistics

	Return	Portfolio Std Dev	Benchmark Std Dev	Sharpe Ratio	Beta	Tracking Error	Information Ratio
TOTAL ENDOWMENT RETURN	8.12	7.92	7.97	0.84	0.99	0.40	-0.10





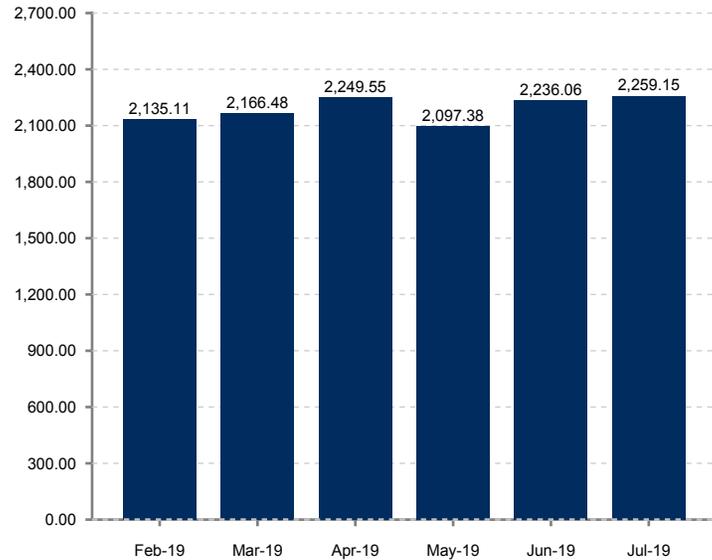
Return Comparison



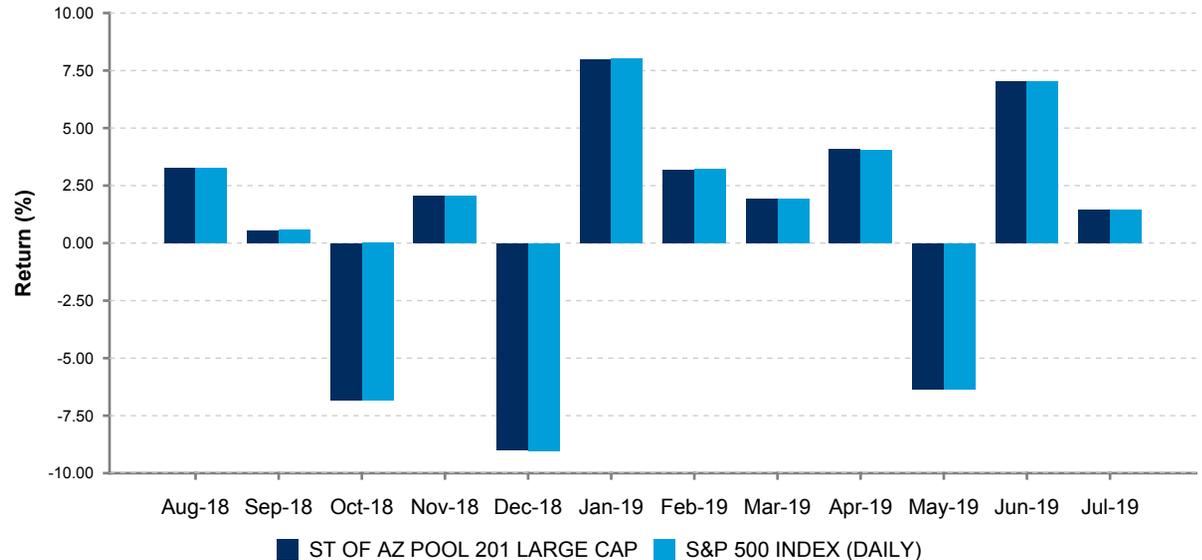
	Market Value	Actual Weight	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	10 Year	ITD	Inc Date
TOTAL ENDOWMENT RETURN	6,092,910,315	100.00	0.87	1.44	13.02	0.87	4.77	8.12	7.45	9.24	6.51	Jul-01-99
TOTAL ENDOWMENT BENCHMARK			0.91	1.84	13.72	0.91	5.32	8.16	7.64	9.58	6.69	Jul-01-99
ST OF AZ POOL 201 LARGE CAP	2,259,150,737	37.08	-0.05	-0.40	-0.70	-0.05	-0.56	-0.04	-0.19	-0.34	-0.19	Jul-01-99
S&P 500 INDEX (DAILY)			1.44	1.69	20.24	1.44	7.99	13.36	11.34	14.03	5.95	Jul-01-99
ST OF AZ POOL 203 MID CAP	872,147,730	14.31	0.01	0.01	0.01	0.01	0.00	-0.04	-0.06	-0.04	-0.47	Aug-01-01
S&P 400 MIDCAP INDEX (DAILY)			1.19	0.24	19.38	1.19	0.79	9.79	9.23	13.82	9.31	Aug-01-01
ST OF AZ POOL 204 SMALL CAP	580,635,006	9.53	-0.01	0.02	-0.20	-0.01	0.17	0.13	0.11	-0.05	0.01	Mar-01-11
S&P SM 600 TR			1.15	-0.63	15.18	1.15	-6.34	10.62	9.94		11.45	Mar-01-11
POOL 205 FIXED INCOME	2,304,329,859	37.82	0.01	0.19	0.20	0.01	0.41	0.08	0.05		0.05	Jul-01-99
FTSE BIG (DAILY)			0.14	2.22	4.73	0.14	6.61	2.15	2.65	3.08	4.65	Jul-01-99
POOL 123 FIXED INCOME	76,646,983	1.26	-0.13	-1.11	-1.70	-0.13	-1.56	-0.05	-0.41	-0.64	-0.33	Jun-01-16
ASTO-POOL 5 BENCHMARK			0.27	3.33	6.43	0.27	8.17	2.20	3.06	3.72	4.98	Jul-01-99
			0.22	0.65	1.54	0.22	2.67	1.68			1.61	Jun-01-16
			0.20	0.62	1.47	0.20	2.41	1.52			1.46	Jun-01-16
			0.01	0.04	0.06	0.01	0.26	0.17			0.15	



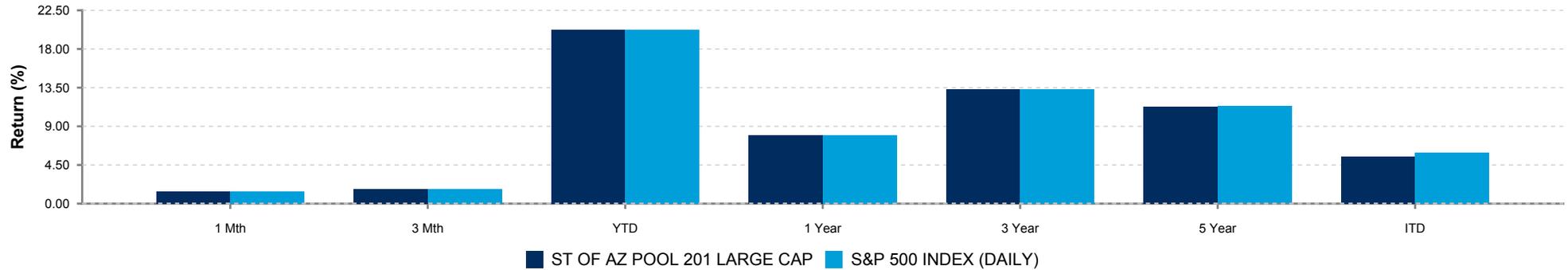
Net Asset Values over Time (\$MM)



Monthly Returns



Rates of Return

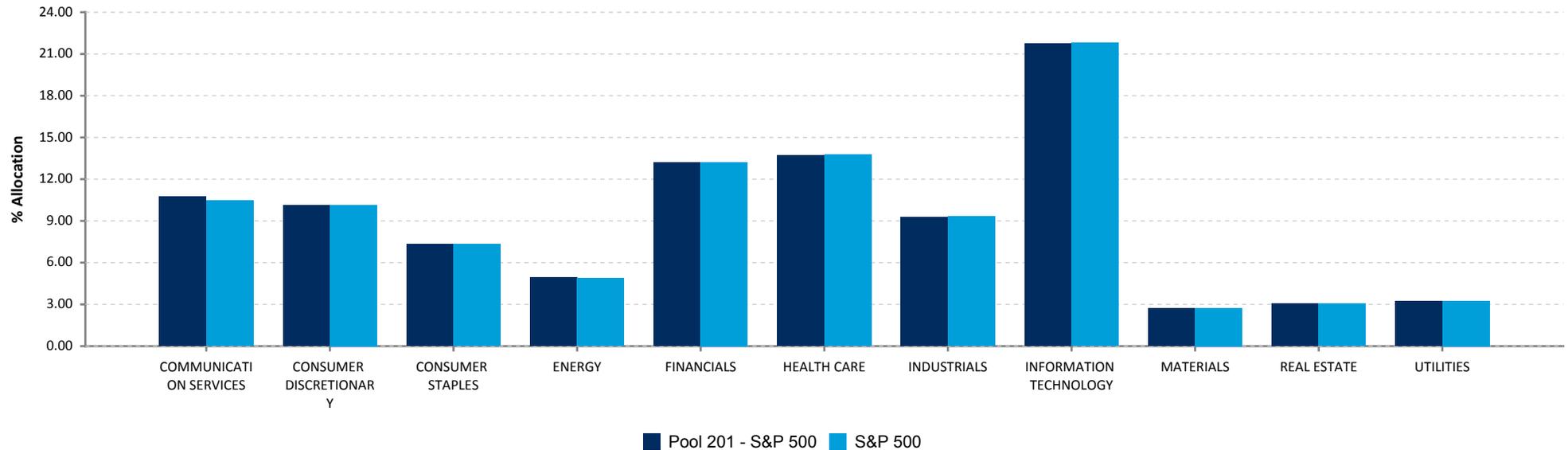


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2017	Jul 31 2018	Jul 31 2019
ST OF AZ POOL 201 LARGE CAP	1.44	1.69	20.25	7.99	13.32	11.27	5.48	16.02	16.14	7.99
S&P 500 INDEX (DAILY)	1.44	1.69	20.24	7.99	13.36	11.34	5.95	16.04	16.24	7.99
	0.01	0.01	0.01	0.00	-0.04	-0.06	-0.47	-0.02	-0.10	0.00

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2019

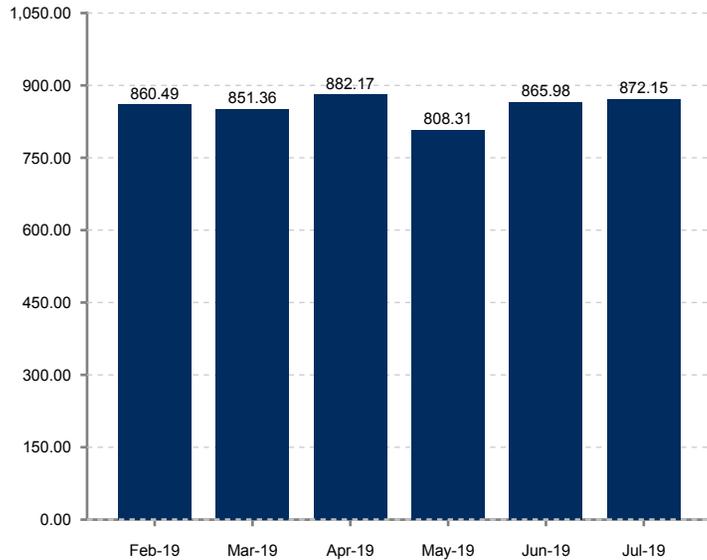
ST OF AZ POOL 201 LARGE CAP
Sector Allocation vs S&P 500



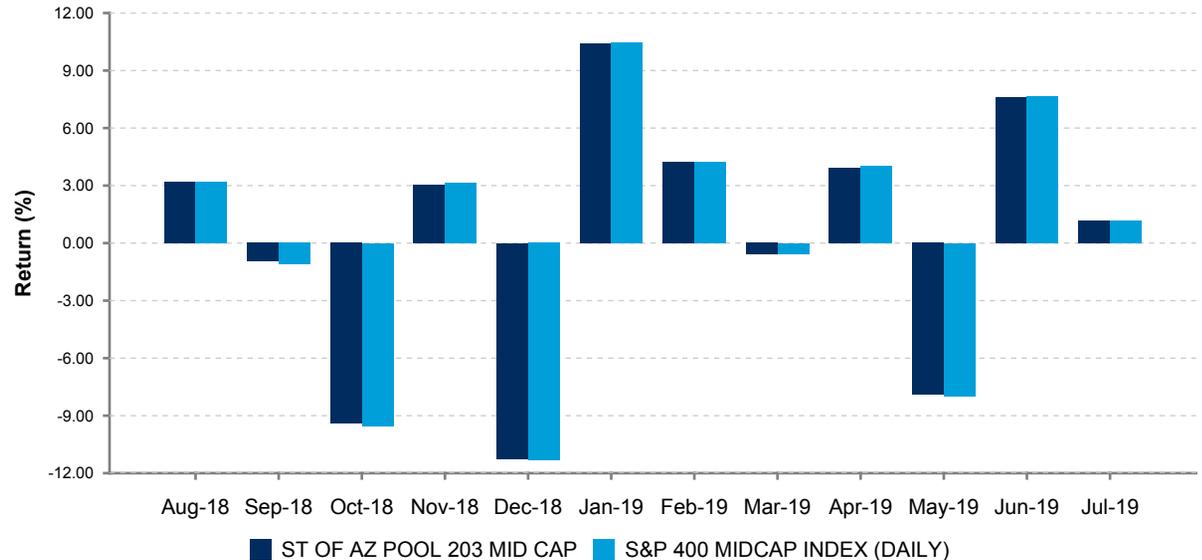
	Fund Weight	Benchmark Weight	Relative Weight
ST OF AZ POOL 201 LARGE CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	10.73	10.45	0.28
CONSUMER DISCRETIONARY	10.14	10.15	-0.01
CONSUMER STAPLES	7.32	7.34	-0.02
ENERGY	4.92	4.88	0.03
FINANCIALS	13.19	13.23	-0.05
HEALTH CARE	13.72	13.76	-0.05
INDUSTRIALS	9.25	9.30	-0.06
INFORMATION TECHNOLOGY	21.73	21.82	-0.09
MATERIALS	2.73	2.74	-0.01
REAL ESTATE	3.05	3.06	-0.01
UTILITIES	3.24	3.25	-0.01



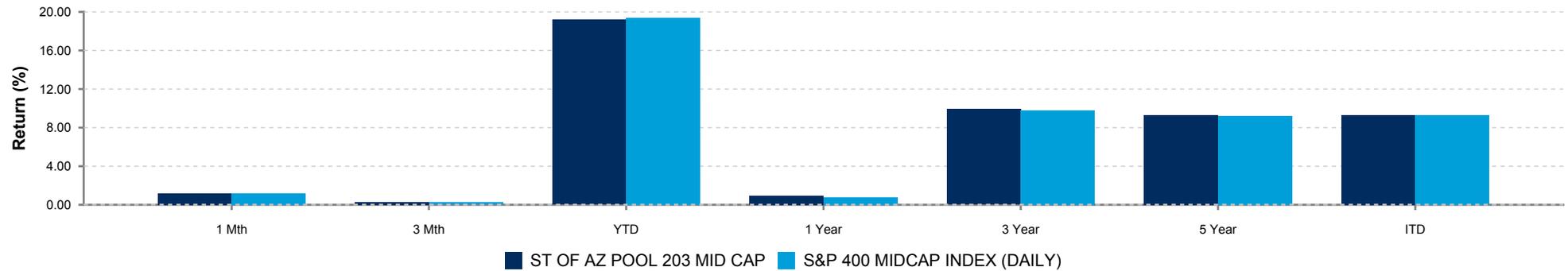
Net Asset Values over Time (\$MM)



Monthly Returns



Rates of Return

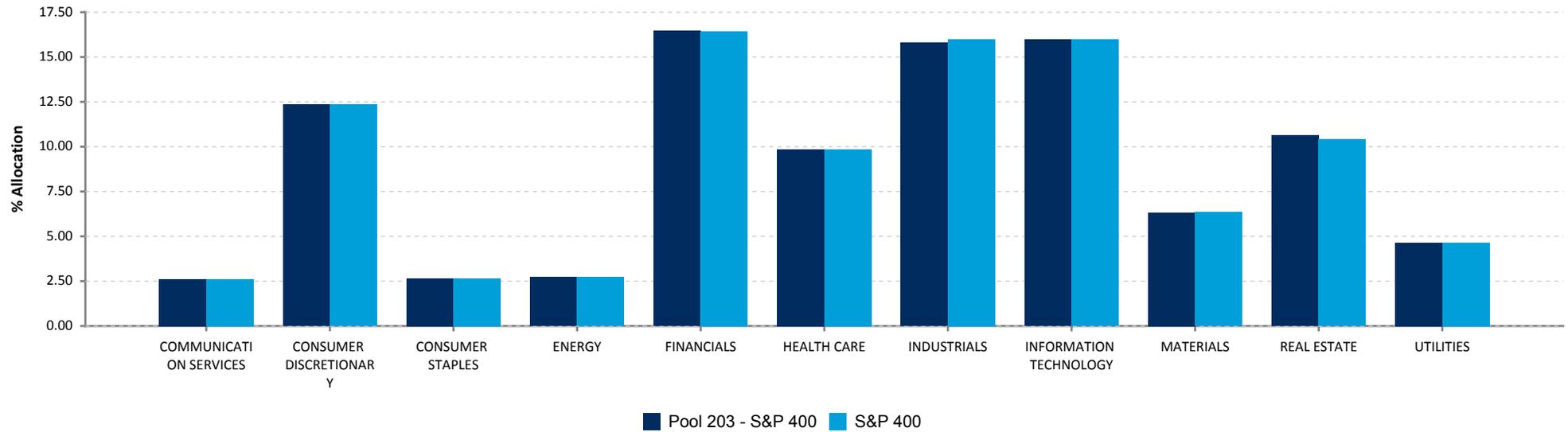


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2017	Jul 31 2018	Jul 31 2019
ST OF AZ POOL 203 MID CAP	1.18	0.26	19.18	0.96	9.92	9.33	9.33	14.90	14.50	0.96
S&P 400 MIDCAP INDEX (DAILY)	1.19	0.24	19.38	0.79	9.79	9.23	9.31	14.69	14.50	0.79
	-0.01	0.02	-0.20	0.17	0.13	0.11	0.01	0.21	0.01	0.17

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2019

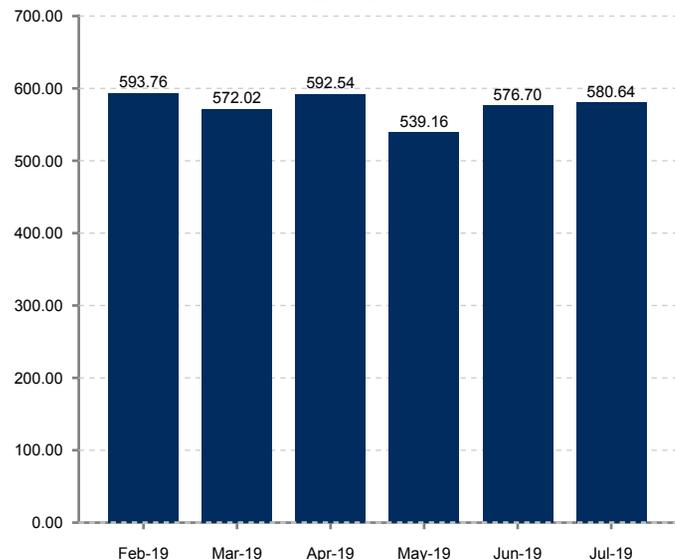
ST OF AZ POOL 203 MID CAP
Sector Allocation vs S&P MID CAP 400



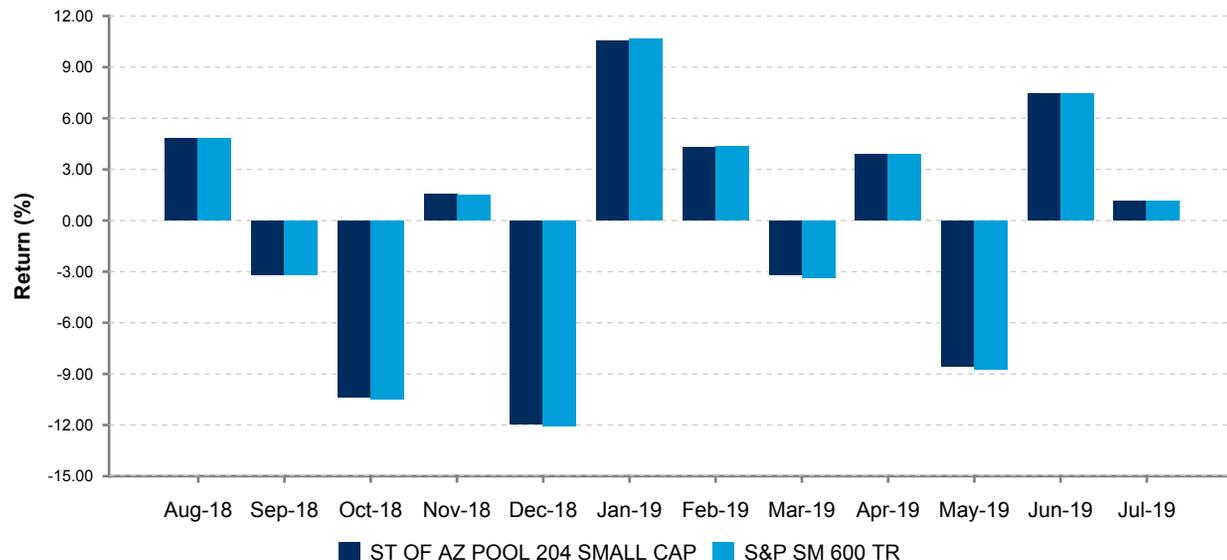
	Weight Fund	Weight Benchmark	Weight Relative
ST OF AZ POOL 203 MID CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	2.61	2.61	-0.00
CONSUMER DISCRETIONARY	12.35	12.35	-0.00
CONSUMER STAPLES	2.66	2.66	-0.00
ENERGY	2.73	2.72	0.00
FINANCIALS	16.46	16.44	0.03
HEALTH CARE	9.85	9.86	-0.01
INDUSTRIALS	15.78	16.00	-0.22
INFORMATION TECHNOLOGY	15.97	15.98	-0.01
MATERIALS	6.32	6.33	-0.00
REAL ESTATE	10.62	10.41	0.21
UTILITIES	4.64	4.64	-0.00



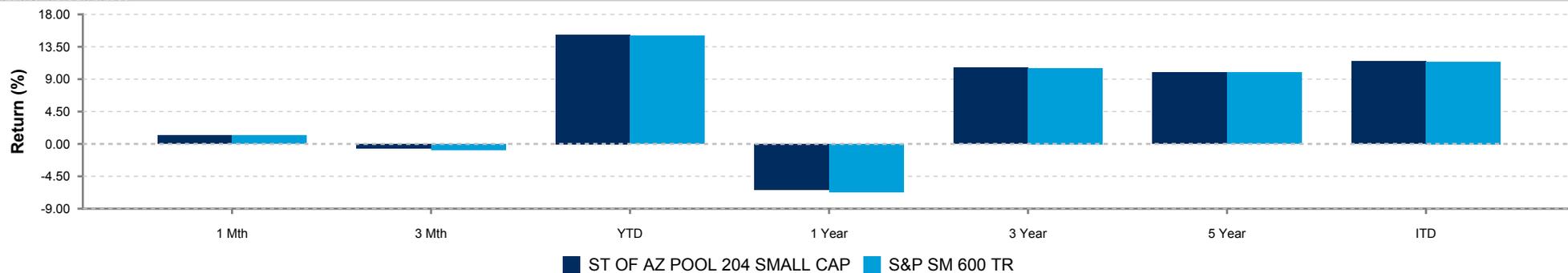
Net Asset Values over Time (\$MM)



Monthly Returns



Rates of Return

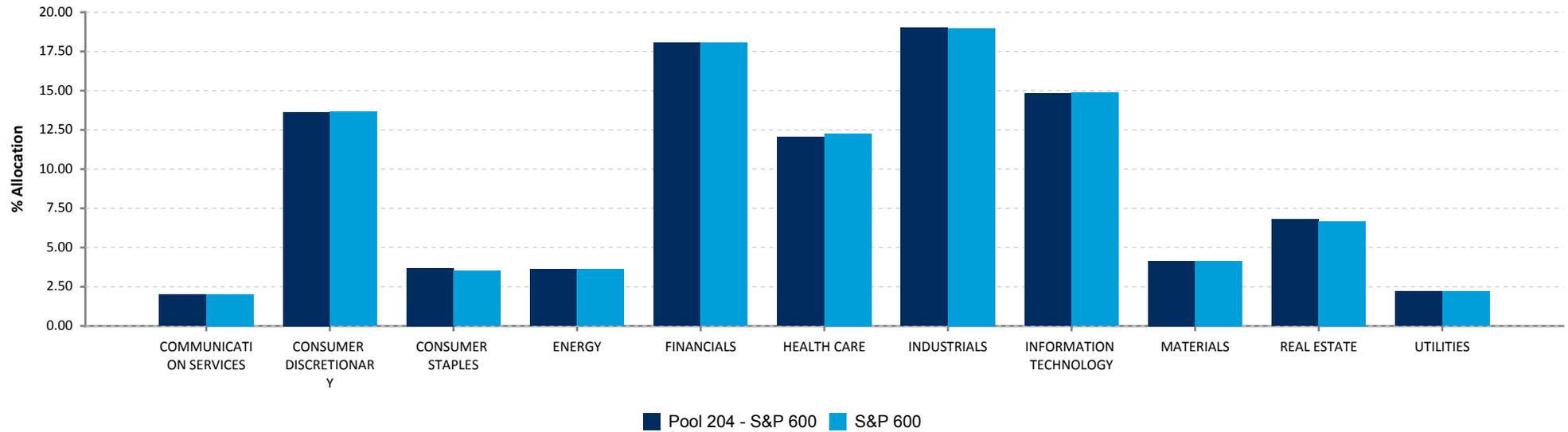


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2017	Jul 31 2018	Jul 31 2019
ST OF AZ POOL 204 SMALL CAP	1.15	-0.63	15.18	-6.34	10.62	9.94	11.45	17.73	22.76	-6.34
S&P SM 600 TR	1.14	-0.82	14.98	-6.75	10.54	9.89	11.41	17.66	23.11	-6.75
	0.01	0.19	0.20	0.41	0.08	0.05	0.05	0.07	-0.35	0.41

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2019

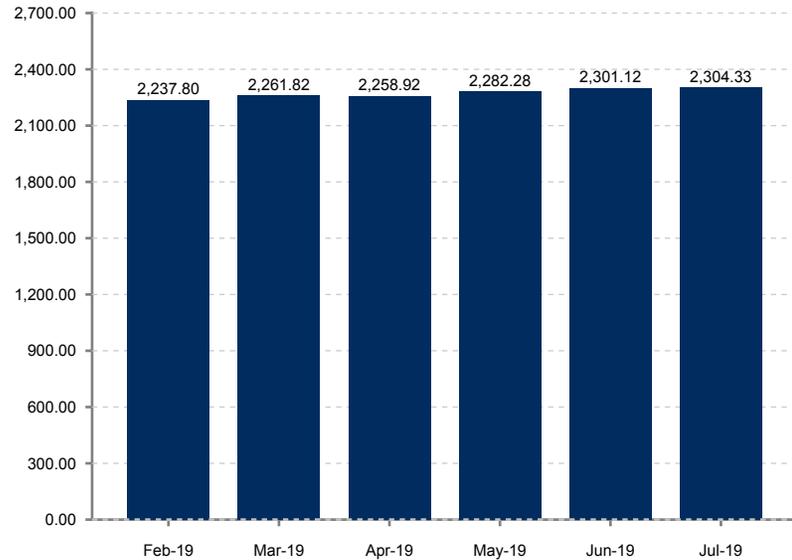
ST OF AZ POOL 204 SMALL CAP
Sector Allocation vs S&P SMALLCAP 600



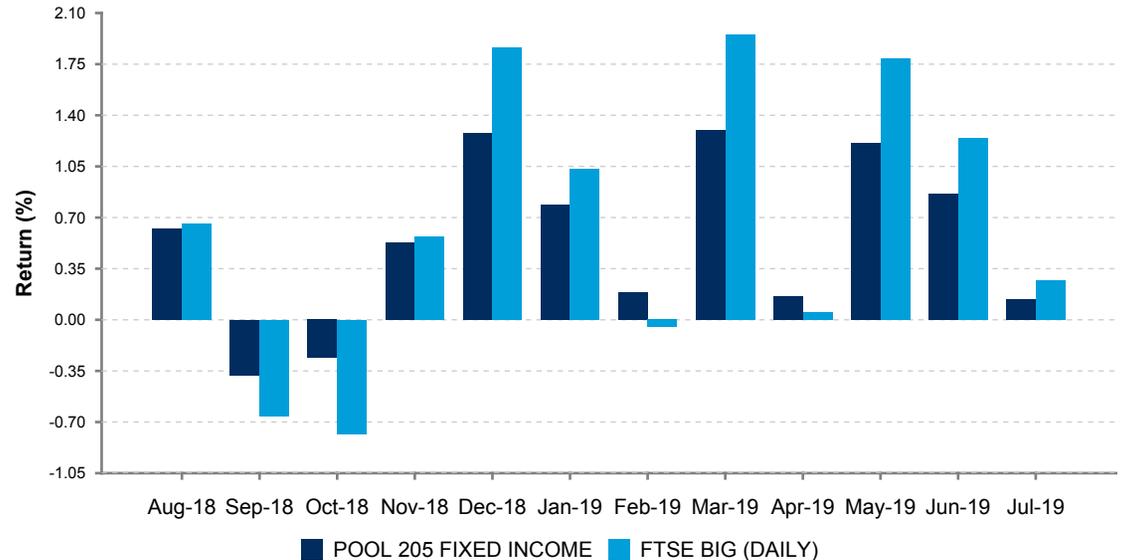
	Weight Fund	Weight Benchmark	Weight Relative
ST OF AZ POOL 204 SMALL CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	2.01	2.02	-0.00
CONSUMER DISCRETIONARY	13.63	13.67	-0.04
CONSUMER STAPLES	3.69	3.51	0.18
ENERGY	3.63	3.62	0.02
FINANCIALS	18.04	18.04	-0.00
HEALTH CARE	12.05	12.27	-0.21
INDUSTRIALS	19.00	18.99	0.01
INFORMATION TECHNOLOGY	14.82	14.87	-0.05
MATERIALS	4.14	4.14	0.00
REAL ESTATE	6.78	6.67	0.10
UTILITIES	2.20	2.20	0.00



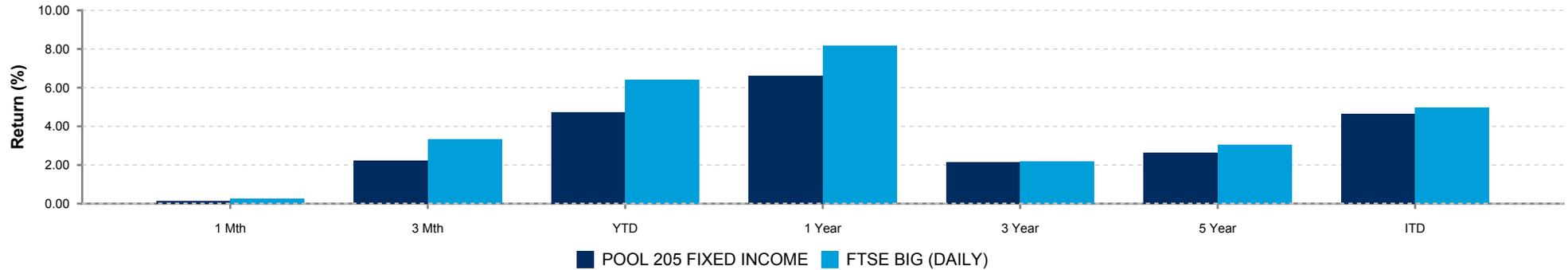
Net Asset Values over Time (\$MM)



Monthly Returns



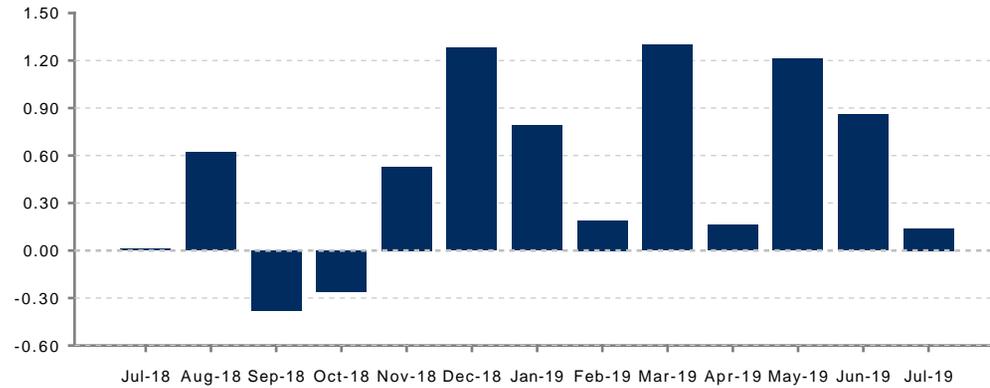
Rates of Return



	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2019	Jul 31 2018	Jul 31 2017
POOL 205 FIXED INCOME	0.14	2.22	4.73	6.61	2.15	2.65	4.65	6.61	-0.20	0.19
FTSE BIG (DAILY)	0.27	3.33	6.43	8.17	2.20	3.06	4.98	8.17	-0.86	-0.47
	-0.13	-1.11	-1.70	-1.56	-0.05	-0.41	-0.33	-1.56	0.65	0.66



Net Mqr Return



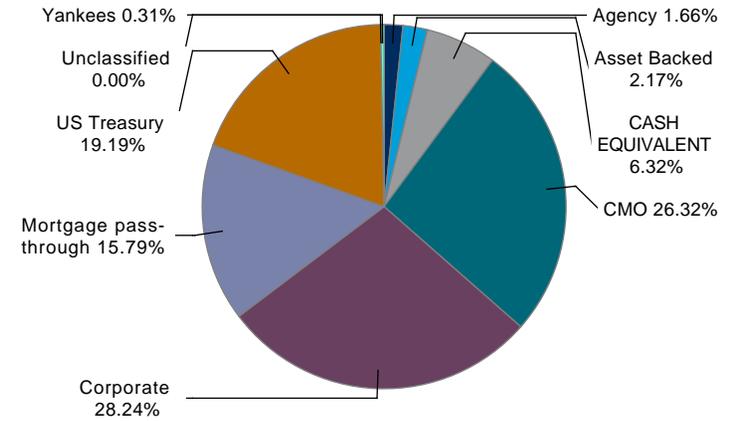
Current Mth **Prior Mth** **1 Year Ago**

POOL 205 FIXED INCOME

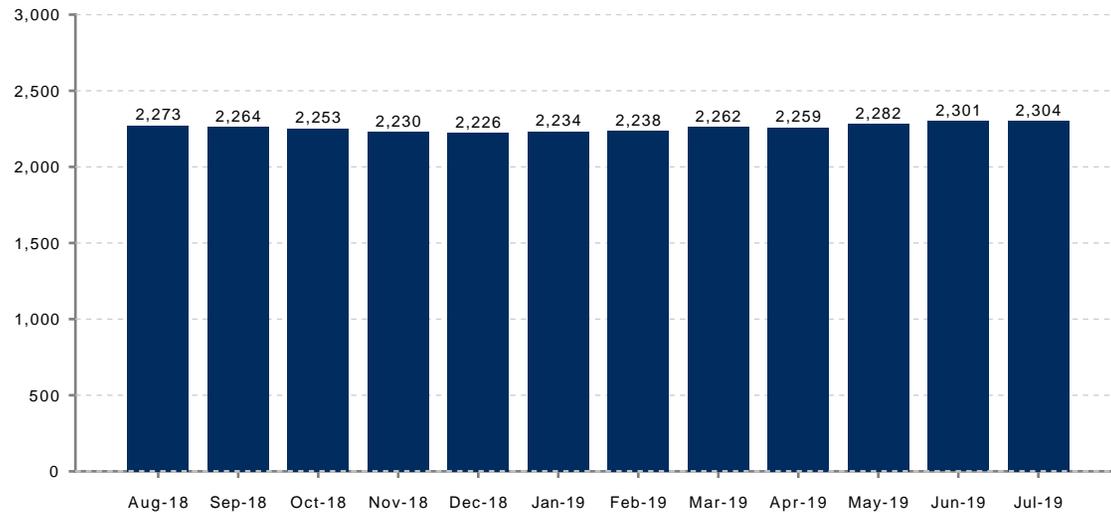
0.14 0.86 0.01

Asset Allocation

	Ending Market Value
POOL 205 FIXED INCOME	2,304,329,859



Net Asset Values over Time (\$MM)

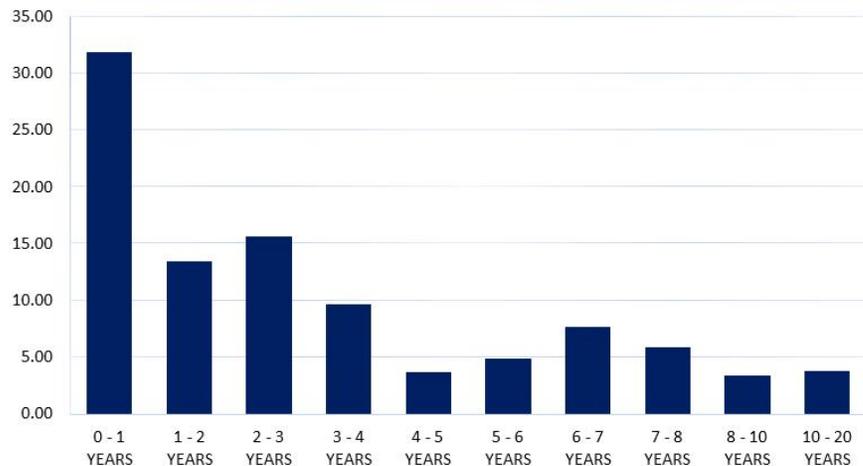


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 205 FIXED INCOME		
US TREASURY N/B	46,160,322	2.00
US TREASURY N/B	36,139,455	1.57
US TREASURY N/B	28,010,437	1.22
US TREASURY N/B	26,950,915	1.17
US TREASURY N/B	26,092,986	1.13
US TREASURY N/B	22,486,727	0.98
US TREASURY N/B	20,343,682	0.88
PEPSICO INC	20,210,839	0.88
PNC BANK NA	20,159,190	0.87
FORD MOTOR CREDIT CO	20,119,247	0.87



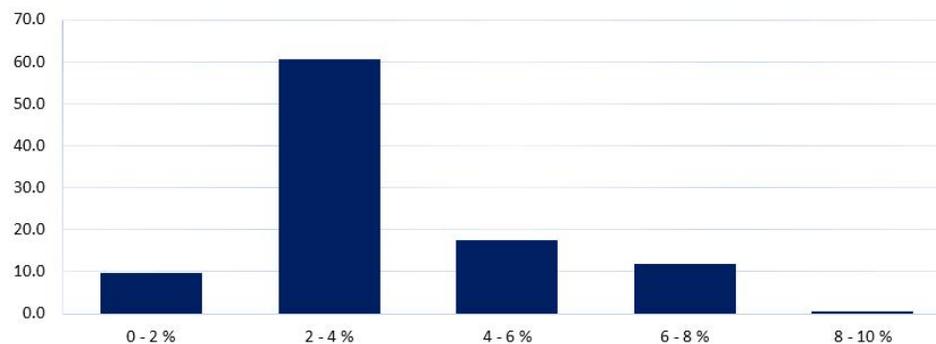
Duration Distribution



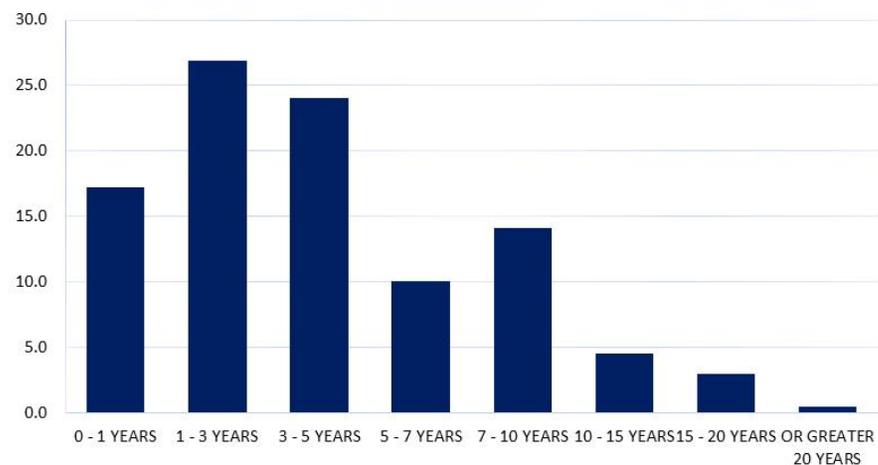
Portfolio Level Characteristics

	POOL 205 FIXED INCOME
Effective Maturity	4.48
Coupon	3.64
Effective Duration	3.11
Quality Rating (Moody's)	AA-2

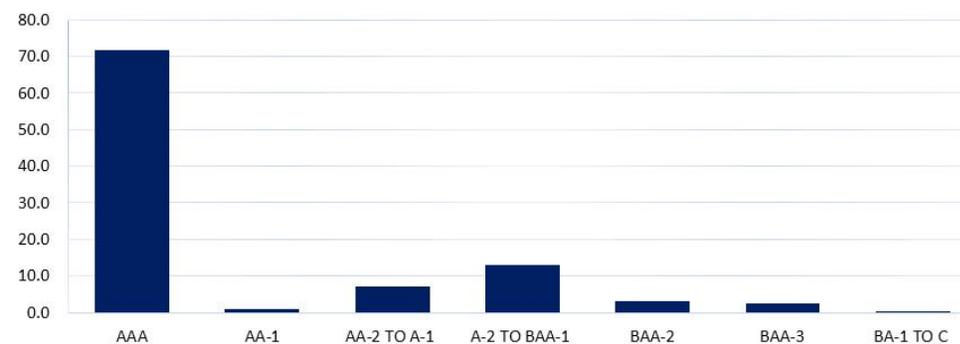
Coupon Distribution



Expected Maturity Distribution

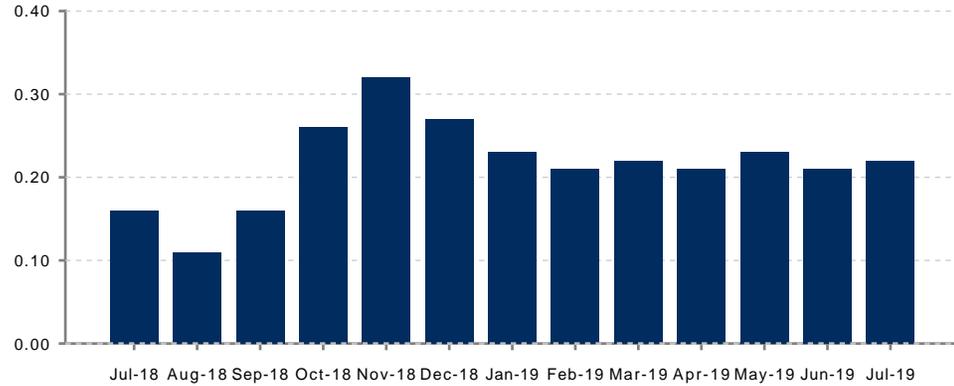


Rating Distribution





Net Yield

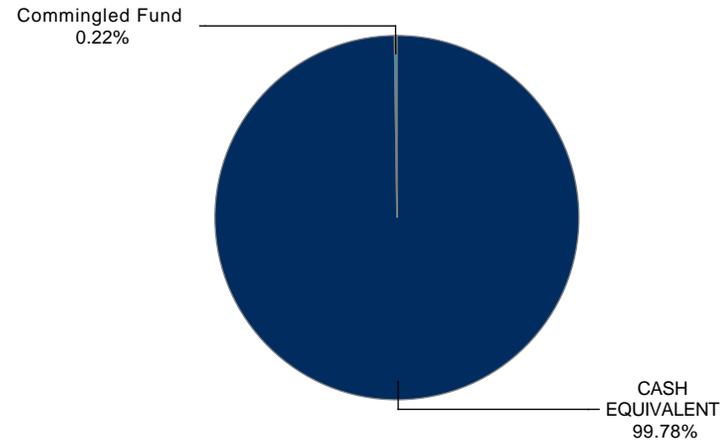


Current Mth Prior Mth 1 Year Ago

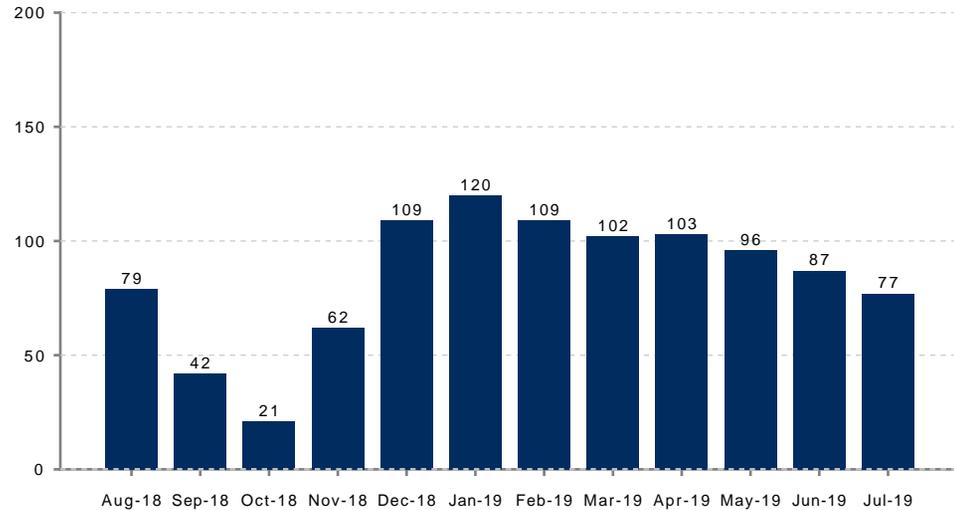
ST OF AZ POOL 123 ST FIXED INC	0.22	0.21	0.16
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Asset Allocation

	Ending Market Value
ST OF AZ POOL 123 ST FIXED INC	76,646,983



Net Asset Values over Time (\$MM)

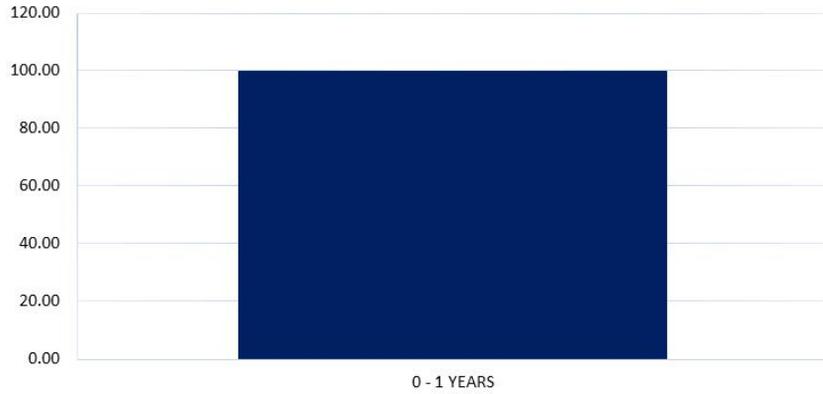


Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
ST OF AZ POOL 123 ST FIXED INC		
INSTITUTIONAL SECURED	10,000,000	13.05
UNITED HEALTHCARE CO	9,986,000	13.03
ANGLESEA FDG PLC and ANG	9,966,433	13.00
MOUNTCLIFF	9,000,000	11.74
NORTHWESTERN UNIVERS	6,780,616	8.85
ANGLESEA FDG PLC and ANG	5,000,000	6.52
MOUNTCLIFF	4,993,700	6.52
HALKIN FINANCE LLC USC	4,992,889	6.51
BOEING CO.	4,987,864	6.51
BLACKROCK PROV TEMP	4,671,000	6.09



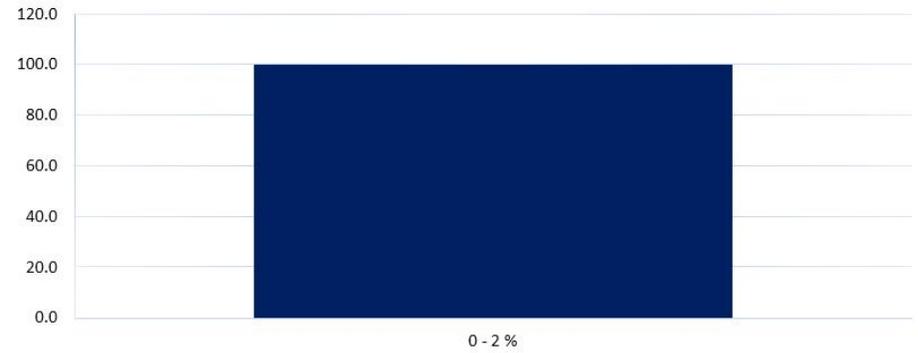
Duration Distribution



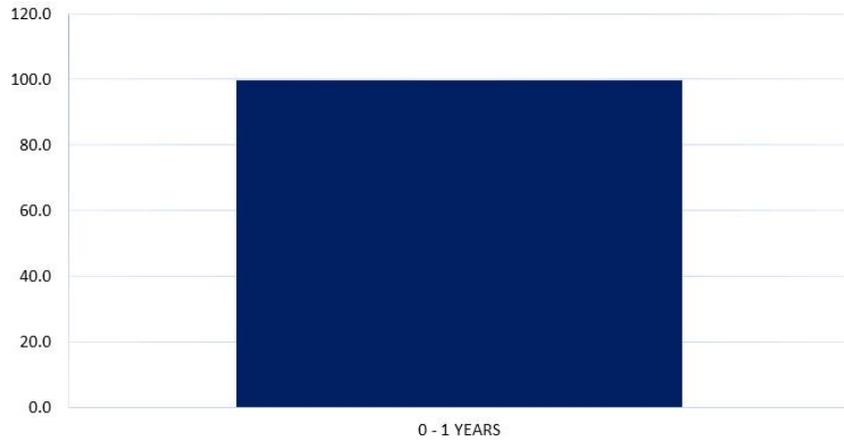
Portfolio Level Characteristics

	POOL 123 ST
Effective Maturity	0.05
Coupon	0.00
Effective Duration	0.05
Quality Rating (Moody's)	AA-1

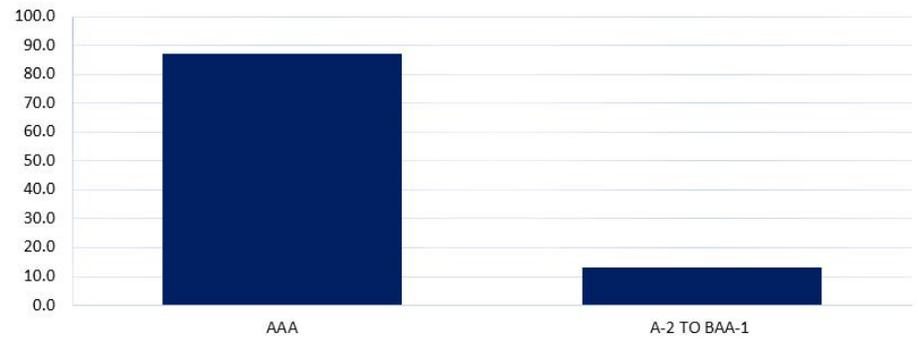
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



Permanent Land Endowment Fund Market Value

