OFFICE OF THE

ARIZONA STATE TREASURER

Kimberly Yee

TREASURER

NOVEMBER 2019

Presented To:

Arizona State Board of Investment

December 30, 2019

STATE BOARD OF INVESTMENT

A G E N D A

December 30, 2019

1. Call to Order; Opening Remarks ……..……..The Honorable Kimberly Yee, Chair
2. Approval of Minutes of November 26, 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 the November 2019 Report
5. Operating Cash and Prop 123 Distributions/Stress Test Results ……....Mark Swenson, Deputy Treasurer
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

December 30, 2019

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Minutes of
BOARD OF INVESTMENT MEETING
November 26, 2019

The regular meeting of the State Board of Investment was held on November 26, 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 10:03 a.m.

Members Present:

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

Designees Present:

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

Others Present:

Mark Swenson, Deputy Treasurer, Arizona State Treasurer's Office
Lorraine Jones, Deputy Treasurer, 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
Jackie Harding, Deputy Treasurer of Administration and Banking Divisions
Ken Price, Human Resource Manager, Arizona State Treasurer's Office
Fareed Bailey, Director of Legislative Affairs, Arizona State Treasurer's Office
Matthew Reed, Information Systems Administrator, Arizona State Treasurer's Office

1. Call to Order

Treasurer Yee called the November 26, 2019 BOI meeting to order at 10:03 a.m.

Treasurer's Comments

Treasurer Yee welcomed the Board members and guests, acknowledging Treasurer Beth Ford's and Mr. Harry Papp'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 October 29, 2019; seconded by Mr. Biggs. 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 November 2019. See memo.

B. LGIP Yield Analysis, Pool Investments and Performance Reports
Portfolio Manager, Jake Richardson, highlighted the results for the Local Government Investment Pools performance for the month of November 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 November 2019. See memo.

4. Approval of October 2019 Monthly Report
Mr. Biggs moved the approval of the Treasurer's October 2019 Monthly Report. Treasurer Ford seconded the motion. Motion carried unanimously.

5. Approval of New Broker Dealers
Chief Investment Officer, Dennis Stevenson, provided an overview of two new broker dealers: SMBC Nikko Securities America and Academy Securities.
Mr. Papp moved to approve SMBC Nikko Securities American and Academy Securities as new broker dealers; Director Tobin seconded the motion. Motion carried unanimously.

6. Treasurer's Report – The Honorable Kimberly Yee
Treasurer Yee thanked the Treasury staff for their work. She continues to reach out to LGIP clients throughout Arizona. The Financial Literacy Task Force continue to work in their respective committees finding ways to carry the message of the importance of financial literacy throughout the state.

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 Monday, December 30, 2019 at 10:00 a.m.at 1700 West Washington, State Capitol, West Wing, Treasurer's Conference Room, Phoenix, Arizona.

10. Adjournment

Since there was no further business to discuss Director Tobin moved the adjournment of the meeting. Mr. Briggs seconded the motion. Motion was carried unanimously.

The BOI Meeting was adjourned at approximately 10:27 a.m.

Respectfully Submitted by:

_____
Deborah Gomez
Executive Assistant

Approved by:

_____ _____
Kimberly Yee Date
Chair

OFFICE OF THE
ARIZONA STATE TREASURER

KIMBERLY YEE
TREASURER

Investment Summary | November 2019

Overall Performance – Where We Are Now |

- **State Agency Pools:**
  - Total assets: $7,250,466,740
  - November earnings distributed: $11,429,396 (+1.35% YoY)
  - General Fund earnings distributed: $3,675,399 (+3.65% YoY)

Outlook |

The U.S. and China have reached a trade truce with the Trump administration not implementing new tariff increases. The Chinese government has reciprocated in the form of eliminating or curtailing tariffs against American agriculture imports. Consumer sentiment and employment are near all-time highs. Brexit is finally going to be a reality with Boris Johnson winning a plurality in recent elections. The ending of uncertainty should have positive impact on the British economy.

Strategy: Monthly Commentary |

The Federal Reserve has stated through various outlets and quasi-spokesmen that they have no plans to either raise or cut interest rates in the coming months. They have stated that if they feel the economy needs an intervention, they are willing to do whatever is necessary to keep a stable growth outlook for the foreseeable future. Since we bought many of our bonds at-or-below par, the issuers are calling them away from us as that option becomes available to them. As this occurs, we will have to reinvest the proceeds at lower rates.

Alternative Scenarios |

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

- Congress fails to ratify the USMCA treaty
- Iran, Saudi Arabian confrontations heat up
- A serious disruption to REPO markets at year-end
- Hong Kong protests spread or are crushed with heavy military intervention
- Turkey leaves NATO to join some type of Syrian/Russian axis

Dennis Stevenson, CIO

State Agency Investment Pool Balances |

	November 30, 2019	November 30, 2018	YoY Change
Pool 2 FF&C	$1,141,328,391	$1,141,877,851	-$549,460
Pool 3 Internal	$3,135,952,779	$1,746,380,500	+$1,389,572,279
Pool 3 External	$110,061,740	$106,375,341	+$3,686,399
Pool 4 Gov.	$1,049,801,520	$1,240,387,903	-$190,586,383
Pool 10 Internal	$798,928,191	$1,079,952,050	-$281,023,859
Pool 10 External	$310,414,914	$98,343,934	+$212,070,980
Pool 12 CAWCD	$368,300,155	$415,813,865	-$47,513,710
Pool 16 ECDHB	$335,679,048	$326,454,001	+$9,225,047
TOTAL STATE AGENCY	**$7,250,466,740**	**$6,155,585,448**	**+$1,094,881,292**

Dennis Stevenson, CIO

Local Government Investment Pools (LGIP) Summary

Overall Performance – Where We Are Now |

- **Local Government Investment Pools:**
  - Total assets: $4,088,189,451
  - Total November earnings: $6,087,649; -$71k vs. November 2018
  - Total fiscal year-to-date yields:
    - Pool 5: 1.81%; -45bps vs. November 2018
    - Pool 7: 1.69%; -48bps vs. November 2018
    - Pool 500: 2.24%; -14bps vs. November 2018
    - Pool 700: 1.95%; -26bps vs. November 2018

Strategy: Short-term Pools 5 & 7 |

The Federal Open Market Committee decided to leave the federal funds rate unchanged at 1.50% to 1.75% for the lower and upper bounds, respectively. After three consecutive rate cuts in the prior meetings, the indication from the committee at the December meeting was that they will keep rates at these levels throughout 2020. The central bank also added more liquidity into the market increasing overnight and term REPO operations. This is being used to ease pressure on the overnight REPO rate through quarter- and year-end. Pools 5 and 7 will continue to target daily liquidity at 10% to 15% for participant cash needs. Both pools will also look to target duration at 40 to 50 days for the beginning of the new year.

Strategy: Intermediate Pools 500 & 700 |

The strategy for the intermediate-term pools will remain unchanged looking to patiently extend duration in both Pools 500 and 700 heading into 2020. Pools 500 and 700 will have a monthly liquidity target of 5% and 10%, respectively. Pool 500 will look to add high-quality investment grade securities. Pool 700 will look to add securities that are guaranteed by the U.S. Government.

LGIP Investment Pool Balances |

	November 30, 2019	November 30, 2018	FY Change
Pool 5 LGIP	$1,807,958,725	$1,598,197,810	+$209,760,915
Pool 7 LGIP FF&C	$1,788,186,603	$1,358,703,854	+$429,482,749
Pool 500 LGIP Med.	$363,919,329	$348,739,130	+$15,180,199
Pool 700 LGIP Med FF&C	$128,124,794	$135,987,425	-$7,862,631
TOTAL LGIP	**$4,088,189,451**	**$3,441,628,219**	**+$646,561,232**

Jake Richardson, Portfolio Manager

Endowment Summary

Overall Performance – Where Are We Now |

- Highlights:
  - PLETF 10-year annualized total return: 8.92%
  - PLETF total return in November trailed benchmark by 2bps
  - Prop 123 monthly distributions highest ever at $30.7 million

Big Picture:

- PLETF fair market value at $6,230,552,764
- FYTD2020 distributions increased to $153.32MM; up $9.4MM vs FY2019
- PLETF FYTD return 4.53% vs benchmark 4.90%
- Calendar YTD return was 17.13% vs benchmark 18.22%
- Annualized 10-Year total return through November is 8.92% versus October at 9.03%; -11 basis points MoM
- Fair Market Value up $103MM MoM; up $373.1MM YoY
- Unrealized Gains: $3.5BN; up $508.7MM or 16.79% YoY
- November Realized Gains: $977k; -$17.44MM vs November 2018
- November TRR PLETF 2.03% vs benchmark 2.05%; trailing by 2bps

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 once again testing all-time highs. Our equity exposure was 61.59% 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 long-term cycles. Since inception, our SmallCap exposure has returned 11.46% (+26bps MoM), still outperforming the MidCap return at 9.32% (+13bps MoM), our LargeCap return at 5.69% (+16bps MoM), and our fixed income return of 4.65% (-2bp 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 continue to invest new monies for the AETF in exchanged traded funds (ETFs) as we ramp up with +22bps return over benchmark since inception.

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 and cut rates 25bps at the July, September and October 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., keeping 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. Slow global growth perceptions (especially Europe) have kept U.S. rates relatively low

Tim White, Director of Endowments

while U.S. domestic equities continued to rally on good consumer conditions since last Christmas, creating very divergent market sentiments between fixed income and equities. 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 continue to steepen modestly. Rising longer-end rates in November began to reverse the effects of the August rate rally. 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 and foreign cash seeks superior returns in US IG credit. Hence, we feel our corporate exposures are on better footing. We will let bonds mature and move into cash equivalents within Pool 123, USTs 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 four months of liquidity in Pool 123 for timely school payments. We continue to add bond ETFs (AGG) with new AETF cash for the fixed income allocation.

Long interest rates may continue to rise modestly in a scenario if higher inflation perceptions surface with a U.S./Chinese trade agreement, and the curve may steepen further 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 3.17 years (unch. MoM) versus 5.74 (+0.07 MoM) for the SBBIG Index. Note the forward-looking Bloomberg Bond Yield Forecast compiled by averaging 56 wall street economist's forecasts:

Rate	Market Yld	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21	Q1 22
United States											
US 30-Year	2.34	2.30	2.26	2.31	2.36	2.42	2.46	2.49	2.55	2.64	2.70
US 10-Year	1.91	1.82	1.82	1.86	1.91	1.93	1.97	2.01	2.09	2.15	2.25
US 5-Year	1.74	1.63	1.63	1.67	1.70	1.73	1.78	1.81	1.87	1.92	2.02
US 2-Year	1.64	1.62	1.60	1.61	1.62	1.64	1.66	1.68	1.72	1.78	1.85
US 3-Month Libor	1.96	1.80	1.78	1.74	1.73	1.71	1.71	1.72	1.79	1.82	1.91
Fed Funds Rate - Upper Bound	1.75	1.75	1.65	1.60	1.55	1.55	1.55	1.55	1.60	1.65	1.65
Fed Funds Rate - Lower Bound	1.50	1.50	1.43	1.34	1.30	1.28	1.30	1.30	1.34	1.39	1.42
2 Year - 10 Year Spread	0.27	0.20	0.22	0.25	0.29	0.29	0.31	0.33	0.37	0.37	0.40

*Table presented as-of 12/26/2019.

Endowment Monthly Land Sale Proceeds |

- +$9.16MM in November
- +$4.09MM vs October
- -$80.30MM FYoY

Endowment Prop 123 Distributions |

- $30.7MM total/$28.5MM for K-12 successfully distributed on time from Pool 123
- FYTD K-12 distribution $142.6MM; up $8.7MM YoY
- Pool 123 mechanism working well (3-4 months laddered liquidity)

Pool Performance |

Portfolio 3Yr standard deviation was 7.76 versus benchmark at 7.80; portfolio is less risky/volatile versus benchmark.

Equity/Fixed Income Pools:

- Pool 201 LargeCap Equity outperformed the S&P 500 by 2bps MoM at +3.65%
- Pool 203 MidCap Equity trailed the S&P 400 by 8bps MoM at +2.89%
- Pool 204 SmallCap Equity trailed the S&P 600 by 7bps MoM at +2.99%
- Pool 205 trailed the FTSE BIG Index by 3bps MoM at -0.06%
- Pool 123 returned +0.15% for November, matching the Pool 5 benchmark

Tim White, Director of Endowments

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EARNINGS DISTRIBUTION - INVESTMENT POOLS
NOVEMBER 2019

Recipient	Earnings Distributed NOVEMBER 2019	Fiscal YTD 19/20	Fiscal YTD 18/19	Change from Previous Year	Fiscal YTD Investment Management Fees Received
General Fund (1)	$3,675,399	$20,295,524	$15,217,261	33.4%	
2 State Agencies - Full Faith & Credit (2)	1,488,187	8,430,308	7,373,239	14.3%	239,212
3 State Agencies - Diversified (2) (3)	1,895,829	10,915,446	9,096,279	20.0%	610,635
4 State Agencies - Gov (2)	1,488,493	7,933,206	7,995,644	-0.8%	237,371
5 LGIP (2)	2,804,890	13,986,108	12,957,333	7.9%	368,376
7 LGIP Gov (2)	2,318,192	12,543,294	9,567,088	31.1%	343,111
9A Public School Credit Enhancement (4)	0	0	0	0	23,945
10 Restricted Operating (2)	1,506,947	8,390,312	3,875,771	116.5%	254,190
12 CAWCD Medium-Term	731,601	3,944,474	3,859,426	2.2%	85,666
16 ECDH Medium-Term	642,940	3,403,961	3,388,314	0.5%	84,736
Subtotal	**$16,552,478**	**$89,842,634**	**$73,330,355**	**22.5%**	**$2,247,242**
NAV POOL					
500 LGIP - Med Term	669,644	3,635,972	3,359,242	8.2%	83,595
700 LGIP - FF&C Med Term (2)	172,471	945,859	899,314	5.2%	31,026
Total	**$17,394,593**	**$94,424,465**	**$77,588,911**	**21.7%**	**$2,361,863**
NOVEMBER 2018 TOTALS	**$17,325,585**				**$2,021,248**

(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 November 30, 2019
(in millions)

Month	Fiscal Year 2017/2018	Fiscal Year 2018/2019	Fiscal Year 2019/2020
JULY	$1,635	$1,824	$2,483
AUGUST	1,303	1,495	1,840
SEPTEMBER	1,455	1,594	1,980
OCTOBER	1,473	1,813	2,246
NOVEMBER	1,417	1,912	2,259
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	**$1,457**	**$1,728**	**$2,162**
Full Year Average	**$1,806**	**$2,135**	

STATE AGENCY POOLS
PORTFOLIO EARNINGS ANALYSIS
NOVEMBER 2019

FUND	DESCRIPTION	Current Month 11/30/19	Prior Month 10/31/19	Prior Year 11/30/18	Net Asset Value Per Share
2	STATE AGENCIES - FULL FAITH & CREDIT	1,638,666	1,724,755	**1,825,365**	1.0010
3	STATE AGENCIES - DIVERSIFIED				
	INTERNAL MANAGERS	4,370,580	4,750,799	**2,880,748**	1.0011
	EXTERNAL MANAGERS	210,565	219,788	**193,694**	1.0050
	FUND 3 TOTAL	4,581,145	4,970,587	**3,074,441**	1.0012
4	STATE AGENCIES - GOV	1,844,080	1,997,868	**2,406,575**	1.0043
9A	PUBLIC SCHOOL CREDIT ENHANCEMENT	168,272	166,859	**185,834**	1.0010
10	RESTRICTED OPERATING				
	INTERNAL MANAGERS	1,371,641	1,566,633	**2,005,266**	1.0017
	EXTERNAL MANAGERS	277,927	272,012	**126,239**	1.0012
	FUND 10 TOTAL	1,649,568	1,838,644	**2,131,505**	1.0016
12	CAWCD MEDIUM-TERM	731,601	777,433	**797,293**	1.0069
15	AHCCCS OPERATING	50,671	130,140	**62,660**	N/A
16	ECDH MEDIUM-TERM	642,940	683,874	**683,393**	1.0066
	TOTAL STATE AGENCIES	**11,306,943**	**12,290,161**	**11,167,066**	

STATE AGENCY POOLS
PORTFOLIO YIELD ANALYSIS
NOVEMBER 2019

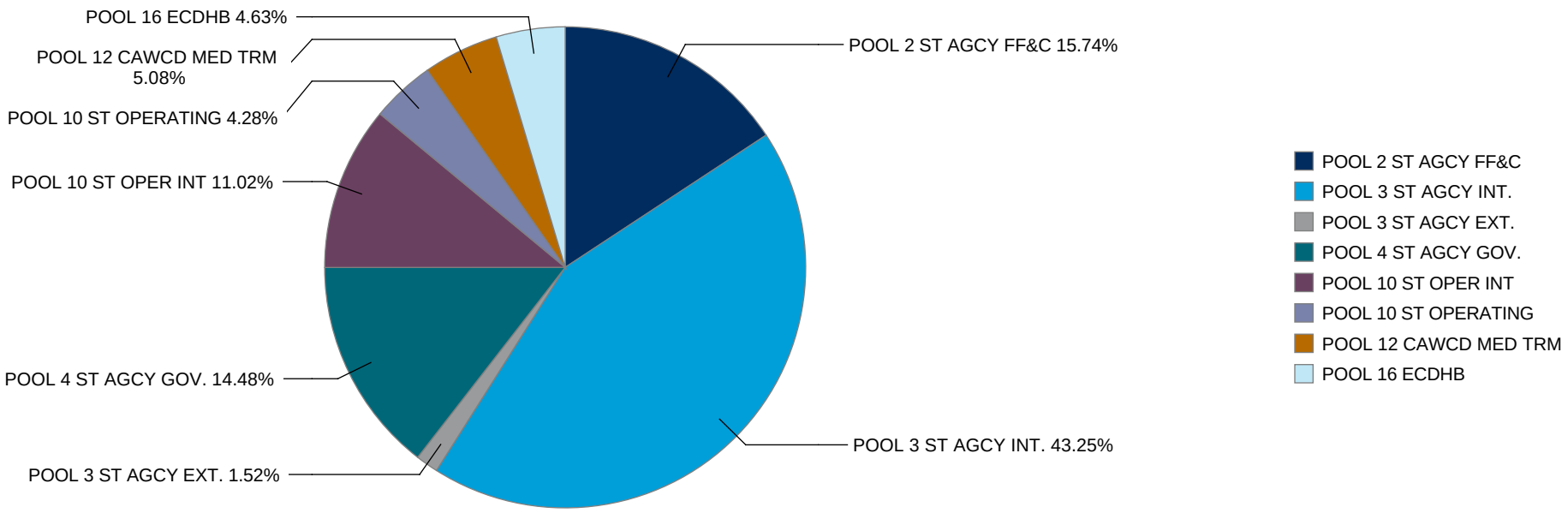
FUND	DESCRIPTION	Current Month 11/30/19	Prior Month 10/31/19	Prior Year 11/30/18
2	**STATE AGENCIES - FULL FAITH & CREDIT**	1.93%	1.97%	**2.20%**
	50% Trailing 3-mo T-bill /	1.72%	1.72%	**2.56%**
	50% Bloomberg Barclays 1-3 year UST			
3	**STATE AGENCIES - DIVERSIFIED**			
	INTERNAL MANAGERS	1.99%	2.13%	**2.37%**
	EXTERNAL MANAGERS	2.34%	2.37%	**2.20%**
	COMBINED	2.00%	2.14%	**2.36%**
	50% 1 month T-bill /	1.75%	1.75%	**2.63%**
	50% Bloomberg Barclays 1-3 year US Agg			
4	**STATE AGENCIES - GOV**	2.15%	2.22%	**2.34%**
	50% Trailing 3-mo T-bill /	1.73%	1.73%	**2.56%**
	50% Bloomberg Barclays 1-3 year US Gov			
9A	**PUBLIC SCHOOL CREDIT ENHANCEMENT**	1.93%	1.97%	**2.20%**
10	**RESTRICTED OPERATING**			
	INTERNAL MANAGERS	2.09%	2.18%	**2.26%**
	EXTERNAL MANAGERS	1.09%	1.23%	**1.42%**
	COMBINED	1.81%	1.96%	**2.19%**
	50% Trailing 3-mo T-bill /	1.82%	1.82%	**2.66%**
	50% Bloomberg Barclays 1-3 year US Agg			
12	**CAWCD MEDIUM-TERM**	2.41%	2.46%	**2.39%**
	25% S&P LGIP Index /	1.86%	1.86%	**2.84%**
	75% Bloomber Barclays 1-3 year US Agg			
15	**AHCCCS OPERATING**	0.42%	0.79%	**0.61%**
16	**ECDH MEDIUM-TERM**	2.35%	2.42%	**2.51%**
	25% S&P LGIP Index /	1.86%	1.86%	**2.84%**
	75% Bloomber Barclays 1-3 year US Agg			

OFFICE OF THE ARIZONA STATE TREASURER

November 30, 2019

STATE AGENCY

Manager Allocation



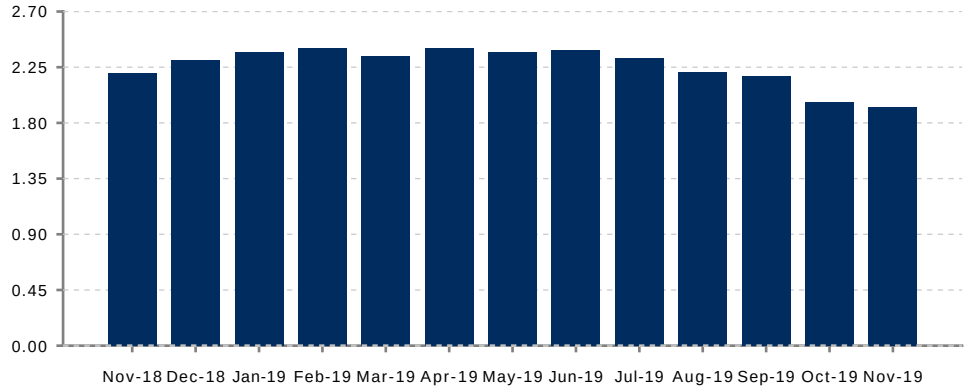
	Market Value	% of Portfolio
POOL 2 ST AGCY FF&C	1,141,328,391	15.7
POOL 3 ST AGCY INT.	3,135,952,779	43.3
POOL 3 ST AGCY EXT.	110,061,740	1.5
POOL 4 ST AGCY GOV.	1,049,801,520	14.5
POOL 10 ST OPER INT	798,928,191	11.0
POOL 10 ST OPERATING	310,414,914	4.3
POOL 12 CAWCD MED TRM	368,300,155	5.1
POOL 16 ECDHB	335,679,048	4.6
TOTAL STATE AGENCY	7,250,466,740	100.0

OFFICE OF THE ARIZONA STATE TREASURER

November 30, 2019

POOL 2 ST AGCY FF&C

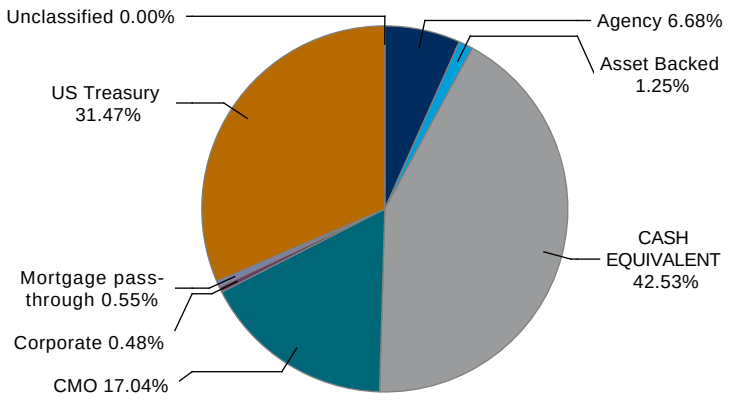
Net Yield



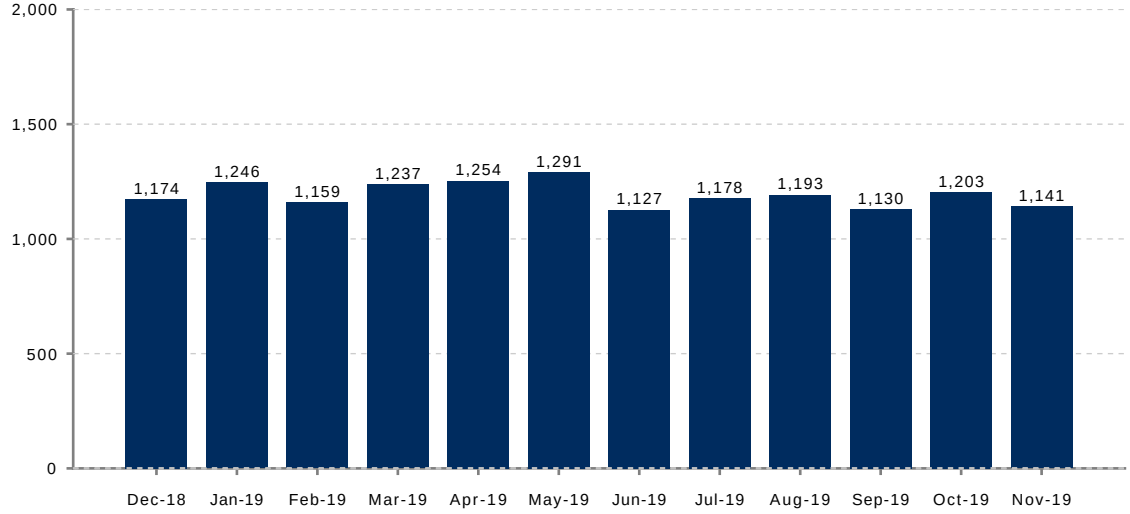
	Current Mth	Prior Mth	1 Year Ago
POOL 2 ST AGCY FF&C	1.93	1.97	2.20

Asset Allocation

	Ending Market Value
POOL 2 ST AGCY FF&C	1,141,328,391



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	131,446,766	11.52
WELLS FARGO REPO	90,018,750	7.89
US TREASURY N/B	81,093,269	7.11
TREASURY BILL	64,917,328	5.69
US TREASURY N/B	50,332,201	4.41
BMO TRIPARTY MTGE	50,008,222	4.38
TREASURY BILL	44,915,162	3.94
US TREASURY N/B	40,967,068	3.59
TREASURY BILL	39,887,586	3.49
US TREASURY N/B	30,215,319	2.65

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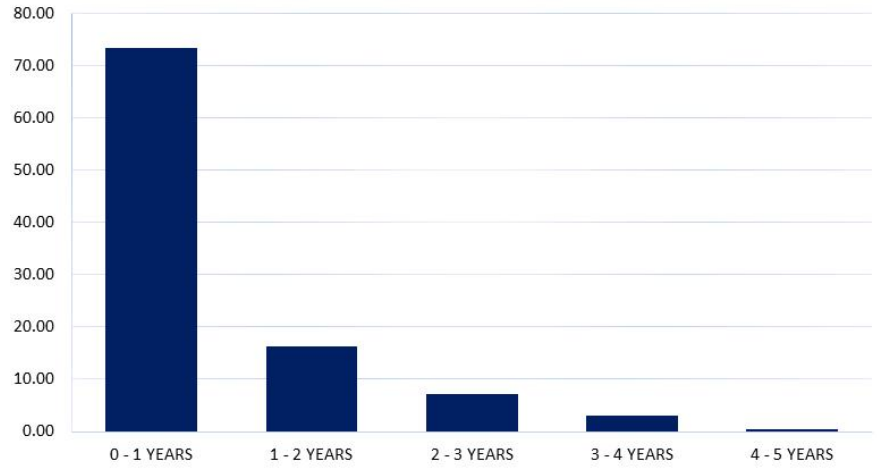
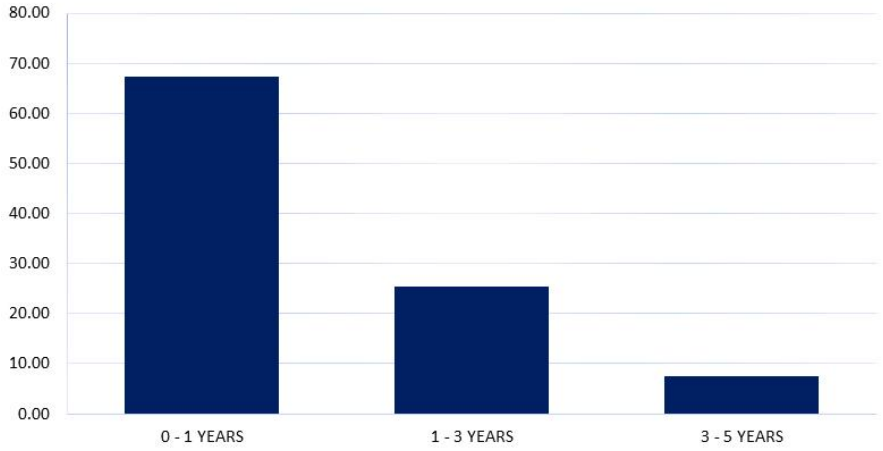
POOL 2 ST AGCY FF&C

Duration Distribution



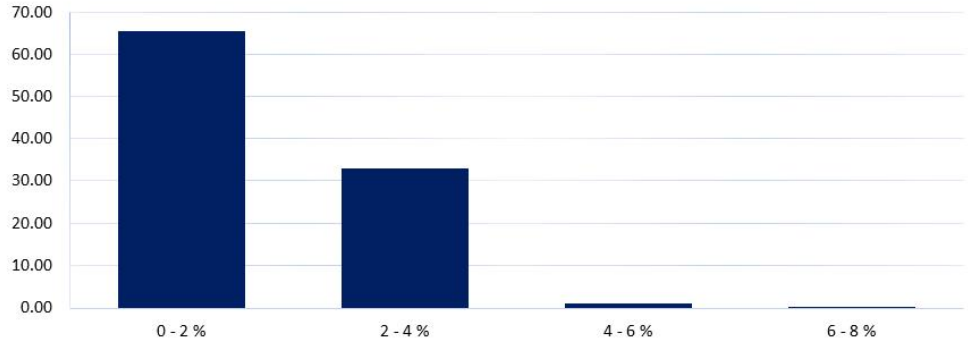
Expected Maturity Distribution



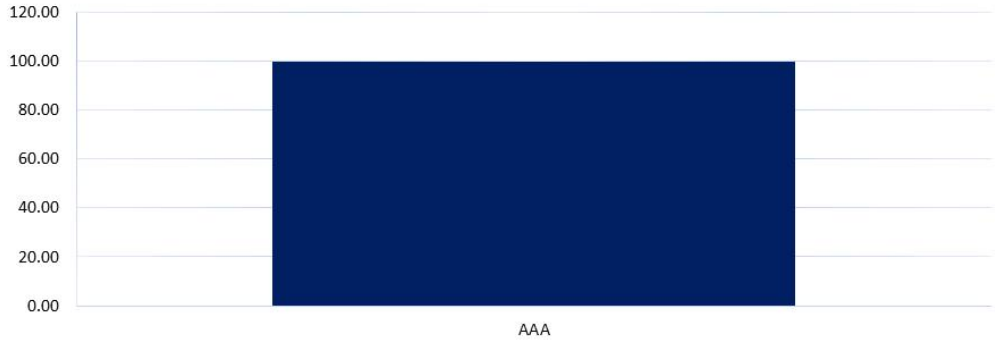
Portfolio Level Characteristics

	POOL 2 ST AGCY FF&C
Effective Maturity	0.90
Coupon	1.60
Effective Duration	0.77
Quality Rating (Moody's)	AAA

Coupon Distribution



Rating Distribution



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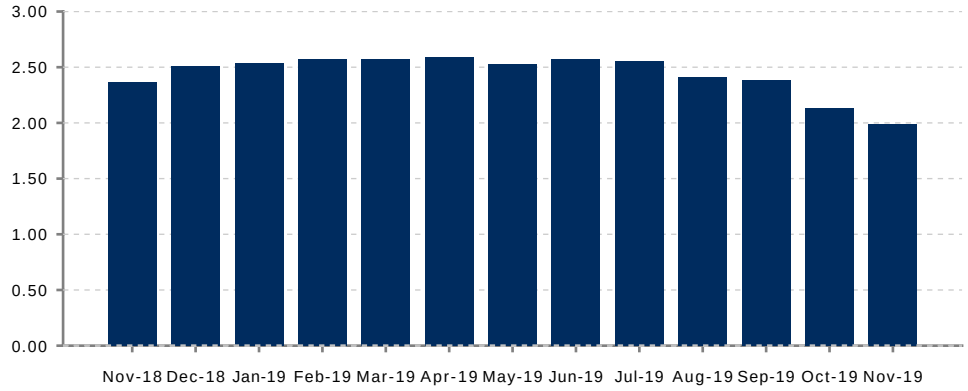
POOL 3 ST AGCY INT.

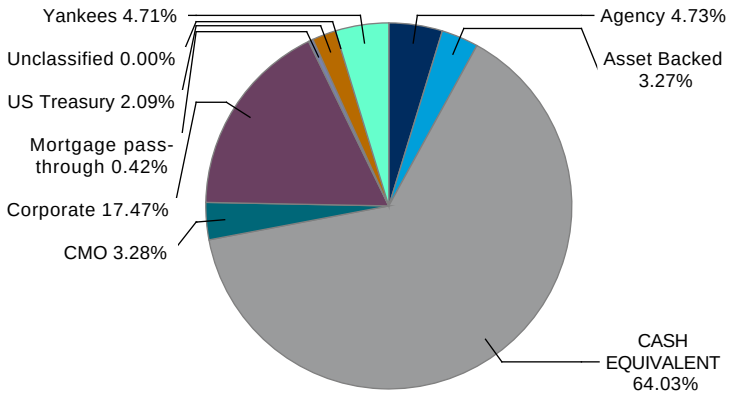
Net Yield



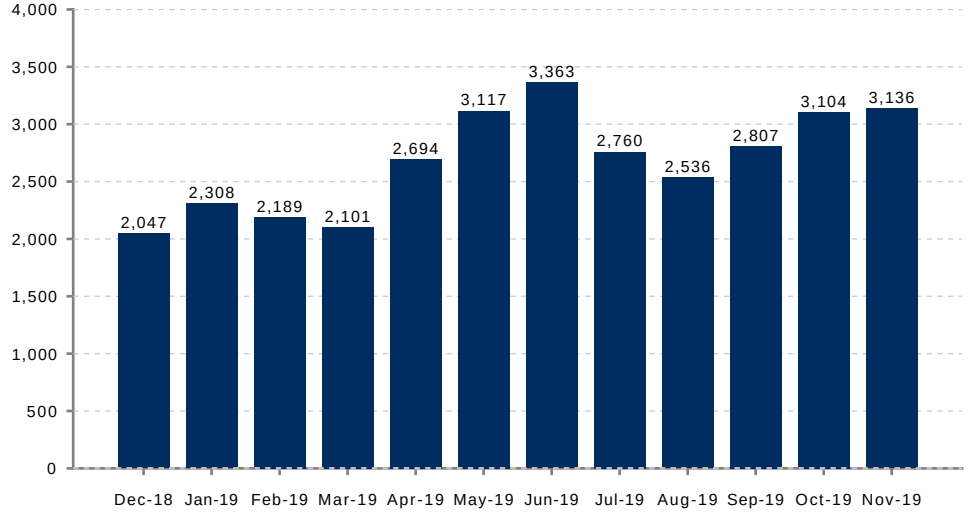
	Current Mth	Prior Mth	1 Year Ago
POOL 3 ST AGCY INT.	1.99	2.13	2.37

Asset Allocation

	Ending Market Value
POOL 3 ST AGCY INT.	3,135,952,779



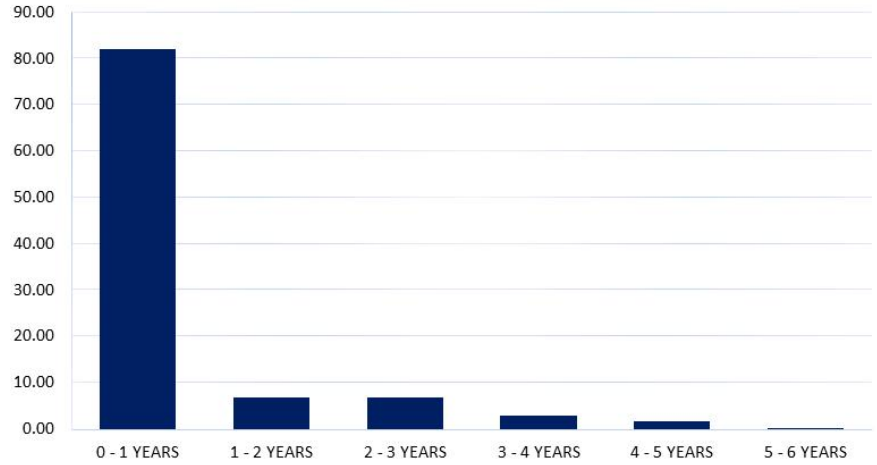
Net Asset Values over Time ($MM)



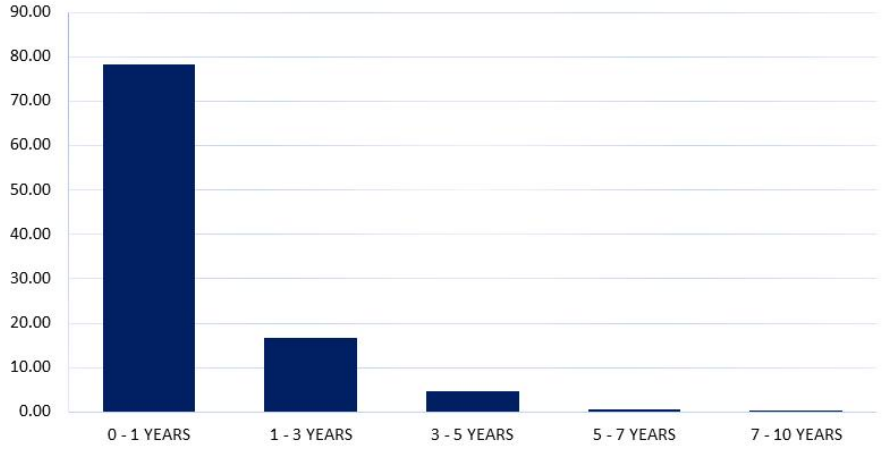
Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY INT.		
SOUTH STREET REPO	313,267,228	9.99
CANTOR FITZGERALD REPO	260,530,950	8.31
AMHERST PIERPONT	225,021,625	7.18
CANTOR FITZGERALD REPO	173,703,637	5.54
SOUTH STREET REPO	146,474,735	4.67
CANTOR FITZGERALD REPO	75,094,000	2.39
AMHERST PIERPONT	70,029,225	2.23
TREASURY BILL	54,930,047	1.75
US TREASURY N/B	40,534,776	1.29
SUNTRUST BKS INC DTC CP GENERIC CUSIP	40,058,333	1.28

Duration Distribution



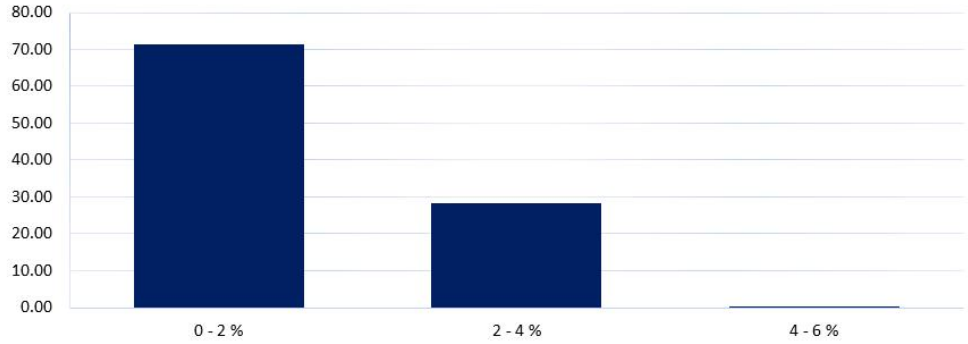
Expected Maturity Distribution



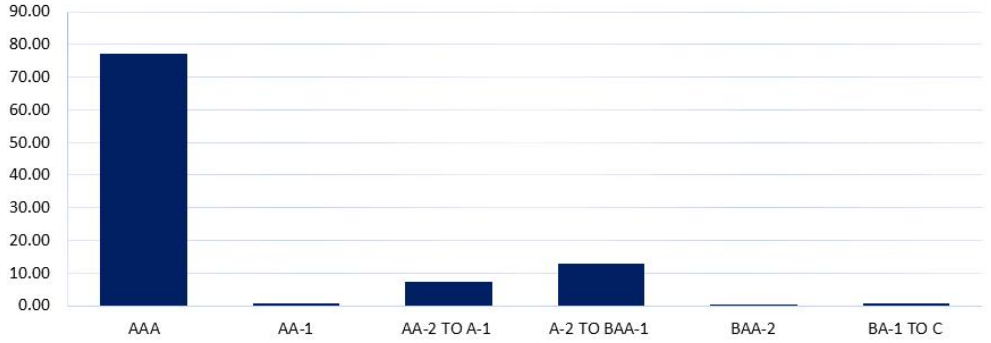
Portfolio Level Characteristics

	POOL 3 ST AGCY INT.
Effective Maturity	0.64
Coupon	1.34
Effective Duration	0.54
Quality Rating (Moody's)	AA-1

Coupon Distribution



Rating Distribution



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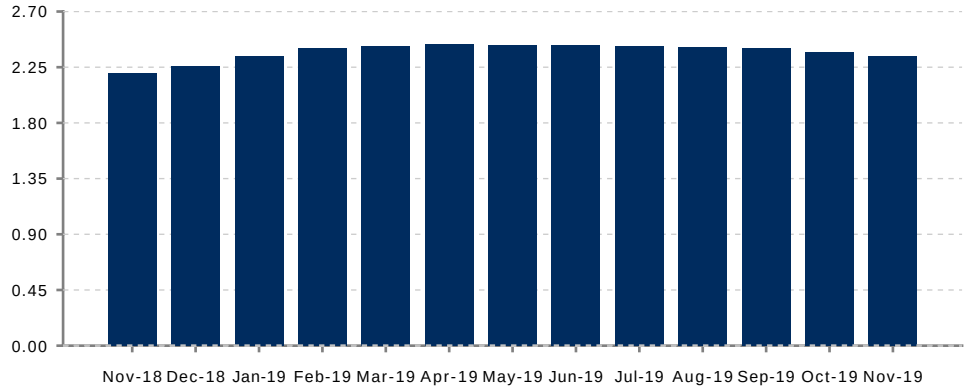
POOL 3 ST AGCY EXT.

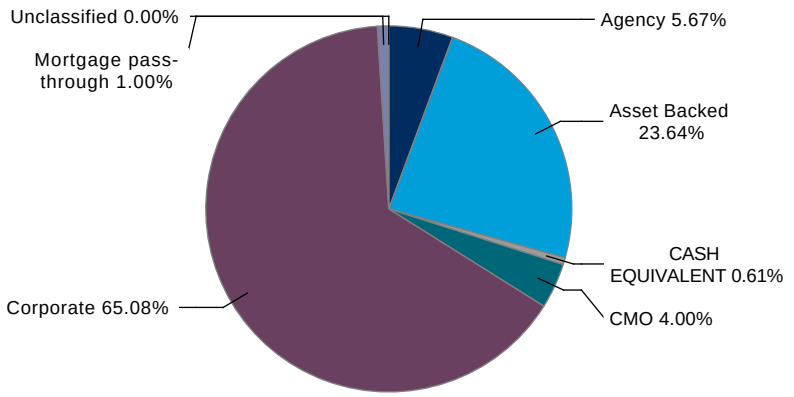
Net Yield



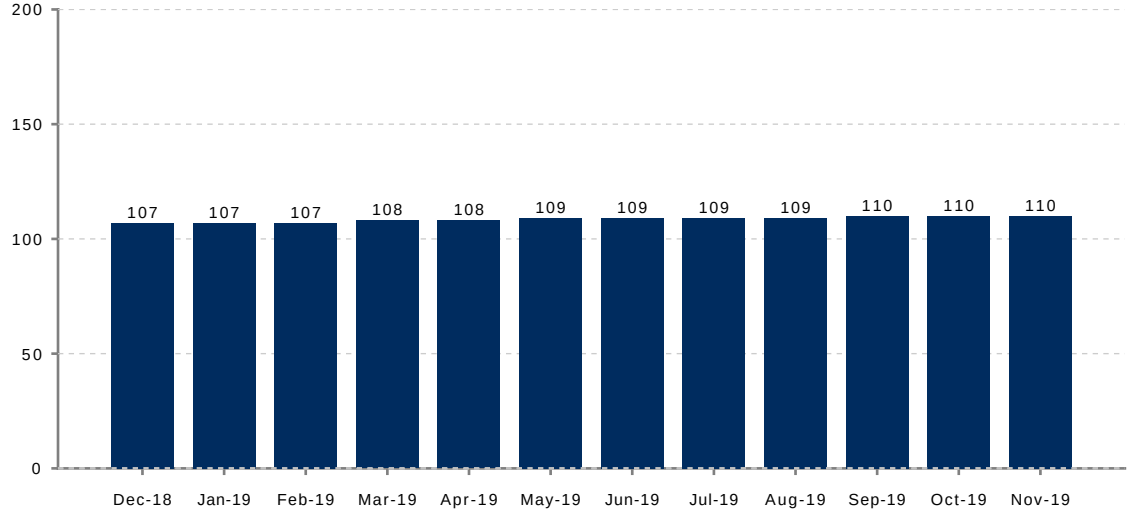
	Current Mth	Prior Mth	1 Year Ago
POOL 3 ST AGCY EXT.	2.34	2.37	2.20

Asset Allocation

	Ending Market Value
POOL 3 ST AGCY EXT.	110,061,740



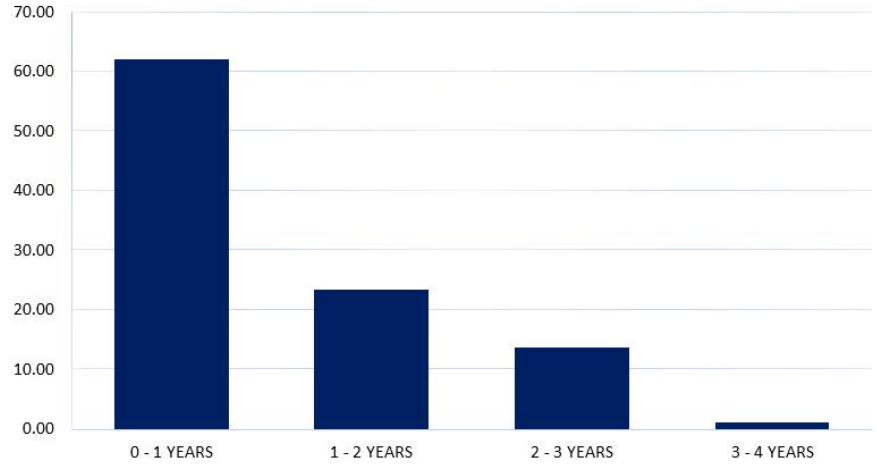
Net Asset Values over Time ($MM)



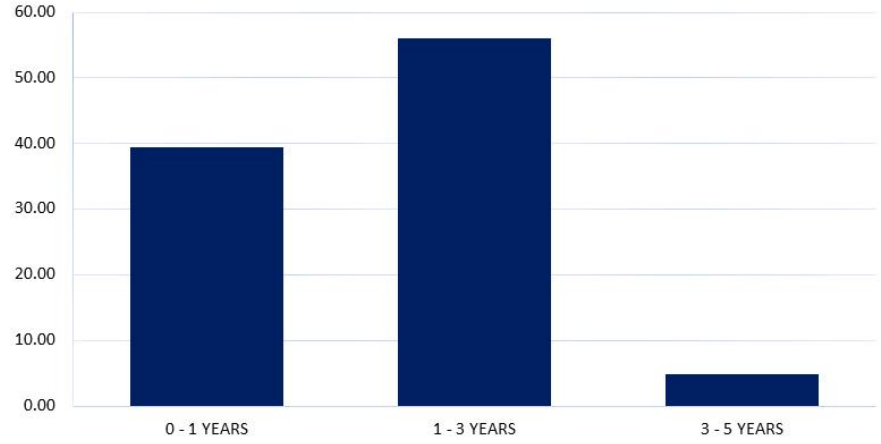
Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY EXT.		
PACCAR FINANCIAL CORP	2,084,355	1.89
CISCO SYSTEMS INC	2,029,472	1.84
FREDDIE MAC	2,012,502	1.83
FREDDIE MAC	1,998,541	1.82
FHLMC MULTIFAMILY STRUCTURED P	1,958,808	1.78
BANK OF AMERICA CREDIT CARD TR	1,950,513	1.77
TRUIST BANK	1,856,734	1.69
FHLMC MULTIFAMILY STRUCTURED P	1,855,275	1.69
MANUF + TRADERS TRUST CO	1,809,376	1.64
CITIBANK NA	1,757,165	1.60

Duration Distribution



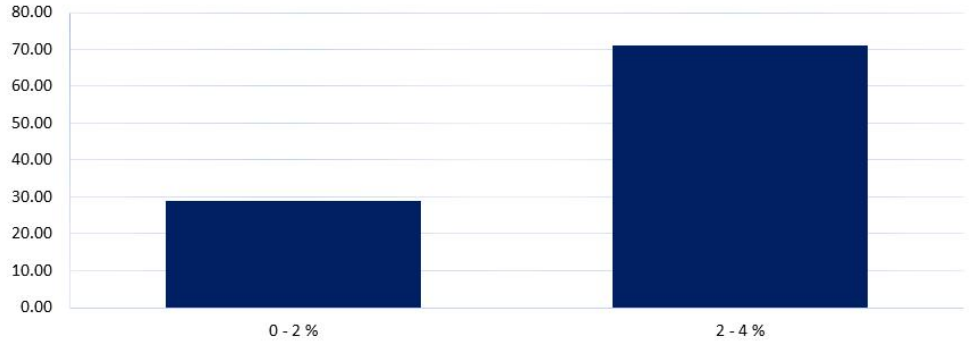
Expected Maturity Distribution



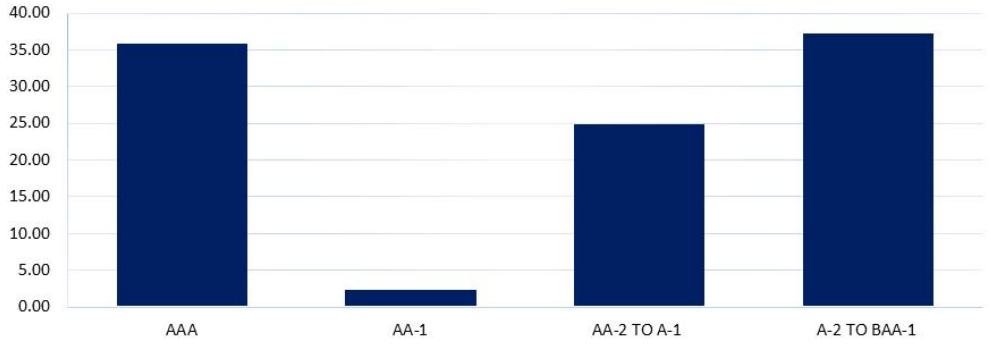
Portfolio Level Characteristics

	POOL 3 ST AGCY EXT.
Effective Maturity	1.37
Coupon	2.32
Effective Duration	0.91
Quality Rating (Moody's)	AA-3

Coupon Distribution



Rating Distribution



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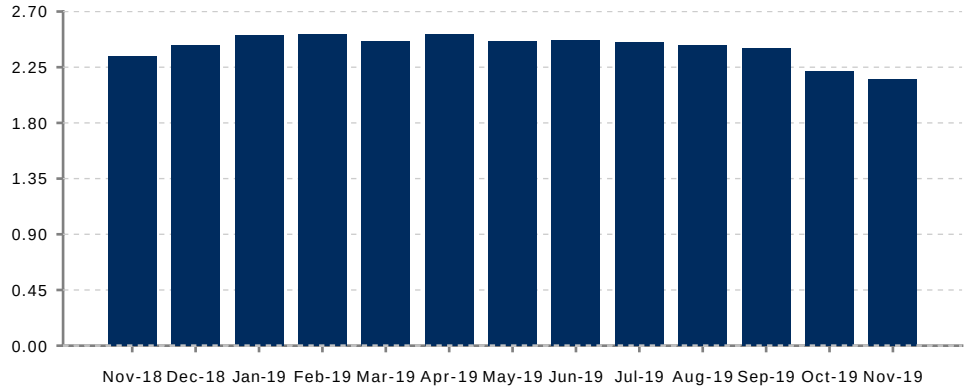
POOL 4 ST AGCY GOV.

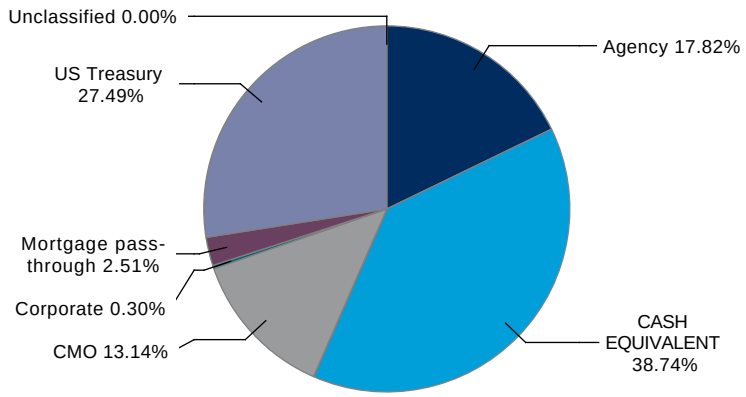
Net Yield



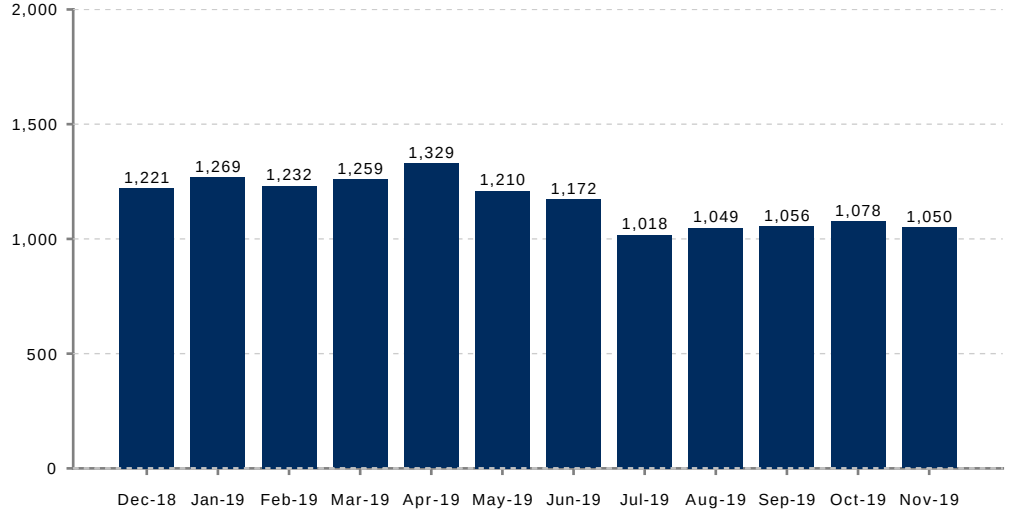
	Current Mth	Prior Mth	1 Year Ago
POOL 4 ST AGCY GOV.	2.15	2.22	2.34

Asset Allocation

	Ending Market Value
POOL 4 ST AGCY GOV.	1,049,801,520



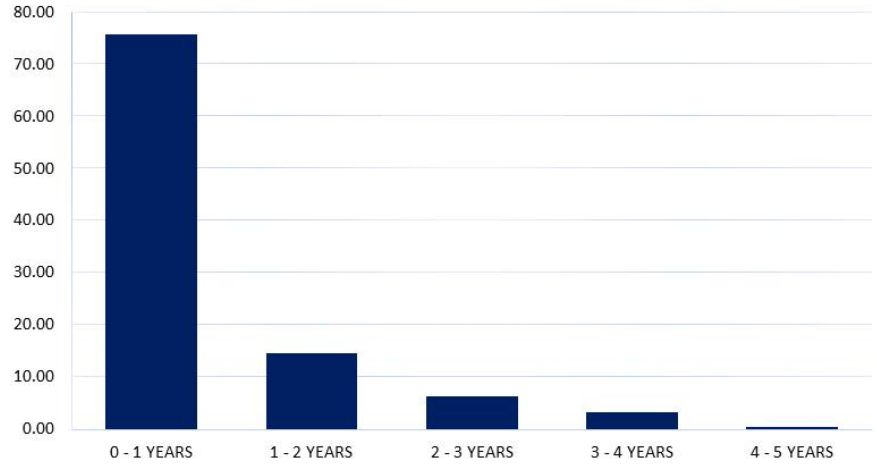
Net Asset Values over Time ($MM)



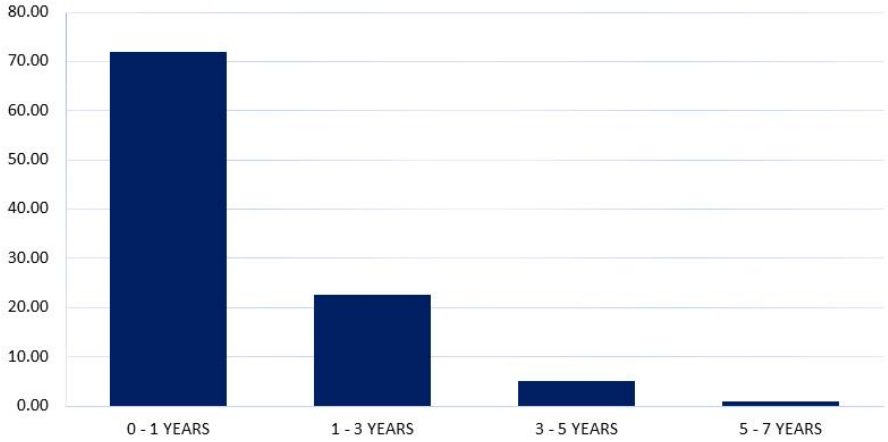
Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 4 ST AGCY GOV.		
CREDIT AGRICOLE REPO	81,655,451	7.78
US TREASURY N/B	65,888,281	6.28
SUNTRUST BKS INC DTC CP GENERIC CUSIP	60,087,500	5.72
US TREASURY N/B	55,735,318	5.31
SOUTH STREET REPO	53,541,932	5.10
CANTOR FITZGERALD REPO	50,034,125	4.77
US TREASURY N/B	40,600,951	3.87
CANTOR FITZGERALD REPO	31,333,946	2.98
US TREASURY N/B	25,436,438	2.42
US TREASURY N/B	25,381,666	2.42

Duration Distribution



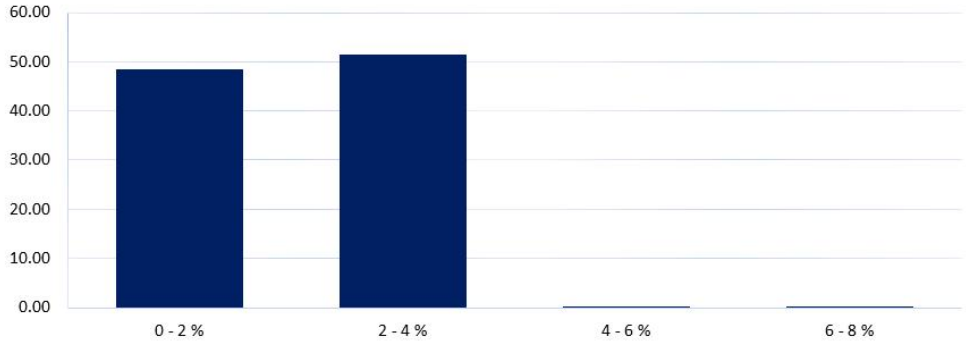
Expected Maturity Distribution



Portfolio Level Characteristics

	POOL 4 ST AGCY GOV.
Effective Maturity	0.86
Coupon	1.91
Effective Duration	0.74
Quality Rating (Moody's)	AAA

Coupon Distribution



Rating Distribution

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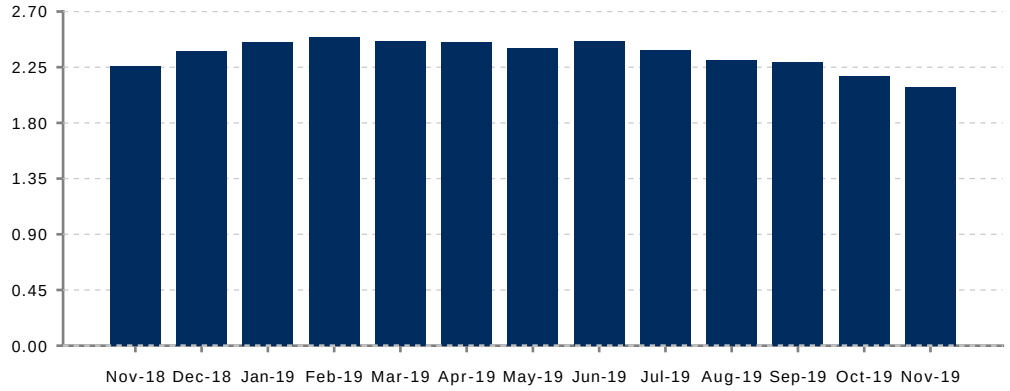
POOL 10 ST OPERATING INT

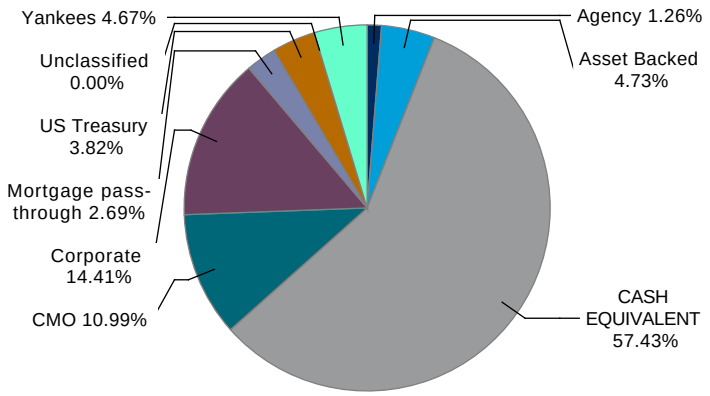
Net Yield



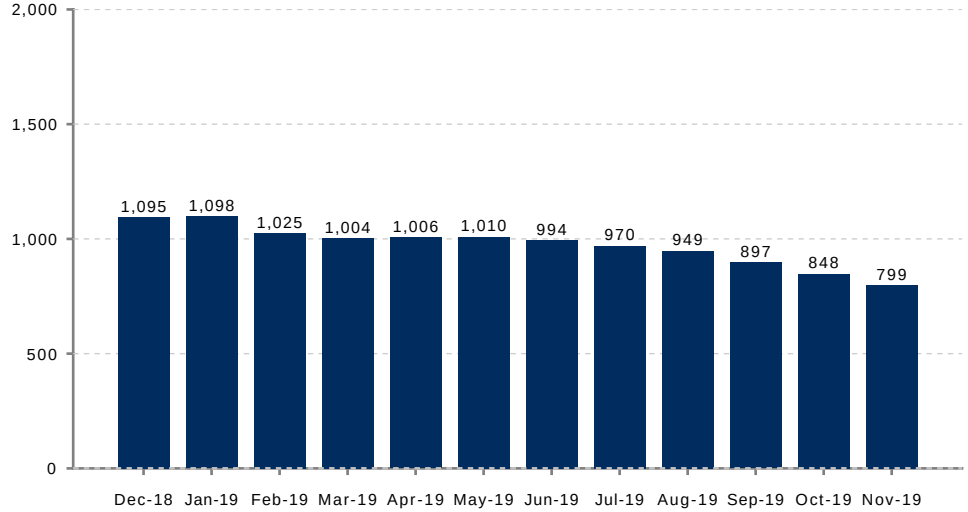
	Current Mth	Prior Mth	1 Year Ago
POOL 10 ST OPER INT	2.09	2.18	2.26

Asset Allocation

	Ending Market Value
POOL 10 ST OPER INT	798,928,191



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPER INT		
CANTOR FITZGERALD REPO	55,088,458	6.90
CROWN POINT CAP CO.	25,033,003	3.13
VICTORY RECEIVABLES	24,944,500	3.12
ATLANTIC ASSET SECUR	24,833,313	3.11
BEDFORD ROW FDG CORP	20,029,173	2.51
GLENCOVE FDG DAC/LLC	20,020,140	2.51
STARBIRD FDG. CORP	20,014,246	2.51
CONCORD MIN CPTL CO	19,999,094	2.50
THUNDER BAY FNDNG LLC	19,998,628	2.50
HALKIN FINANCE LLC USC	19,916,444	2.49

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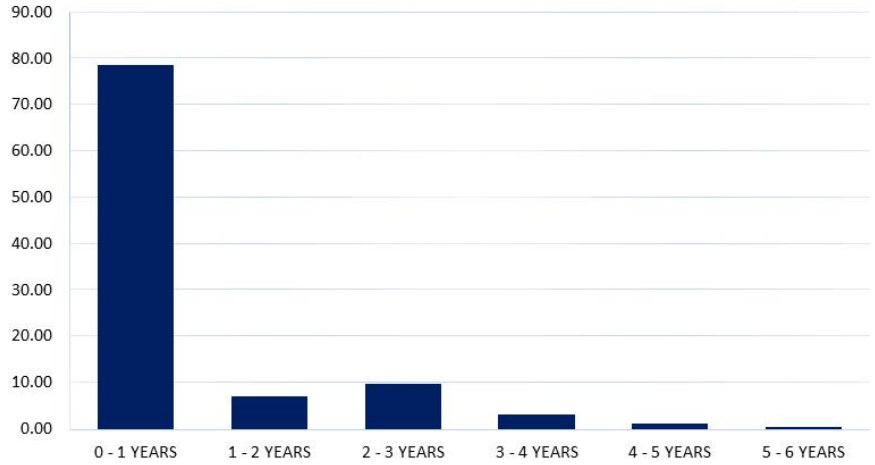
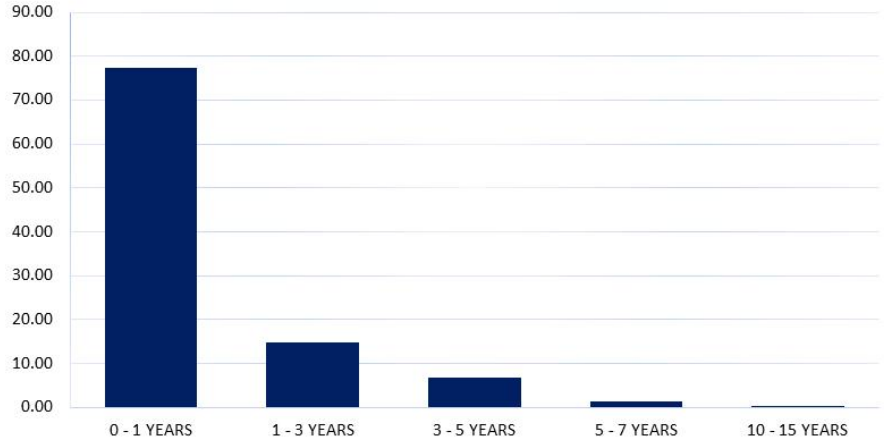
POOL 10 ST OPERATING INT

Duration Distribution



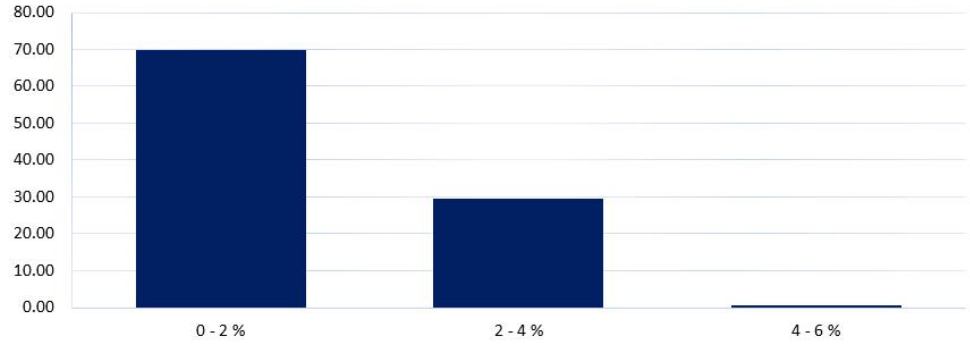
Expected Maturity Distribution



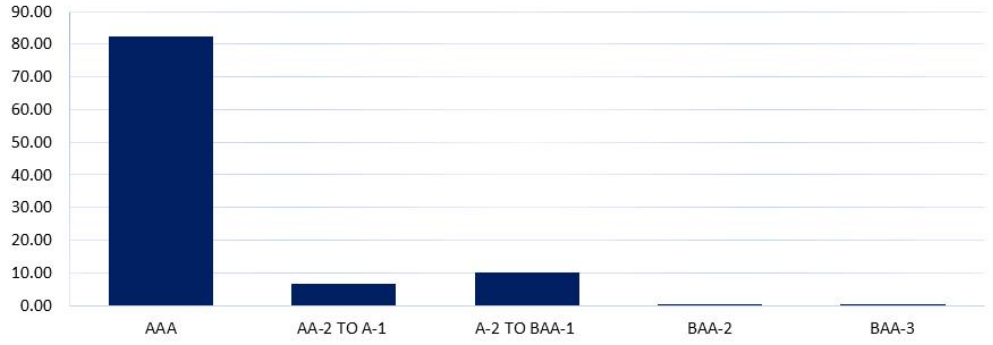
Portfolio Level Characteristics

	POOL 10 ST OPERATING INT
Effective Maturity	0.85
Coupon	1.11
Effective Duration	0.72
Quality Rating (Moody's)	AA-1

Coupon Distribution



Rating Distribution



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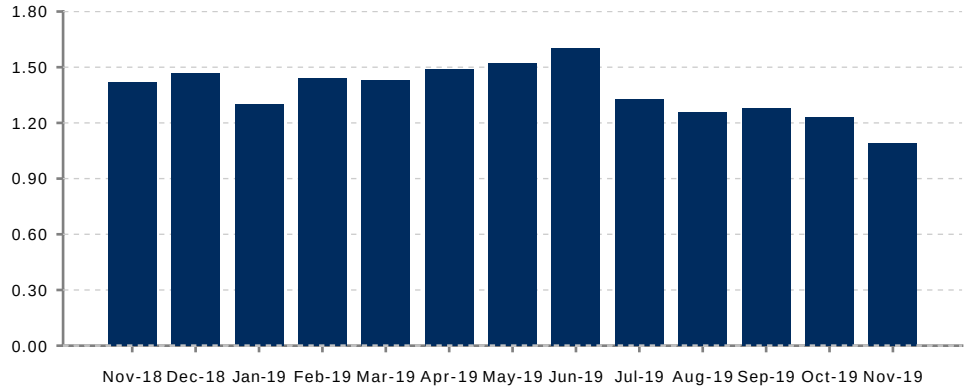
POOL 10 ST OPERATING Ext

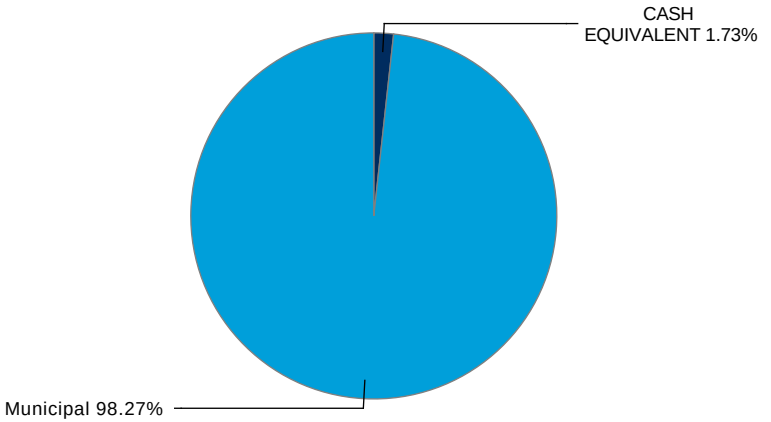
Net Yield



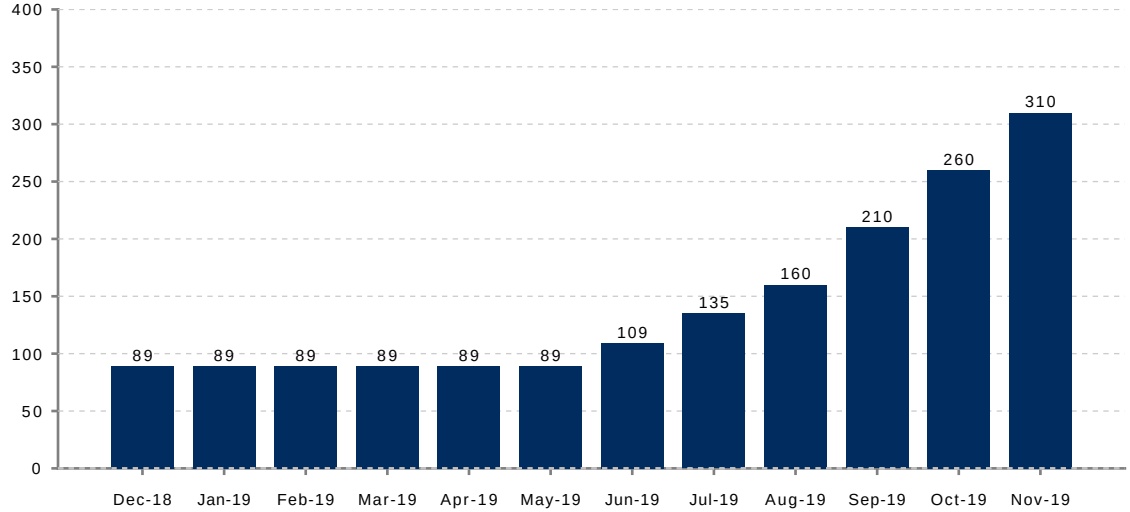
	Current Mth	Prior Mth	1 Year Ago
POOL 10 ST OPERATING	1.09	1.23	1.42

Asset Allocation

	Ending Market Value
POOL 10 ST OPERATING	310,414,914



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPERATING		
ARIZONA ST HLTH FACS A	12,010,711	3.87
LOUDOUN CNTY VA INDL	11,900,808	3.83
IOWA ST FIN AUTH REVEN	11,220,034	3.61
WISCONSIN ST	11,104,201	3.58
CHARLESTON CNTY SC S	10,085,902	3.25
DISTRICT OF COLUMBIA R	10,079,154	3.25
TEXAS ST	9,274,175	2.99
LOWER NECHES VLY TX A	9,008,216	2.90
MISSISSIPPI ST BUSINESS	9,008,154	2.90
PENNSYLVANIA ST TURNP	9,008,048	2.90

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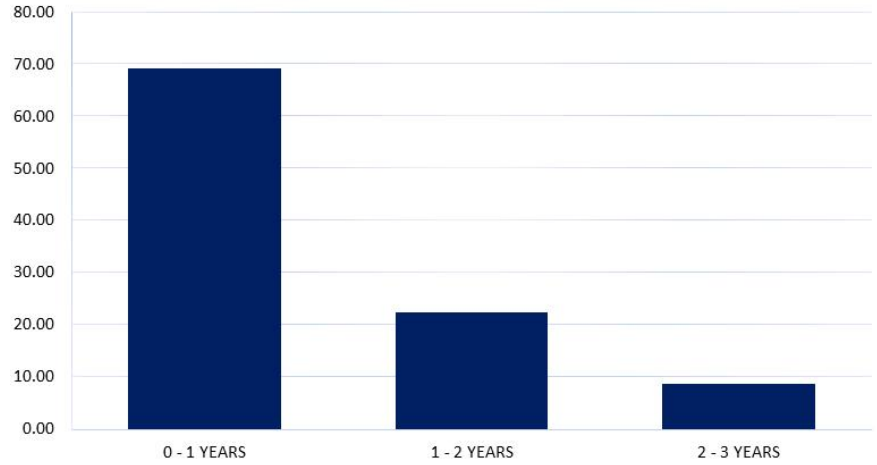
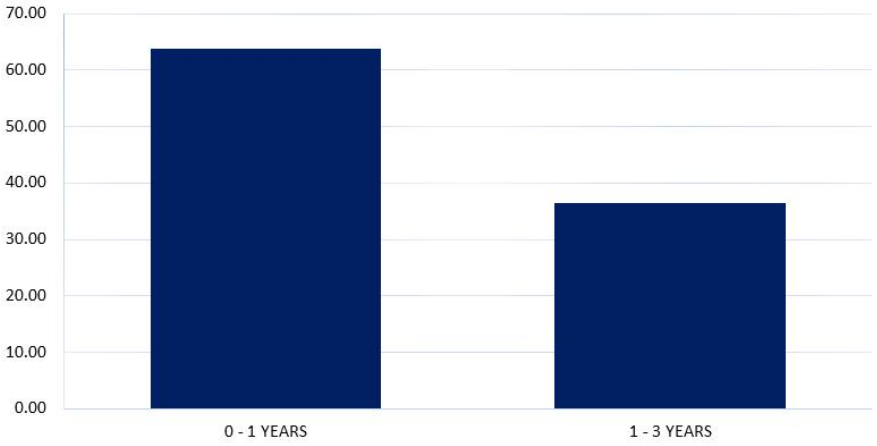
POOL 10 ST OPERATING Ext

Duration Distribution



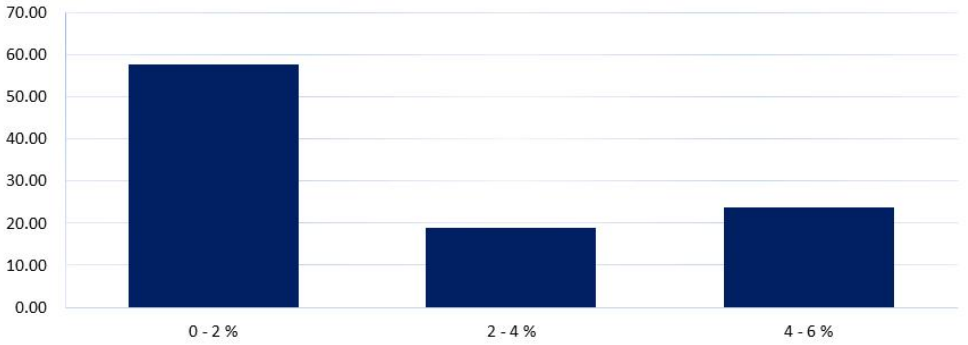
Expected Maturity Distribution



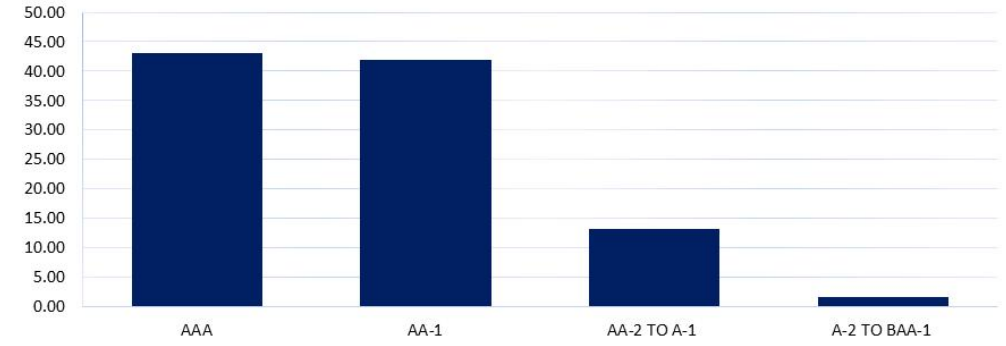
Portfolio Level Characteristics

	POOL 10 ST OPERATING
Effective Maturity	0.65
Coupon	2.73
Effective Duration	0.63
Quality Rating (Moody's)	AA-1

Coupon Distribution



Rating Distribution



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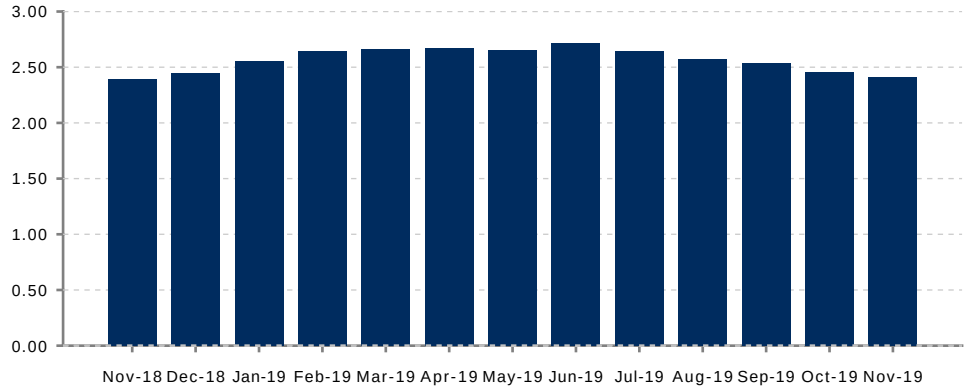
POOL 12 CAWCD MED TRM

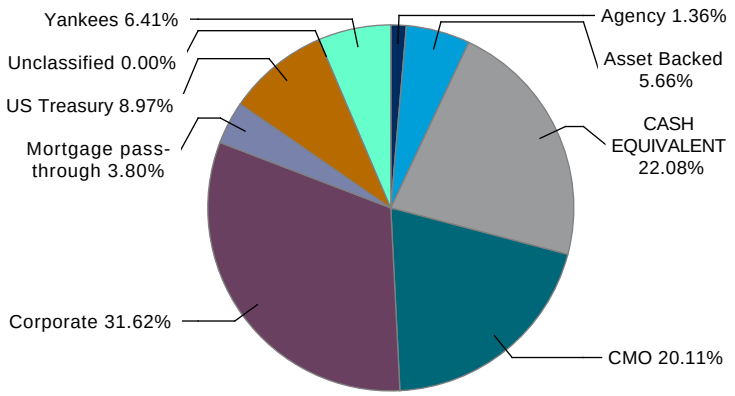
Net Yield



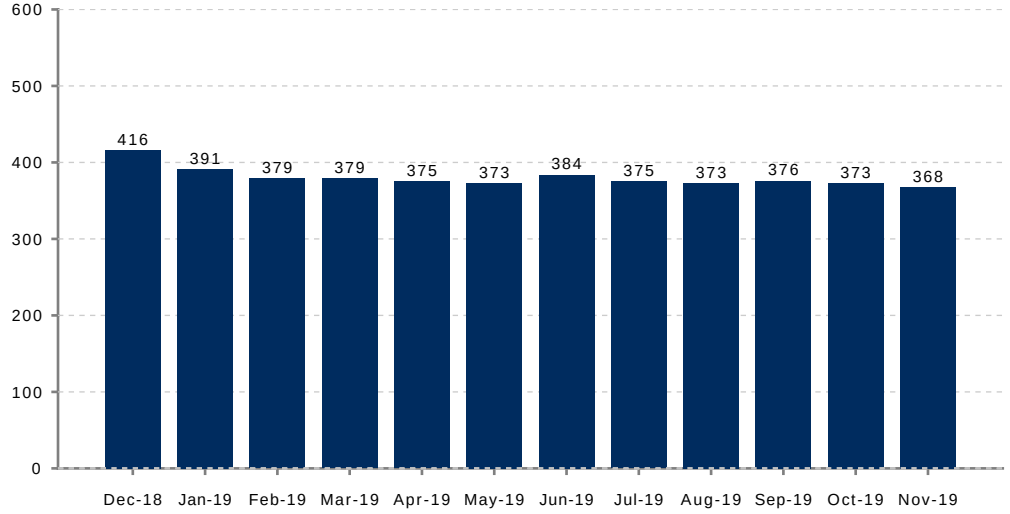
	Current Mth	Prior Mth	1 Year Ago
POOL 12 CAWCD MED TRM	2.41	2.46	2.39

Asset Allocation

	Ending Market Value
POOL 12 CAWCD MED TRM	368,300,155



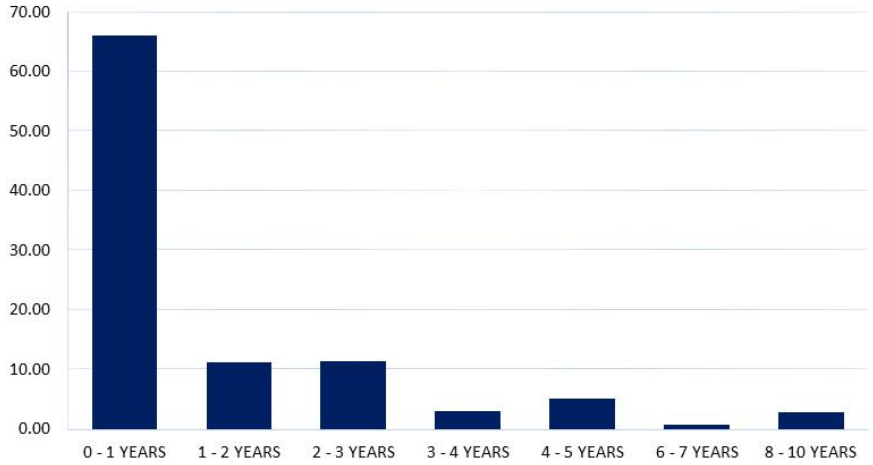
Net Asset Values over Time ($MM)



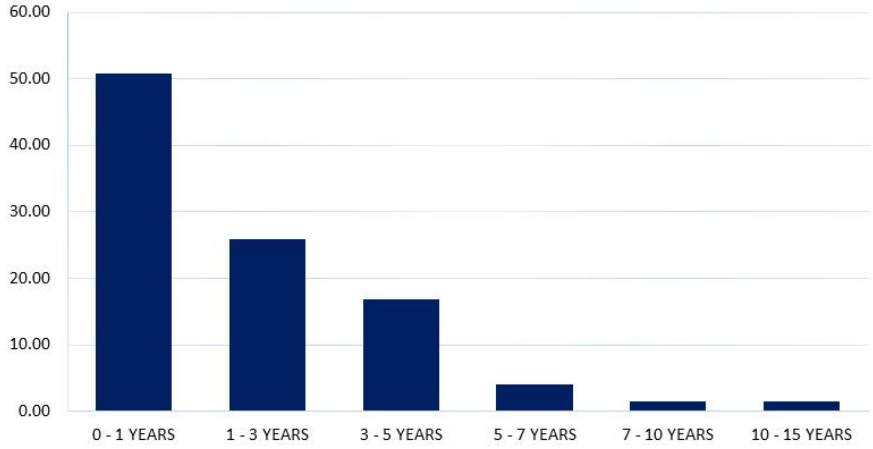
Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 12 CAWCD MED TRM		
CANTOR FITZGERALD REPO	12,502,181	3.39
US TREASURY N/B	10,129,954	2.75
CANTOR FITZGERALD REPO	10,016,083	2.72
CROWN POINT CAP CO.	10,013,201	2.72
TREASURY BILL	9,978,089	2.71
WI TREASURY SEC	7,641,746	2.07
SHEFFIELD RECEIVABLE	5,985,733	1.63
GOVERNMENT NATIONAL MORTGAGE A	5,925,891	1.61
BANK OF AMERICA CORP	5,560,077	1.51
JP MORGAN CHASE BANK NA	5,320,940	1.44

Duration Distribution



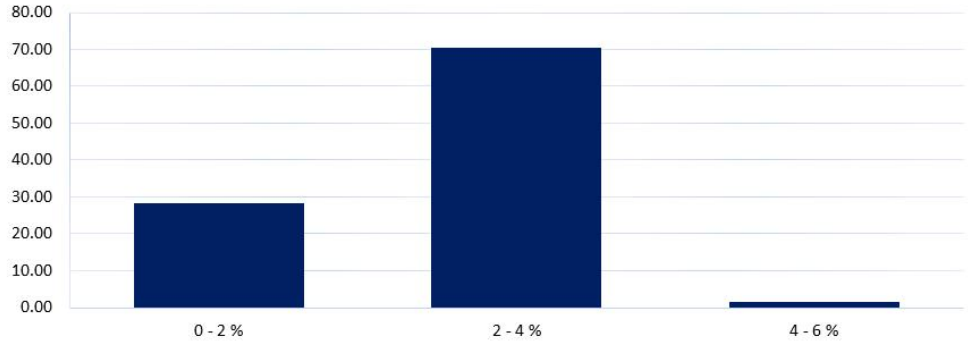
Expected Maturity Distribution



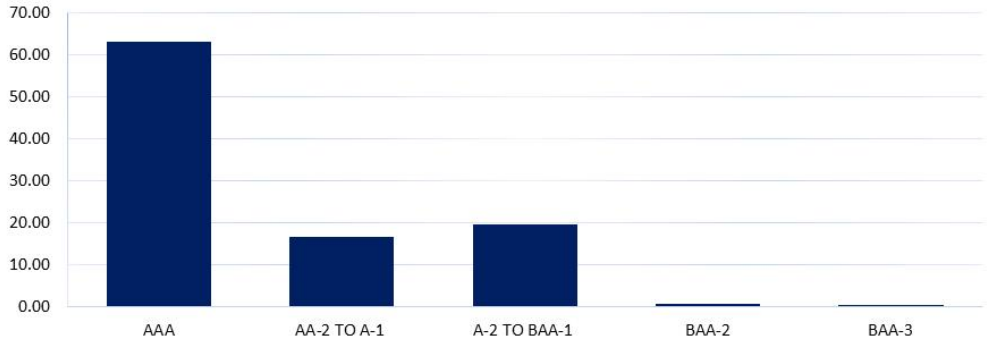
Portfolio Level Characteristics

	POOL 12 CAWCD MED TRM
Effective Maturity	1.86
Coupon	2.34
Effective Duration	1.17
Quality Rating (Moody's)	AA-2

Coupon Distribution



Rating Distribution



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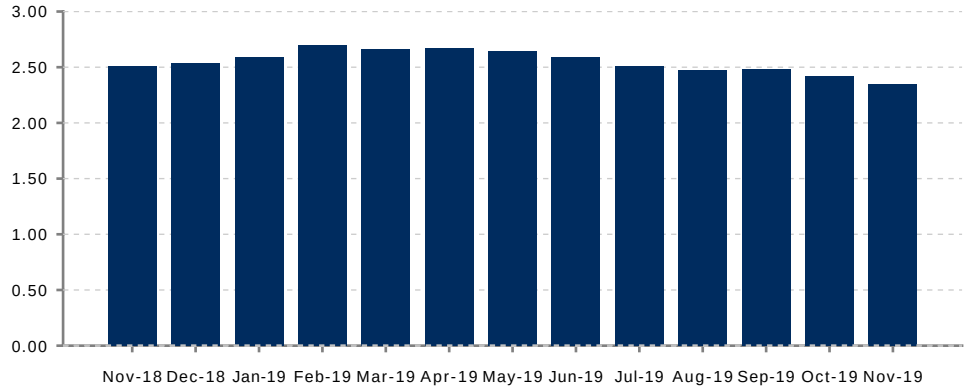
POOL 16 ECDHB

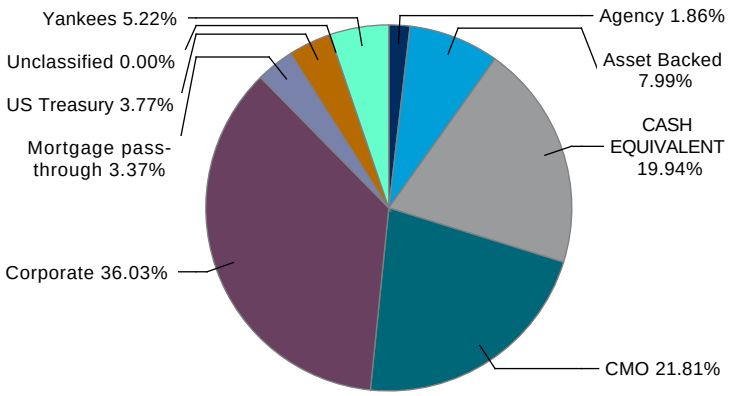
Net Yield



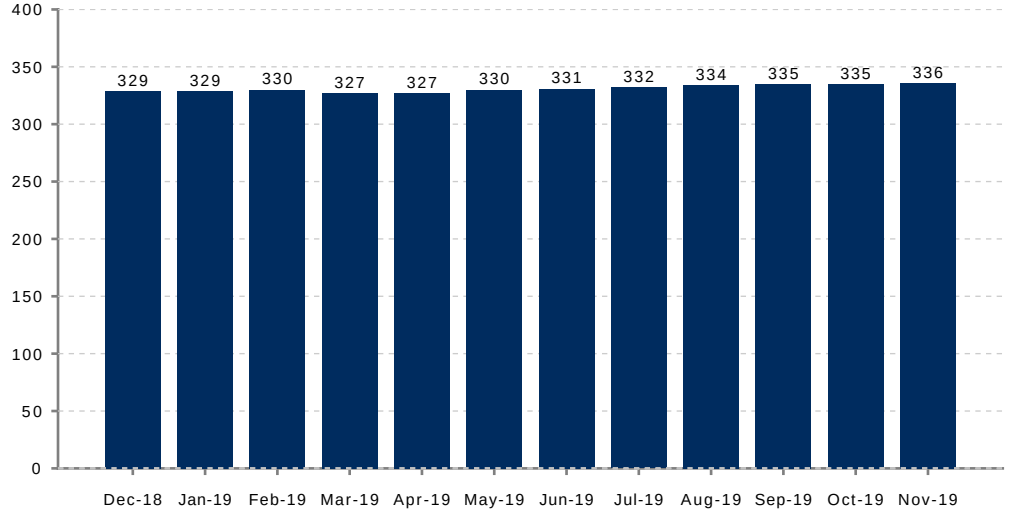
	Current Mth	Prior Mth	1 Year Ago
POOL 16 ECDHB	2.35	2.42	2.51

Asset Allocation

	Ending Market Value
POOL 16 ECDHB	335,679,048



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 16 ECDHB		
CANTOR FITZGERALD REPO	12,002,093	3.58
CANTOR FITZGERALD REPO	10,016,083	2.98
CEDAR SPRING CPTL CO	9,999,547	2.98
BANK OF AMERICA CORP	5,453,930	1.62
FANNIE MAE	5,401,084	1.61
JP MORGAN CHASE BANK NA	5,321,942	1.59
BANK OF NY MELLON CORP	5,255,392	1.57
BRISTOL MYERS SQUIBB CO	5,235,135	1.56
BOEING CO	5,201,207	1.55
AMERICAN HONDA FINANCE	5,130,392	1.53

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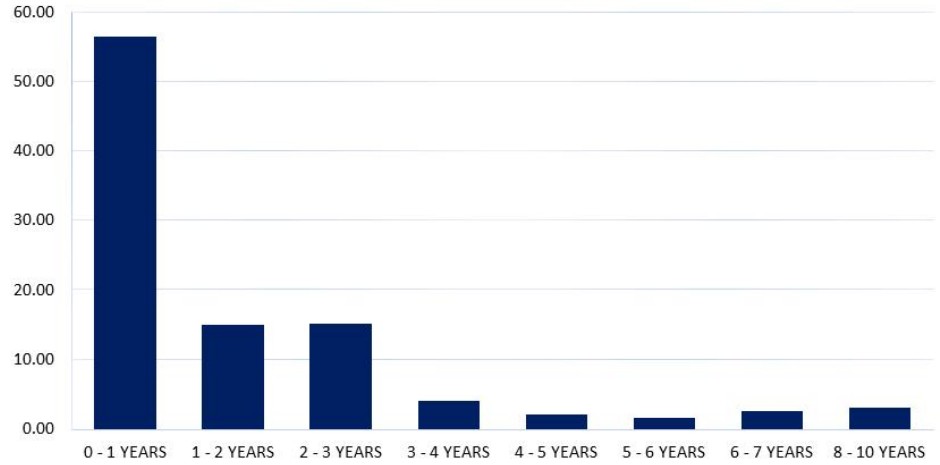
POOL 16 ECDHB

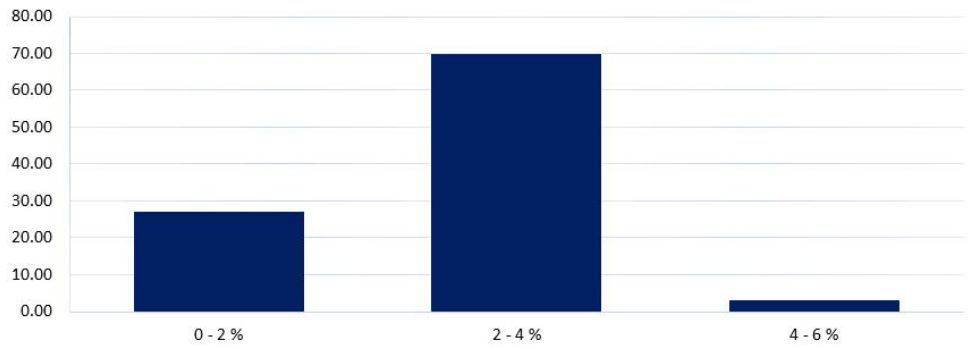
Duration Distribution



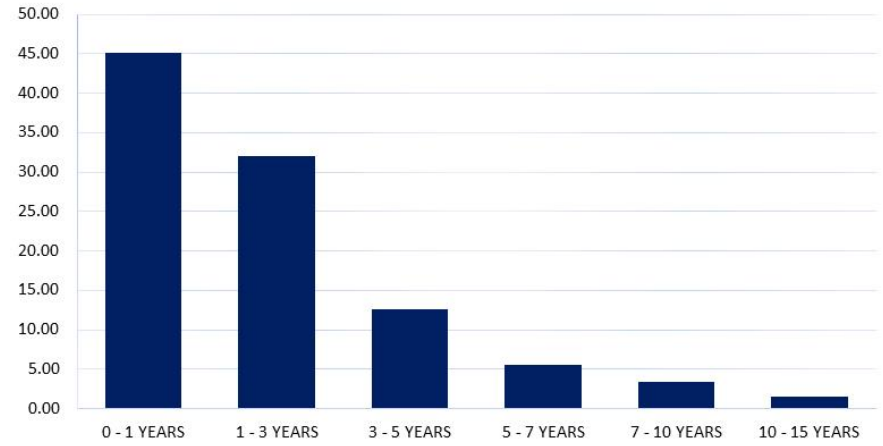
Portfolio Level Characteristics

	POOL 16 ECDHB
Effective Maturity	2.07
Coupon	2.51
Effective Duration	1.40
Quality Rating (Moody's)	AA-2

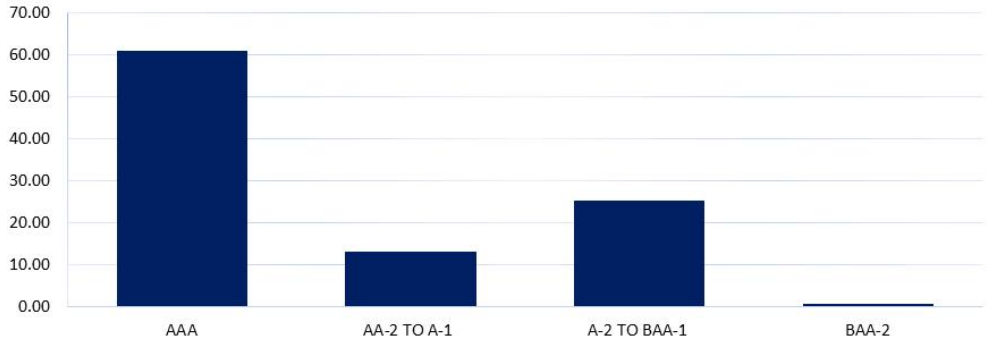
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



LGIP & LGIP- GOV
PORTFOLIO YIELD ANALYSIS
NOVEMBER 2019

NET EARNINGS

FUND	DESCRIPTION	Current Month 11/30/19	Prior Month 10/31/19	Prior Year 11/30/18	Net Asset Value Per Share
5	LGIP	2,850,972	2,642,693	2,993,976	1.0000
7	LGIP - GOV (1)	2,361,966	2,284,376	2,236,248	1.0000
	TOTAL LGIP & LGIP-GOV	5,212,939	4,927,068	5,230,224	

YIELDS

	MONTHLY	Current Month 11/30/19	Prior Month 10/31/19	Prior Year 11/30/18
5	LGIP (NET)	1.81%	2.00%	2.26%
	S&P LGIP Index	1.85%	2.02%	2.16%
7	LGIP - GOV (NET) (1)	1.69%	1.94%	2.17%
	Trailing 3-mo T-bill	1.71%	1.85%	2.26%
	FISCAL YEAR TO DATE			
5	LGIP (NET)	2.14%	2.22%	2.14%
	S&P LGIP Index	2.12%	2.18%	2.02%
7	LGIP - GOV (NET) (1)	2.05%	2.14%	1.98%
	Trailing 3-mo T-bill	1.98%	2.05%	2.07%

(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
NOVEMBER 2019

NET EARNINGS

FUND	DESCRIPTION	Current Month 11/30/19	Prior Month 10/31/19	Prior Year 11/30/18	Net Asset Value Per Share
500	LGIP - MED TERM POOL	669,644	723,365	681,487	1.0341
700	LGIP - FF&C MED TERM POOL	205,066	227,832	246,808	1.0119
	TOTAL LGIP MEDIUM TERM POOLS	874,710	951,197	928,295	

YIELDS

	MONTHLY	Current Month 11/30/19	Prior Month 10/31/19	Prior Year 11/30/18
500	LGIP - MED TERM (NET)	2.24%	2.32%	2.38%
	20% S&P LGIP Index /	1.82%	1.84%	2.88%
	80% Bloomberg Barclays 1-3 year US Agg			
700	LGIP - FF&C MED TERM (NET)	1.95%	2.00%	2.21%
	20% Trailing 3-mo T-bill /	1.65%	1.65%	2.74%
	80% Barclay 1-3 year UST			
	FISCAL YEAR TO DATE			
500	LGIP - MED TERM (NET)	2.39%	2.42%	2.31%
	20% S&P LGIP Index /	1.93%	1.96%	2.73%
	80% Bloomberg Barclays 1-3 year US Agg			
700	LGIP - FF&C MED TERM (NET)	2.10%	2.13%	1.97%
	20% Trailing 3-mo T-bill /	1.75%	1.77%	2.61%
	80% Bloomberg Barclays 1-3 year UST			

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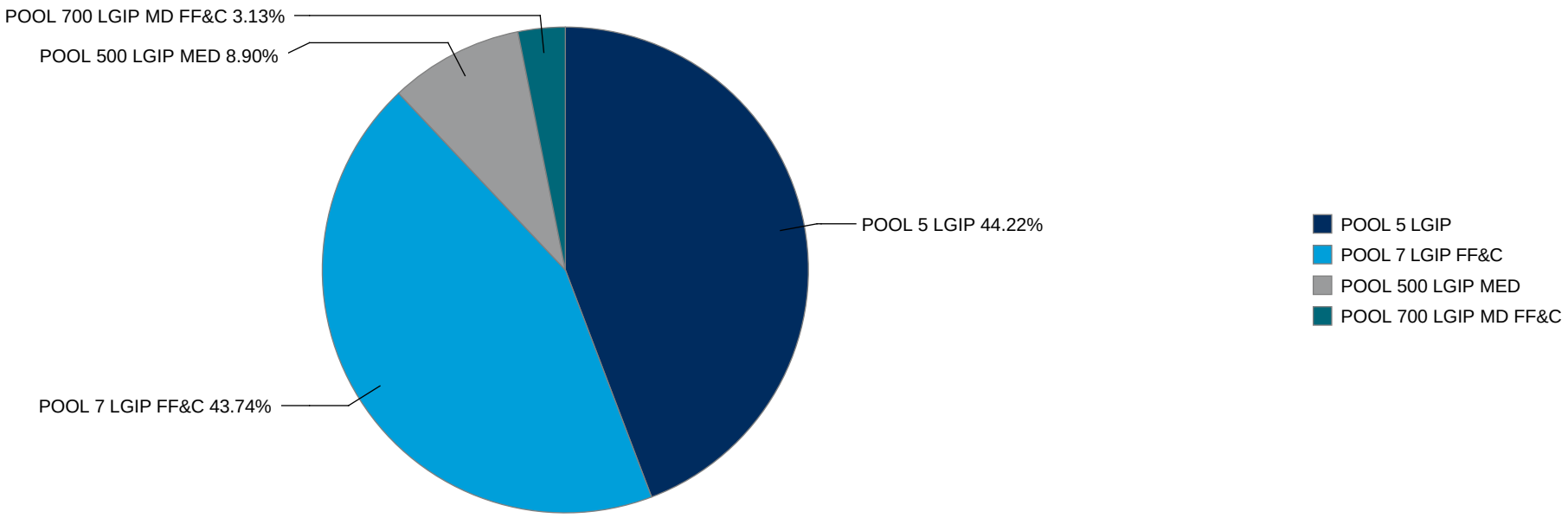
LGIP

Manager Allocation



	Market Value	% of Portfolio
POOL 5 LGIP	1,807,958,725	44.2
POOL 7 LGIP FF&C	1,788,186,603	43.7
POOL 500 LGIP MED	363,919,329	8.9
POOL 700 LGIP MD FF&C	128,124,794	3.1
TOTAL LGIP	4,088,189,451	100.0

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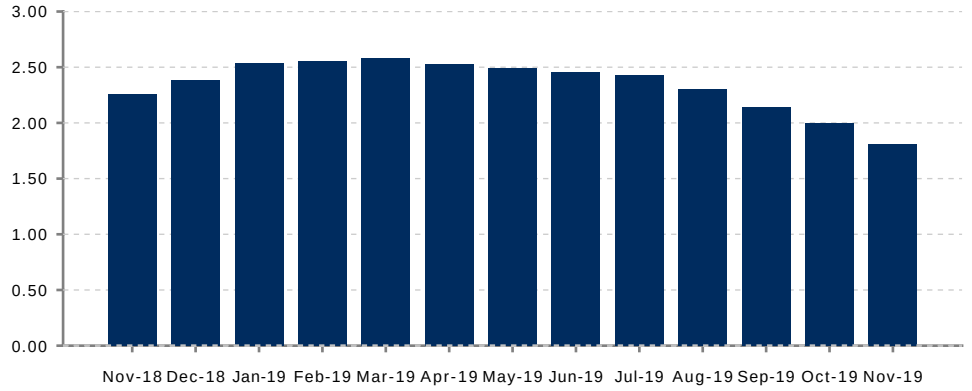
POOL 5 LGIP

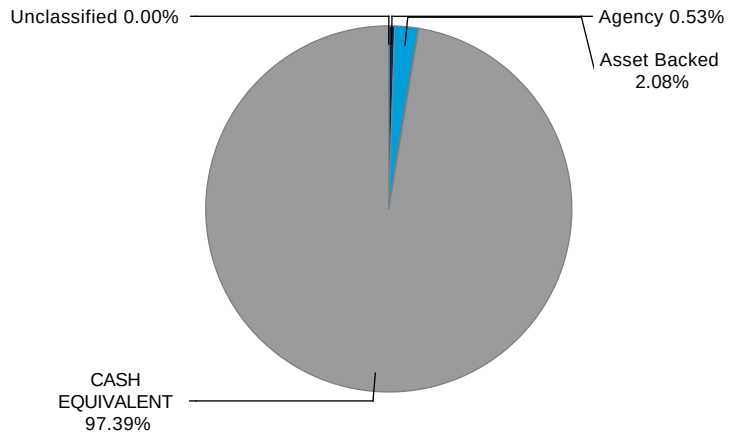
Net Yield



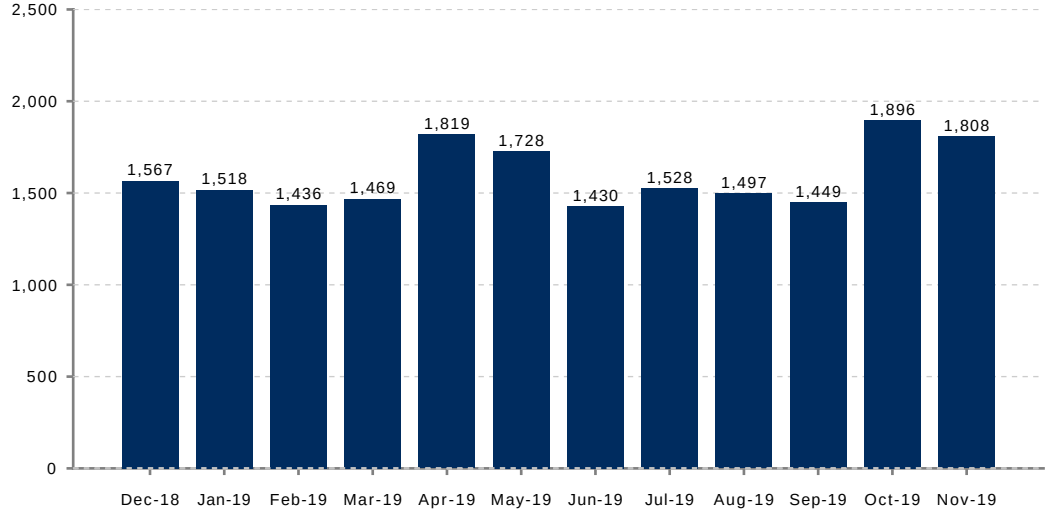
	Current Mth	Prior Mth	1 Year Ago
POOL 5 LGIP	1.81	2.00	2.26

Asset Allocation

	Ending Market Value
POOL 5 LGIP	1,807,958,725



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 5 LGIP		
BANK OF AMERICA REPO	100,008,944	5.53
RBC CAPITAL MARKETS REPO	75,006,583	4.15
TREASURY BILL	29,961,324	1.66
GLENCOVE FDG DAC/LLC	25,005,867	1.38
INSTITUTIONAL SECURED	24,997,556	1.38
ELI LILLY & COMPANY	24,996,667	1.38
INSTITUTIONAL SECURED	24,980,778	1.38
OLD LINE FUNDING LLC	24,909,278	1.38
BEDFORD ROW FDG CORP	23,033,549	1.27
MERCK & CO. INC	22,594,789	1.25

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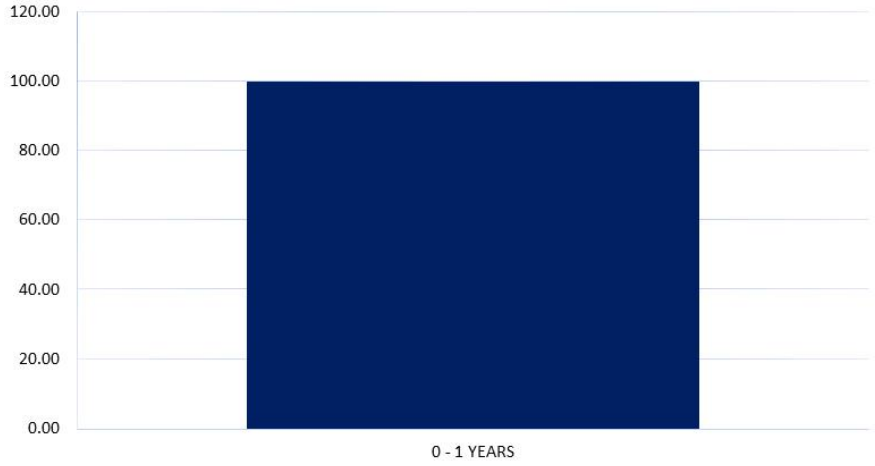
POOL 5 LGIP

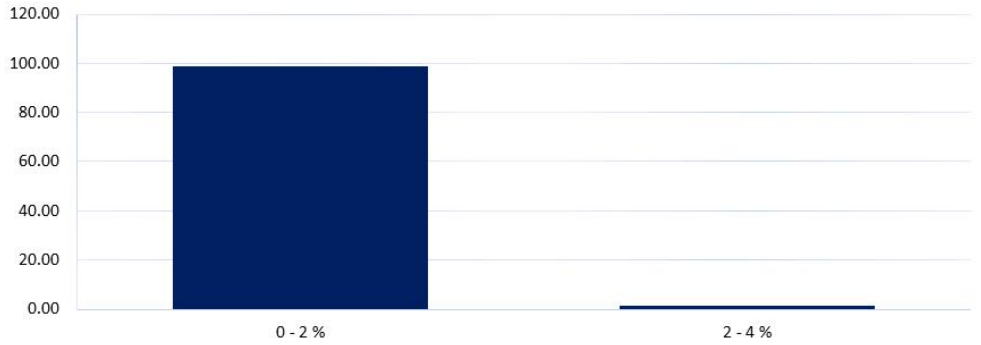
Duration Distribution



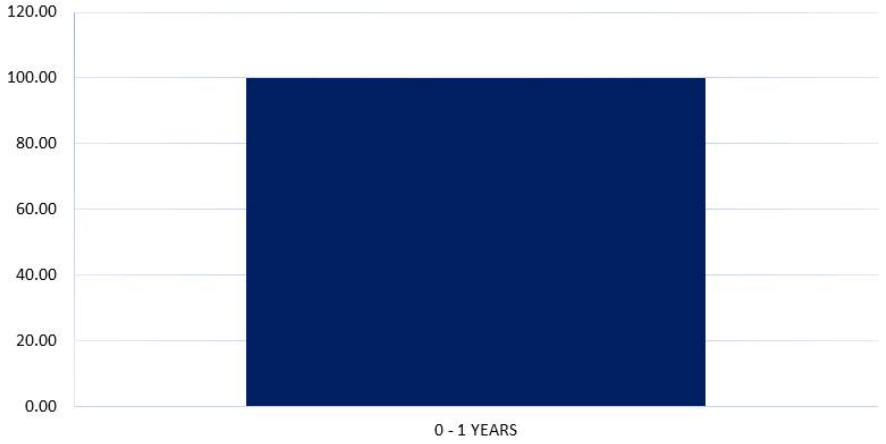
Portfolio Level Characteristics

	POOL 5 LGIP
Effective Maturity	0.12
Coupon	0.05
Effective Duration	0.12
Quality Rating (Moody's)	AAA

Coupon Distribution



Expected Maturity Distribution



Rating Distribution

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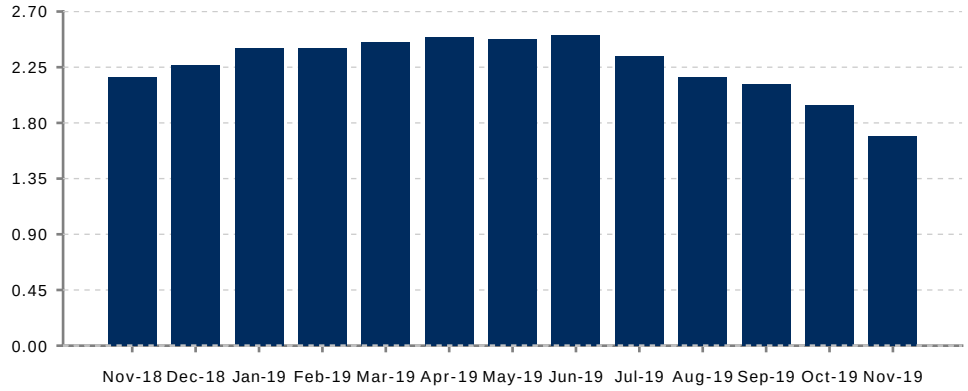
POOL 7 LGIP FF&C

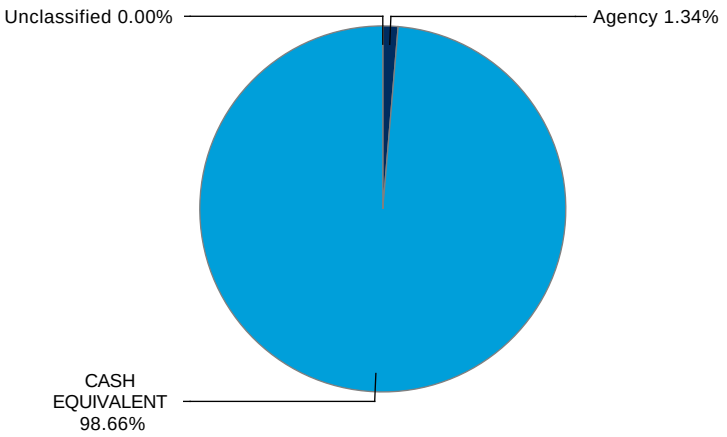
Net Yield



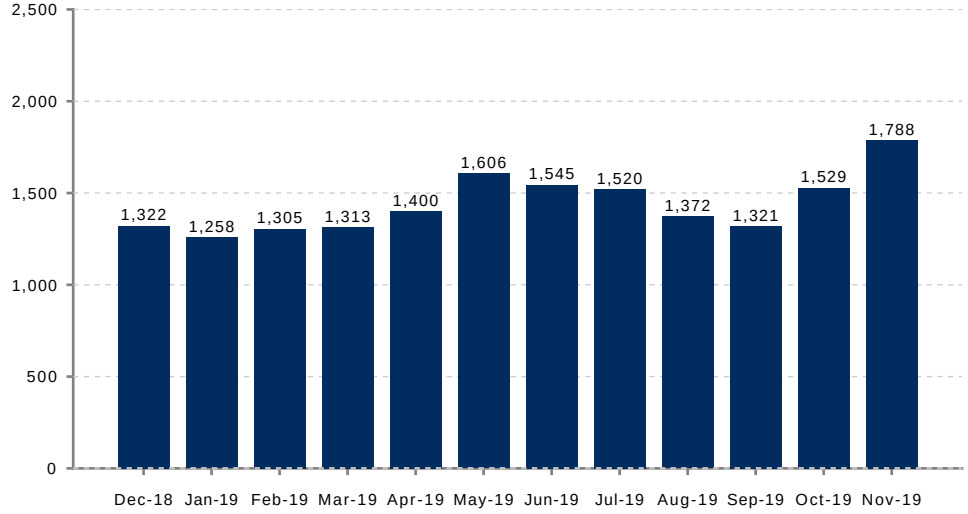
	Current Mth	Prior Mth	1 Year Ago
POOL 7 LGIP FF&C	1.69	1.94	2.17

Asset Allocation

	Ending Market Value
POOL 7 LGIP FF&C	1,788,186,603



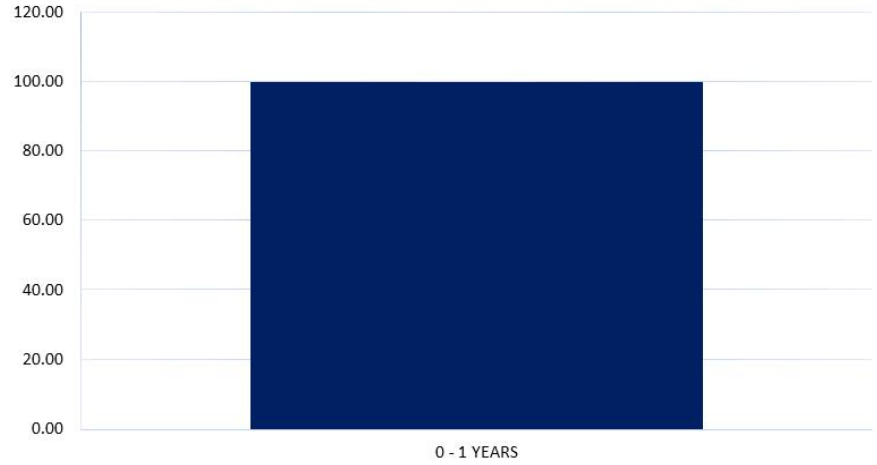
Net Asset Values over Time ($MM)



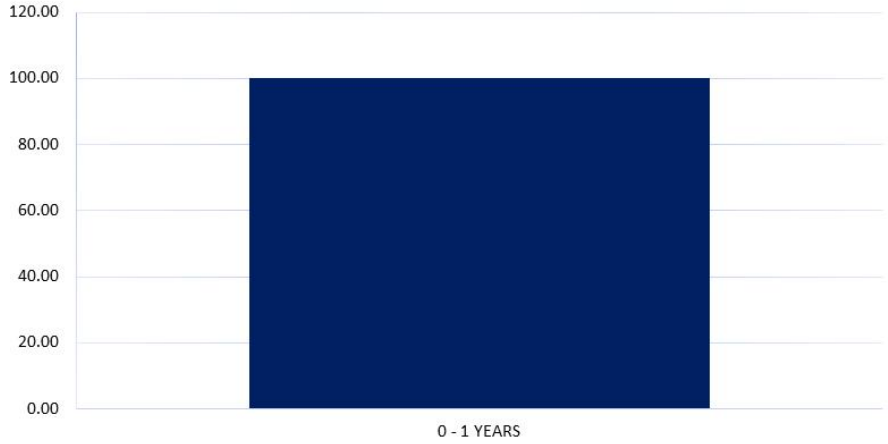
Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 7 LGIP FF&C		
GUGGENHEIM SECURITIES REPO	199,528,488	11.16
TREASURY BILL	109,585,300	6.13
WELLS FARGO REPO	90,018,750	5.03
TREASURY BILL	89,688,500	5.02
TREASURY BILL	79,913,411	4.47
TREASURY BILL	79,826,165	4.46
TREASURY BILL	69,953,496	3.91
TREASURY BILL	69,932,226	3.91
DAIWA CAPITAL MARKETS REPO	68,570,789	3.83
TREASURY BILL	64,903,310	3.63

Duration Distribution



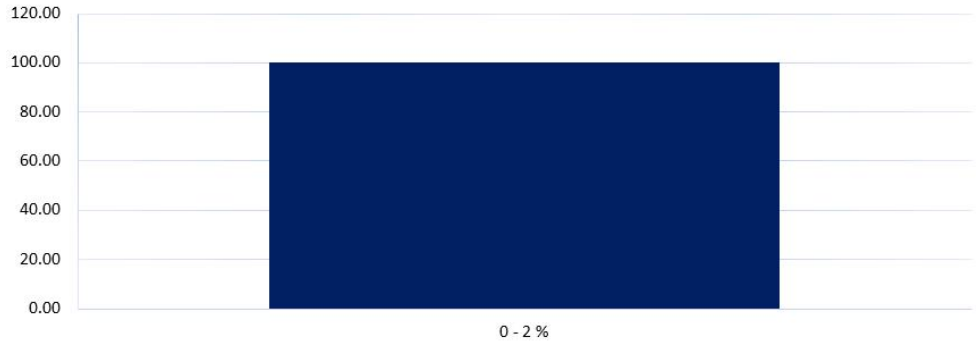
Expected Maturity Distribution



Portfolio Level Characteristics

	POOL 7 LGIP FF&C
Effective Maturity	0.13
Coupon	0.00
Effective Duration	0.13
Quality Rating (Moody's)	AAA

Coupon Distribution



Rating Distribution

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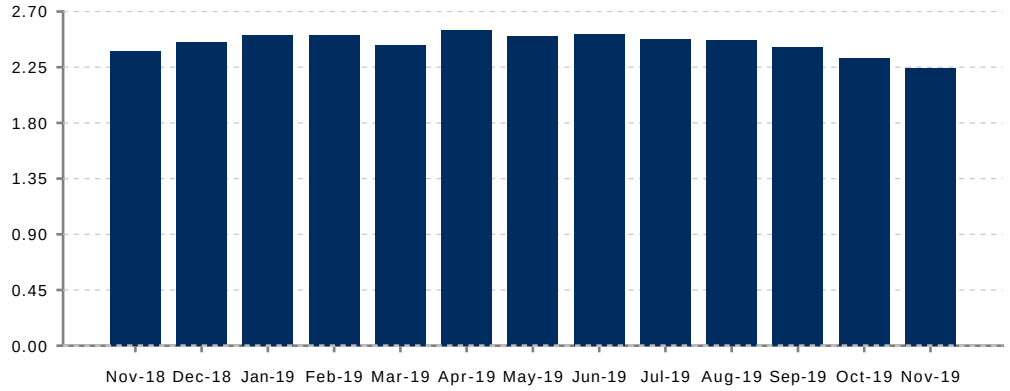
POOL 500 LGIP MED

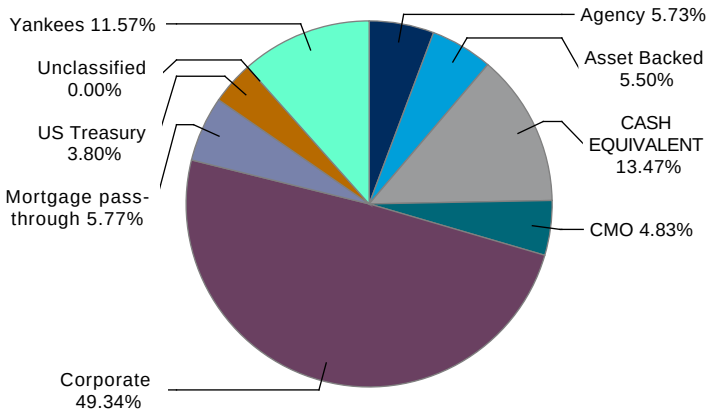
Net Yield



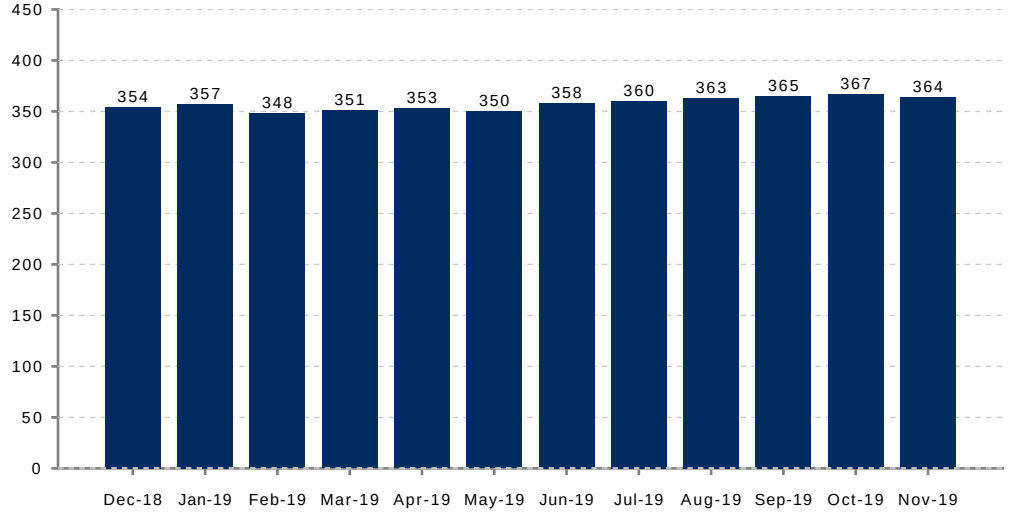
	Current Mth	Prior Mth	1 Year Ago
POOL 500 LGIP MED	2.24	2.32	2.38

Asset Allocation

	Ending Market Value
POOL 500 LGIP MED	363,919,329



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 500 LGIP MED		
CANTOR FITZGERALD REPO	10,016,083	2.75
MICROSOFT CORP	8,044,658	2.21
APPLE INC	7,044,534	1.94
MANUF + TRADERS TRUST CO	7,020,377	1.93
BANK OF AMERICA CORP	5,861,279	1.61
MERCK + CO INC	5,510,970	1.51
US BANCORP	5,107,335	1.40
AMERICAN EXPRESS CO	5,086,906	1.40
EXXON MOBIL CORPORATION	5,057,630	1.39
FEDERAL HOME LOAN BANK	5,056,530	1.39

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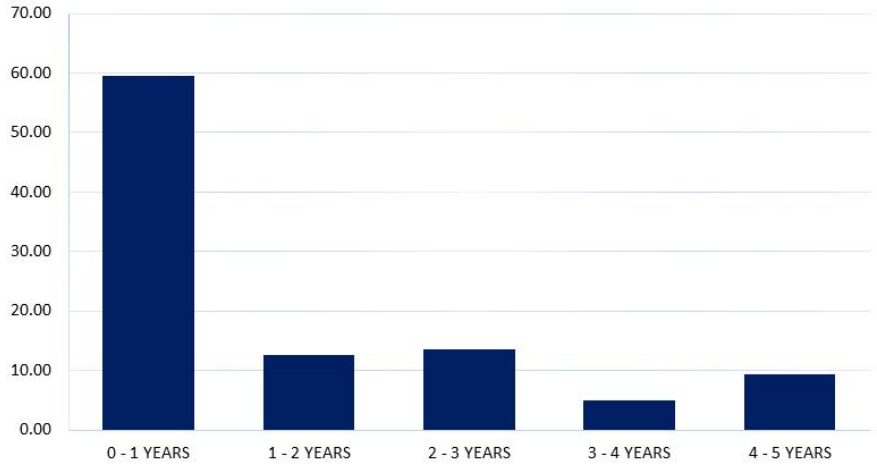
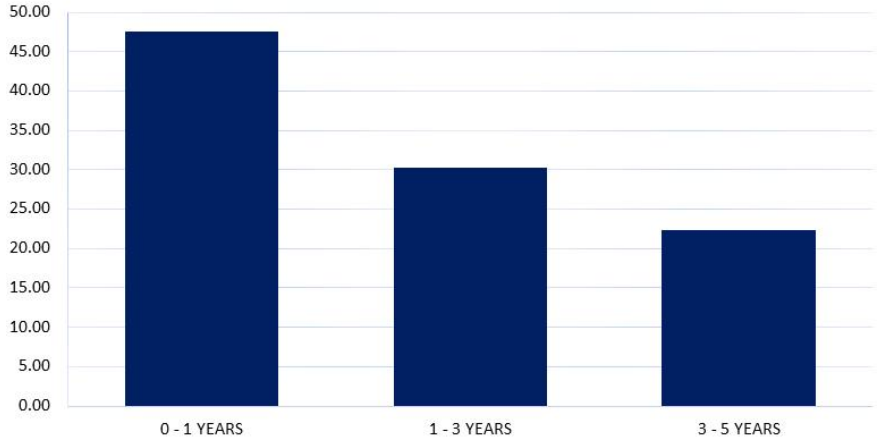
November 30, 2019

POOL 500 LGIP MED

Duration Distribution



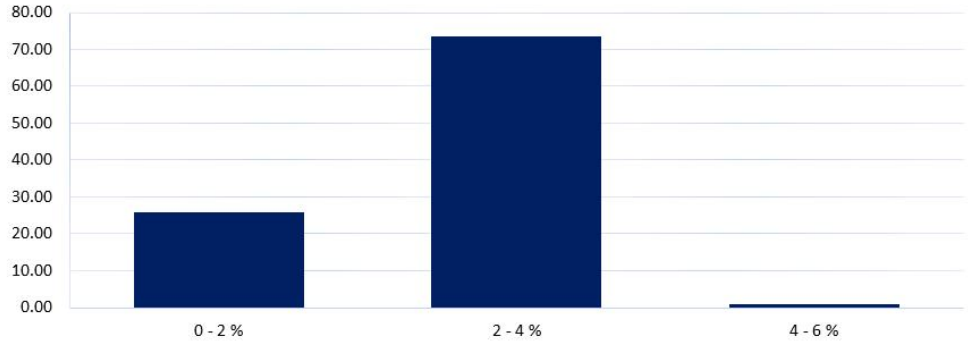
Expected Maturity Distribution



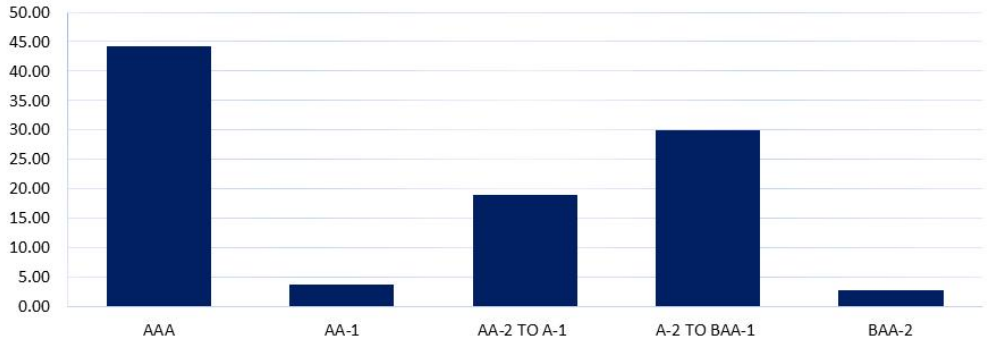
Portfolio Level Characteristics

	POOL 500 LGIP MED
Effective Maturity	1.61
Coupon	2.16
Effective Duration	1.25
Quality Rating (Moody's)	AA-2

Coupon Distribution



Rating Distribution



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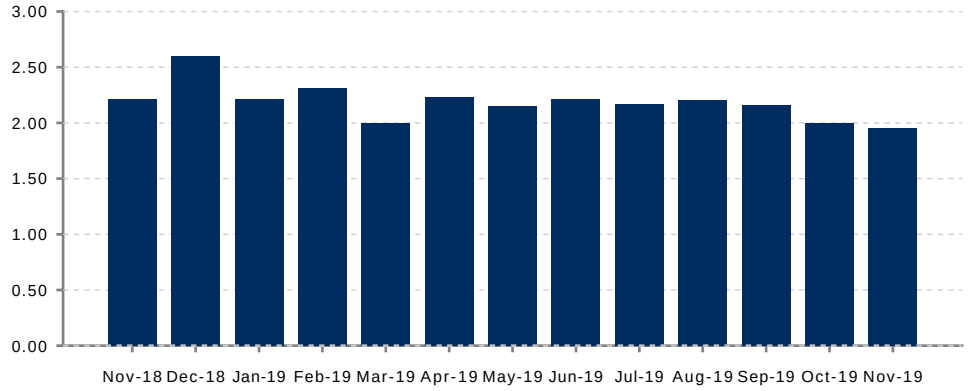
November 30, 2019

POOL 700 LGIP MD FF&C

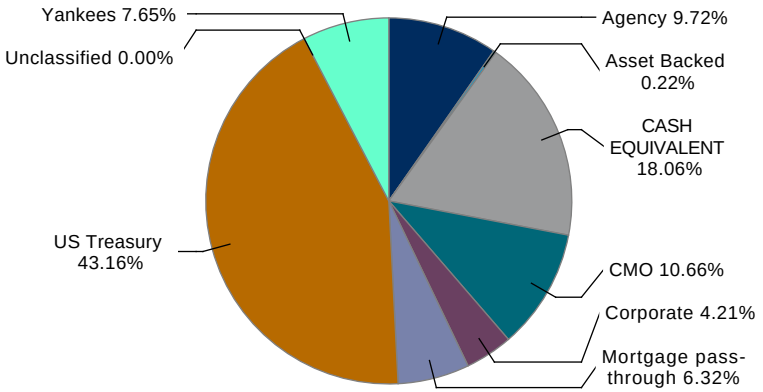
Net Yield



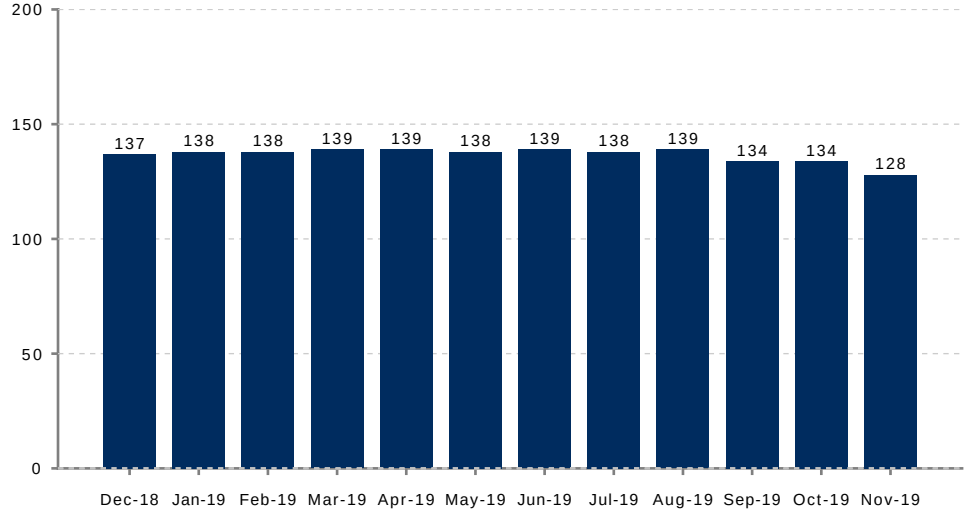
	Current Mth	Prior Mth	1 Year Ago
POOL 700 LGIP MD FF&C	1.95	2.00	2.21

Asset Allocation

	Ending Market Value
POOL 700 LGIP MD FF&C	128,124,794



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 700 LGIP MD FF&C		
US TREASURY N/B	8,060,000	6.29
AID JORDAN	6,336,102	4.95
US TREASURY N/B	6,040,202	4.71
OVERSEAS PRIVATE INV COR	5,268,931	4.11
US TREASURY N/B	5,006,385	3.91
US TREASURY N/B	5,006,048	3.91
TREASURY BILL	4,993,576	3.90
PRIVATE EXP. FUNDING	4,961,875	3.87
US TREASURY N/B	4,061,067	3.17
US TREASURY N/B	4,035,000	3.15

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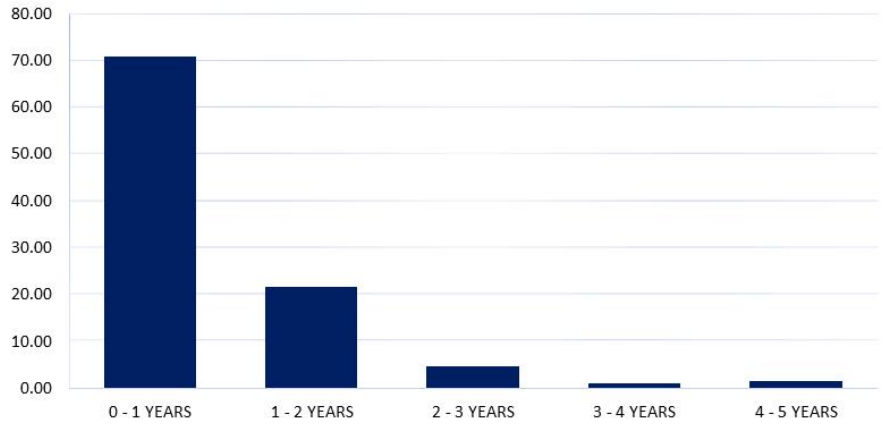
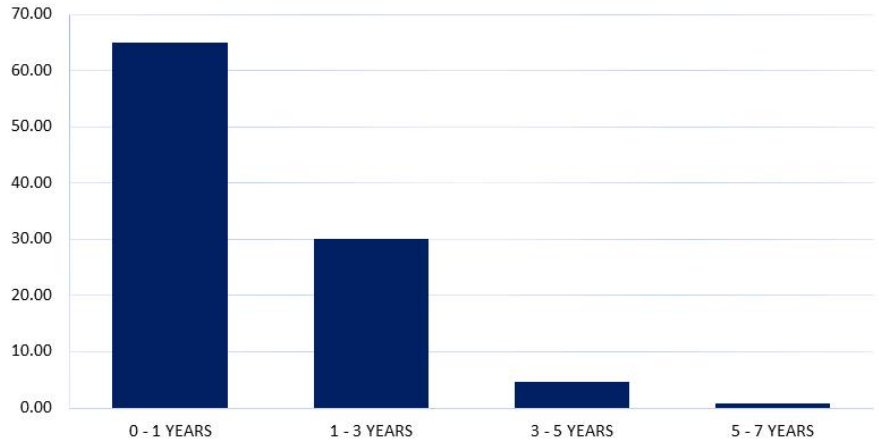
November 30, 2019

POOL 700 LGIP MD FF&C

Duration Distribution



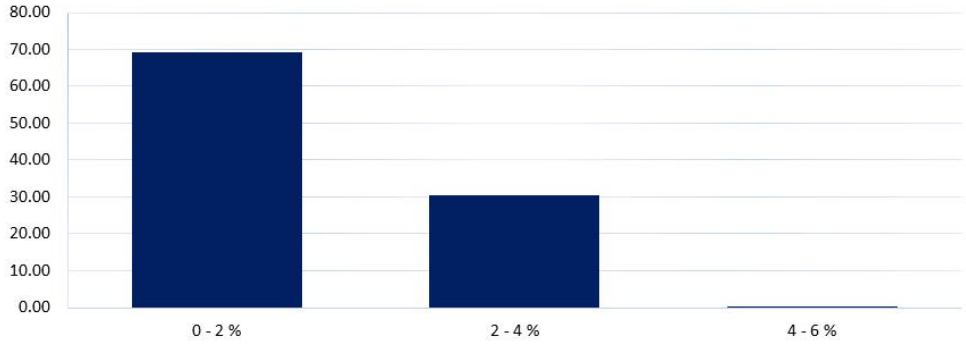
Expected Maturity Distribution



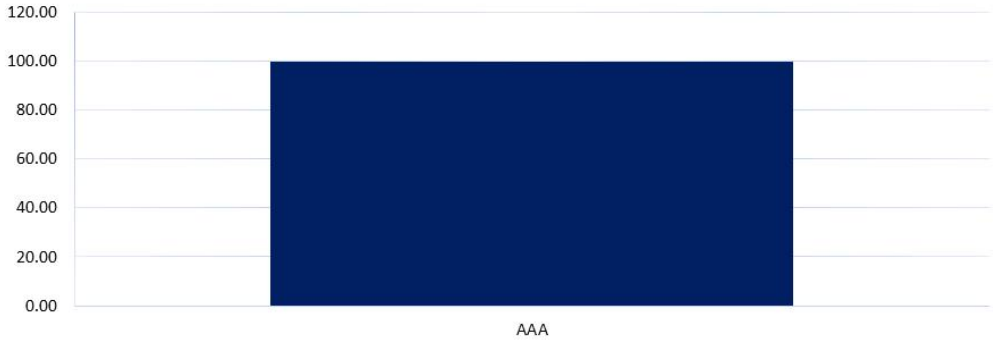
Portfolio Level Characteristics

	POOL 700 LGIP MD FF&C
Effective Maturity	1.02
Coupon	1.50
Effective Duration	0.82
Quality Rating (Moody's)	AAA

Coupon Distribution



Rating Distribution



EARNINGS DISTRIBUTED
PERMANENT LAND ENDOWMENT TRUST FUND
NOVEMBER 2019

Recipient		Distributed in Current Month NOVEMBER 2019	Fiscal YTD 19/20	Fiscal YTD 18/19	Fiscal YTD Change
101	A & M Colleges	$73,227	$366,135	$352,026	$14,109
102	State Hospital	51,319	256,594	235,424	21,170
103	Leg., Exec., & Jud.	60,756	303,780	291,603	12,177
104	Military Institute	4,049	20,245	19,338	907
105	Miners Hospital	170,411	852,053	790,591	61,463
107	Normal School ASU/NAU	31,311	156,555	144,276	12,279
108	Penitentiaries	113,987	569,933	530,418	39,516
109	Permanent Common School	28,518,181	142,590,907	133,852,348	8,738,559
110	School for Deaf & Blind	41,371	206,853	193,031	13,823
111	School of Mines	83,229	416,146	399,329	16,817
112	State Charitable-Pioneers Home	412,187	2,060,933	1,970,579	90,354
112	State Charitable-Corrections	206,093	1,030,467	985,290	45,177
112	State Charitable-Youth Treatment	206,093	1,030,467	985,290	45,177
113	University Fund	151,327	756,636	716,932	39,704
114	U of A Land - 1881	541,028	2,705,138	2,460,183	244,954
	Total	**$30,664,569**	**$153,322,843**	**$143,926,657**	**$9,396,186**

Land Sales Monthly Proceeds
Permanent Land Endowment Trust Fund

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	1,201,114	
October	3,150,170	2,366,519	10,614,885	480,710	24,823,636	5,075,858	
November	34,193,583	1,358,711	28,490,238	9,500,048	42,245,892	9,161,341	
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	79,439,149	-
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	29,833,229

NET REALIZED CAPITAL GAINS / LOSSES - PERM LAND ENDOW TRUST FUND

Endowment Fund	November 2019 NET GAIN(LOSS)	November 2018 NET GAIN(LOSS)
Fixed Income Pool	($463,346)	**($296,236)**
500 Large-Cap Fund	5,146,721	**6,961,461**
400 Mid-Cap Fund	(1,786,827)	**8,553,563**
600 Small-Cap Fund	(1,919,155)	**3,201,554**
Totals	$977,392	**$18,420,342**

Endowment Fund	2019/2020 FISCAL YEAR TO DATE GAINS(LOSSES)	2018/2019 FISCAL YEAR TO DATE GAINS(LOSSES)
Fixed Income Pool	($2,314,049)	**($1,809,435)**
500 Large-Cap Fund	35,966,045	**20,489,008**
400 Mid-Cap Fund	6,444,014	**25,398,217**
600 Small-Cap Fund	11,535,054	**15,473,316**
Totals	$51,631,064	**$59,551,106**

PERM LAND ENDOWMENT TRUST FUND FIXED-INCOME POOLS
PURCHASES & SALES
NOVEMBER 2019

I. Endowment Funds Purchases

POOL	SECURITY DESCRIPTION	RATE	MATURITY	WAL YEARS (1)	PAR VALUE	PURCHASE COST	YIELD	MOODY'S RATING
205	CANCARA	0.00	05/20/2020	NA	$5,000,000	$4,951,972	1.92%	P-1
205	FREDDIE MAC	3.50	08/15/2041	2.54	2,127,446	2,192,931	2.26%	Aaa
205	HARLEY-DAVIDSON	0.00	01/17/2020	NA	10,000,000	9,963,400	1.84%	P-2
205	JOHN DEERE	2.60	02/07/2024	NA	8,393,000	8,587,885	2.03%	A2
205	NEXTERA	2.38	05/04/2021	NA	19,900,000	19,941,392	2.26%	Baa1
205	NORTHWESTERN UNIV	0.00	01/09/2020	NA	14,000,000	13,969,511	1.60%	P-1
205	UNITED HEALTHCARE	0.00	12/27/2019	NA	10,000,000	9,985,500	1.74%	P-2
123	BOEING	0.00	03/06/2020	NA	10,000,000	9,943,333	2.05%	P-1
123	HALKIN	0.00	02/26/2020	NA	10,000,000	9,951,972	1.91%	P-1
123	NORTHWESTERN UNIV	0.00	01/06/2020	NA	6,000,000	5,986,933	1.60%	P-1
123	UNITED HEALTHCARE	0.00	12/27/2019	NA	5,000,000	4,992,750	1.74%	P-2
	TOTAL ENDOWMENT FUNDS PURCHASES				**$100,420,446**	**$100,467,581**		

II. Endowment Funds Sales

POOL	SECURITY DESCRIPTION	MATURITY	PAR VALUE	NET PROCEEDS	SALES GAINS/(LOSSES)	MOODY'S RATING
205	TREASURY	02/15/2020	$5,000,000	$4,996,289	$9,611	Aaa
205	TREASURY	03/31/2020	2,500,000	2,505,078	6,629	Aaa
	TOTAL ENDOWMENT FUNDS SALES		**$7,500,000**	**$7,501,367**	**$16,241**	

(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.

PERMANENT LAND ENDOWMENT TRUST FUND
EQUITY FUNDS PURCHASES & SALES
NOVEMBER 2019

I. Equity Fund Purchases

	SHARES	PURCHASE COST	COMMISSIONS
400 Mid-Cap Fund	124,414	$3,694,242	$841
500 Large-Cap Fund	25,852	6,289,283	194
600 Small-Cap Fund	349,045	6,699,811	1,912
TOTAL EQUITY PURCHASES	**499,311**	**$16,683,336**	**$2,947**

II. Equity Funds Sales

	SHARES	SALES AMOUNT	COMMISSIONS
400 Mid-Cap Fund	111,244	$5,243,175	$129
500 Large-Cap Fund	19,958	4,367,587	150
600 Small-Cap Fund	247,322	2,449,311	1,763
TOTAL EQUITY SALES	**378,524**	**$12,060,073**	**$2,042**

PERMANENT LAND ENDOWMENT TRUST FUND
INVESTMENTS OUTSTANDING
NOVEMBER 30, 2019
(In Thousands)

FUND	NAME OF FUND	SHARES OUTSTANDING	BOOK VALUE	MARKET VALUE	UNREALIZED GAINS (LOSSES)	**Mkt Value/ Book Value**
101	A & M Colleges					
	Shares in Equity Pools	360	$2,530	$8,437	$5,908	
	Shares in Fixed Income Pools	3,586	2,567	5,215	2,648	
	Total	3,946	5,097	13,652	8,555	**2.679**
102	State Hospital					
	Shares in Equity Pools	290	2,524	6,797	4,273	
	Shares in Fixed Income Pools	2,980	2,480	4,333	1,853	
	Total	3,269	5,004	11,130	6,127	**2.224**
103	Leg., Exec, & Jud					
	Shares in Equity Pools	294	2,219	6,893	4,674	
	Shares in Fixed Income Pools	3,153	2,259	4,585	2,326	
	Total	3,447	4,478	11,478	7,000	**2.563**
104	Military Institute					
	Shares in Equity Pools	20	155	465	310	
	Shares in Fixed Income Pools	218	153	317	163	
	Total	238	309	782	473	**2.533**
105	Miners Hospital					
	Shares in Equity Pools	898	8,060	21,061	13,001	
	Shares in Fixed Income Pools	9,016	7,896	13,112	5,215	
	Total	9,913	15,956	34,172	18,216	**2.142**
107	Normal School ASU/NAU					
	Shares in Equity Pools	173	1,506	4,070	2,564	
	Shares in Fixed Income Pools	1,791	1,438	2,604	1,166	
	Total	1,964	2,944	6,674	3,730	**2.267**
108	Penitentiaries					
	Shares in Equity Pools	585	4,955	13,717	8,762	
	Shares in Fixed Income Pools	5,978	4,924	8,694	3,771	
	Total	6,563	9,878	22,412	12,533	**2.269**

PERMANENT LAND ENDOWMENT TRUST FUND
INVESTMENTS OUTSTANDING
NOVEMBER 30, 2019
(In Thousands)

	NAME OF FUND	SHARES OUTSTANDING	BOOK VALUE	MARKET VALUE	UNREALIZED GAINS (LOSSES)	**Mkt Value/ Book Value**
109	Permanent Common School					
	Shares in Equity Pools	152,223	1,243,498	3,571,432	2,327,934	
	Shares in Fixed Income Pools	1,531,362	1,255,291	2,227,054	971,764	
	Total	1,683,585	2,498,789	5,798,486	3,299,697	**2.321**
110	School for Deaf & Blind					
	Shares in Equity Pools	212	1,758	4,963	3,205	
	Shares in Fixed Income Pools	2,392	1,881	3,479	1,598	
	Total	2,604	3,639	8,442	4,803	**2.320**
111	School of Mines					
	Shares in Equity Pools	408	3,061	9,568	6,507	
	Shares in Fixed Income Pools	4,192	3,113	6,097	2,984	
	Total	4,600	6,174	15,665	9,491	**2.537**
112	State Charitable					
	Shares in Equity Pools	4,330	33,901	101,580	67,679	
	Shares in Fixed Income Pools	41,990	33,846	61,066	27,220	
	Total	46,320	67,747	162,646	94,900	**2.401**
113	University Fund					
	Shares in Equity Pools	924	9,721	21,675	11,954	
	Shares in Fixed Income Pools	9,535	8,427	13,867	5,440	
	Total	10,459	18,148	35,542	17,394	**1.958**
114	U Of A Land - 1881					
	Shares in Equity Pools	2,850	27,752	66,864	39,112	
	Shares in Fixed Income Pools	29,297	25,298	42,607	17,309	
	Total	32,147	53,050	109,471	56,421	**2.064**
	TOTALS - ALL FUNDS					
	Shares in Equity Pools	163,564	1,341,638	3,837,521	2,495,883	
	Shares in Fixed Income Pools	1,645,491	1,349,574	2,393,032	1,043,457	
	Grand Total	$1,809,055	$2,691,213	$6,230,553	$3,539,340	
	PRIOR YEAR: NOVEMBER 2018 BALANCES	**$1,903,033**	**$2,826,831**	**$5,857,470**	**$3,030,639**	

PERMANENT LAND ENDOWMENT TRUST FUND
INVESTMENTS OUTSTANDING
NOVEMBER 30, 2019

ASSET ALLOCATION PERCENTAGE

	SHARES OUTSTANDING	**BOOK VALUE**	MARKET VALUE	NOVEMBER 2018 MARKET VALUE
Equity Pools	9.04%	**49.85%**	61.59%	60.87%
Fixed Income Pools	90.96%	**50.15%**	38.41%	39.13%
Total	100.00%	**100.00%**	100.00%	100.00%

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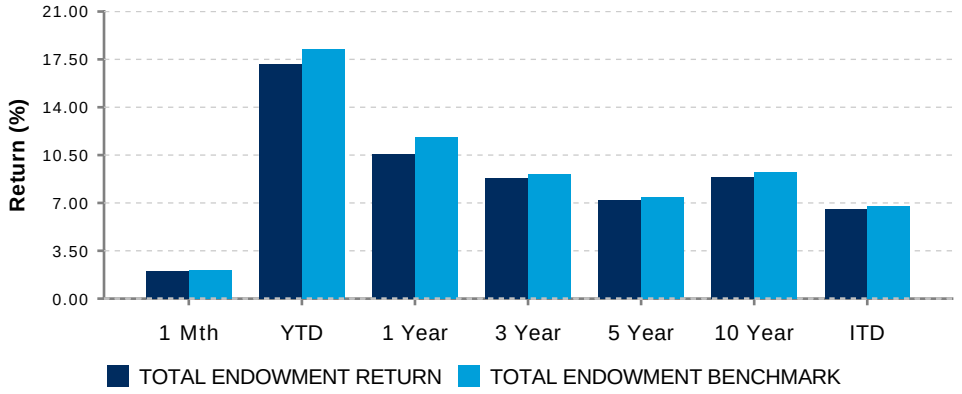
Total Endowment Summary

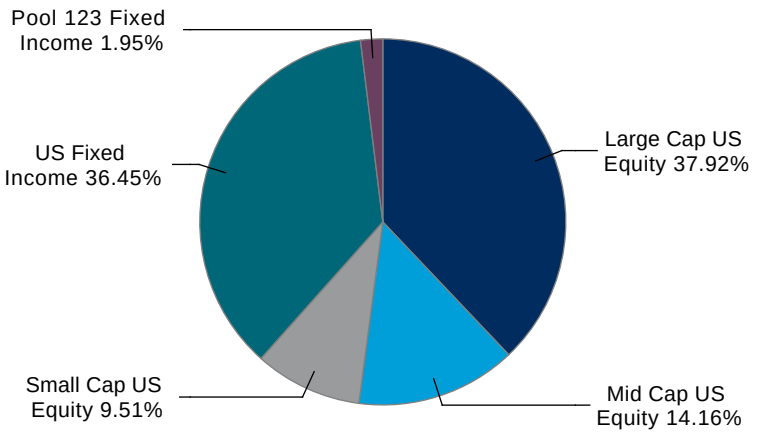
Performance



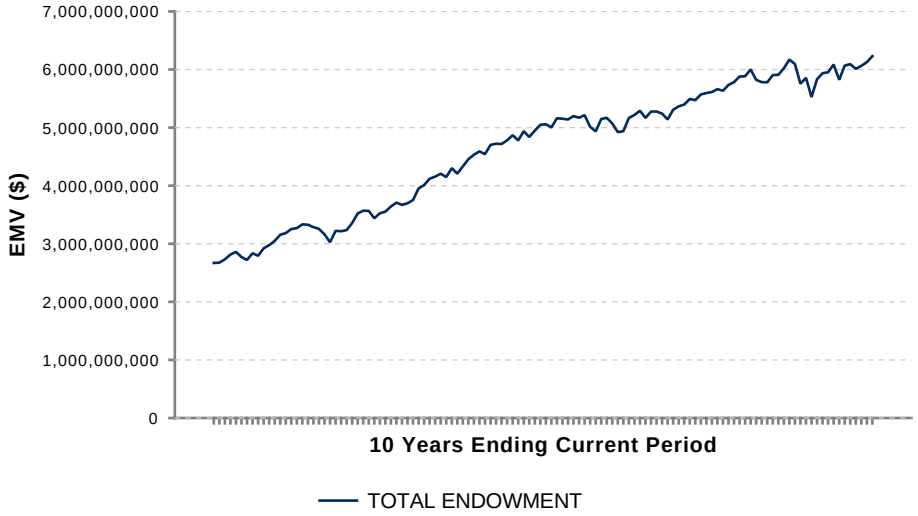
	1 Mth	YTD	1 Year	3 Year	5 Year	10 Year	ITD	Incept Date
TOTAL ENDOWMENT RETURN	2.03	17.13	10.56	8.80	7.20	8.92	6.58	07/99
TOTAL ENDOWMENT BENCHMARK	2.05	18.22	11.80	9.13	7.40	9.26	6.78	07/99
	-0.02	-1.09	-1.25	-0.33	-0.20	-0.33	-0.20	

Asset Allocation

	Ending Market Value
TOTAL ENDOWMENT RETURN	6,230,552,764

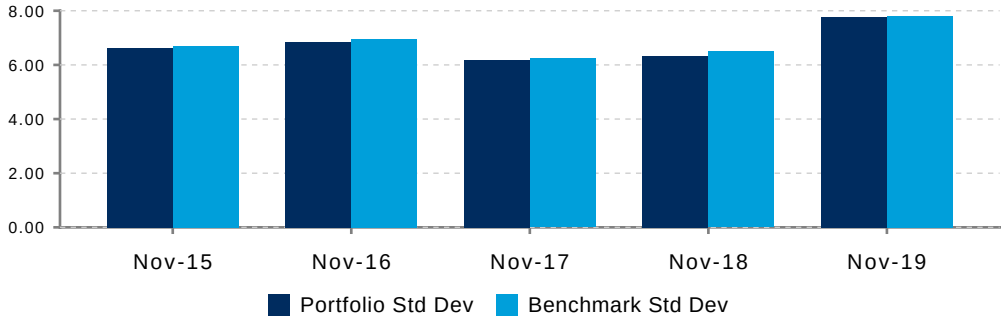


Ending Market Value



3 Year Risk Statistics

	Return	Portfolio Std Dev	Benchmark Std Dev	Sharpe Ratio	Beta	Tracking Error	Information Ratio
TOTAL ENDOWMENT RETURN	8.80	7.76	7.80	0.92	0.99	0.41	-0.80



OFFICE OF THE ARIZONA STATE TREASURER

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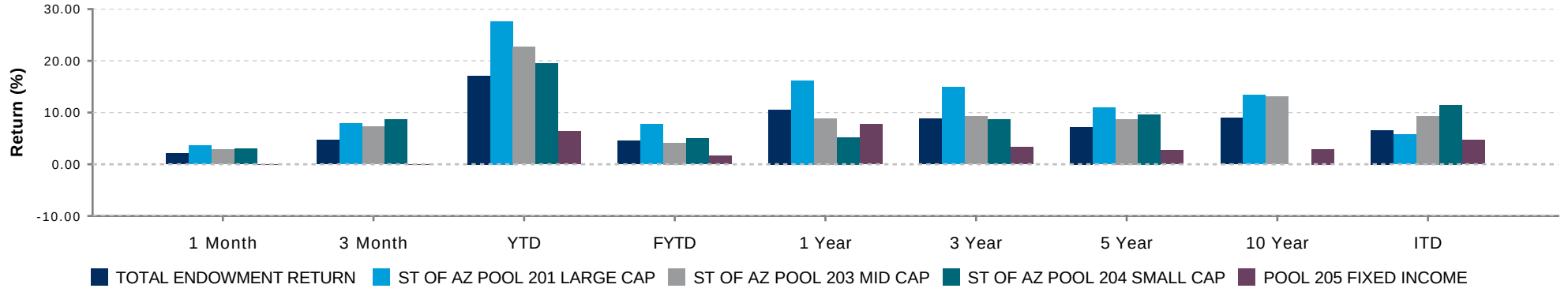
Total Returns Net Mgr

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	6,230,552,764	100.00	2.03	4.67	17.13	4.53	10.56	8.80	7.20	8.92	6.58	Jul-01-99
TOTAL ENDOWMENT BENCHMARK			2.05	4.59	18.22	4.90	11.80	9.13	7.40	9.26	6.78	Jul-01-99
			-0.02	0.08	-1.09	-0.37	-1.25	-0.33	-0.20	-0.33	-0.20	
ST OF AZ POOL 201 LARGE CAP	2,362,607,714	37.92	3.65	7.86	27.65	7.68	16.18	14.85	10.92	13.41	5.69	Jul-01-99
S&P 500 INDEX (DAILY)			3.63	7.86	27.63	7.67	16.11	14.88	10.98	13.44	6.16	Jul-01-99
			0.02	0.00	0.01	0.01	0.07	-0.03	-0.05	-0.03	-0.47	
ST OF AZ POOL 203 MID CAP	882,525,512	14.16	2.89	7.31	22.66	4.12	8.86	9.23	8.74	13.06	9.32	Aug-01-01
S&P 400 MIDCAP INDEX (DAILY)			2.98	7.33	22.75	4.05	8.86	9.04	8.60	13.10	9.30	Aug-01-01
			-0.08	-0.02	-0.10	0.08	-0.00	0.19	0.14	-0.04	0.02	
ST OF AZ POOL 204 SMALL CAP	592,387,922	9.51	2.99	8.65	19.50	4.94	5.21	8.61	9.63		11.46	Mar-01-11
S&P SM 600 TR			3.06	8.58	19.22	4.86	4.83	8.49	9.53		11.41	Mar-01-11
			-0.07	0.08	0.29	0.08	0.38	0.12	0.09		0.06	
POOL 205 FIXED INCOME	2,271,233,007	36.45	-0.06	-0.08	6.34	1.67	7.70	3.34	2.64	2.90	4.65	Jul-01-99
FTSE BIG (DAILY)			-0.03	-0.28	8.95	2.65	10.97	4.16	3.11	3.56	5.02	Jul-01-99
			-0.03	0.20	-2.61	-0.97	-3.27	-0.82	-0.47	-0.66	-0.37	
POOL 123 FIXED INCOME	121,798,609	1.95	0.15	0.50	2.25	0.92	2.52	1.83			1.66	Jun-01-16
ASTO-POOL 5 BENCHMARK			0.15	0.50	2.17	0.89	2.37	1.70			1.52	Jun-01-16
			0.00	0.01	0.08	0.02	0.14	0.13			0.14	

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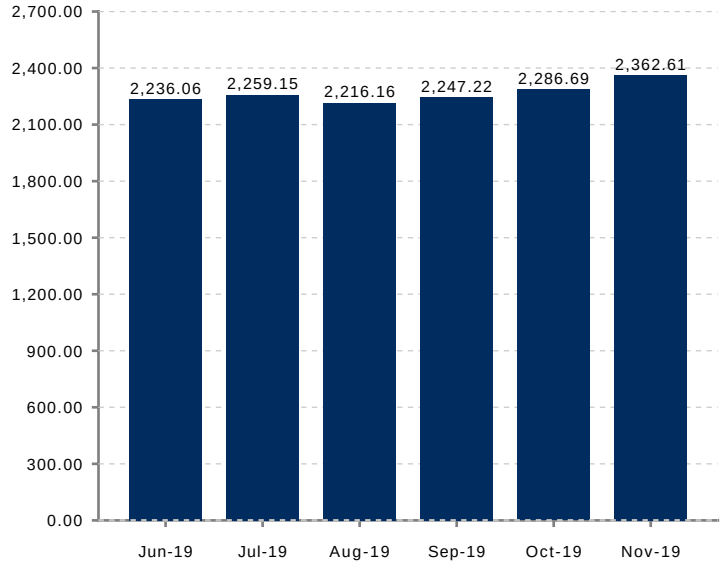
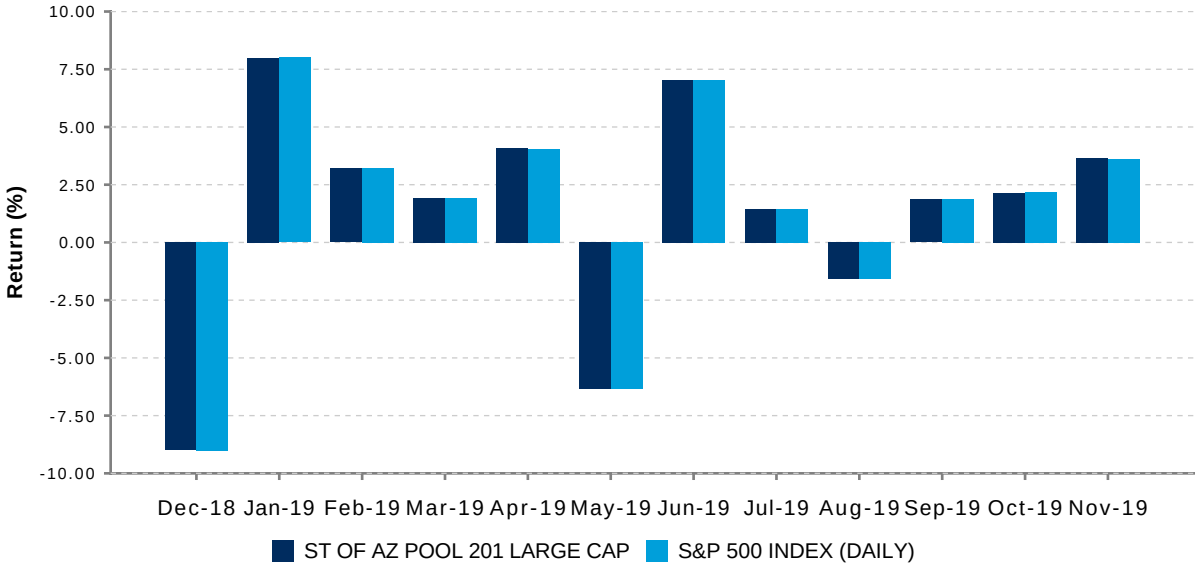
ST OF AZ POOL 201 LARGE CAP

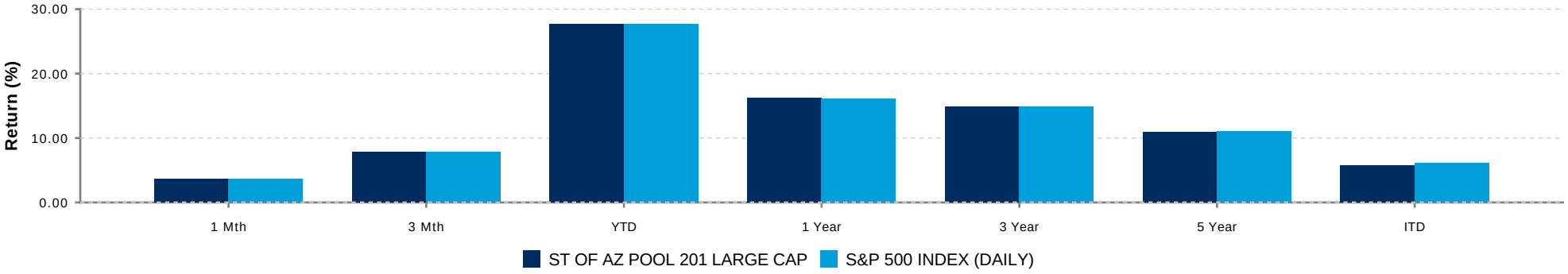
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return

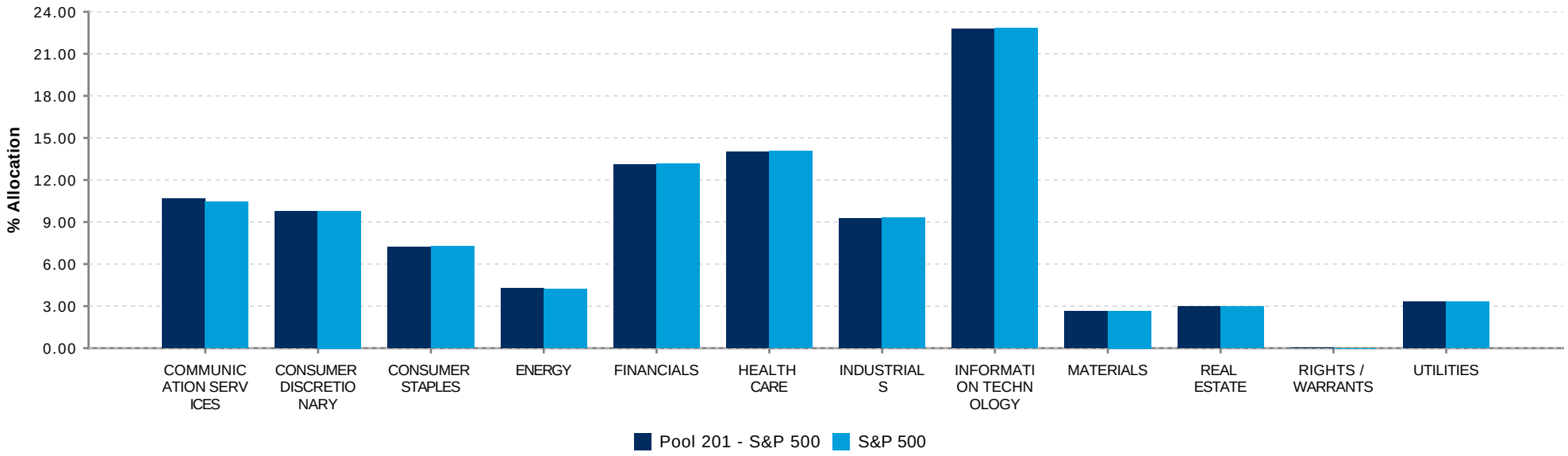


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Nov 30 2017	Nov 30 2018	Nov 30 2019
ST OF AZ POOL 201 LARGE CAP	3.65	7.86	27.65	16.18	14.85	10.92	5.69	22.91	6.10	16.18
S&P 500 INDEX (DAILY)	3.63	7.86	27.63	16.11	14.88	10.98	6.16	22.87	6.27	16.11
	0.02	0.00	0.01	0.07	-0.03	-0.05	-0.47	0.04	-0.17	0.07

OFFICE OF THE ARIZONA STATE TREASURER

November 30, 2019

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



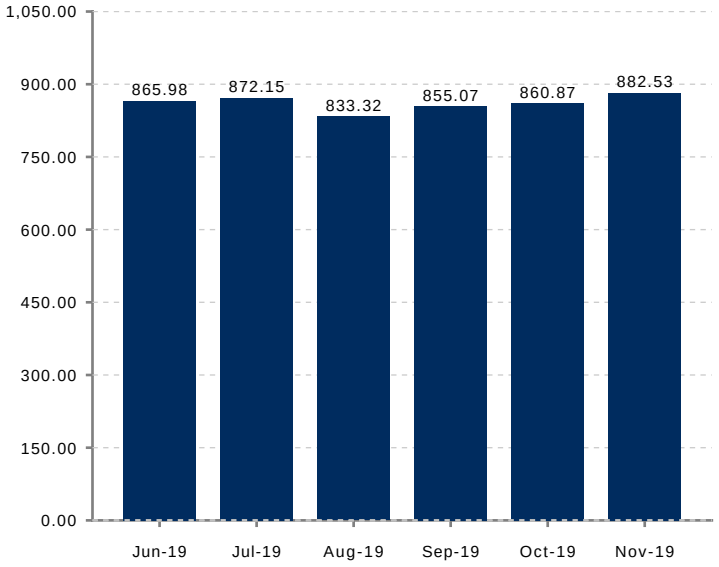
	Fund Weight	Benchmark Weight	Relative Weight
ST OF AZ POOL 201 LARGE CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	10.69	10.45	0.24
CONSUMER DISCRETIONARY	9.77	9.79	-0.02
CONSUMER STAPLES	7.22	7.25	-0.03
ENERGY	4.29	4.23	0.06
FINANCIALS	13.08	13.13	-0.05
HEALTH CARE	14.02	14.07	-0.05
INDUSTRIALS	9.26	9.30	-0.04
INFORMATION TECHNOLOGY	22.76	22.85	-0.09
MATERIALS	2.65	2.66	-0.01
REAL ESTATE	2.97	2.98	-0.01
RIGHTS / WARRANTS	0.01	0.00	0.01
UTILITIES	3.29	3.29	-0.00

OFFICE OF THE ARIZONA STATE TREASURER

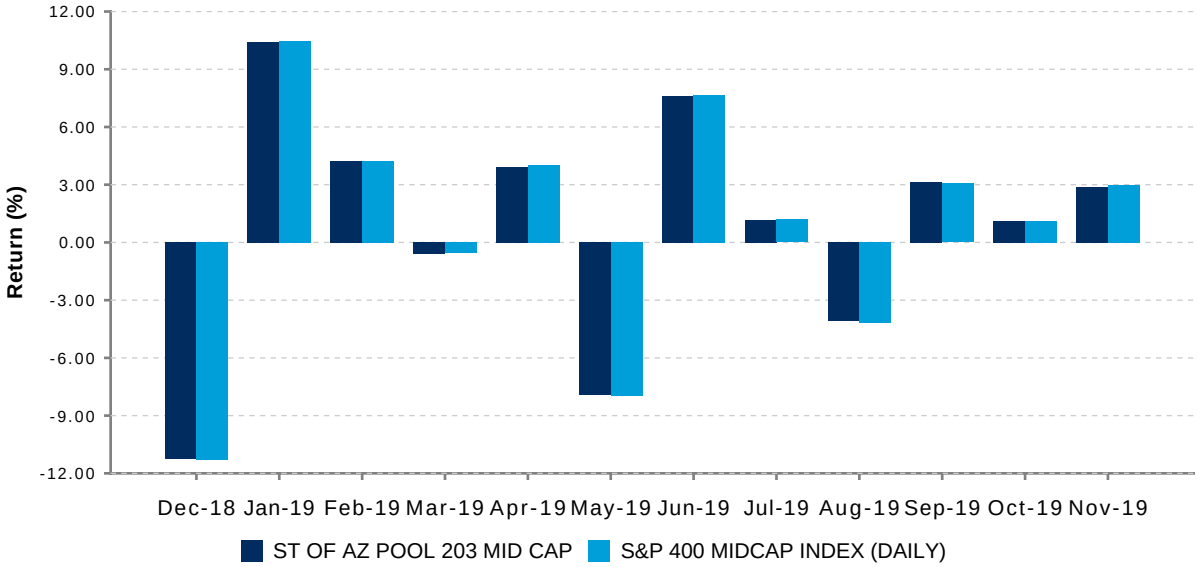
November 30, 2019

ST OF AZ POOL 203 MID CAP

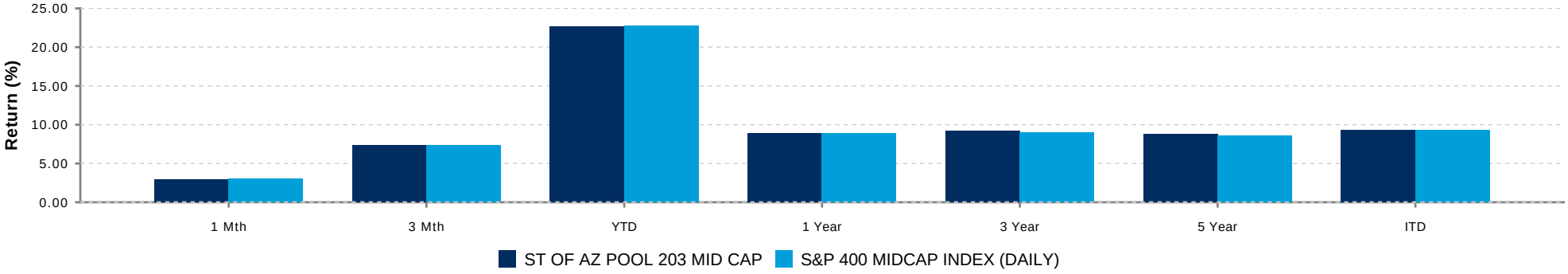
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return



	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Nov 30 2017	Nov 30 2018	Nov 30 2019
ST OF AZ POOL 203 MID CAP	2.89	7.31	22.66	8.86	9.23	8.74	9.32	18.87	0.72	8.86
S&P 400 MIDCAP INDEX (DAILY)	2.98	7.33	22.75	8.86	9.04	8.60	9.30	18.53	0.48	8.86
	-0.08	-0.02	-0.10	-0.00	0.19	0.14	0.02	0.34	0.23	-0.00

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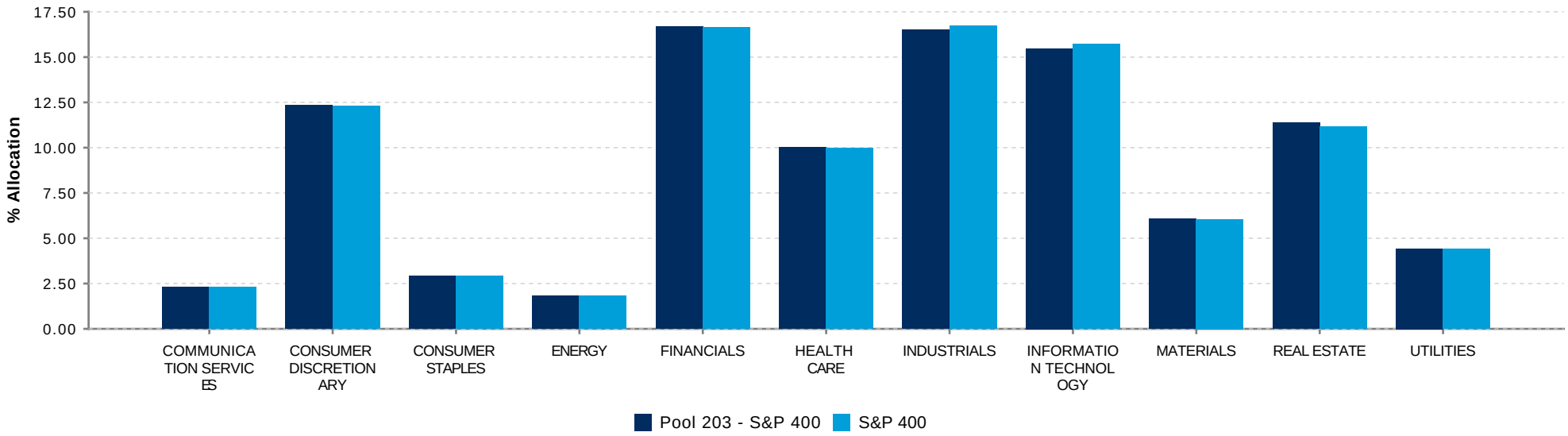
ST OF AZ POOL 203 MID CAP
Sector Allocation vs S&P MID CAP 400



	Weight Fund	Weight Benchmark	Weight Relative
ST OF AZ POOL 203 MID CAP	100.00	100.00	0.00
COMMUNICATION SERVICES	2.32	2.31	0.01
CONSUMER DISCRETIONARY	12.33	12.29	0.03
CONSUMER STAPLES	2.91	2.91	0.01
ENERGY	1.84	1.83	0.01
FINANCIALS	16.69	16.63	0.06
HEALTH CARE	10.02	9.99	0.03
INDUSTRIALS	16.52	16.71	-0.19
INFORMATION TECHNOLOGY	15.48	15.72	-0.24
MATERIALS	6.07	6.05	0.03
REAL ESTATE	11.38	11.15	0.23
UTILITIES	4.43	4.41	0.02

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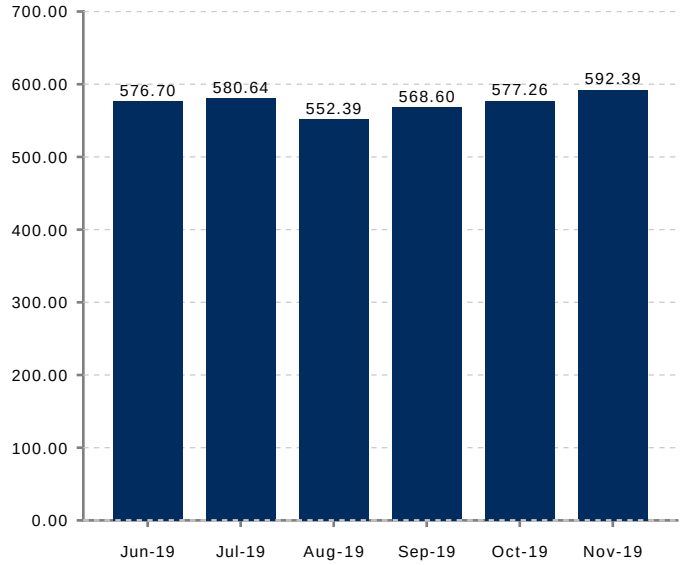
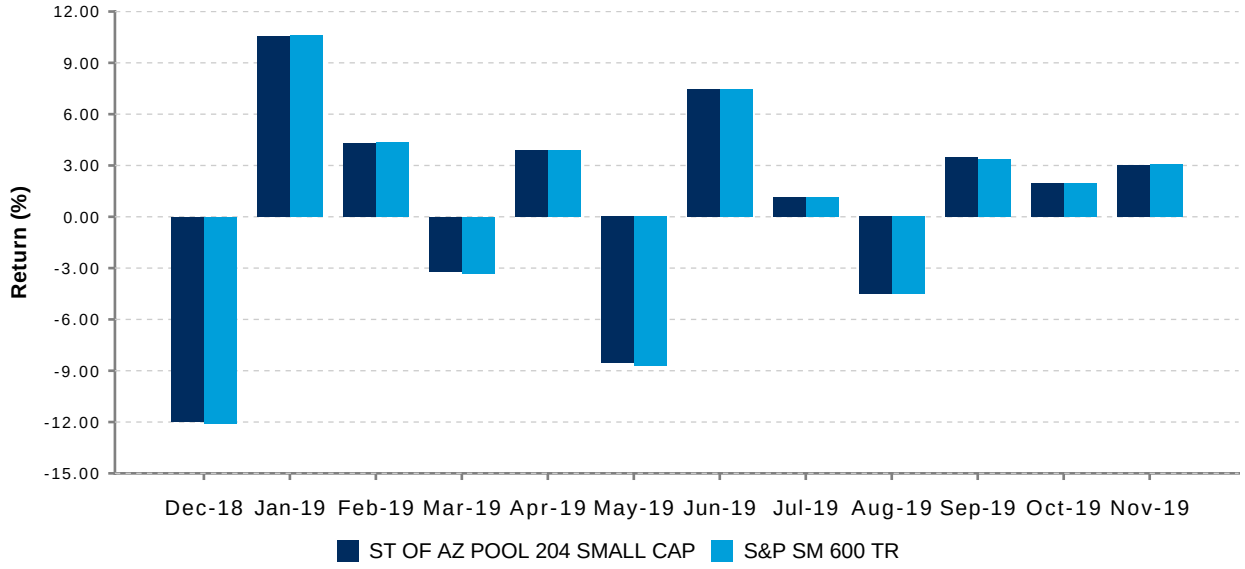
ST OF AZ POOL 204 SMALL CAP

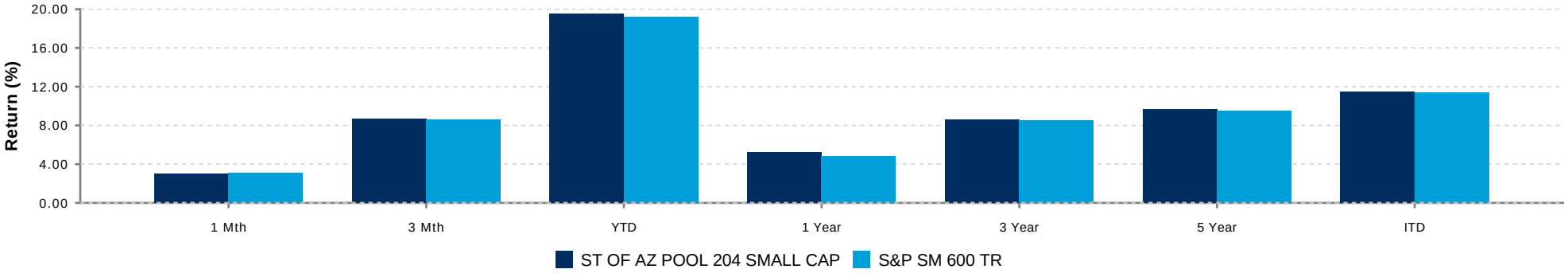
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return



	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Nov 30 2017	Nov 30 2018	Nov 30 2019
ST OF AZ POOL 204 SMALL CAP	2.99	8.65	19.50	5.21	8.61	9.63	11.46	17.58	3.57	5.21
S&P SM 600 TR	3.06	8.58	19.22	4.83	8.49	9.53	11.41	17.66	3.54	4.83
	-0.07	0.08	0.29	0.38	0.12	0.09	0.06	-0.08	0.03	0.38

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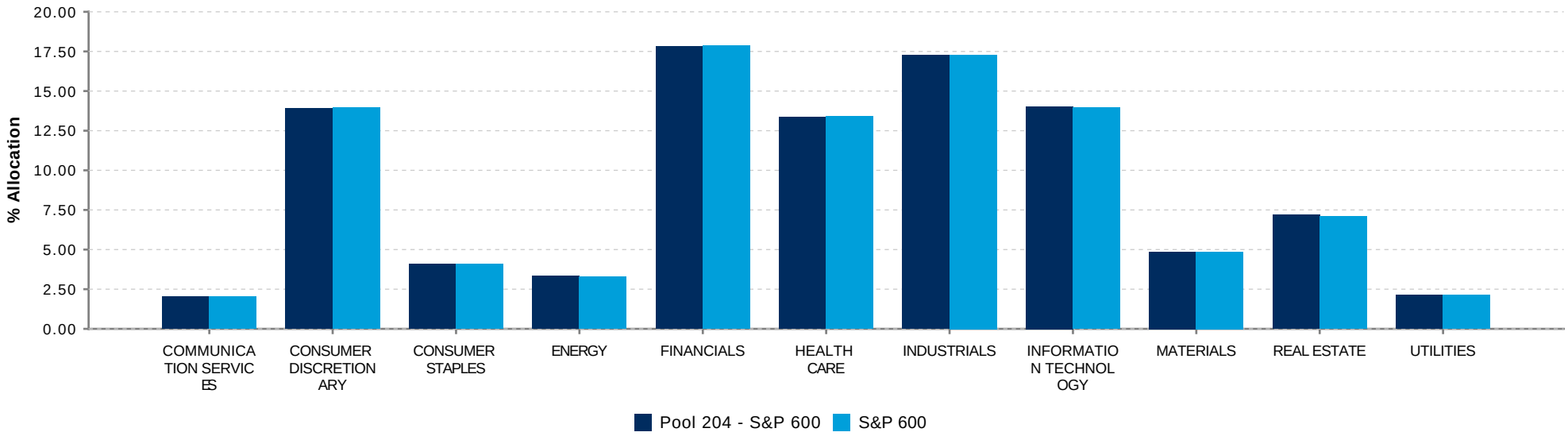
November 30, 2019

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	2.03	2.04	-0.01
CONSUMER DISCRETIONARY	13.92	13.94	-0.02
CONSUMER STAPLES	4.10	4.10	-0.00
ENERGY	3.32	3.30	0.02
FINANCIALS	17.81	17.85	-0.04
HEALTH CARE	13.34	13.42	-0.08
INDUSTRIALS	17.26	17.29	-0.03
INFORMATION TECHNOLOGY	14.03	13.96	0.07
MATERIALS	4.86	4.86	0.00
REAL ESTATE	7.19	7.09	0.09
UTILITIES	2.15	2.14	0.00

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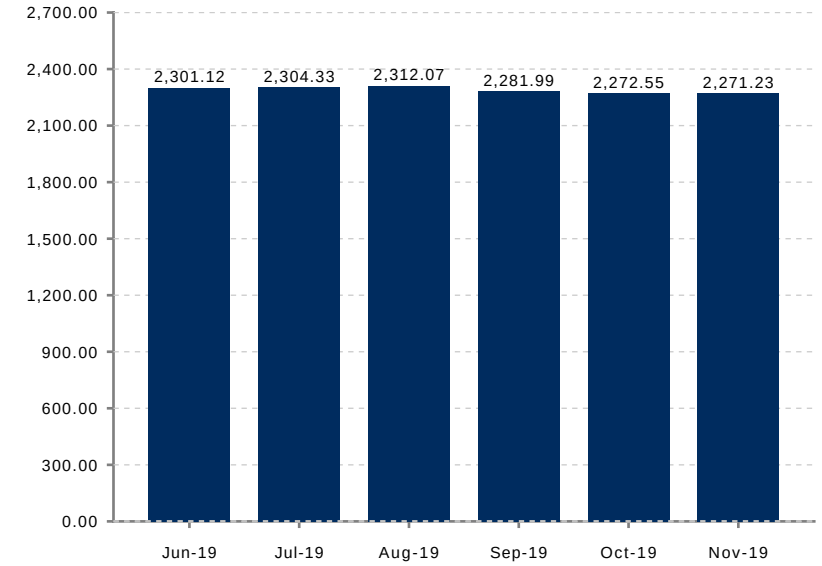
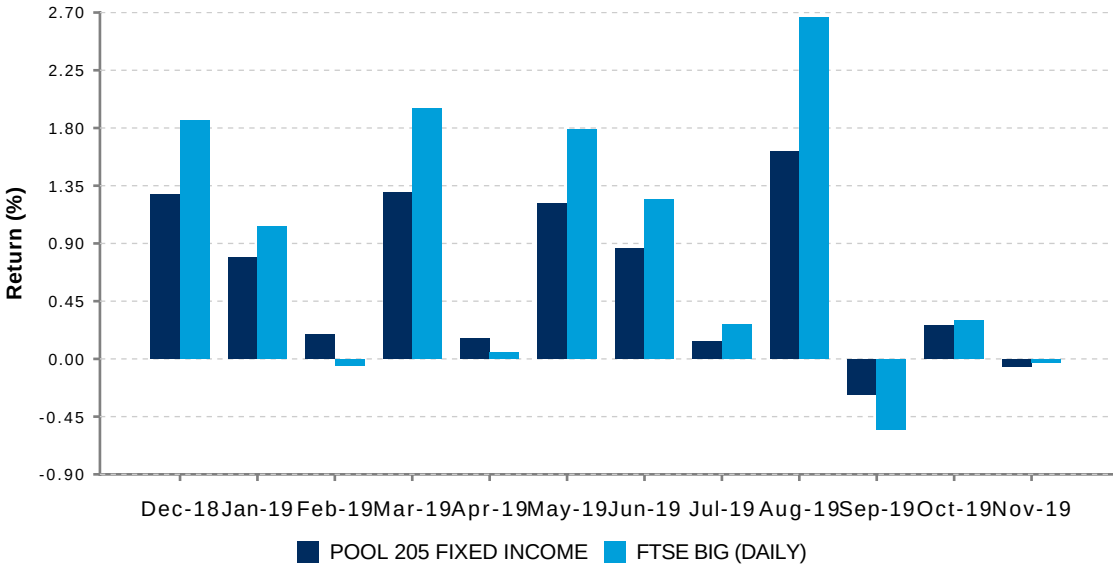
POOL 205 FIXED INCOME

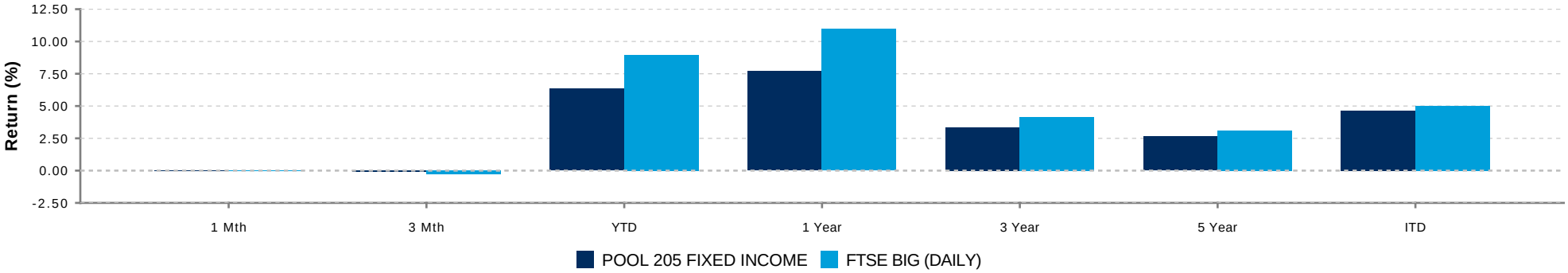
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return



	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Nov 30 2019	Nov 30 2018	Nov 30 2017
POOL 205 FIXED INCOME	-0.06	-0.08	6.34	7.70	3.34	2.64	4.65	7.70	0.10	2.36
FTSE BIG (DAILY)	-0.03	-0.28	8.95	10.97	4.16	3.11	5.02	10.97	-1.38	3.24
	-0.03	0.20	-2.61	-3.27	-0.82	-0.47	-0.37	-3.27	1.47	-0.88

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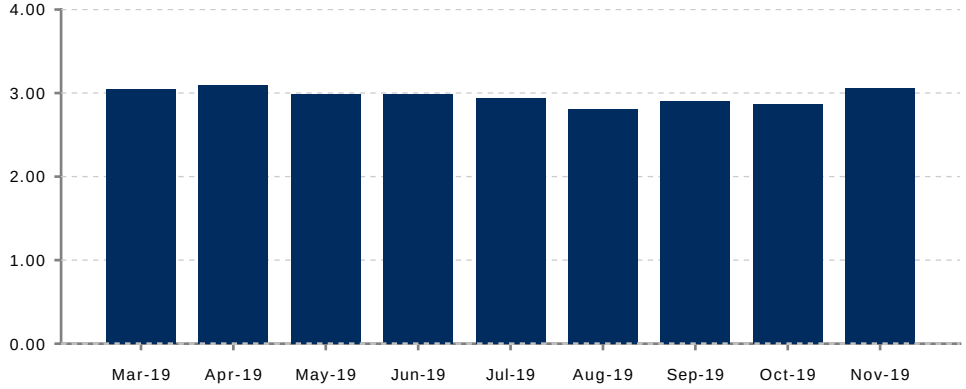
OFFICE OF THE ARIZONA STATE TREASURER

November 30, 2019

POOL 205 FIXED INCOME

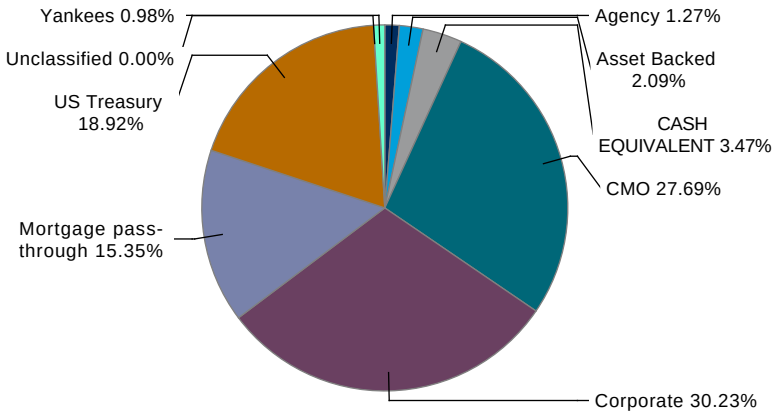
Net Yield



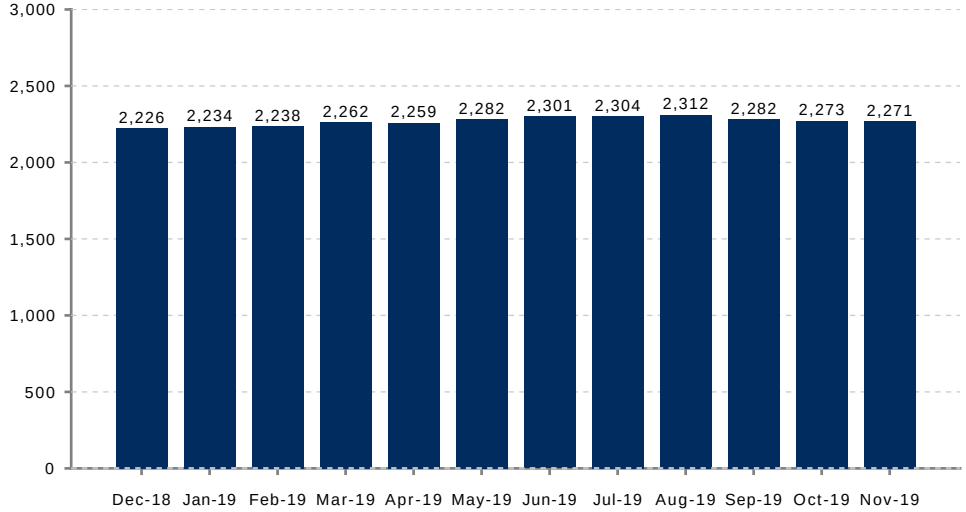
	Current Mth	Prior Mth	1 Year Ago
POOL 205 FIXED INCOME	3.06	2.87	

Asset Allocation

	Ending Market Value
POOL 205 FIXED INCOME	2,271,233,007



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 205 FIXED INCOME		
US TREASURY N/B	46,409,403	2.04
US TREASURY N/B	36,216,444	1.59
US TREASURY N/B	28,117,323	1.24
US TREASURY N/B	26,756,352	1.18
US TREASURY N/B	26,217,527	1.15
US TREASURY N/B	22,578,470	0.99
US TREASURY N/B	20,290,404	0.89
PEPSICO INC	20,101,007	0.89
PNC BANK NA	20,041,917	0.88
NEXTERA ENERGY CAPITAL	19,966,039	0.88

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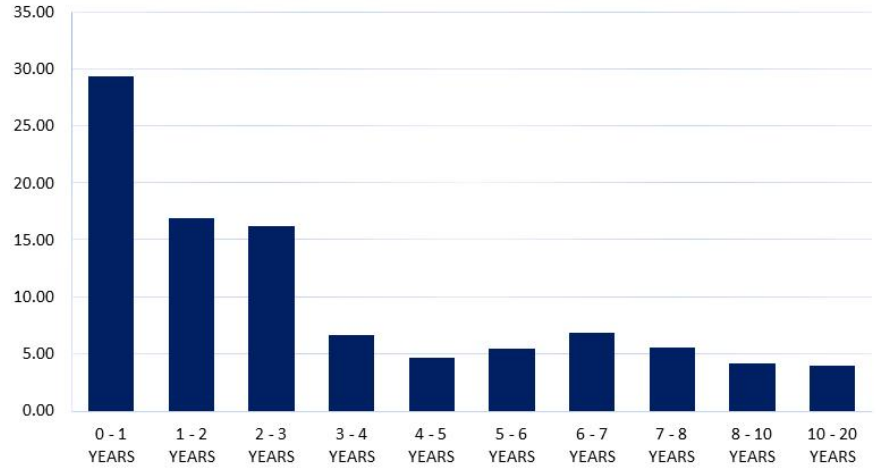
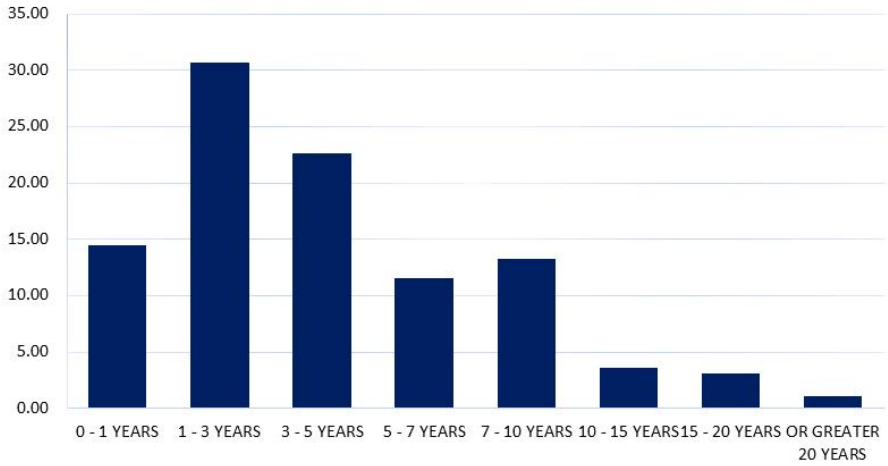
POOL 205 FIXED INCOME

Duration Distribution



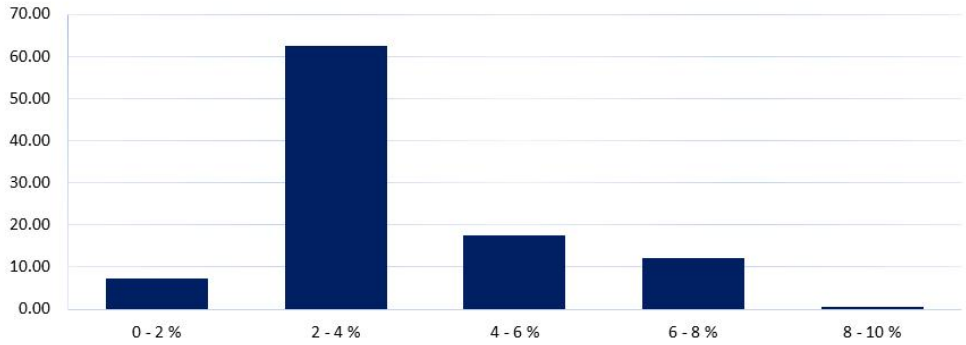
Expected Maturity Distribution



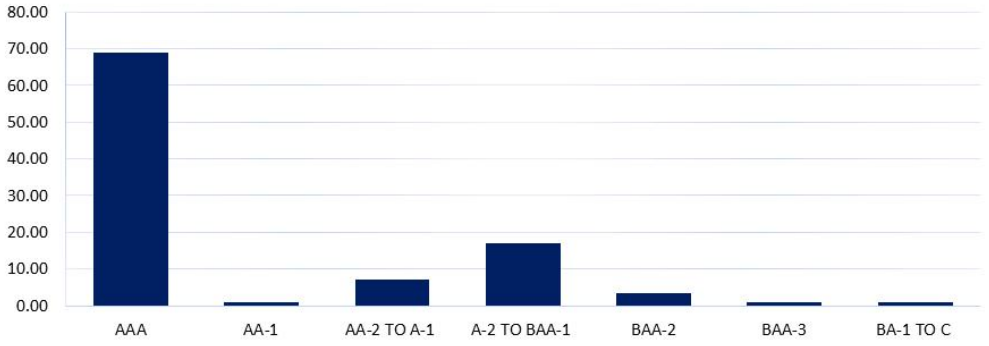
Portfolio Level Characteristics

	POOL 205 FIXED INCOME
Effective Maturity	4.58
Coupon	3.67
Effective Duration	3.17
Quality Rating (Moody's)	AA-2

Coupon Distribution



Rating Distribution



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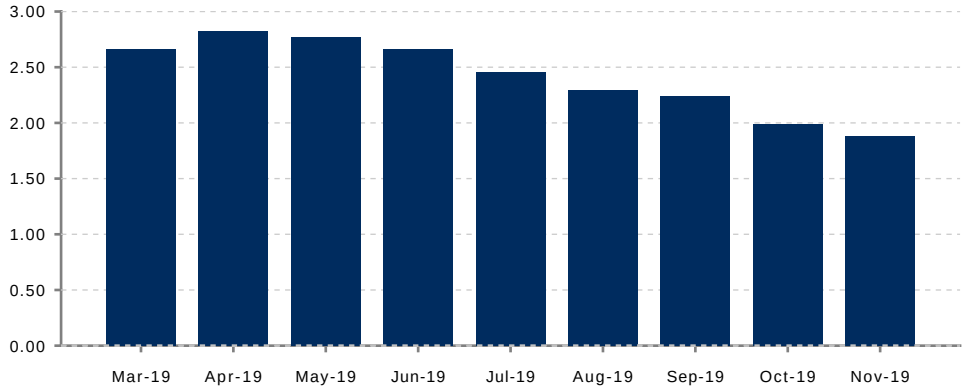
POOL 123 ST

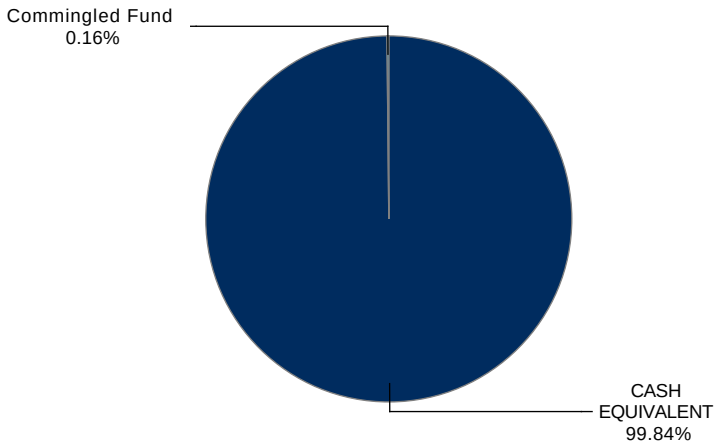
Net Yield



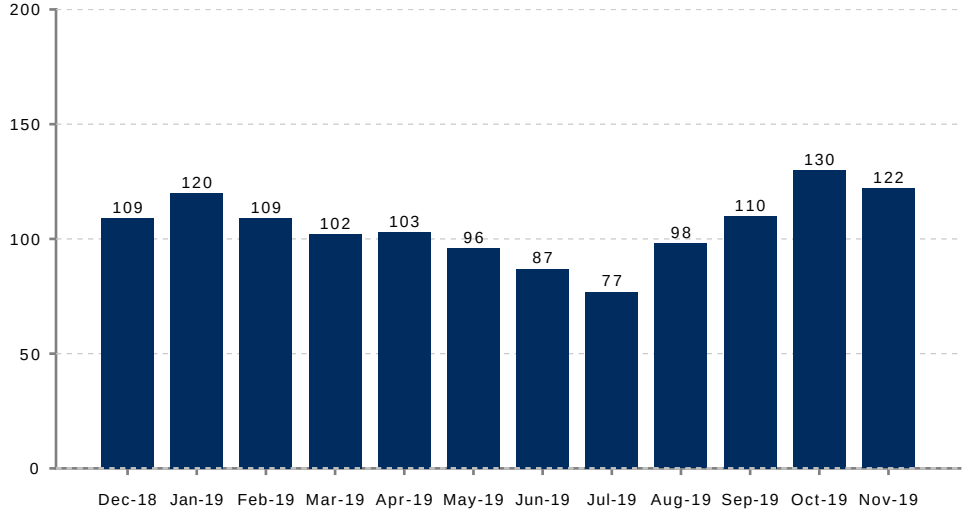
	Current Mth	Prior Mth	1 Year Ago
ST OF AZ POOL 123 ST FIXED INC	1.88	1.99	

Asset Allocation

	Ending Market Value
ST OF AZ POOL 123 ST FIXED INC	121,798,609



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
ST OF AZ POOL 123 ST FIXED INC		
CONCORD MIN CPTL CO	9,970,600	8.19
SHEFFIELD RECEIVABLE	9,965,683	8.18
HALKIN FINANCE LLC USC	9,954,083	8.17
BOEING COMPANY	9,945,600	8.17
CROWN POINT CAP CO.	6,004,339	4.93
NORTHWESTERN UNIVERS	5,990,400	4.92
VICTORY RECEIVABLES	5,353,798	4.40
CROWN POINT CAP CO.	5,009,075	4.11
STARBIRD FDG. CORP	5,003,853	4.11
SHEFFIELD RECEIVABLE	4,994,353	4.10

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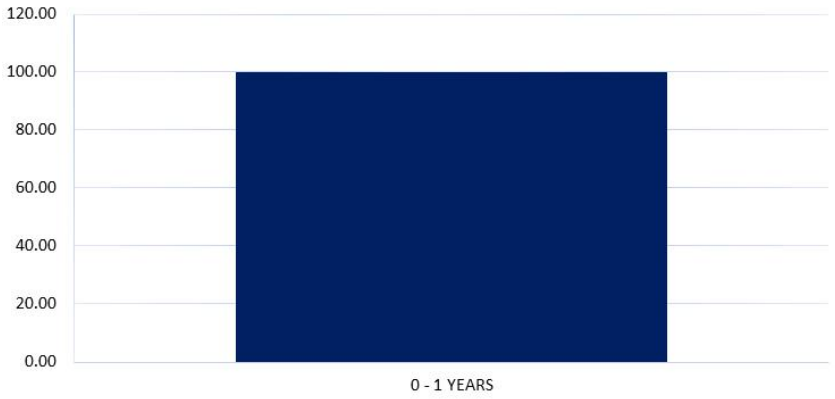
POOL 123 ST

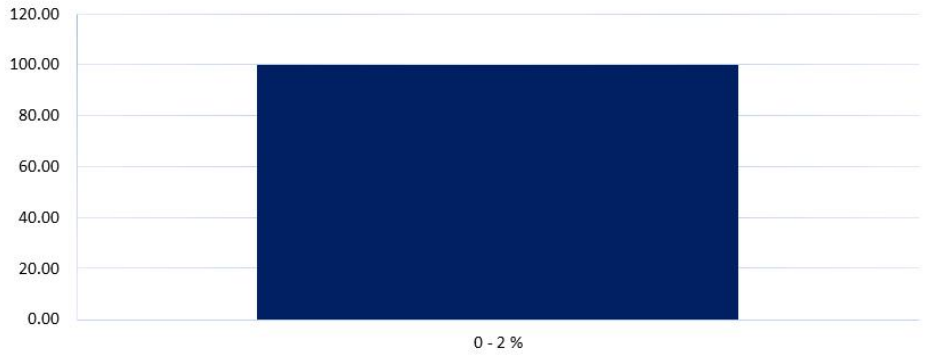
Duration Distribution



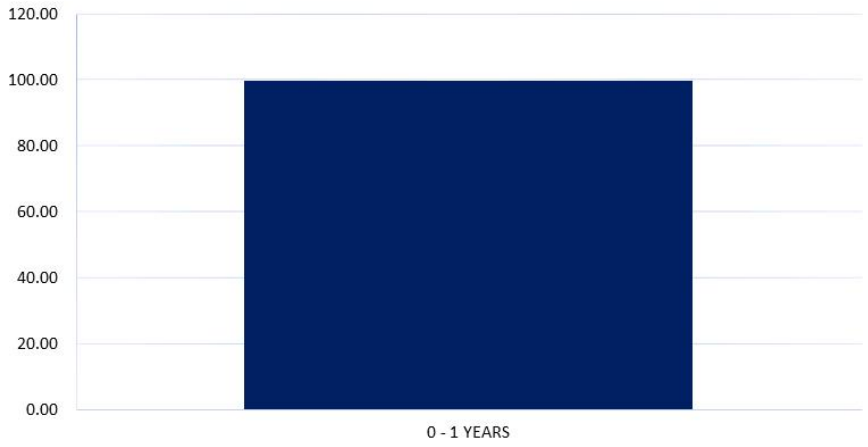
Portfolio Level Characteristics

	POOL 123 ST
Effective Maturity	0.18
Coupon	0.00
Effective Duration	0.18
Quality Rating (Moody's)	AAA

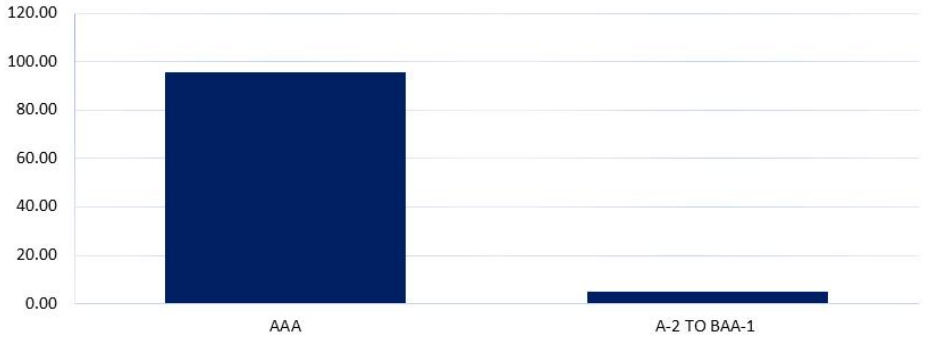
Coupon Distribution

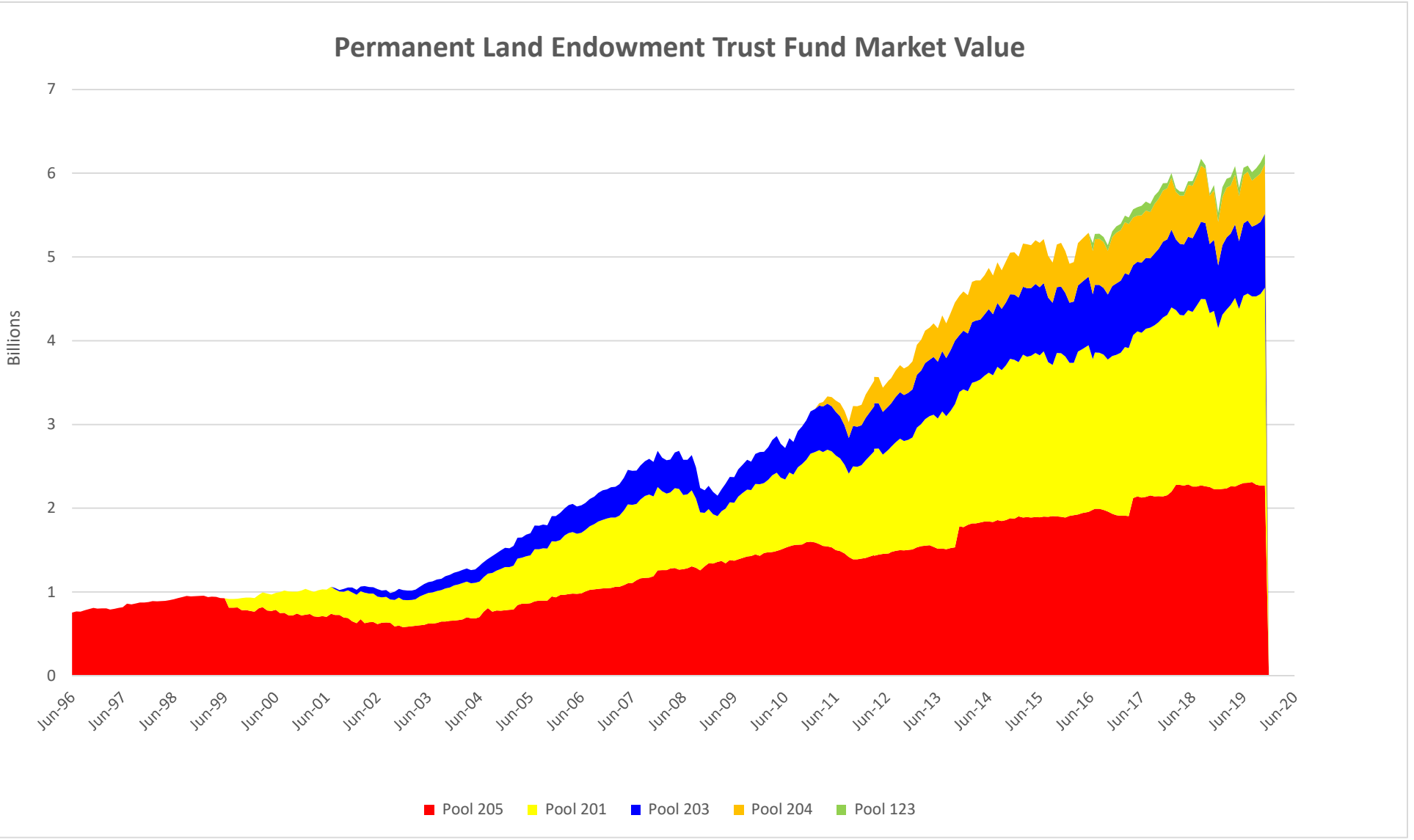


Expected Maturity Distribution



Rating Distribution




Permanent Land Endowment Trust Fund Market Value
Billions
7
6
5
4
3
2
1
0
Jun-96
Jun-97
Jun-98
Jun-99
Jun-00
Jun-01
Jun-02
Jun-03
Jun-04
Jun-05
Jun-06
Jun-07
Jun-08
Jun-09
Jun-10
Jun-11
Jun-12
Jun-13
Jun-14
Jun-15
Jun-16
Jun-17
Jun-18
Jun-19
Jun-20
Pool 205
Pool 201
Pool 203
Pool 204
Pool 123

ARIZONA ENDOWMENT TRUST FUND

NET REALIZED CAPITAL GAIN/(LOSS)

	November 2019	November 2018
Current Month	$29	$0
Year-to-date	(273)	0

MONTHLY PROCEEDS

	FY 2019
July	$0
August	0
September	4,749,889
October	931,330
November	874,356
December	
January	
February	
March	
April	
May	
June	
TOTAL	**$6,555,575**

ASSET ALLOCATION

	SHARES OUTSTANDING	BOOK VALUE	MARKET VALUE	UNREALIZED GAIN / (LOSS)
Equity Pools	401,033	$3,933,345	$4,195,343	$261,998
Fixed Income Pools	251,791	2,622,230	2,634,070	11,840
TOTAL	**652,824**	**$6,555,575**	**$6,829,413**	**$273,838**

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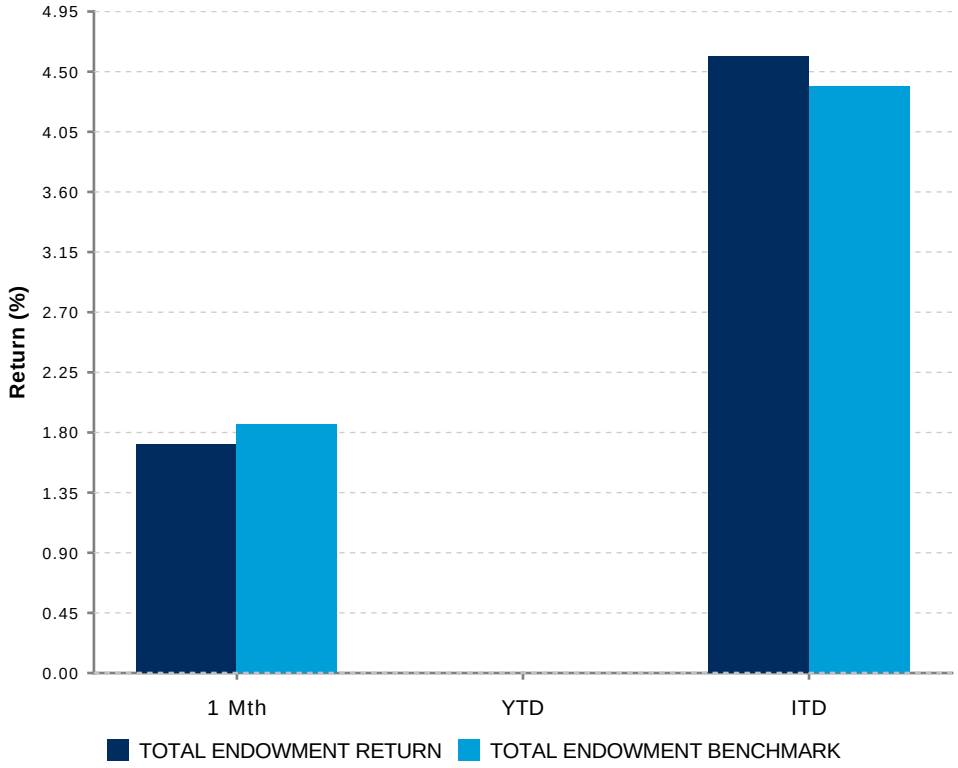
Arizona Endowment Trust Fund Summary

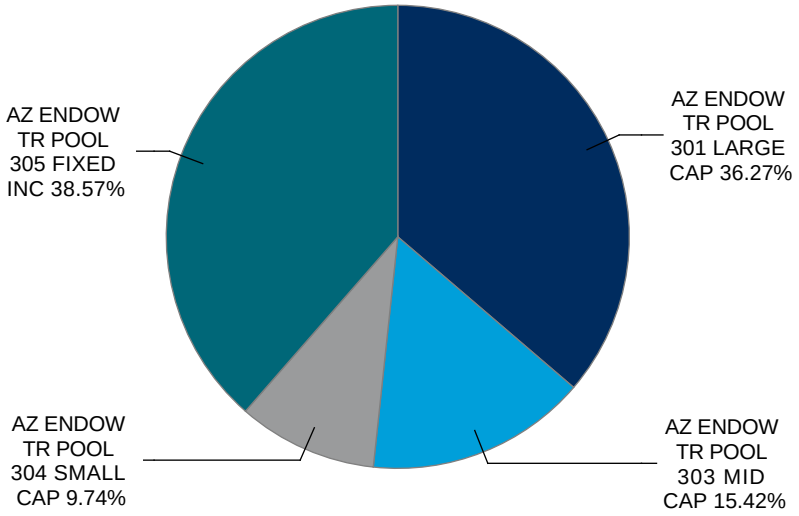
Performance



	1 Mth	YTD	ITD	Incept Date
TOTAL ENDOWMENT RETURN	1.71		4.61	09/19
TOTAL ENDOWMENT BENCHMARK	1.86		4.39	09/19
	-0.15		0.22	

Asset Allocation

	Ending Market Value
TOTAL ENDOWMENT RETURN	6,829,413



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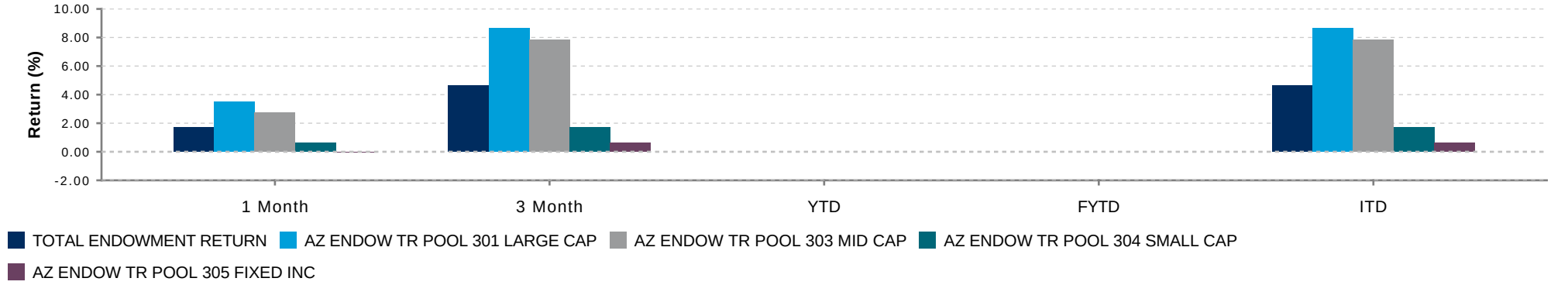
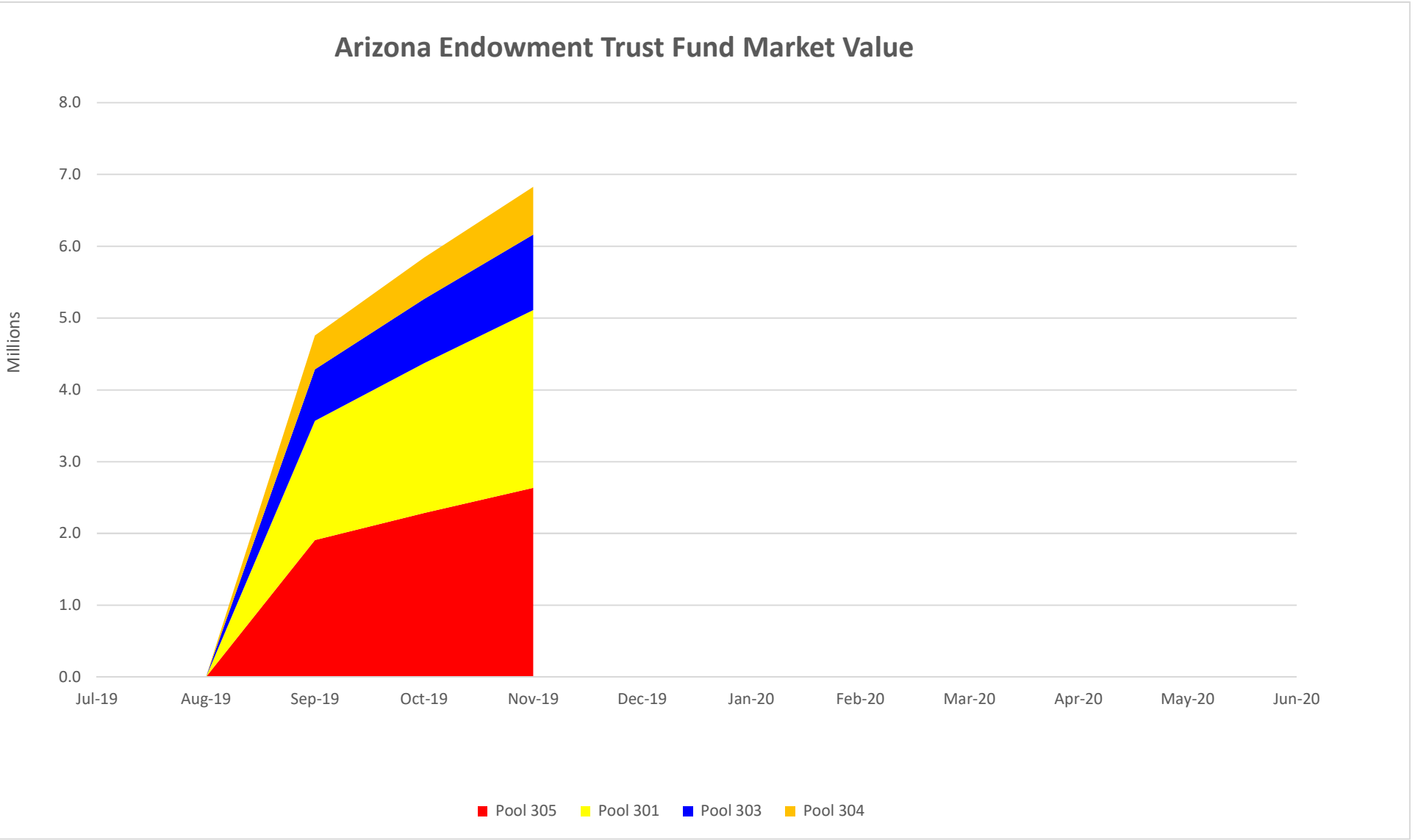
Total Returns Net Mgr

Return Comparison



	Market Value	Actual Weight	1 Mth	3 Mth	YTD	FYTD	ITD	Inc Date
TOTAL ENDOWMENT RETURN	6,829,413		1.71	4.61			4.61	Sep-01-19
TOTAL ENDOWMENT BENCHMARK			1.86	4.39			4.39	Sep-01-19
			-0.15	0.22			0.22	
AZ ENDOW TR POOL 301 LARGE CAP	2,476,803		3.51	8.67			8.67	Sep-01-19
S&P 500 INDEX (DAILY)			3.63	7.86			7.86	Sep-01-19
			-0.12	0.81			0.81	
AZ ENDOW TR POOL 303 MID CAP	1,053,043		2.73	7.82			7.82	Sep-01-19
S&P 400 MIDCAP INDEX (DAILY)			2.98	7.33			7.33	Sep-01-19
			-0.24	0.50			0.50	
AZ ENDOW TR POOL 304 SMALL CAP	665,497		0.61	1.69			1.69	Sep-01-19
S&P SM 600 TR			3.06	8.58			8.58	Sep-01-19
			-2.46	-6.88			-6.88	
AZ ENDOW TR POOL 305 FIXED INC	2,634,070		-0.04	0.60			0.60	Sep-01-19
FTSE BIG (DAILY)			-0.03	-0.28			-0.28	Sep-01-19
			-0.01	0.89			0.89	


Arizona Endowment Trust Fund Market Value
Millions
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Jul-19
Aug-19
Sep-19
Oct-19
Nov-19
Dec-19
Jan-20
Feb-20
Mar-20
Apr-20
May-20
Jun-20
Pool 305
Pool 301
Pool 303
Pool 304