OFFICE OF THE

ARIZONA STATE TREASURER

EILEEN I. KLEIN

TREASURER

JULY 2018

Presented To:

Arizona State Board of Investment

August 30, 2018

STATE BOARD OF INVESTMENT

A G E N D A

August 30, 2018

1. Call to Order; Opening Remarks ……Eileen I. Klein, Chair
2. Approval of Minutes of July 31, 2018 BOI Meeting
3. Investment Outlook and Summary Review of Treasurer's Monthly Reports
   A. State Agency Earnings Distributions ……... Dennis Stevenson, CIO
      State Agency Operating Average Invested Balances
      State Agency Investments and Performance Reports
   B. LGIP Yield Analysis …… Jake Richardson, Portfolio Manager
      LGIP Pools Investments and Performance Reports
   C. Endowment Earnings Distributions …….Tim White, Director of Endowments
      Land Sales Monthly Proceeds Endowment Funds
      Endowment Investments and Performance Reports
4. Approval of July 2018 Report
5. Treasurer's Report ……. Eileen I. Klein, Chair
6. Economic Outlook…….....Dr. Dennis Hoffman, Professor of Economics, ASU
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 30, 2018

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Minutes of
BOARD OF INVESTMENT MEETING

The regular meeting of the State Board of Investment was held on July 31, 2018 in the Office of the State Treasurer, 1700 West Washington, State Capitol, West Wing, Treasurer's Conference Room, Phoenix, Arizona. Treasurer Klein called the meeting to order at approximately 1:33 p.m.

Members Present:

Eileen I. Klein, Chair, State Treasurer
Harry A. Papp, CFA & Managing Partner, L. Roy Papp & Associate
Robert Charlton, Superintendent, Department of Financial Institutions

Members Absent:

Beth Ford, Treasurer, Pima County
Gilbert Davidson, Interim Director, Arizona Department of Administration

Designee Present:

Kevin Donnellan, Deputy Director, Arizona Department of Administration

Other Staff Present:

Dennis Stevenson, Chief Investment Officer, Arizona State Treasurer's Office
Tim White, Director of Endowments, Arizona State Treasurer's Office
Jake Richardson, Portfolio Manager, Arizona State Treasurer's Office
Eric Stivers, Investment Analyst, Arizona State Treasurer's Office
Dajana Zlaticanin, Financial Policy Administrator, 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
Dave Cherry, Press Secretary, Arizona State Treasurer's Office

1. **Call to Order; Opening Remarks:**
   Treasurer Klein called the July 31, 2018 BOI meeting to order at approximately 1:33 p.m.

2. **Approval of Minutes:**
   Mr. Papp made a motion to approve the June 28, 2018 minutes. Mr. Charlton seconded the motion. Motion carried.

3. **Investment Outlook and Summary Review of Treasurer's Monthly Reports:**

   A. **State Agency Earnings Distributions, Operating Average Invested Balances, Investments and Performance Reports**
   Chief Investment Officer, Dennis Stevenson, distributed his outlook and highlighted the results of the State Agency performance for the month of June 2018. See memo.

B. LGIP Yield Analysis, Pools Investments and Performance Reports
Portfolio Manager, Jake Richardson, distributed his outlook and highlighted the results for the Local Government Investment Pools performance for the month of June 2018. See memo.

C. Endowment Earnings Distributions, Land Sales Monthly Proceeds, Investment and Performance Reports
Director of Endowments, Tim White, distributed his outlook and highlighted the results for the Endowment performance for the month of June 2018. See memo.

4. Approval of June 2018 Report:
Mr. Papp made a motion to approve the June 2018 Report. Mr. Charlton seconded the motion. Motion carried.

5. Treasurers Report:
Treasurer Klein provided the Board with a brief Treasurer's Report which included updates on agency collaborations, outreach with education and county associations and the executive budget requests.

6. Annual Performance Review and Market Outlook:
Mr. Jim Palmer and Mr. Thomas Moore with U.S. Bancorp Asset Management provided the Board with an Annual Performance Review and Market Outlook.

7. Market Update:
Mr. Papp provided the Board with a brief Market Update.

8. Call to the Public:
There was no Public comment.

9. Notice of Next Meeting:
Treasurer Klein advised the Board that the next regular meeting of the Board of Investment will be Thursday, August 30, 2018 at 1:30 p.m. at 1700 West Washington, State Capitol, West Wing, Treasurer's Conference Room, Phoenix, Arizona.

10. Adjournment:
Mr. Donnellan made a motion to adjourn the BOI meeting. Mr. Charlton seconded the motion. Upon unanimous approval the BOI Meeting was adjourned at 2:47 p.m.

State Treasurer's Report
August 30, 2018 Meeting
Minutes of the July 31, 2018 Meeting

Respectfully Submitted by:

Christine Thurston
Executive Assistant

Approved by:

Eileen J. Klein
Chair

30 August 2018
Date

OFFICE OF THE
ARIZONA STATE TREASURER

EILEEN I. KLEIN
TREASURER

Investment Summary | June 2018

Overall Performance – Where We Are Now |

- State Agency Pools:
  - Total assets: $6,240,555,467.
  - Total earnings distributed: $14,288,235; Fiscal YTD: $88MM, +$28.3MM YoY.

Outlook |

The GDP for second quarter 2018 came in very strong at 4.1%. This number was highly anticipated and when measured in combination with rising wages, lower taxes and strong consumer sentiment contributes to the plausibility of continued domestic growth. Looking forward, 2018 GDP is on course to finish in the 3.4+ range. This will likely reinforce The Federal Reserve's plan for two more .25 basis point hikes in 2018.

Strategy: Monthly Commentary |

Throughout June we kept duration short in anticipation of approximately $2.0B in state bills at the start of the fiscal year. After both Federal Reserve interest rate moves we will be extending duration. As we look at longer durations, some of our investment allocation will be to add floating rate US government notes and bonds that have interest rate floors or put provisions as protection against a change in interest rate trends. This protection gives us upside participation and downside protection for a minimal cost to yield.

Alternative Scenarios |

There are several scenarios we continue to monitor which could change our expectations that the Fed will raise interest rates. The possibility of sanctions on Turkey. The Turkish government tried to get the present administration to lift a ban on a Turkish bank that ignored the Iranian embargo. The Turkish lira and equity markets continue to decline, adding more pressure to an unstable government that is a member of NATO.

The Chinese trade war seems to have abated for now but still remains a concern. What we export to China are necessities, what they export are non-essential products. We believe this balance will be support the domestic markets through this tension. Additionally, the possibility that European rates stagnate or revert to negative levels could put significant pressure on the Federal Reserve to delay or put-off future hikes. We have contingency plans should these events cause us to change our current optimistic outlook.

Dennis Stevenson, CIO

State Agency Investment Pool Balances |

	June 29, 2018	June 30, 2017	FY Change
Pool 2 FF&C	$958,195,838	$888,957,803	+69,238,035
Pool 3 Internal	2,424,731,511	2,061,961,527	+362,769,984
Pool 3 External	105,487,890	104,265,678	+1,222,212
Pool 4 Gov.	846,617,046	891,519,668	-44,902,622
Pool 10 Internal	1,020,766,026	975,818,044	+44,947,982
Pool 10 External	147,701,060	265,421,396	-117,720,336
Pool 12 CAWCD	387,415,990	366,183,710	+21,232,280
Pool 16 ECDHB	349,640,104	353,153,272	-3,513,168
TOTAL STATE AGENCY	**$6,240,555,467**	**$5,907,281,103**	**+333,274,364**

Dennis Stevenson, CIO

Local Government Investment Pools (LGIP) Summary

Overall Performance – Where We Are Now |

- Local Government Investment Pools:
  - Total assets: $3,198,677,157.
  - Total earnings: $44,489,885; +$25MM over June 2017.
  - Total fiscal year yields:
    - Pool 5: 1.38%; 76bps higher than June 2017.
    - Pool 7: 1.24%; 75bps higher than June 2017.
    - Pool 500: 1.87%; 46bps higher than June 2017.
    - Pool 700: 1.64%; 49bps higher than June 2017.

Strategy: Targeting Duration |

Now that we have made it through the fiscal year we will begin to extend our duration in Pools 5 and 7. We expect the Fed to raise rates in September's FOMC meeting and will use this meeting as a target date for new maturities. At that time, we plan to invest a larger portion of the cash balances, targeting a liquidity allocation in the short-term pools of approximately 10% to 15% cash and the remainder being higher yielding investments. As expected, due to participant activity, total market values declined in both 5 and 7 from the month of May by a combined $414,956,552. This decline is not expected to continue in the coming months, but the target allocation should provide sufficient liquidity for participant needs.

Pools 500 and 700 will maintain our short-duration strategy through the remainder of the year, continuing our defensive approach for these intermediate-term pools during an increasing interest rate environment. That being said, we have been looking for opportunities along the curve as we look to take advantage of the continued flattening trend. Participant activity has also been more prevalent this year, which will require slightly more liquidity than in the past.

LGIP Investment Pool Balances |

	June 29, 2018	June 30, 2017	FY Change
Pool 5 LGIP	$1,356,271,138	$1,150,767,283	+205,503,855
Pool 7 LGIP FF&C	1,361,647,788	1,349,120,879	+12,526,909
Pool 500 LGIP Med.	342,488,316	346,654,417	-4,166,101
Pool 700 LGIP Med FF&C	138,269,915	146,273,792	-8,003,877
TOTAL LGIP	**$3,198,677,157**	**$2,992,816,372**	**+205,860,785**

Jake Richardson, Portfolio Manager

Endowment Summary

Overall Performance – Fiscal Year in Review |

FY 2017-2018	PLETF +9.09 vs Benchmark +8.89%			
	Total		Common School (K-12)	YOY Change
PLETF Ending Market Value	$5,908,457,000	5.27%	$5,502,918,000	5.37%
Land Proceeds	$108,965,158	-33.38%	$106,150,403	-30.87%
Prop 123 Distributions	$316,998,617	9.33%	$294,793,058	9.36%
Unrealized Gains	$3,075,893,000	14.89%	$2,866,266,000	15.01%
Realized Gains	$231,082,056	32.60%	$214,745,056	32.05%

FY 2016-2017	PLETF +11.25% vs Benchmark +11.13%			
	Total	YOY Change	Common School (K-12)	YOY Change
PLETF Ending Market Value	$5,612,414,000	8.63%	$5,222,529,000	8.67%
Land Proceeds	$163,553,318	55.23%	$153,550,774	50.93%
Prop 123 Distributions	$289,935,195	4.50%	$269,558,521	3.97%
Unrealized Gains	$2,677,241,000	22.20%	$2,492,113,000	22.28%
Realized Gains	$174,266,315	-9.47%	$162,629,446	-9.06%

Big Picture:

- PLETF has outperformed again for FY2018
- Total annualized return was 9.09% vs Benchmark 8.89% – better by 20basis points overall
- Annualized 10-Year total return through June is 7.73%
- Fair Market Value: $5.91B
- Up $4.4MM MoM
- Up $296MM YoY
- Unrealized Gains: $3.1B (Up $399MM or 14.9% YoY)
- June Realized Gains: $40MM
- FYTD Realized Gains: $231MM (Up $56.8MM or 32.6% YoY)
- June TRR PLETF 0.39% vs Benchmark 0.33% - better by 5+basis points
- Pool 205 Fixed Income massively outperformed Citi BIG Index by 64bps FYTD

FY 2018 Performance versus Largest US Pension System:

Endowment	AUM	1-Year %	3-Year %	5-Year %	10-Year %
Arizona PLETF	$5.9B	9.09%	7.84%	8.91%	7.73%
CalPERS	$351B	8.60%	N/R	8.1%	5.6%
Alpha		+0.49%	N/R	+0.81%	+2.13%

Source: CalPERS, ASTO

Tim White, Director of Endowments

Year-In-Review: Tale of Two Tapes |

Tape 1 (*First Half*): Following a very accommodative period of near-zero fed funds from 2008-2015, the Federal Reserve tested the waters in an effort to normalize post-crisis interest rates with a 0.25% increase in December 2015 only to have to pause for a year before beginning to raise again. As the Federal Reserve continued to attempt to transparently "normalize" monetary policy by increasing the fed funds rate quarterly in 0.25% increments, the administration's fiscal policy was giving market participants renewed optimism through a business friendly agenda.

Various factors provided a positive economic backdrop with strengthening economic momentum and pushed US equity markets higher with low volatility in the first seven months of the fiscal year led by US SmallCap equities. Those factors included:

- Low historic interest rates
- Relatively low (but increasing) inflation
- Reduced business regulations & taxes (including more aggressive depreciation schedules)
- Talk of infrastructure spending
- Strong job growth with low unemployment & underemployment
- Historic small business optimism, and
- Generally increased risk appetites

As a result, for the first half of the fiscal year, the PLETF equity pools had a seemingly constant march upward through January. This resulted in exceeding the 62.50% equity market value exposure and triggered another 2.5% rebalancing from equities into fixed income. It was decided to execute 1% in December and 1.5% in January. With an amazing equity rally in January, the PLETF benefitted greatly as the larger percentage was executed (stocks were sold) during the last couple of trading sessions in January – nearly the top of the market to date.

Tape 2 (*Second Half*): Soon after, in early February a combination of global nuclear fears, notions that the Fed may need to become more aggressive with rate hikes and a 10-Year UST breaking the 3% level reminded investors what markets look like with volatility in risk assets and equity markets dropped. Global trade conflicts and the introduction of tariffs between the US, EU, Mexico, Canada and China have kept investors wary in the second half although equity markets continue to climb, led again by US SmallCap equities and the rates curve has flattened.

Strategy: Maintain Overweight in Small Cap |

Equity Strategy - Our strategy of being overweight in SmallCap stocks continues to add to our performance. As SmallCap stocks have historically outperformed over long periods of time, our position has taken advantage of this return. Our 10% target is approximately three times more than the SmallCap exposure of the S&P 1500 total market cap. As this fund is invested in perpetuity, our goal is take advantage of this historic outperformance over time. Since inception, our SmallCap exposure has returned 13.79% (20.20% FY18), outperforming the MidCap exposure at 9.77% (13.48% FY18), our LargeCap exposure at 5.17% (14.30% FY18), and our fixed income return of 4.57% (0.19% FY18).

We will continue to invest in the individual components of the various indices per our investment policy.

Tim White, Director of Endowments

Strategy: Continue to Keep Duration Short and Marginally Add Convexity |

Fixed Income Strategy – Strategy has been to be very defensively positioned on a duration basis such that Pool 205 performs well in a rising rate environment. Presently the portfolio is positioned to perform best in a "bear-steepener" scenario and a "bear-flattener" scenario.

As the portfolio has benefitted tremendously versus the benchmark FYTD, we will look to lock in relative performance and add more convexity and duration as global economic factors may be changing with European and emerging market weakness. The price of a positively convex security will rise more for a downward move in interest rates than its price declines for an equal upward move in rates.

To do this, we plan to incrementally add longer fixed rate bond positions to hedge against an economic downturn, or any possible credit-driven market dislocations, by adding UST duration at the margin and possibly swapping out of some corporate exposure. Due to larger Prop 123 monthly distributions, pool duration will extend naturally if interest rates do not decrease and our equity portfolios do not realize large appreciation and subsequent cash rebalancing back into our fixed income portfolios. Bearing this in mind, and combined with rising interest rates, we have kept our duration shorter than the benchmark by 2.39 years at 3.64 years (-0.01 MOM) versus 6.03 (unch MOM) for the SBBIG Index – the difference will likely shrink in coming months.

Endowment Monthly Land Sale Proceeds |

- +$6.8 MM in June.
- -$9.4 MM vs May.
- - $54.6 MM FYTD
- - 33.4% YOY

Endowment Prop 123 Distributions |

- $25.3+ MM total/$23.5+ MM for K-12 successfully distributed on time from Pool 123 on June 21st
- $317 MM total/$294.8 MM for K-12 distributed FY18
- +9.36% K-12 YoY increase
- Pool 123 mechanism working well (2-3 months laddered liquidity)

Pool Performance |

Portfolio standard deviation was 6.29 versus benchmark at 6.40; Portfolio is less risky/volatile versus benchmark with better total return.

- Equity Pools:
  - Pool 201 LargeCap Equity beat the S&P 500 by +2bps MOM; Up 14.3% FY18.
  - Pool 203 MidCap Equity beat the S&P 400 by +7bps MOM; Up 13.48% FY18.
  - Pool 204 SmallCap Equity lagged the S&P 600 by -7bps MOM; Up 20.2% FY18.
  - Pool weightings are within policy tolerance.
- Fixed Income Pools:
  - Pool 205 -0.06% versus SBBIG Index at -0.17% MOM.
  - Pool 205 beat the SBBIG Index by +11bps MOM; outperforming by +64bps FYTD.
  - Pool 123 returned 0.14% beating its benchmark by +3bps FYTD.

Tim White, Director of Endowments

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EARNINGS DISTRIBUTION - INVESTMENT POOLS
JULY 2018

Recipient	Earnings Distributed JULY 2018	Earnings Distributed Fiscal YTD 18/19	Earnings Distributed Fiscal YTD 17/18	Fiscal YTD Investment Management Fees Received
General Fund *	$3,076,957	$3,076,957	$1,692,516	
2 State Agencies - Full Faith & Credit	1,372,549	1,372,549	655,716	41,142
3 State Agencies - Diversified (Combined) **	1,710,325	1,710,325	1,110,239	79,508
4 State Agencies - Gov	1,105,412	1,105,412	702,773	40,190
5 LGIP	2,522,170	2,522,170	1,025,951	66,909
7 LGIP Gov	1,922,220	1,922,220	967,422	60,510
9A Public School Credit Enhancement ***	0	0	0	4,882
10 Restricted Operating	761,447	761,447	468,977	55,040
12 CAWCD Medium-Term	745,386	745,386	495,001	18,158
16 ECDH Medium-Term	709,871	709,871	531,783	18,192
Subtotal	**$13,926,338**	**$13,926,338**	**$7,650,377**	**$384,532**
NAV POOL				
500 LGIP - Med Term	664,333	664,333	444,434	16,053
700 LGIP - FF&C Med Term	173,650	173,650	161,418	5,623
Total	**$14,764,320**	**$14,764,320**	**$8,256,228**	**$406,208**
JULY 2017 TOTALS	**$8,256,228**			**$384,719**

* Note: Pool 15 AHCCCS Operating Earnings are reported in General Fund
** Note: Pool 15 AHCCCS Operating Management Fees are reported in Pool 3 State Agencies Diversified (Combined)
*** Note: 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, 2018
(in millions)

Month	Fiscal Year 2016/2017	Fiscal Year 2017/2018	Fiscal Year 2018/2019
JULY	$2,012	$1,635	$1,824
AUGUST	1,504	1,303	
SEPTEMBER	1,694	1,455	
OCTOBER	1,672	1,473	
NOVEMBER	1,633	1,417	
DECEMBER	1,693	1,400	
JANUARY	2,255	2,140	
FEBRUARY	2,306	2,244	
MARCH	1,968	1,937	
APRIL	1,961	1,980	
MAY	2,215	2,279	
JUNE	2,147	2,407	
Y-T-D Average	**$1,922**	**$1,806**	**$1,824**

Budget Stabilization Average Fund Balance - July 2018	**$458**
Total Average Cash Available - July 2018	**$2,282**

STATE AGENCY POOLS
PORTFOLIO EARNINGS ANALYSIS
JULY 2018

FUND	DESCRIPTION	Current Month 07/31/18	Prior Month 06/30/18	Prior Year 07/31/17	Net Asset Value Per Share
2	STATE AGENCIES - FULL FAITH & CREDIT	1,447,988	1,336,712	779,846	0.9895
3	STATE AGENCIES - DIVERSIFIED				
	INTERNAL MANAGERS	2,701,363	3,389,290	1,482,193	0.9951
	EXTERNAL MANAGERS	194,561	183,138	123,092	0.9952
	FUND 3 TOTAL	2,895,924	3,572,428	1,605,285	0.9952
4	STATE AGENCIES - GOV	1,347,491	1,338,151	853,608	0.9917
9A	PUBLIC SCHOOL CREDIT ENHANCEMENT	171,817	165,872	21,776	0.9895
10	RESTRICTED OPERATING				
	INTERNAL MANAGERS	1,840,080	1,682,011	1,100,178	0.9918
	EXTERNAL MANAGERS	120,115	135,567	197,360	1.0018
	FUND 10 TOTAL	1,960,195	1,817,578	1,297,538	0.9931
12	CAWCD MEDIUM-TERM	745,386	707,971	495,001	0.9944
15	AHCCCS OPERATING	109,268	50,433	48,192	N/A
16	ECDH MEDIUM-TERM	709,871	674,202	531,783	0.9875
	TOTAL STATE AGENCIES	9,387,938	9,663,347	5,633,029	

STATE AGENCY POOLS
PORTFOLIO YIELD ANALYSIS
JULY 2018

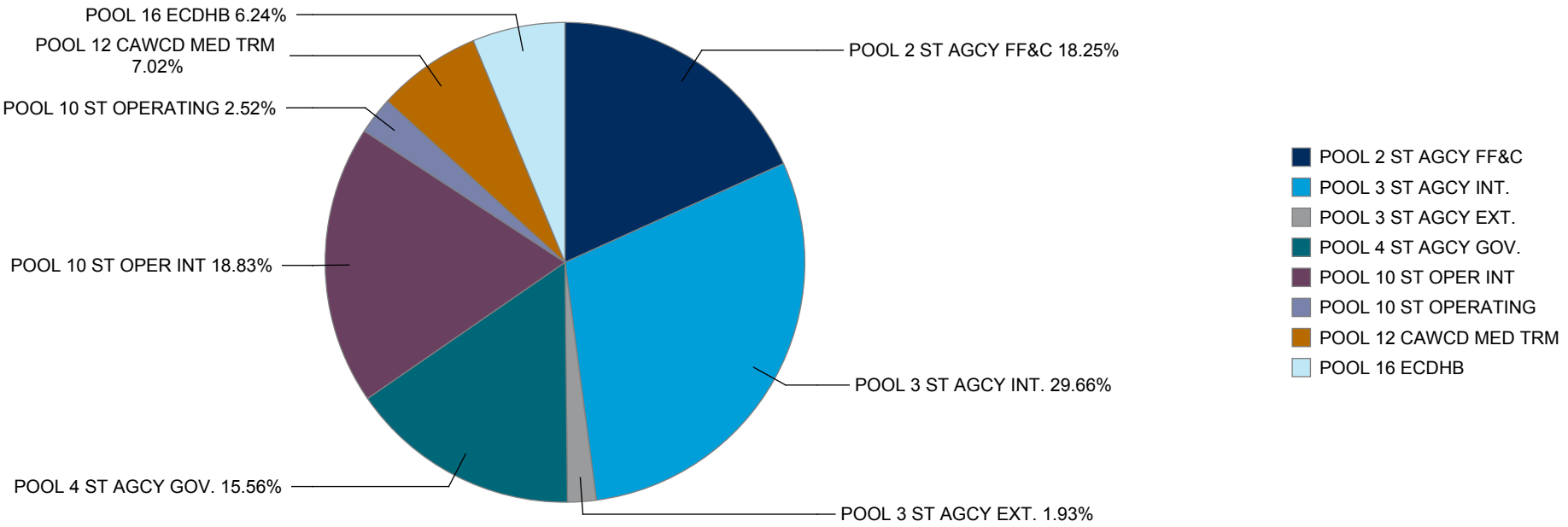
FUND	DESCRIPTION	Current Month 07/31/18	Prior Month 06/30/18	Prior Year 07/31/17
2	STATE AGENCIES - FULL FAITH & CREDIT	1.94%	1.74%	1.09%
	75% MERRILL 0-1 US TREAS INDEX / 25% MERRILL US GNMA MORTGAGE BACKED INDEX	2.39%	2.33%	1.58%
3	STATE AGENCIES - DIVERSIFIED			
	INTERNAL MANAGERS	2.08%	2.00%	1.32%
	EXTERNAL MANAGERS	2.16%	2.10%	1.39%
	COMBINED	2.08%	2.00%	1.33%
	50% 3 MONTH LIBOR INDEX / 50% MERRILL 1-3 US BROAD MARKET INDEX	2.58%	2.53%	1.44%
4	STATE AGENCIES - GOV	1.84%	1.75%	1.12%
	50% MERRILL 6 MTH US T-BILL INDEX / 50% MERRILL 1-3 UNSUB. US TREAS / AGY INDEX	2.40%	2.29%	1.25%
9A	PUBLIC SCHOOL CREDIT ENHANCEMENT	1.94%	1.74%	1.09%
10	RESTRICTED OPERATING			
	INTERNAL MANAGERS	2.10%	2.01%	1.38%
	EXTERNAL MANAGERS	0.96%	1.05%	0.76%
	COMBINED	1.96%	1.88%	1.23%
	50% 3 MONTH LIBOR INDEX / 50% MERRILL 1-3 US BROAD MARKET INDEX	2.58%	2.53%	1.44%
12	CAWCD MEDIUM-TERM	2.26%	2.21%	1.60%
	75% MERRILL 1-5 US D M INDEX / 25% S & P LGIP INDEX	2.70%	2.61%	1.60%
15	AHCCCS OPERATING	0.72%	0.47%	0.25%
16	ECDH MEDIUM-TERM	2.37%	2.32%	1.77%
	75% MERRILL 1-5 US D M INDEX / 25% S & P LGIP INDEX	2.70%	2.61%	1.60%

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

STATE AGENCY

Manager Allocation



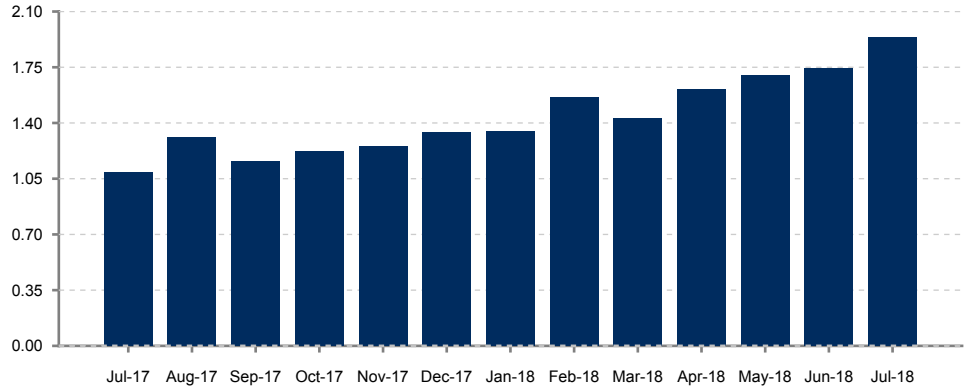
	Market Value	% of Portfolio
POOL 2 ST AGCY FF&C	1,000,433,715	18.3
POOL 3 ST AGCY INT.	1,625,789,749	29.7
POOL 3 ST AGCY EXT.	105,668,915	1.9
POOL 4 ST AGCY GOV.	852,902,888	15.6
POOL 10 ST OPER INT	1,032,069,096	18.8
POOL 10 ST OPERATING	137,885,365	2.5
POOL 12 CAWCD MED TRM	384,997,570	7.0
POOL 16 ECDHB	341,866,048	6.2
TOTAL STATE AGENCY	5,481,613,347	100.0

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

POOL 2 ST AGCY FF&C

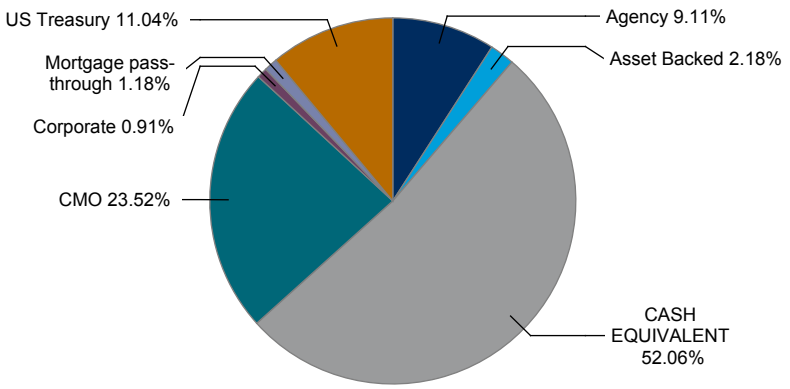
Net Yield



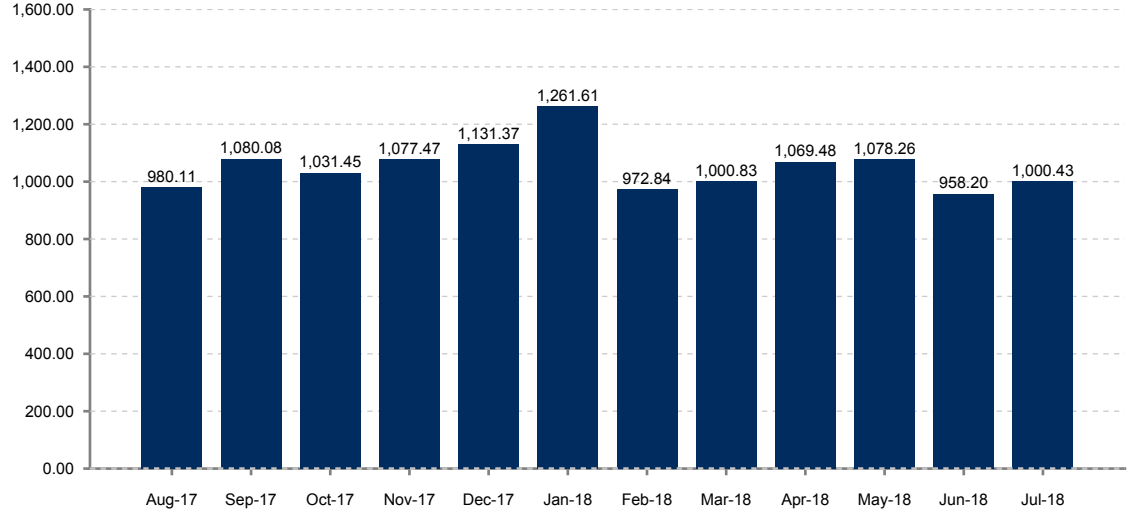
	Current Mth	Prior Mth	1 Year Ago
POOL 2 ST AGCY FF&C	1.94	1.74	1.09

Asset Allocation

	Ending Market Value
POOL 2 ST AGCY FF&C	1,000,433,715



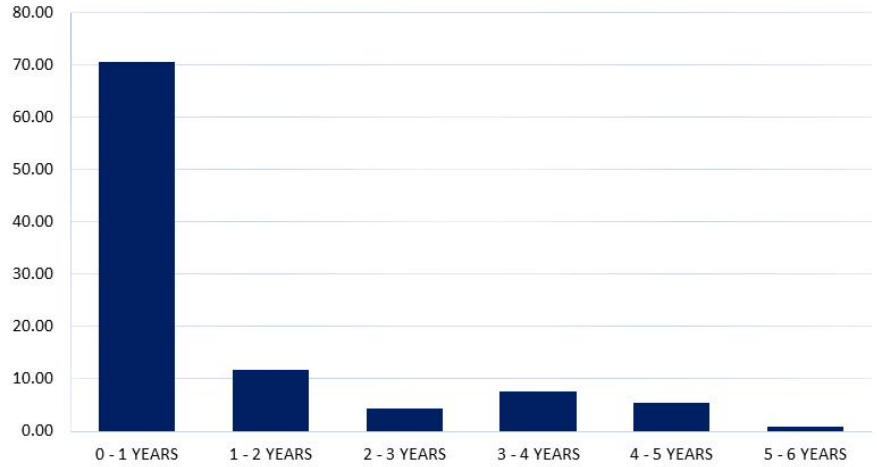
Net Asset Values over Time ($MM)



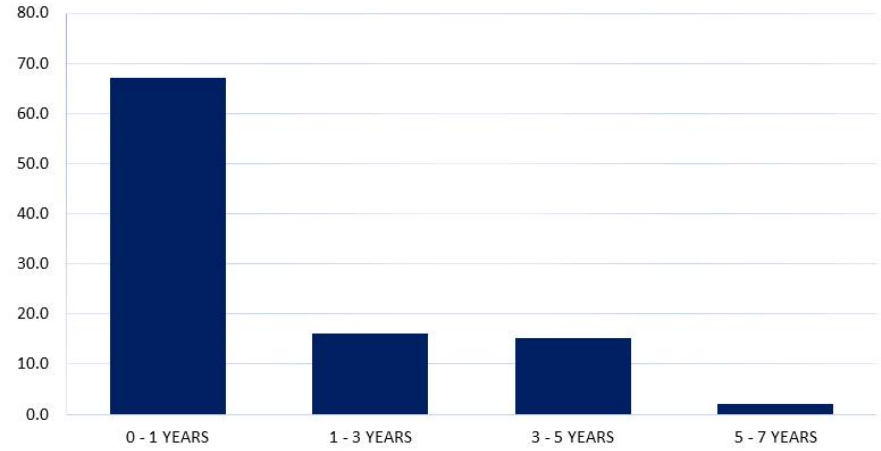
Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 2 ST AGCY FF&C		
DAIWA CAPITAL MARKETS	200,010,444	19.99
WELLS FARGO REPO	174,831,602	17.48
TREASURY BILL	29,998,637	3.00
OVERSEAS PRIVATE INV C	25,000,000	2.50
US TREASURY N/B	24,975,246	2.50
TREASURY BILL	24,925,049	2.49
GUGGENHEIM SECURITIE	20,056,016	2.00
US TREASURY N/B	20,027,668	2.00
TREASURY BILL	19,992,750	2.00
TREASURY BILL	19,946,653	1.99

Duration Distribution



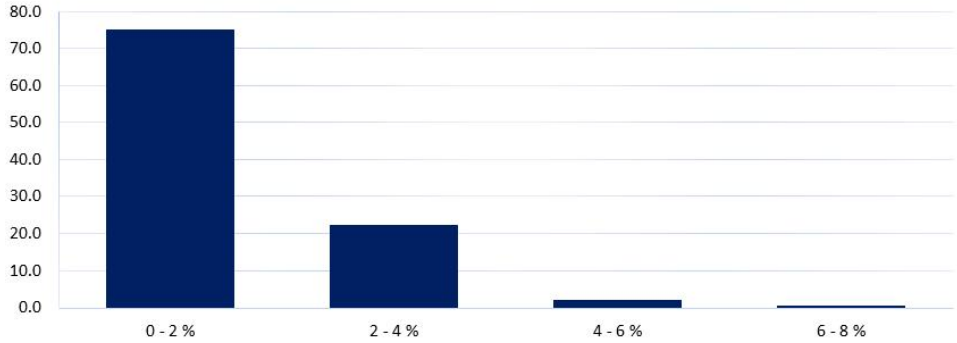
Expected Maturity Distribution



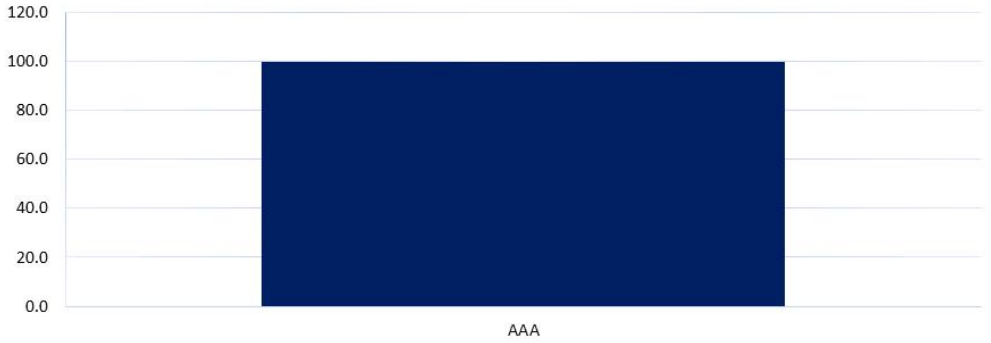
Portfolio Level Characteristics

	POOL 2 ST AGCY FF&C
Effective Maturity	1.09
Coupon	1.00
Effective Duration	0.92
Quality Rating (Moody's)	AAA

Coupon Distribution



Rating Distribution



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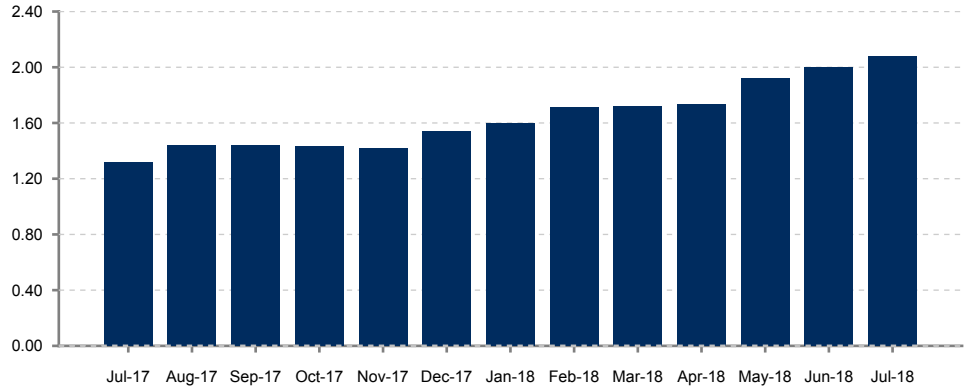
POOL 3 ST AGCY INT.

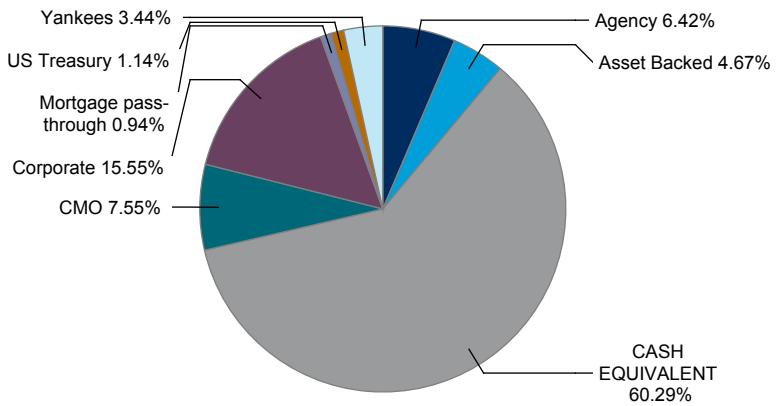
Net Yield



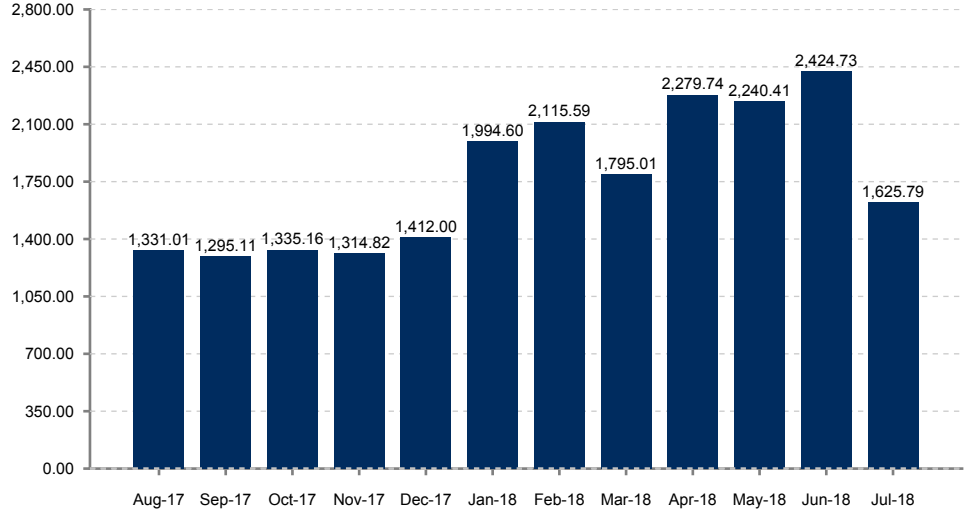
	Current Mth	Prior Mth	1 Year Ago
POOL 3 ST AGCY INT.	2.08	2.00	1.32

Asset Allocation

	Ending Market Value
POOL 3 ST AGCY INT.	1,625,789,749



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY INT.		
SOUTH STREET REPO	520,029,322	31.99
AMHERST PIERPONT	67,156,950	4.13
INTEL CORPORATION	39,972,411	2.46
IBM CORP	30,133,886	1.85
EXXON MOBIL CORP	29,871,433	1.84
ARMY & AIR FORCE EXCHA	25,000,000	1.54
CONCORD MIN CPTL CO	24,982,500	1.54
MOUNTCLIFF	24,943,750	1.53
OLD LINE FUNDING LLC	24,933,090	1.53
KELLS FDG LLC	24,925,250	1.53

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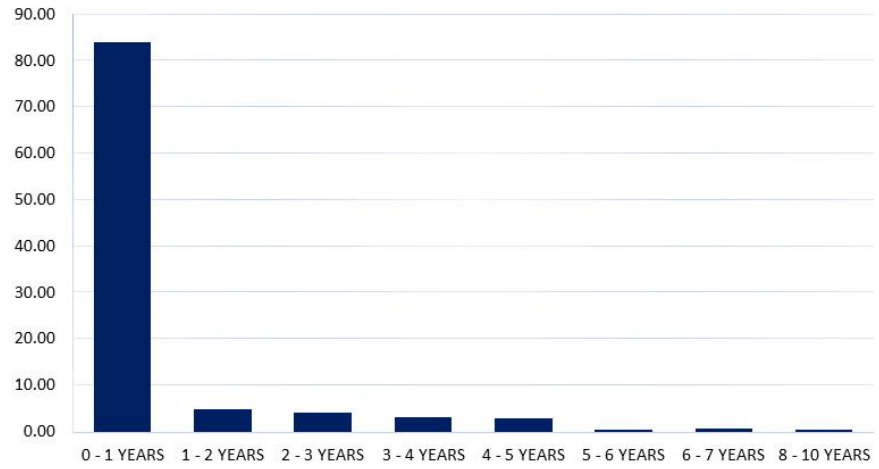
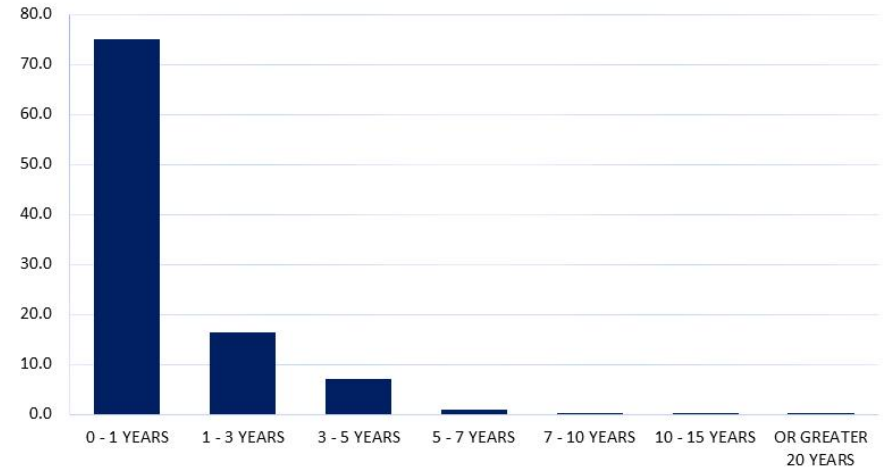
POOL 3 ST AGCY INT

Duration Distribution



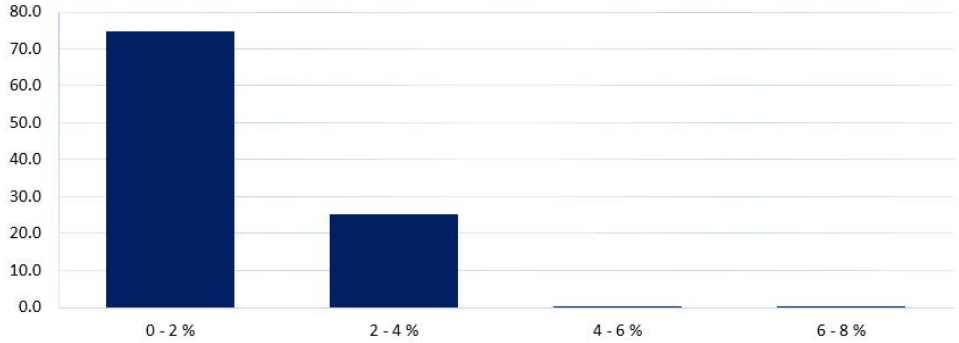
Expected Maturity Distribution



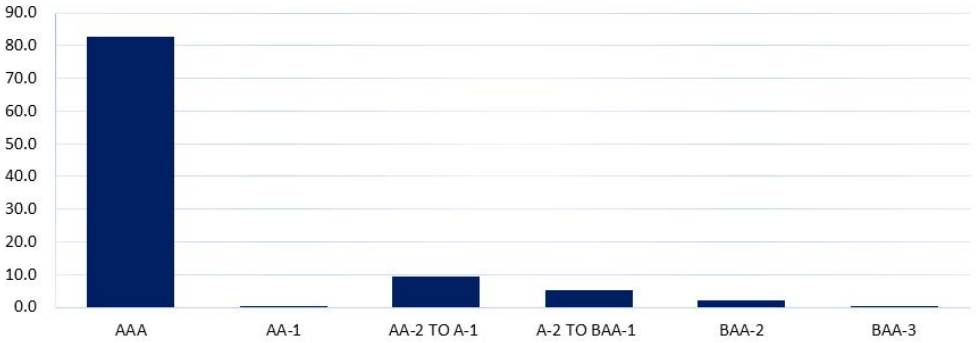
Portfolio Level Characteristics

	POOL 3 ST AGCY INT.
Effective Maturity	0.89
Coupon	0.93
Effective Duration	0.64
Quality Rating (Moody's)	AA-1

Coupon Distribution



Rating Distribution



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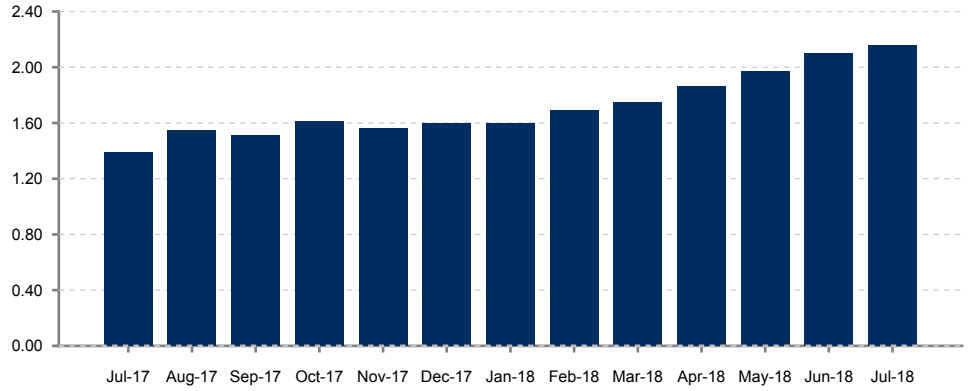
POOL 3 ST AGCY EXT.

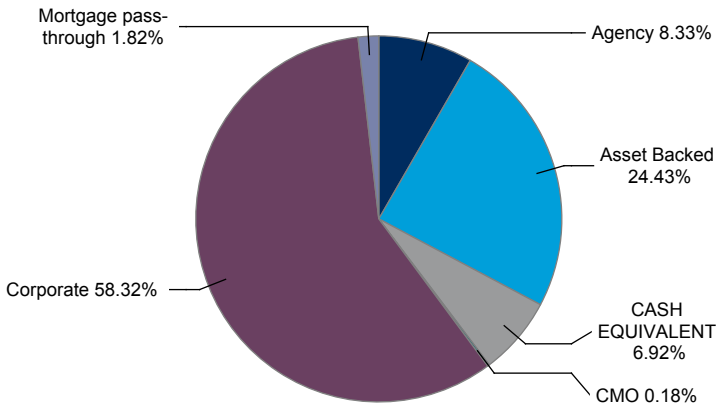
Net Yield



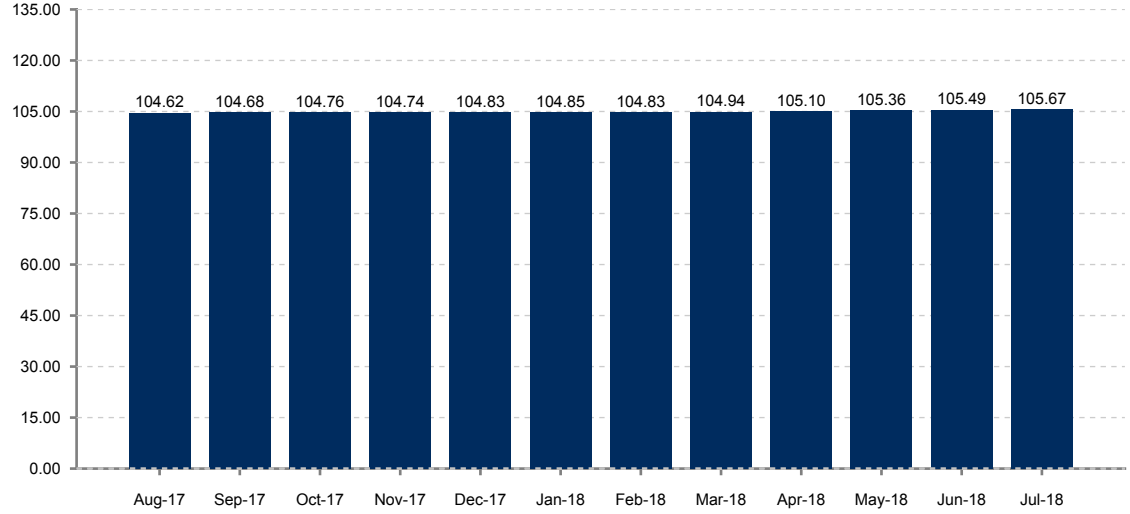
	Current Mth	Prior Mth	1 Year Ago
POOL 3 ST AGCY EXT.	2.16	2.10	1.39

Asset Allocation

	Ending Market Value
POOL 3 ST AGCY EXT.	105,668,915



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 3 ST AGCY EXT.		
FANNIE MAE	2,976,407	2.82
FREDDIE MAC	2,765,571	2.62
DISCOVER CARD EXECUTION NOTE T	2,087,675	1.98
CISCO SYSTEMS INC	1,991,180	1.88
FANNIE MAE	1,984,297	1.88
BANK OF AMERICA CREDIT CARD TR	1,907,482	1.81
BRANCH BANKING + TRUST	1,859,274	1.76
MANUF + TRADERS TRUST CO	1,818,094	1.72
CITIBANK NA	1,750,967	1.66
PACCAR FINANCIAL CORP	1,594,533	1.51

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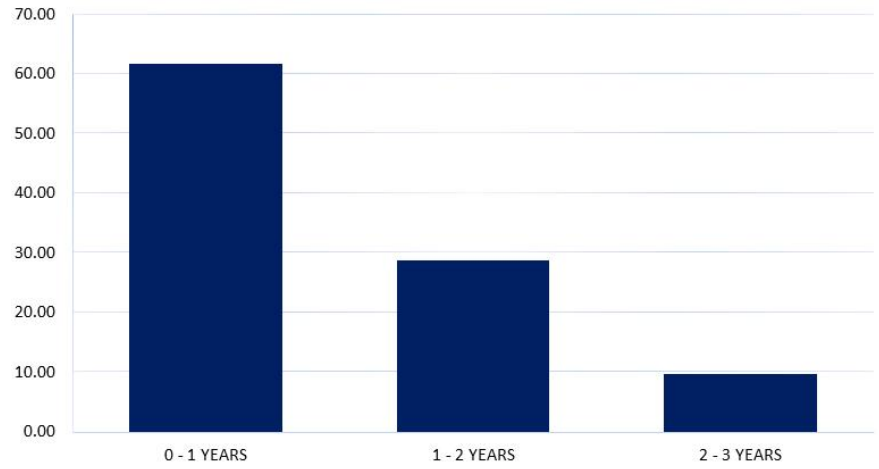
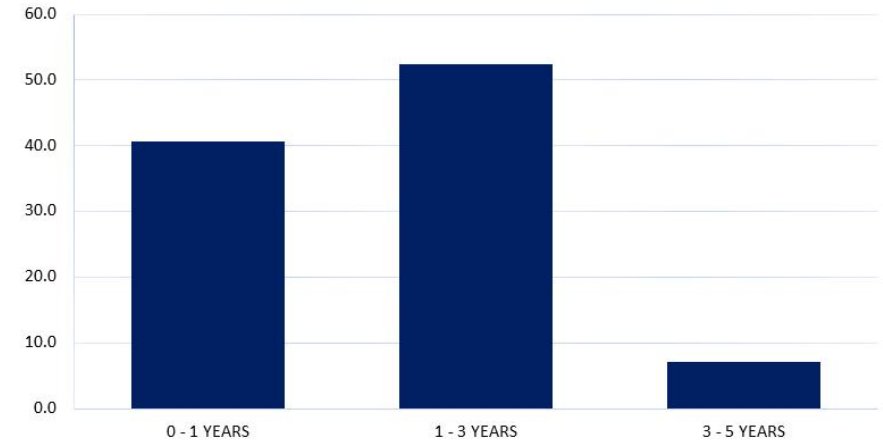
POOL 3 ST AGCY EXT

Duration Distribution



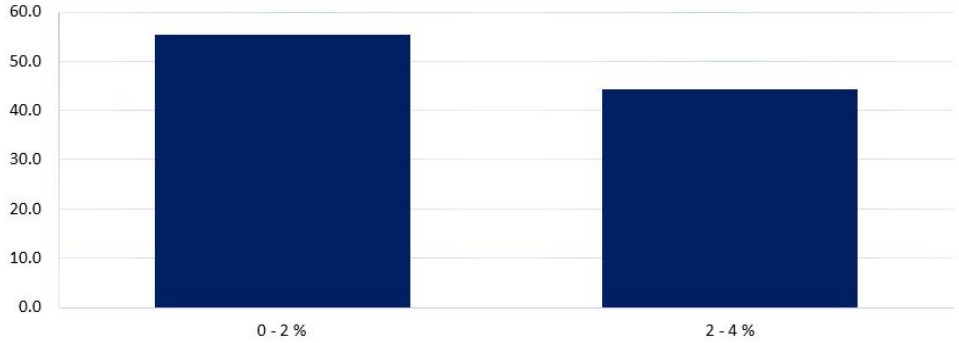
Expected Maturity Distribution



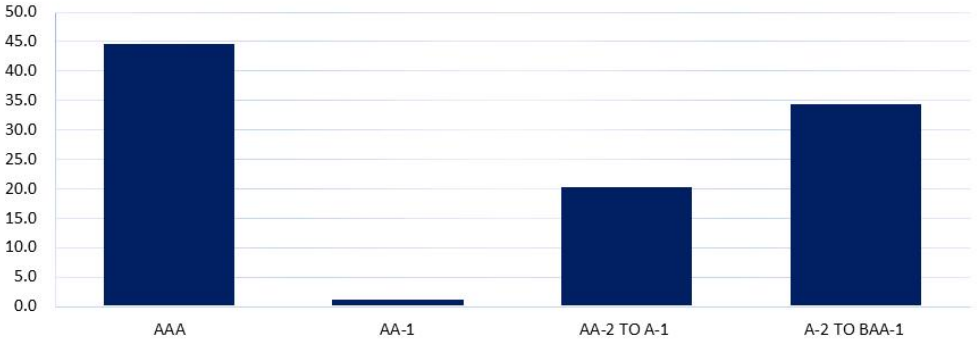
Portfolio Level Characteristics

	POOL 3 ST AGCY EXT.
Effective Maturity	1.37
Coupon	1.93
Effective Duration	0.81
Quality Rating (Moody's)	AA-3

Coupon Distribution



Rating Distribution



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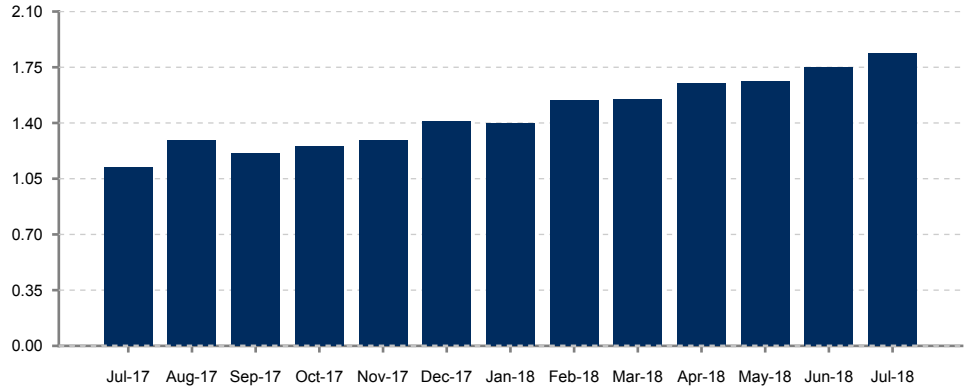
POOL 4 ST AGCY GOV.

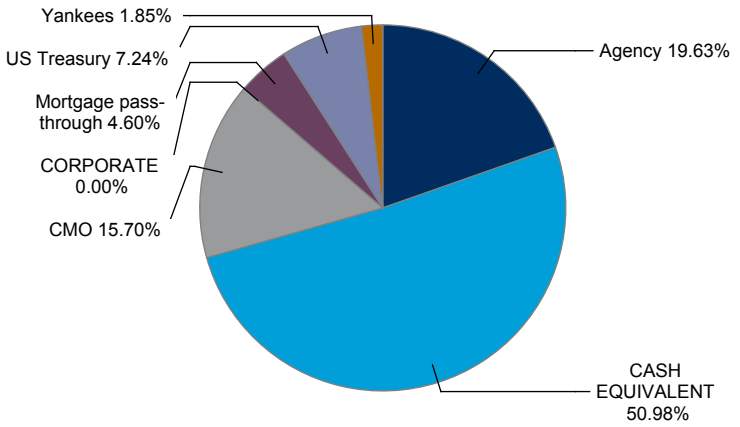
Net Yield



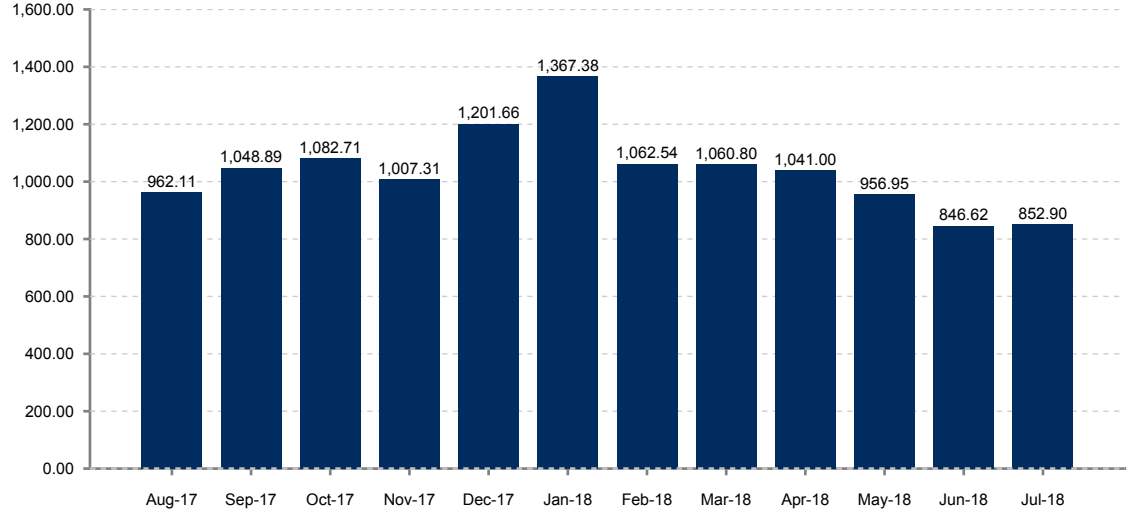
	Current Mth	Prior Mth	1 Year Ago
POOL 4 ST AGCY GOV.	1.84	1.75	1.12

Asset Allocation

	Ending Market Value
POOL 4 ST AGCY GOV.	852,902,888



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 4 ST AGCY GOV.		
AMHERST PIERPONT	336,410,997	39.44
TREASURY BILL	39,783,039	4.66
US TREASURY N/B	24,975,246	2.93
FARMER MAC	20,189,931	2.37
FEDERAL FARM CREDIT BANK	20,064,507	2.35
FEDERAL FARM CREDIT BANK	20,028,520	2.35
US TREASURY N/B	20,027,668	2.35
TREASURY BILL	19,999,099	2.34
TREASURY BILL	19,992,750	2.34
TREASURY BILL	19,866,621	2.33

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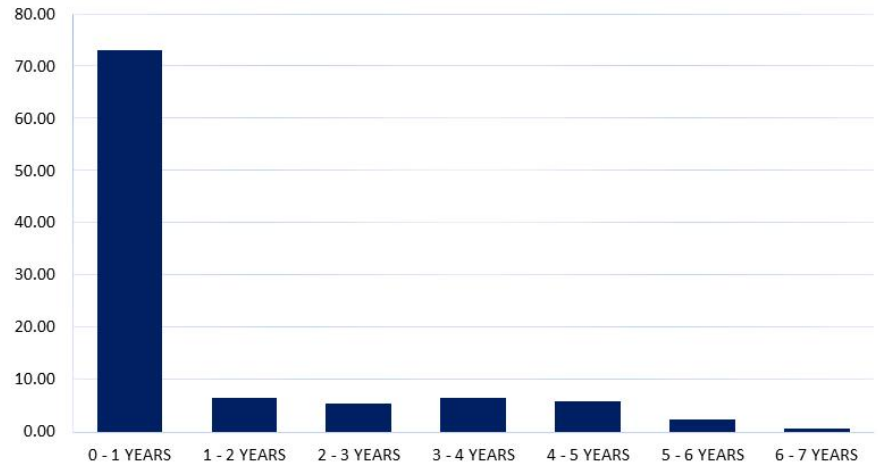
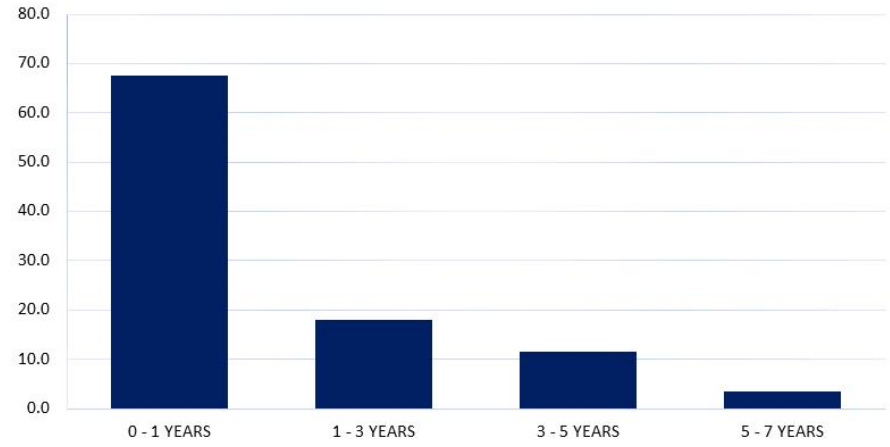
POOL 4 ST AGCY GOV

Duration Distribution



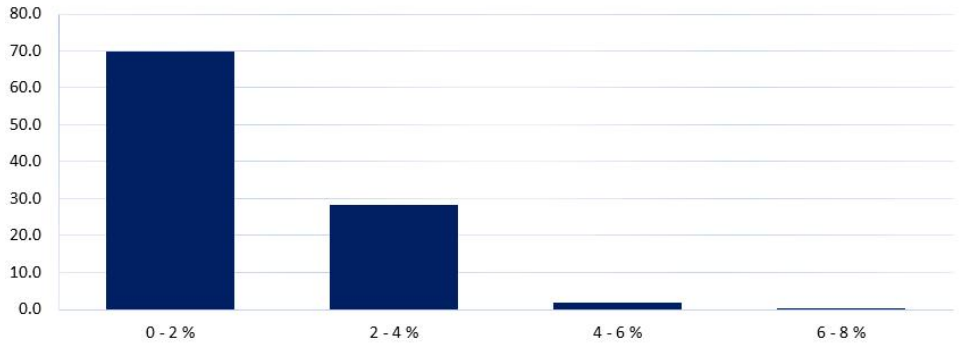
Expected Maturity Distribution



Portfolio Level Characteristics

	POOL 4 ST AGCY GOV.
Effective Maturity	1.13
Coupon	1.07
Effective Duration	0.98
Quality Rating (Moody's)	AAA

Coupon Distribution



Rating Distribution

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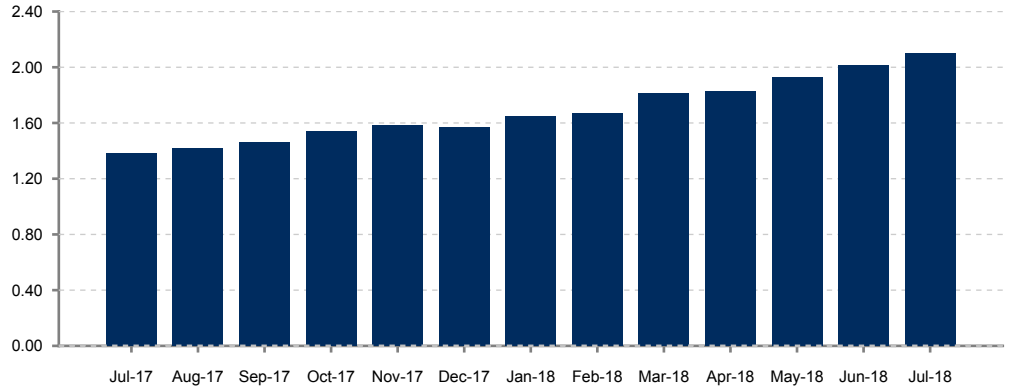
POOL 10 ST OPERATING INT

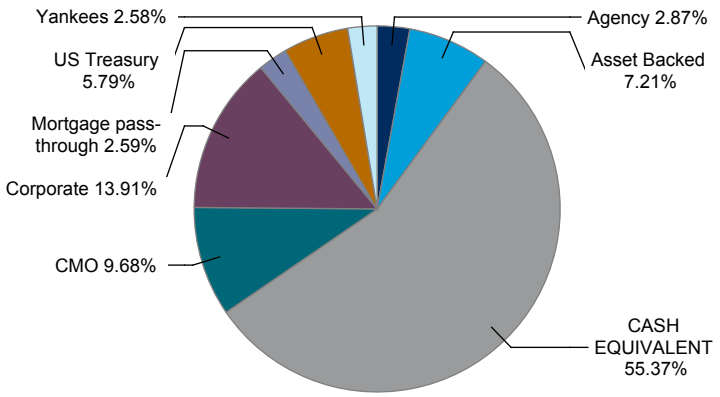
Net Yield



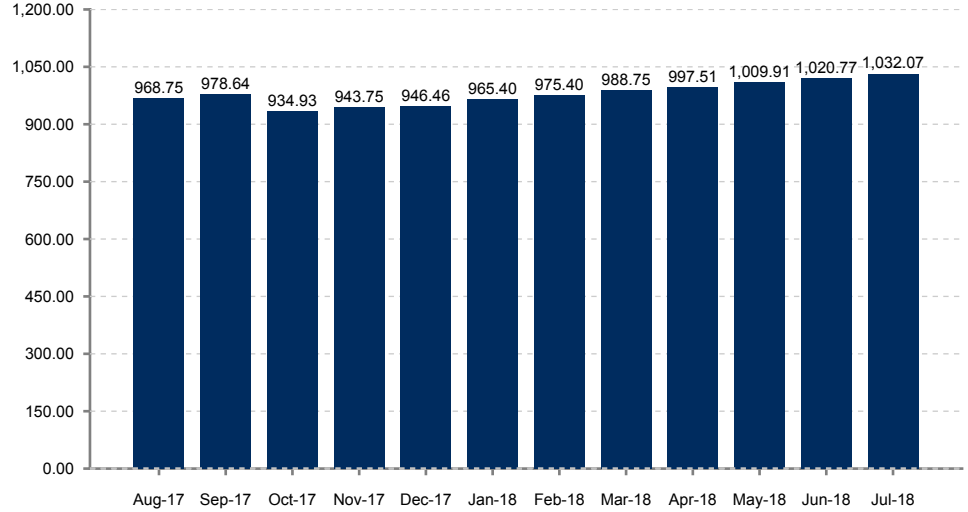
	Current Mth	Prior Mth	1 Year Ago
POOL 10 ST OPER INT	2.10	2.01	1.38

Asset Allocation

	Ending Market Value
POOL 10 ST OPER INT	1,032,069,096



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPER INT		
AMHERST PIERPONT	96,459,970	9.35
WELLS FARGO REPO	45,180,010	4.38
COCA-COLA COMPANY	24,730,325	2.40
KELLS FDG LLC	19,988,800	1.94
CRC FUNDING LLC	19,988,600	1.94
CEDAR SPRING CPTL CO	19,988,500	1.94
MANHATTAN ASSET FDG.	19,984,328	1.94
THUNDER BAY FNDNG LLC	19,982,500	1.94
CROWN POINT CAP CO.	19,982,111	1.94
SHEFFIELD RECEIVABLE	19,964,600	1.93

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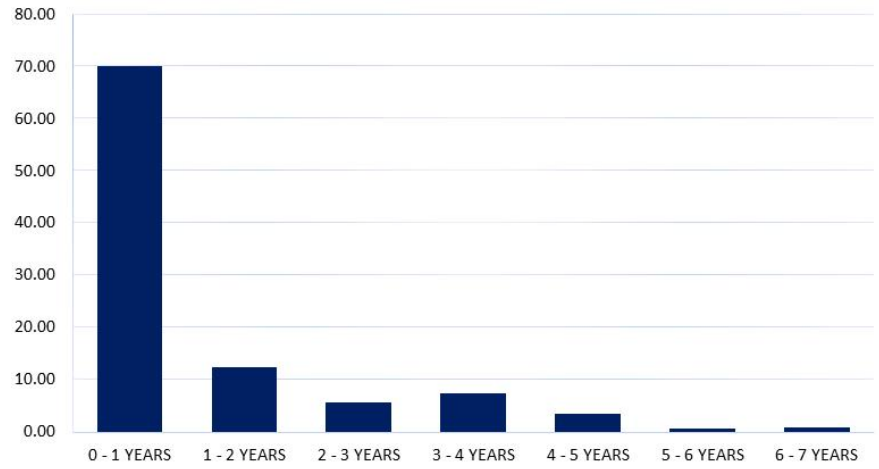
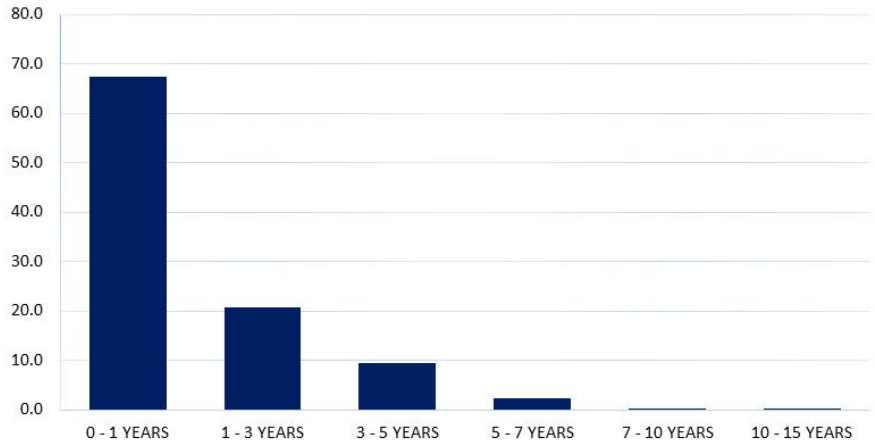
POOL 10 ST OPERATING INT

Duration Distribution



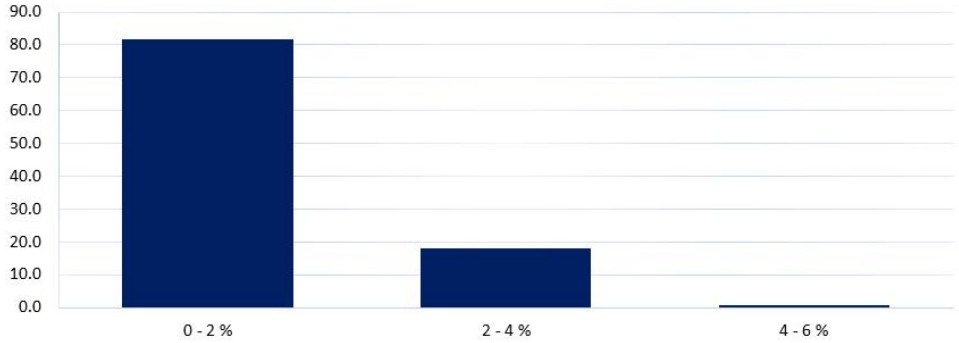
Expected Maturity Distribution



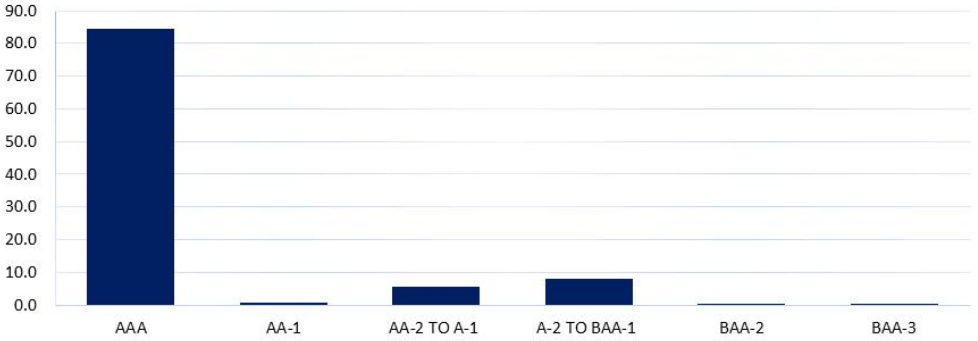
Portfolio Level Characteristics

	POOL 10 ST OPERATING INT
Effective Maturity	1.03
Coupon	0.90
Effective Duration	0.96
Quality Rating (Moody's)	AA-1

Coupon Distribution



Rating Distribution



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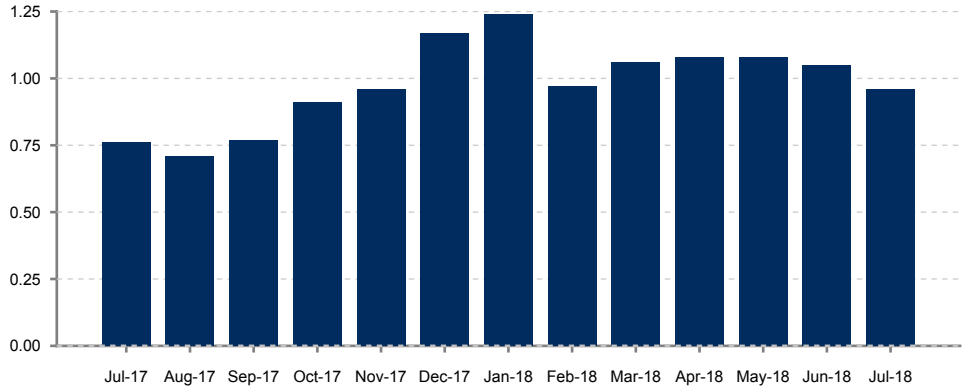
POOL 10 ST OPERATING Ext

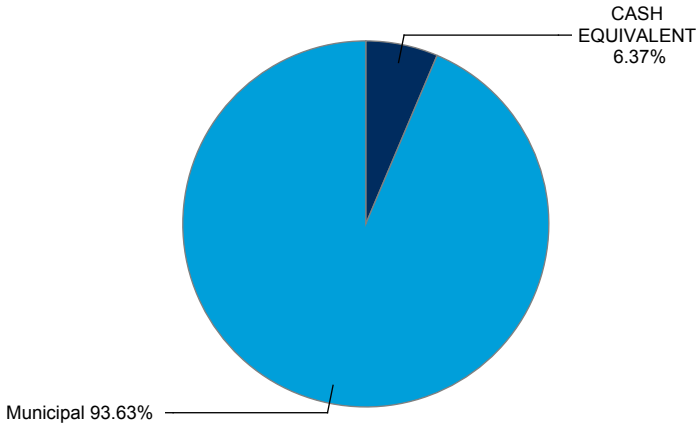
Net Yield



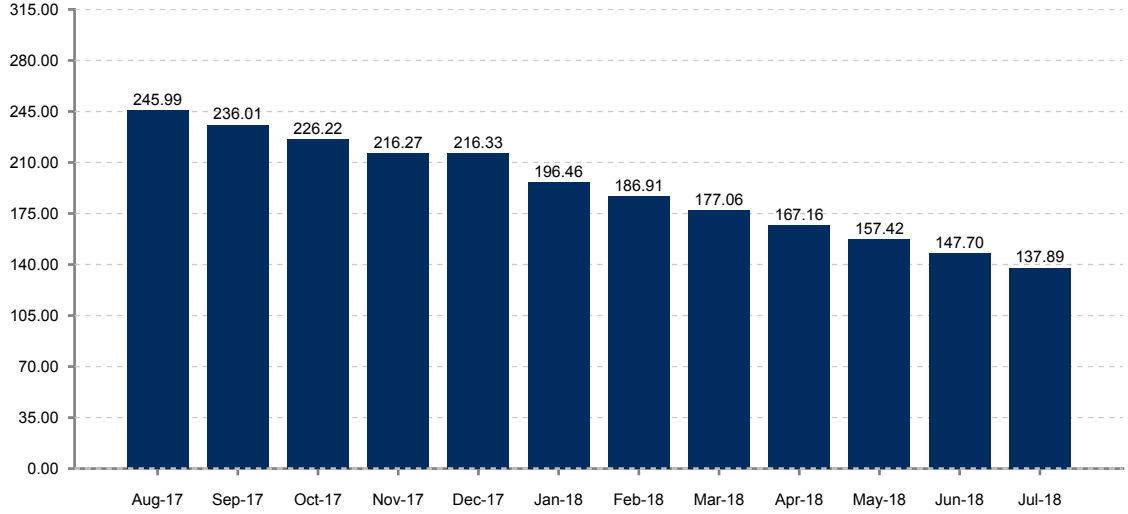
	Current Mth	Prior Mth	1 Year Ago
POOL 10 ST OPERATING	0.96	1.05	0.76

Asset Allocation

	Ending Market Value
POOL 10 ST OPERATING	137,885,365



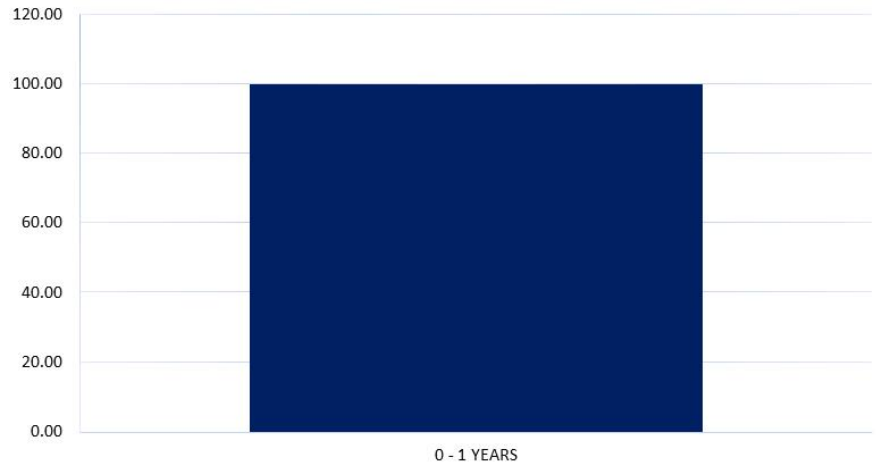
Net Asset Values over Time ($MM)



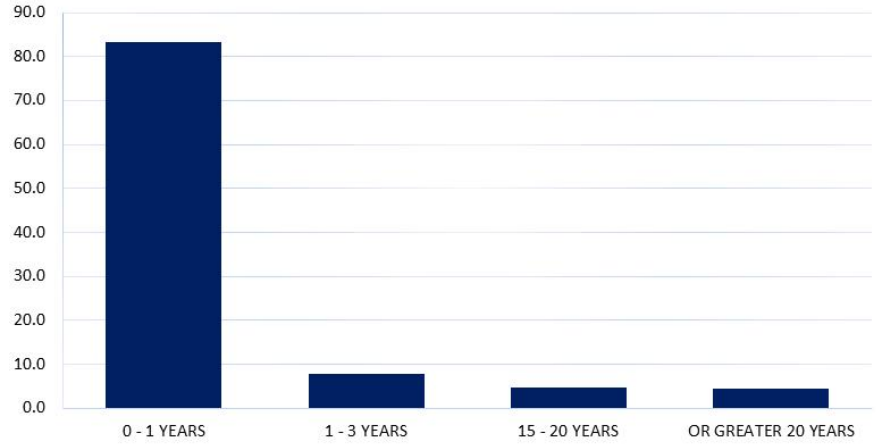
Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 10 ST OPERATING		
ALPINE UT SCH DIST	10,462,008	7.59
PRINCE GEORGES CNTY	10,202,332	7.40
SHELBY CNTY TN	9,861,254	7.15
TEXAS ST	9,348,591	6.78
DREYFUS TAX EXEMPT CA	8,796,823	6.38
WISCONSIN ST PETROLEU	8,781,443	6.37
GEORGIA ST ROAD TOLL	8,176,388	5.93
INDIANA ST FIN AUTH HOS	6,590,089	4.78
MISSISSIPPI ST BUSINESS	6,504,450	4.72
ILLINOIS ST FIN AUTH REV	5,879,159	4.26

Duration Distribution



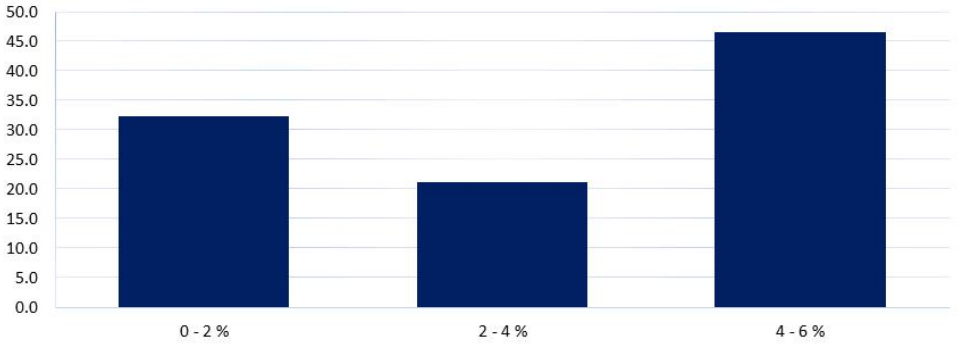
Expected Maturity Distribution



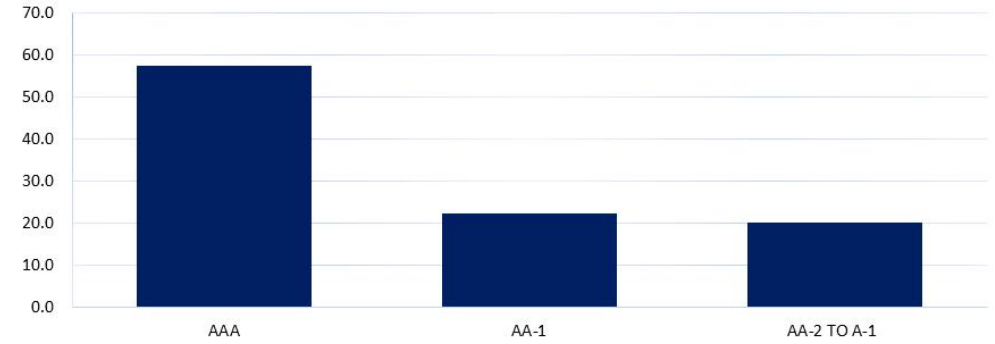
Portfolio Level Characteristics

	POOL 10 ST OPERATING
Effective Maturity	2.34
Coupon	3.44
Effective Duration	0.41
Quality Rating (Moody's)	AA-1

Coupon Distribution



Rating Distribution



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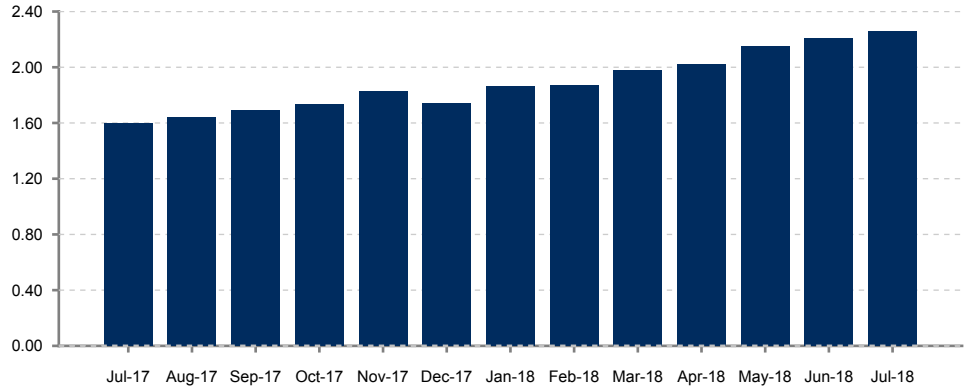
POOL 12 CAWCD MED TRM

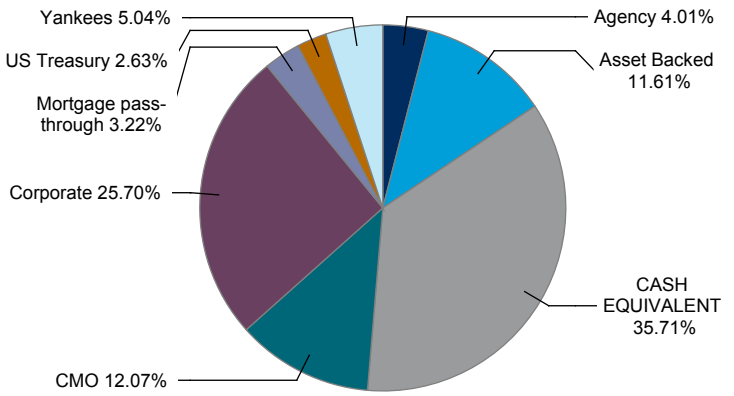
Net Yield



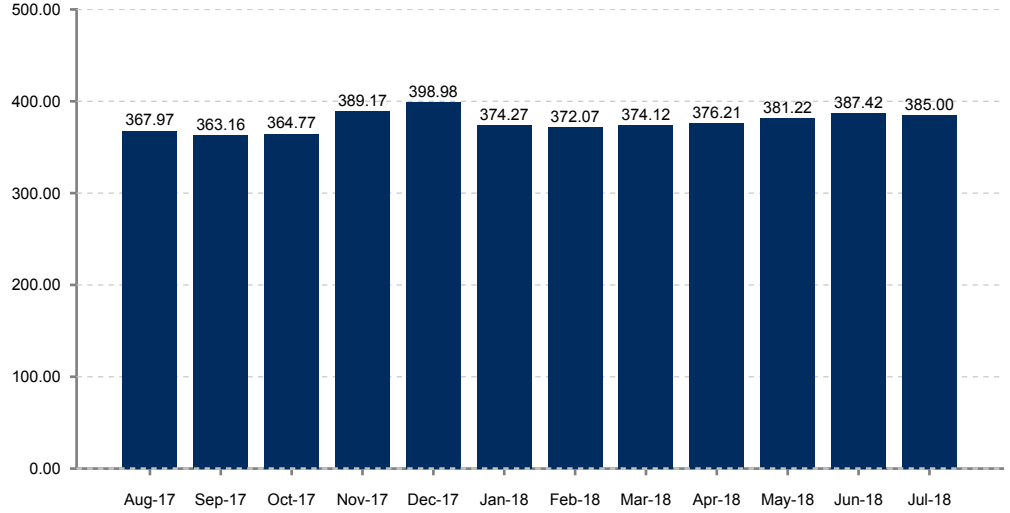
	Current Mth	Prior Mth	1 Year Ago
POOL 12 CAWCD MED TRM	2.26	2.21	1.60

Asset Allocation

	Ending Market Value
POOL 12 CAWCD MED TRM	384,997,570



Net Asset Values over Time ($MM)



Top 10 Holdings

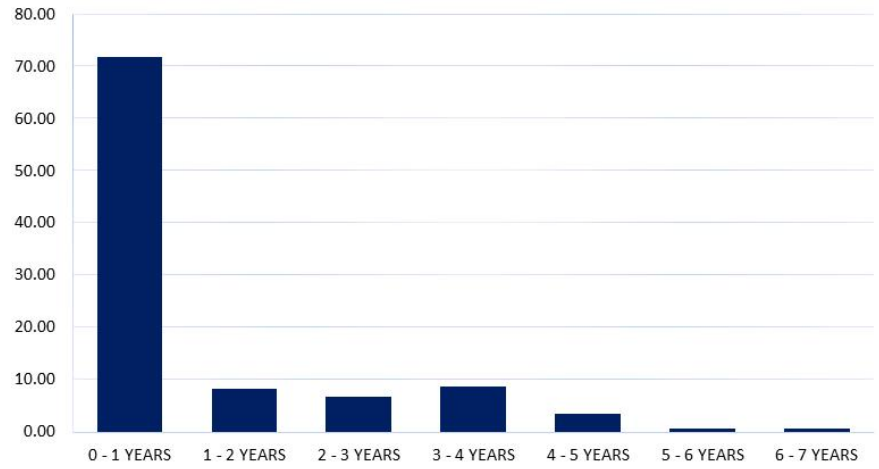
Security Name	Ending Market Value	% of Portfolio
POOL 12 CAWCD MED TRM		
AMHERST PIERPONT	59,635,257	15.49
ATLANTIC ASSET SECUR	9,998,733	2.60
VICTORY RECEIVABLES	9,998,722	2.60
MANHATTAN ASSET FDG.	9,992,164	2.60
SUMITOMO MITSUI TRUST NY	9,963,267	2.59
SOUTH STREET REPO	7,000,350	1.82
FANNIE MAE	5,708,058	1.48
FREDDIE MAC	5,549,781	1.44
FANNIE MAE	5,385,693	1.40
US TREASURY N/B	5,055,276	1.31

OFFICE OF THE ARIZONA STATE TREASURER

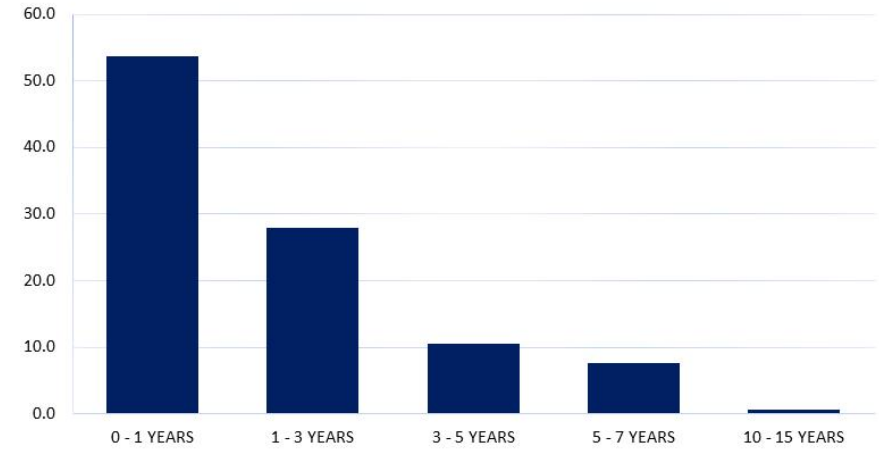
July 31, 2018

POOL 12 CAWCD MED TRM

Duration Distribution



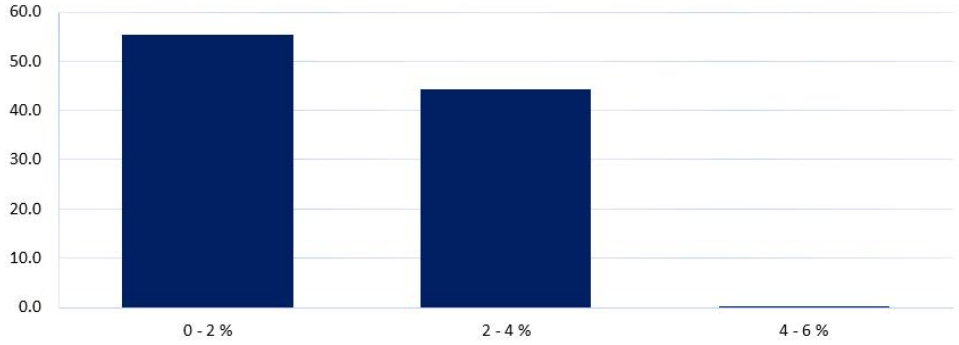
Expected Maturity Distribution



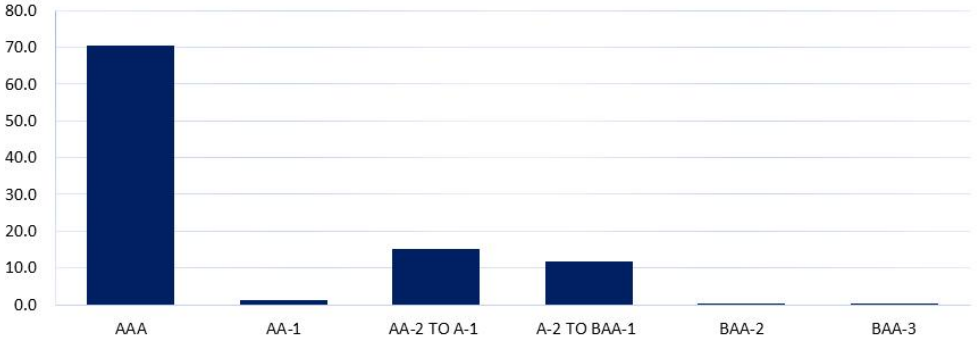
Portfolio Level Characteristics

	POOL 12 CAWCD MED TRM
Effective Maturity	1.51
Coupon	1.62
Effective Duration	0.91
Quality Rating (Moody's)	AA-1

Coupon Distribution



Rating Distribution



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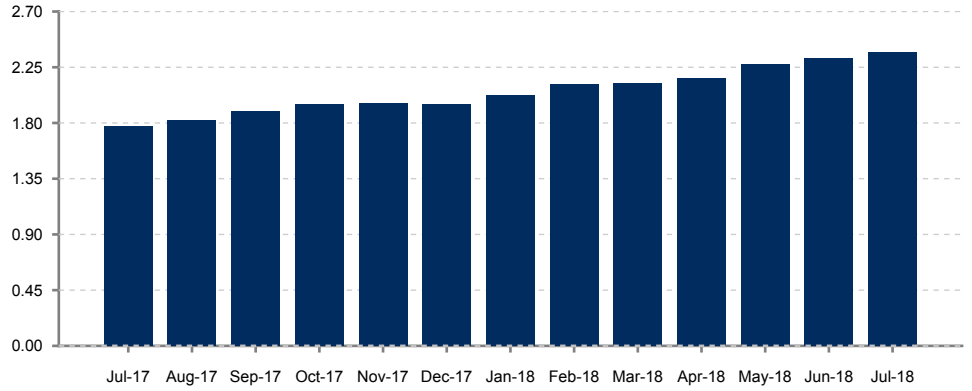
POOL 16 ECDHB

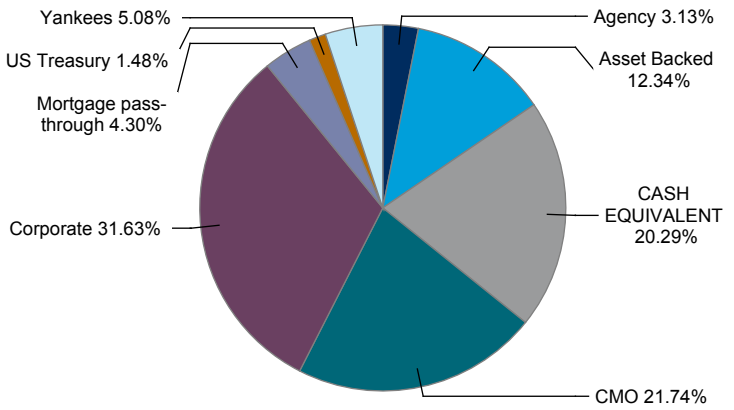
Net Yield



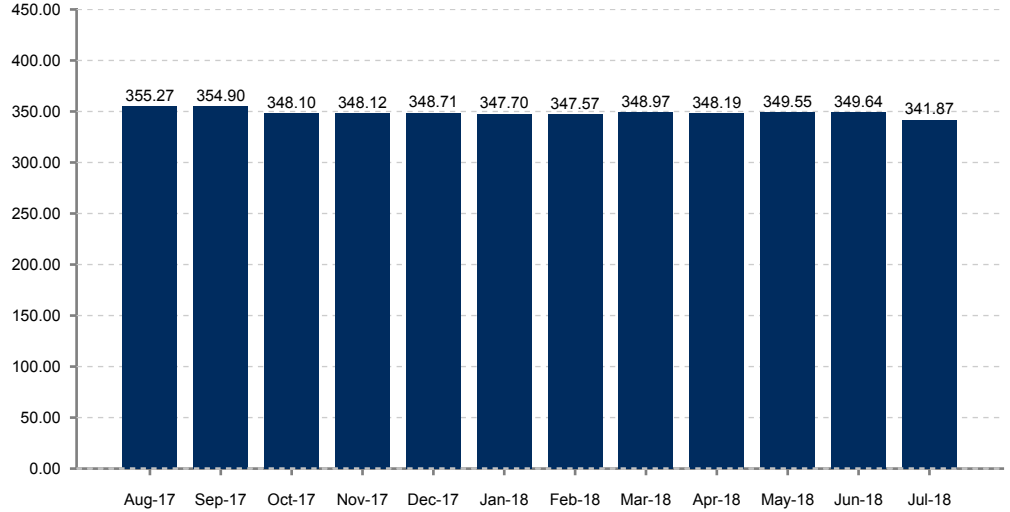
	Current Mth	Prior Mth	1 Year Ago
POOL 16 ECDHB	2.37	2.32	1.77

Asset Allocation

	Ending Market Value
POOL 16 ECDHB	341,866,048



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 16 ECDHB		
SOUTH STREET REPO	26,001,300	7.61
FANNIE MAE	6,132,875	1.79
US TREASURY N/B	5,055,276	1.48
ANHEUSER BUSCH INBEV FIN	5,043,370	1.48
CAPITAL ONE NA	5,042,963	1.48
BANK OF NY MELLON CORP	5,041,660	1.47
AMERICAN EXPRESS CREDIT	5,040,938	1.47
FREDDIE MAC	5,038,313	1.47
CISCO SYSTEMS INC	5,032,595	1.47
CHEVRON CORP	5,032,556	1.47

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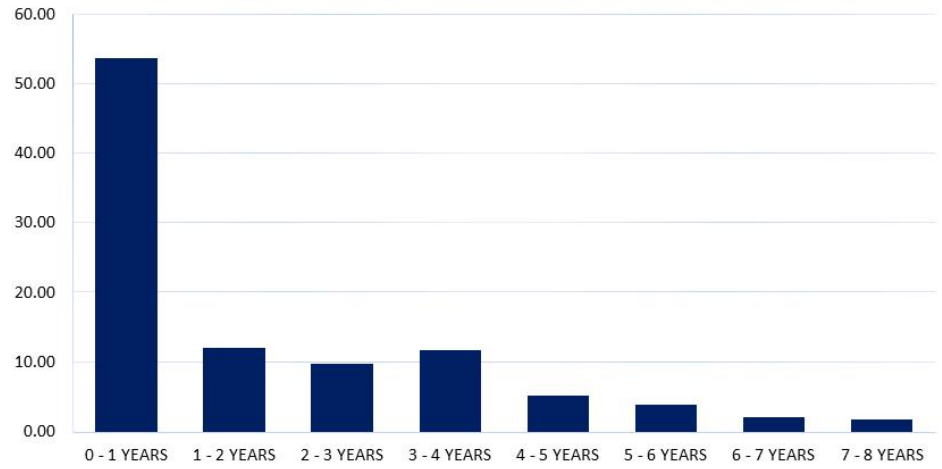
July 31, 2018

POOL 16 ECDHB

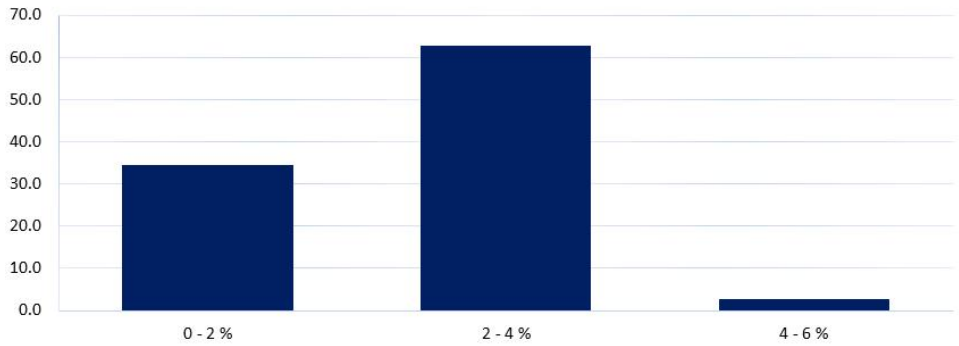
Duration Distribution



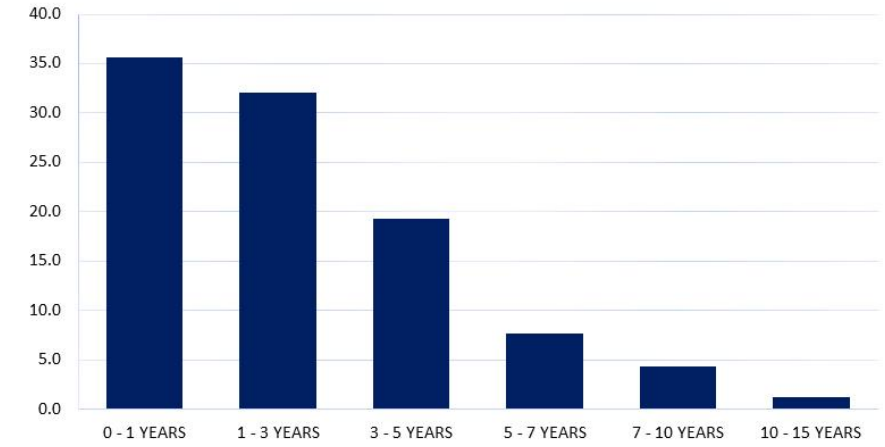
Portfolio Level Characteristics

	POOL 16 ECDHB
Effective Maturity	2.33
Coupon	2.22
Effective Duration	1.62
Quality Rating (Moody's)	AA-1

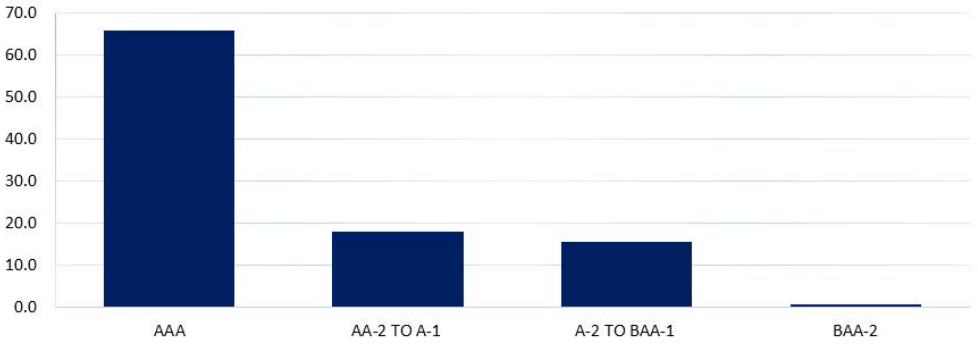
Coupon Distribution



Expected Maturity Distribution



Rating Distribution



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LGIP & LGIP- GOV
PORTFOLIO YIELD ANALYSIS
JULY 2018

NET EARNINGS

FUND	DESCRIPTION	Current Month 07/31/18	Prior Month 06/30/18	Prior Year 07/31/17	Net Asset Value Per Share
5	LGIP	2,522,236	2,554,984	**1,033,836**	1.0000
7	LGIP - GOV	2,016,164	2,069,903	**983,511**	1.0000
	TOTAL LGIP & LGIP-GOV	**4,538,400**	**4,624,888**	**2,017,347**	

YIELDS

	MONTHLY	Current Month 07/31/18	Prior Month 06/30/18	Prior Year 7/31/17
5	LGIP (NET)	2.07%	1.94%	**1.01%**
	S & P LGIP INDEX	1.92%	1.81%	**0.95%**
7	LGIP - GOV (NET)	1.83%	1.73%	**0.89%**
	3 MONTH T-BILL	1.97%	1.91%	**1.07%**

	YEAR TO DATE			
5	LGIP (NET)	2.07%	1.38%	**1.01%**
	S & P LGIP INDEX	1.92%	1.28%	**0.95%**
7	LGIP - GOV (NET)	1.83%	1.24%	**0.89%**
	3 MONTH T-BILL	1.97%	1.42%	**1.07%**

* Note: 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 2018

NET EARNINGS

FUND	DESCRIPTION	Current Month 07/31/18	Prior Month 06/30/18	Prior Year 07/31/17	Net Asset Value Per Share
500	LGIP - MED TERM POOL	664,333	633,959	444,434	1.0209
700	LGIP - FF&C MED TERM POOL	173,650	213,145	161,418	0.9935
	TOTAL LGIP MEDIUM TERM POOLS	837,983	847,103	605,852	

YIELDS

MONTHLY

		Current Month 07/31/18	Prior Month 06/30/18	Prior Year 7/31/17
500	LGIP - MED TERM (NET)	2.28%	2.25%	1.64%
	75% MERRILL 1-5 US D M INDEX / 25% S & P LGIP INDEX	2.70%	2.61%	1.60%
700	LGIP - FF&C MED TERM (NET)	1.71%	1.88%	1.31%
	75% MERRILL 1-5 US TREAS INDEX / 15% MERRILL US GNMA 15 YR INDEX / 10% MERRILL US 3 MO T-BILL INDEX	2.68%	2.56%	1.55%

YEAR TO DATE

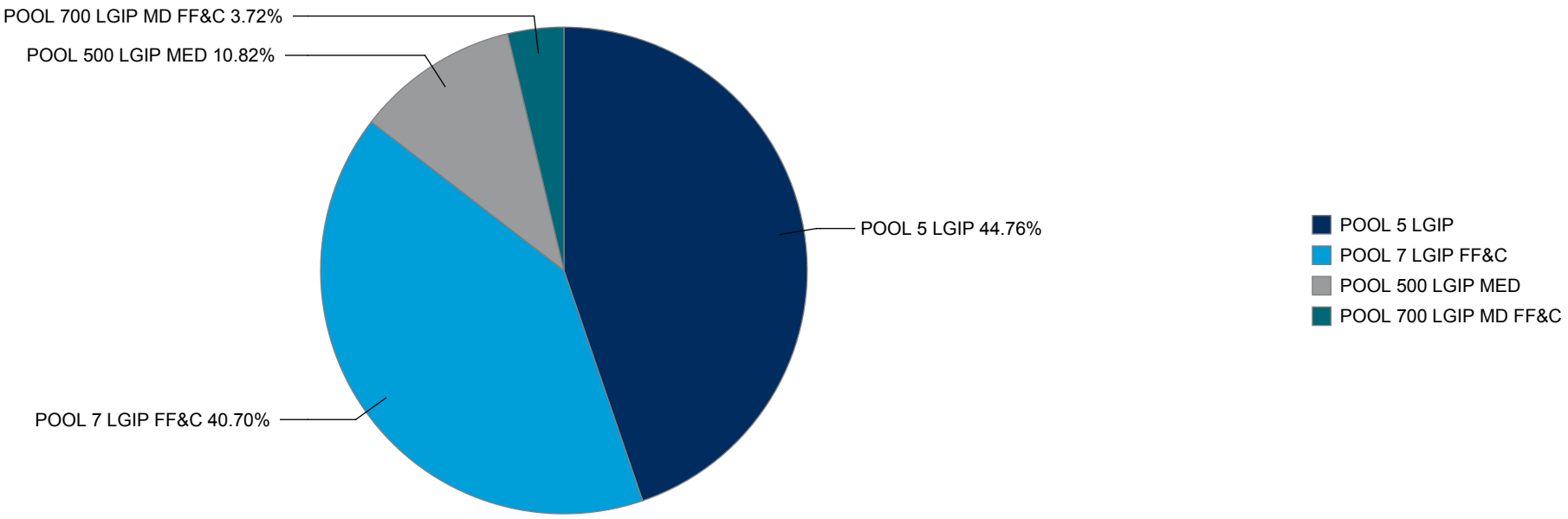
500	LGIP - MED TERM (NET)	2.28%	1.87%	1.64%
	75% MERRILL 1-5 US D M INDEX / 25% S & P LGIP INDEX	2.70%	2.07%	1.60%
700	LGIP - FF&C MED TERM (NET)	1.71%	1.64%	1.31%
	75% MERRILL 1-5 US TREAS INDEX / 15% MERRILL US GNMA 15 YR INDEX / 10% MERRILL US 3 MO T-BILL INDEX	2.68%	2.06%	1.55%

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

LGIP

Manager Allocation



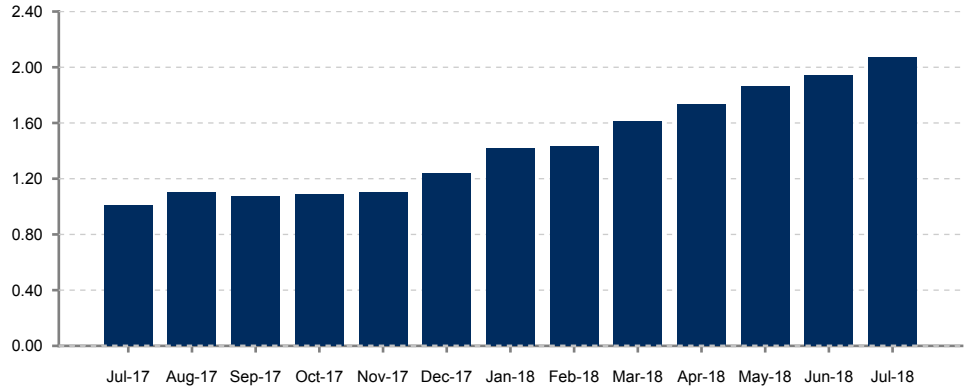
	Market Value	% of Portfolio
POOL 5 LGIP	1,421,251,883	44.8
POOL 7 LGIP FF&C	1,292,354,399	40.7
POOL 500 LGIP MED	343,570,941	10.8
POOL 700 LGIP MD FF&C	118,008,955	3.7
TOTAL LGIP	3,175,186,178	100.0

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

POOL 5 LGIP

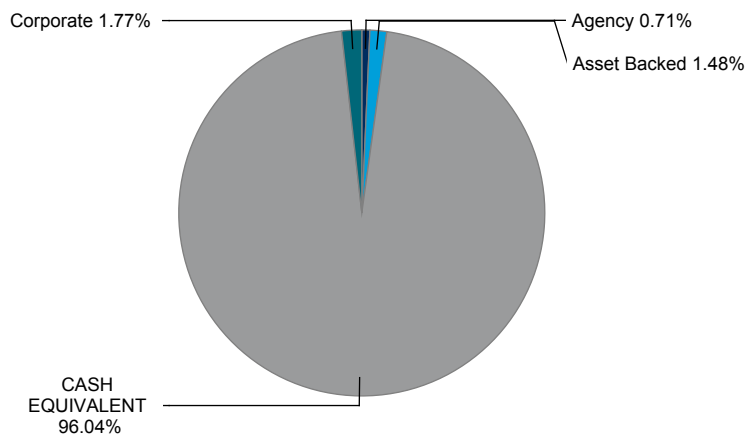
Net Yield



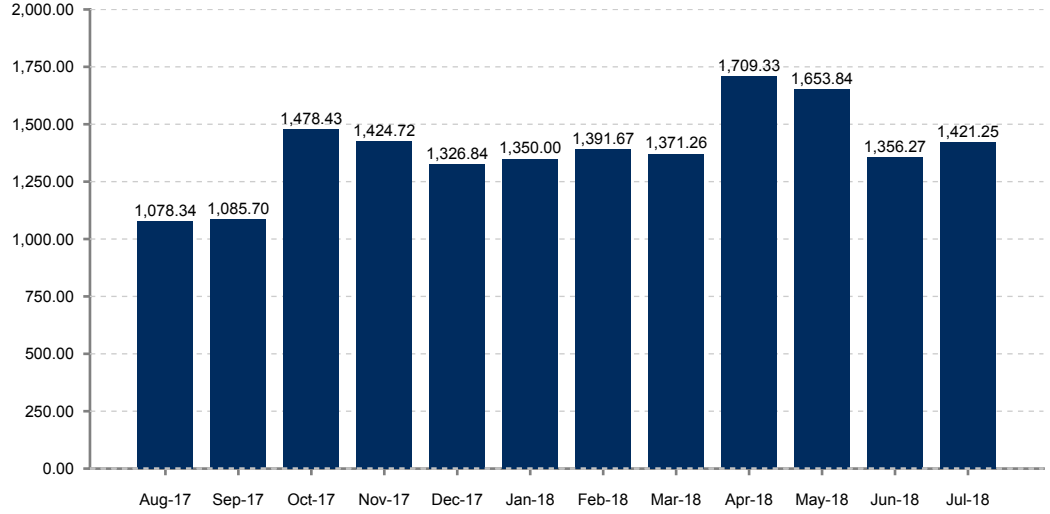
	Current Mth	Prior Mth	1 Year Ago
POOL 5 LGIP	2.07	1.94	1.01

Asset Allocation

	Ending Market Value
POOL 5 LGIP	1,421,251,883



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 5 LGIP		
CREDIT AGRICOLE REPO	106,283,784	7.48
BANK OF AMERICA REPO	100,005,000	7.04
FAIRWAY FINANCE CORP	30,922,844	2.18
NORTHWESTERN UNIVERS	29,951,000	2.11
VICTORY RECEIVABLES	29,876,500	2.10
NATIONAL SECS CLEARING	26,401,214	1.86
CEDAR SPRING CPTL CO	25,282,121	1.78
GOTHAM FDG CORP	25,264,463	1.78
INTL BK RECON + DEVELOP	25,158,354	1.77
CEDAR SPRING CPTL CO	24,998,577	1.76

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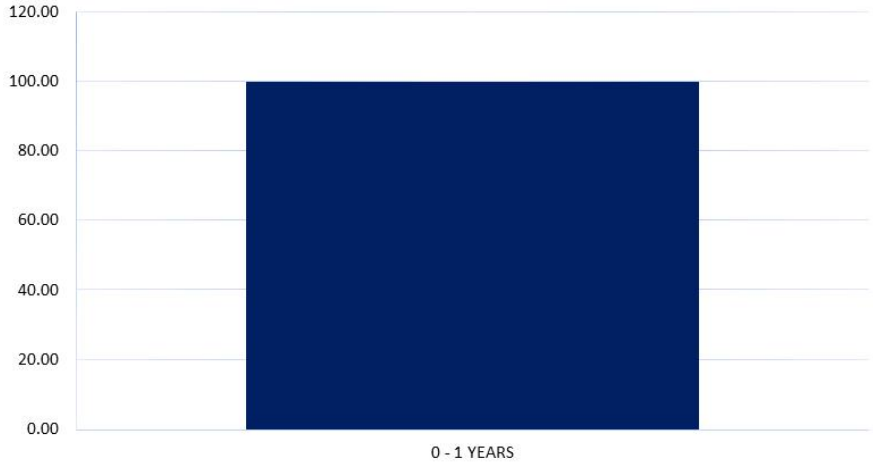
July 31, 2018

POOL 5 LGIP

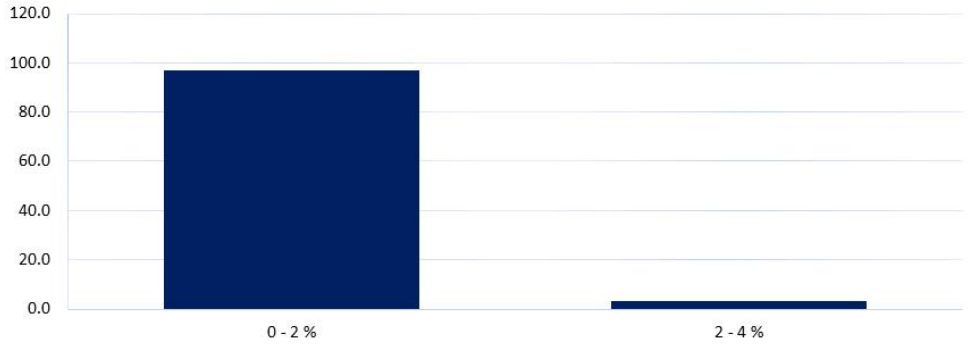
Duration Distribution



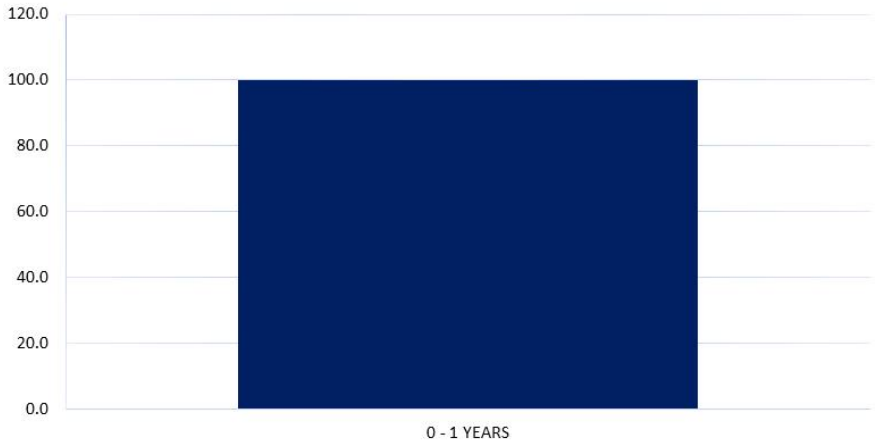
Portfolio Level Characteristics

	POOL 5 LGIP
Effective Maturity	0.11
Coupon	0.08
Effective Duration	0.09
Quality Rating (Moody's)	AAA

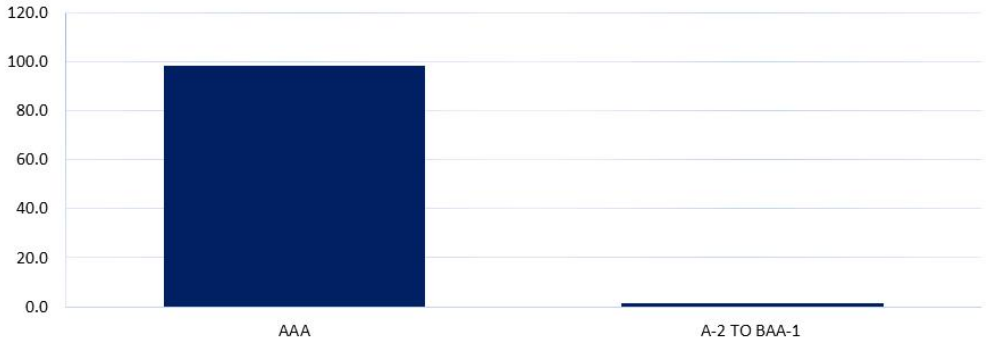
Coupon Distribution



Expected Maturity Distribution



Rating Distribution

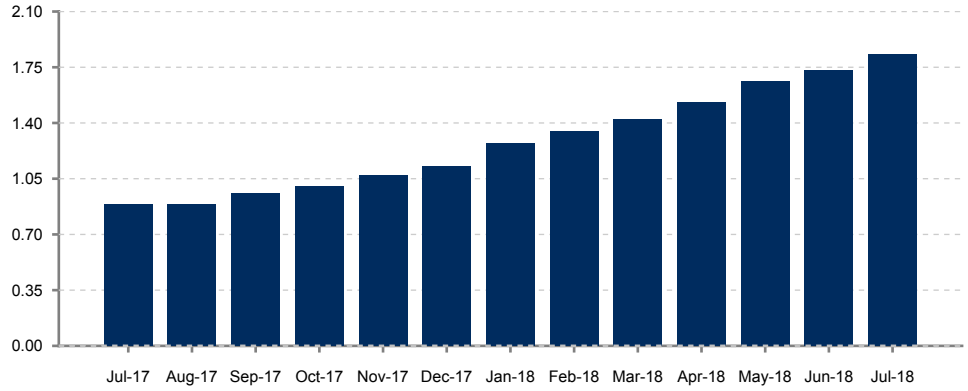


OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

POOL 7 LGIP FF&C

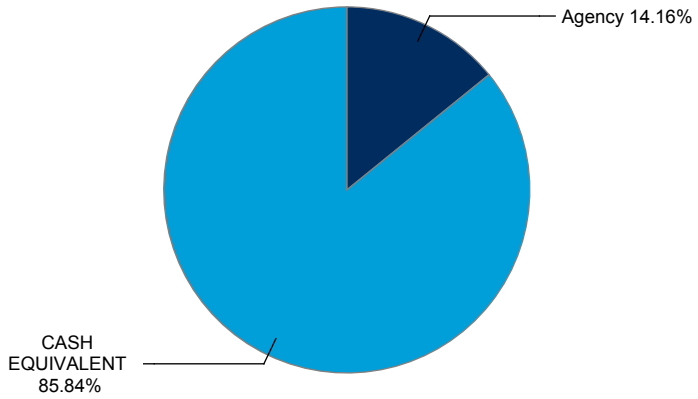
Net Yield



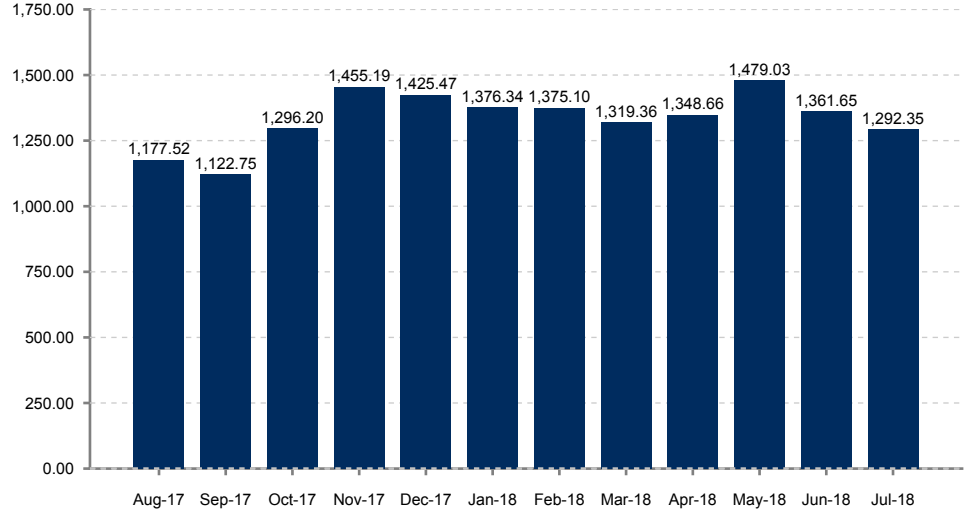
	Current Mth	Prior Mth	1 Year Ago
POOL 7 LGIP FF&C	1.83	1.73	0.89

Asset Allocation

	Ending Market Value
POOL 7 LGIP FF&C	1,292,354,399



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 7 LGIP FF&C		
BMO TRIPARTY MTGE CLAS/ISIT/RTRP MATU//20121224	200,010,500	15.48
AMHERST PIERPONT	100,071,139	7.74
RBC CAPITAL MARKETS REPO	100,005,250	7.74
CREDIT AGRICOLE REPO	93,726,882	7.25
GUGGENHEIM SECURITIES REPO	92,949,979	7.19
TREASURY BILL	79,945,242	6.19
TREASURY BILL	79,758,066	6.17
TREASURY BILL	79,726,348	6.17
TREASURY BILL	59,877,379	4.63
TREASURY BILL	39,983,729	3.09

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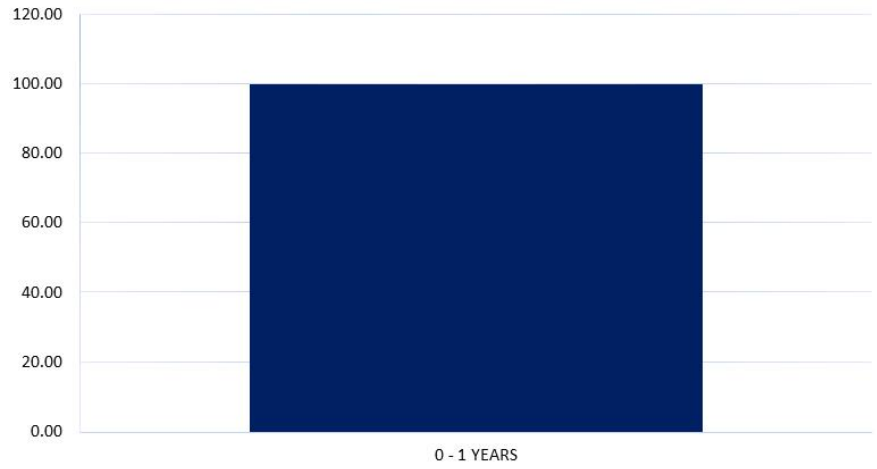
July 31, 2018

POOL 7 LGIP FF&C

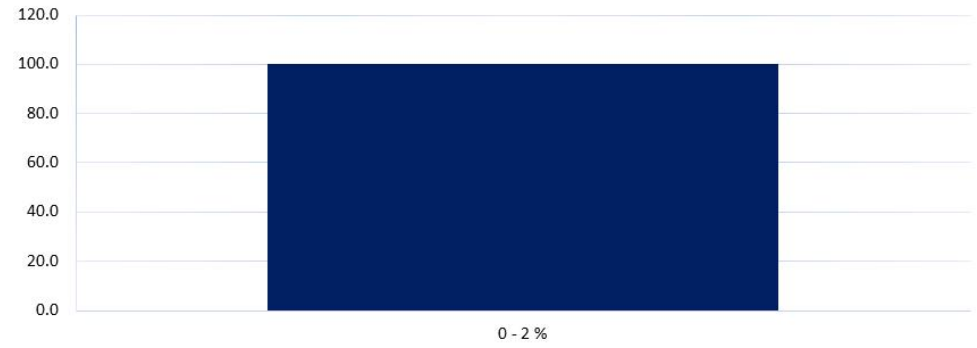
Duration Distribution



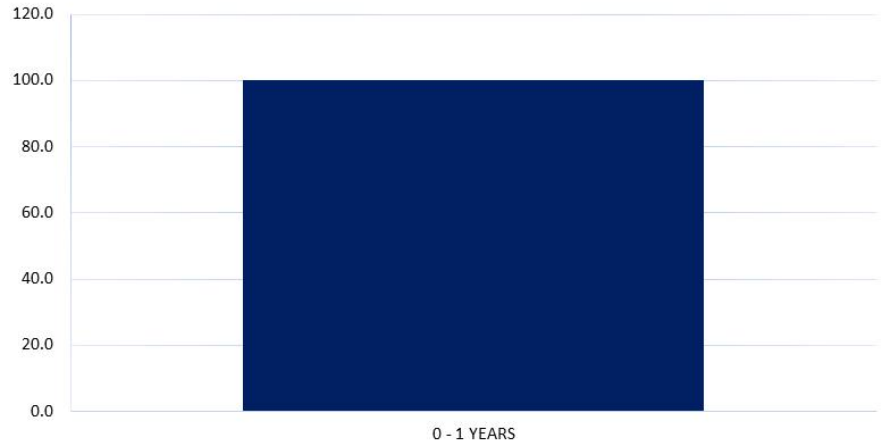
Portfolio Level Characteristics

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

Coupon Distribution



Expected Maturity Distribution



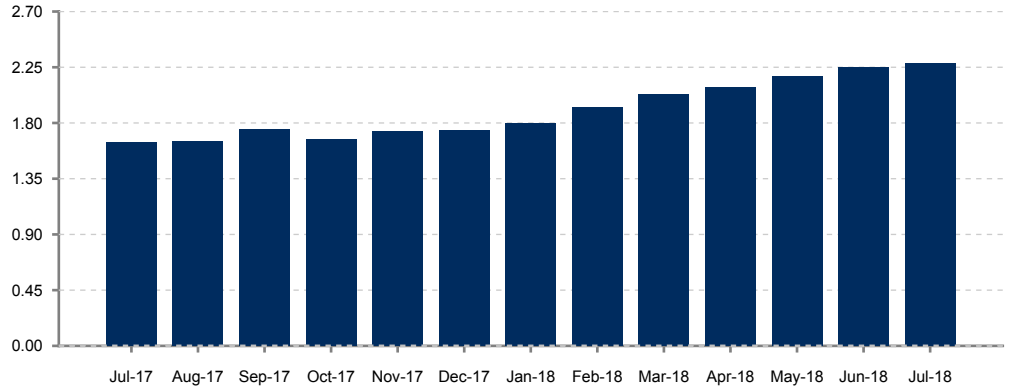
Rating Distribution

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

POOL 500 LGIP MED

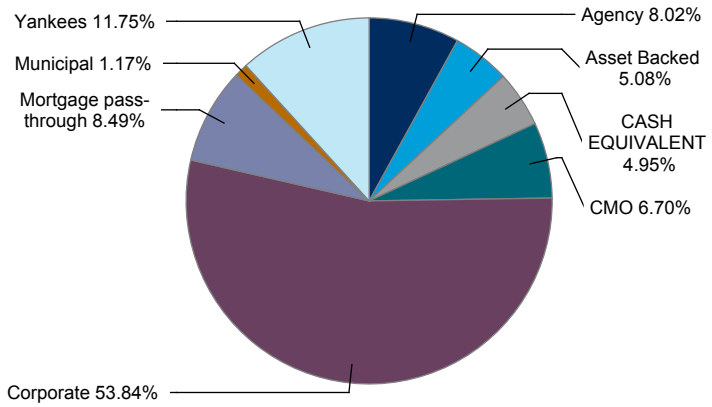
Net Yield



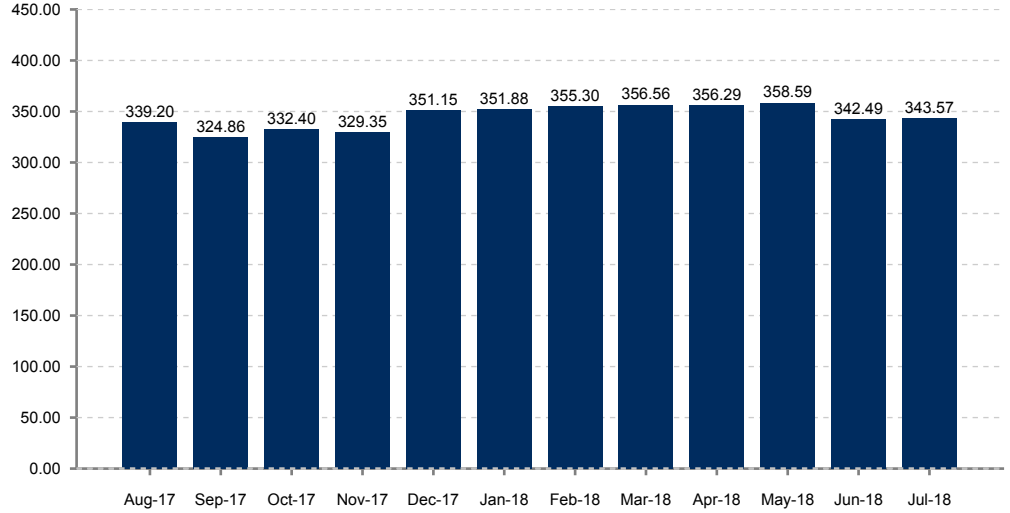
	Current Mth	Prior Mth	1 Year Ago
POOL 500 LGIP MED	2.28	2.25	1.64

Asset Allocation

	Ending Market Value
POOL 500 LGIP MED	343,570,941



Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
POOL 500 LGIP MED		
SOUTH STREET REPO	17,000,850	4.95
MICROSOFT CORP	7,975,094	2.32
GOLDMAN SACHS GROUP INC	7,933,762	2.31
APPLE INC	7,115,312	2.07
MANUF + TRADERS TRUST CO	6,999,854	2.04
HERSHEY COMPANY	6,043,769	1.76
BANK OF AMERICA CORP	5,786,143	1.68
MERCK + CO INC	5,558,909	1.62
FNMA POOL AB5991	5,331,712	1.55
APPLE INC	5,051,937	1.47

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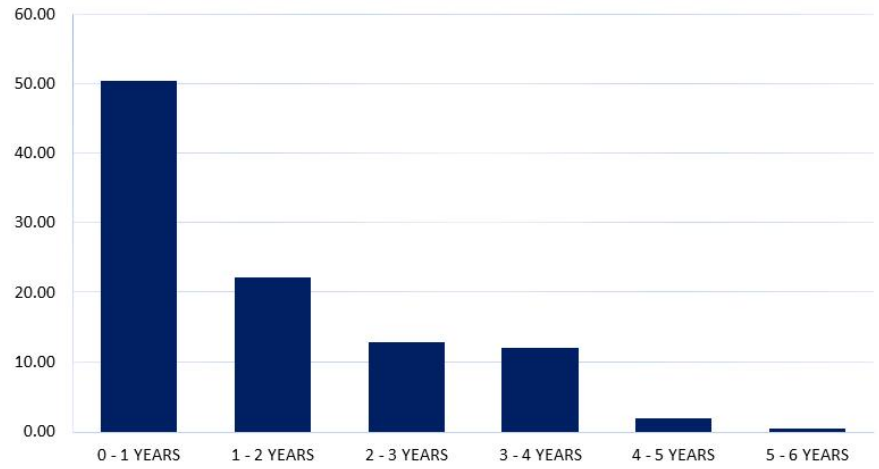
July 31, 2018

POOL 500 LGIP MED

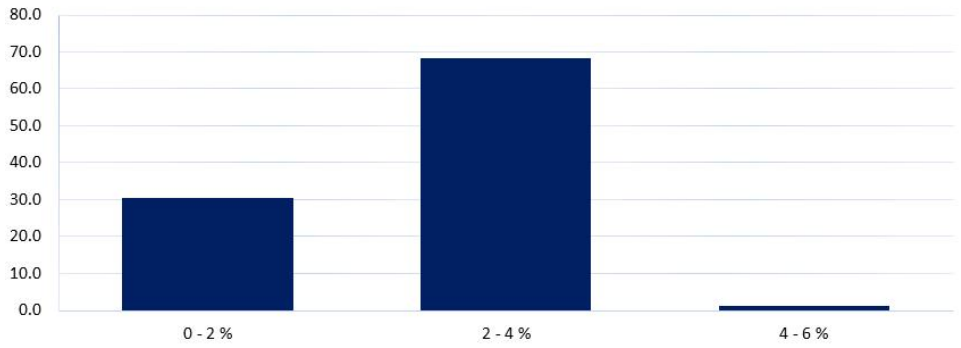
Duration Distribution



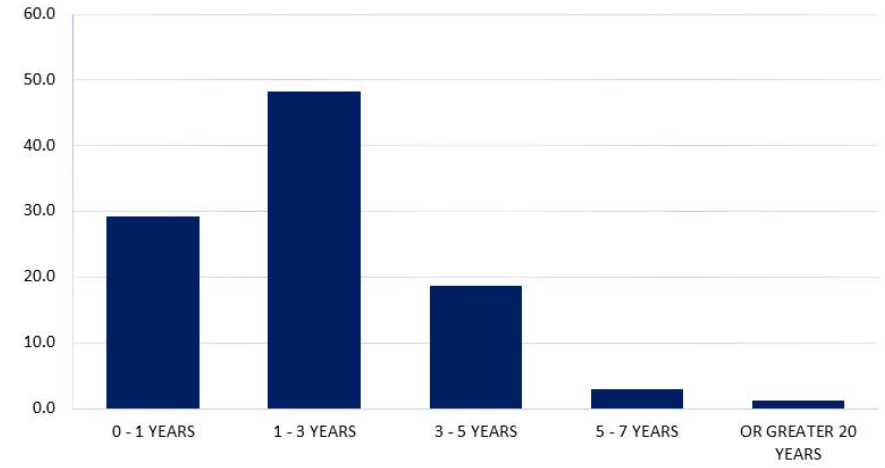
Portfolio Level Characteristics

	POOL 500 LGIP MED
Effective Maturity	1.92
Coupon	2.27
Effective Duration	1.33
Quality Rating (Moody's)	AA-3

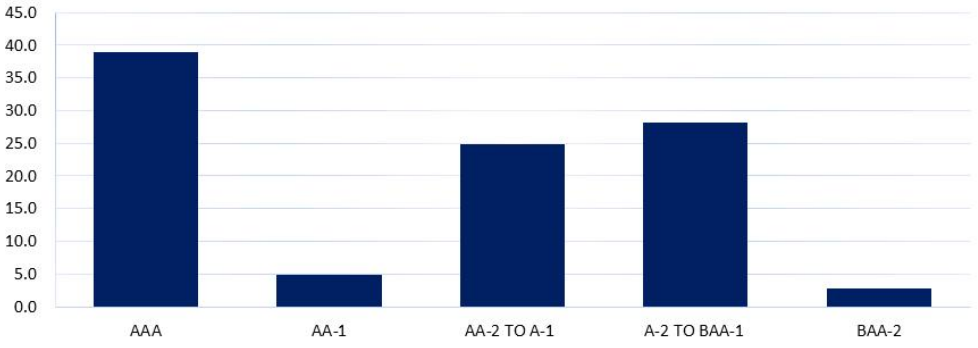
Coupon Distribution



Expected Maturity Distribution



Rating Distribution

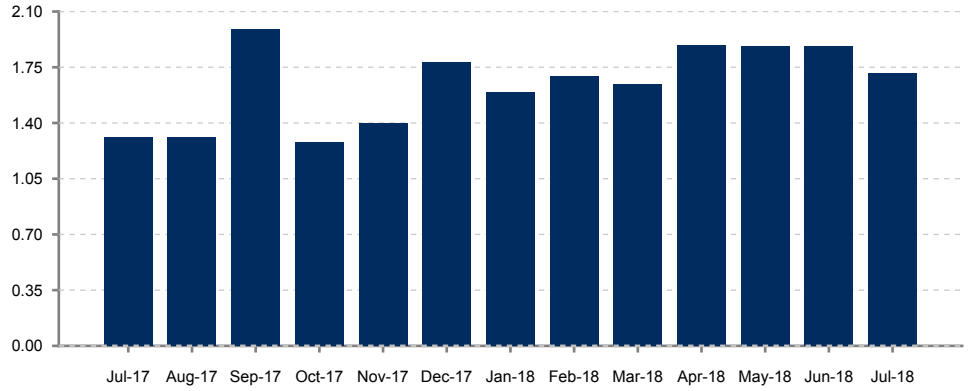


OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

POOL 700 LGIP MD FF&C

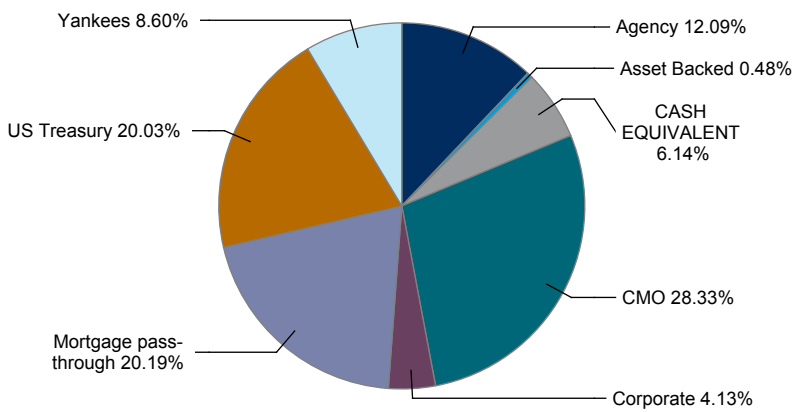
Net Yield



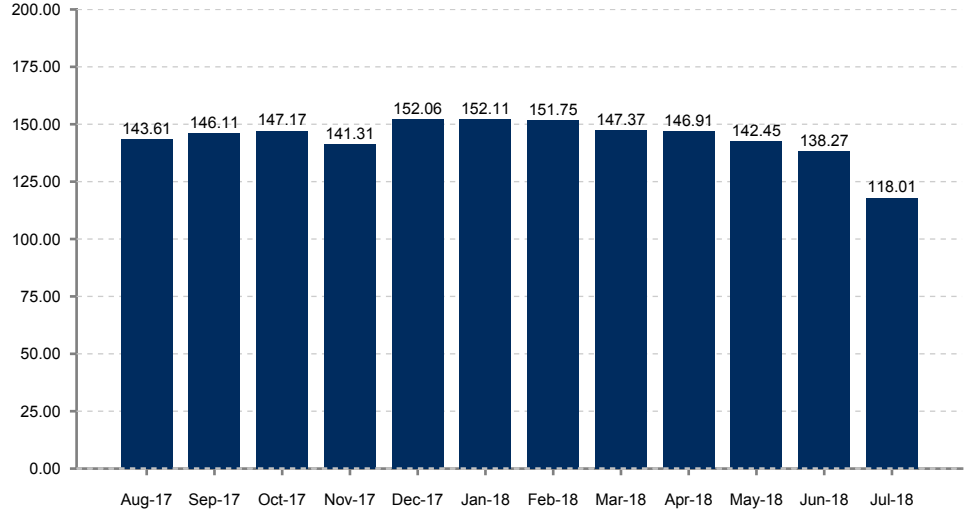
	Current Mth	Prior Mth	1 Year Ago
POOL 700 LGIP MD FF&C	1.71	1.88	1.31

Asset Allocation

	Ending Market Value
POOL 700 LGIP MD FF&C	118,008,955



Net Asset Values over Time ($MM)



Top 10 Holdings

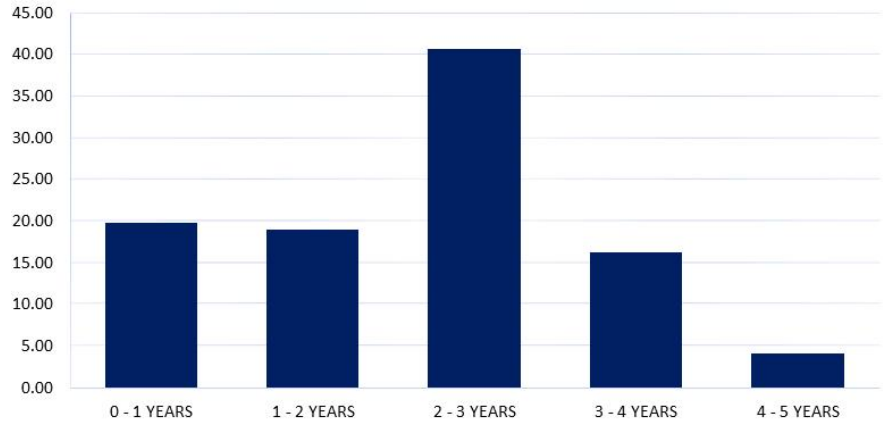
Security Name	Ending Market Value	% of Portfolio
POOL 700 LGIP MD FF&C		
GOVERNMENT NATIONAL MORTGAGE A	7,055,571	5.98
GUGGENHEIM SECURITIES REPO	7,000,371	5.93
AID JORDAN	6,275,070	5.32
OVERSEAS PRIVATE INV COR	4,995,786	4.23
US TREASURY N/B	4,955,282	4.20
US TREASURY N/B	4,928,360	4.18
US TREASURY N/B	4,911,320	4.16
US TREASURY N/B	4,896,153	4.15
GNMA II POOL MA0213	3,795,275	3.22
PRIVATE EXPORT FUNDING	3,439,648	2.91

OFFICE OF THE ARIZONA STATE TREASURER

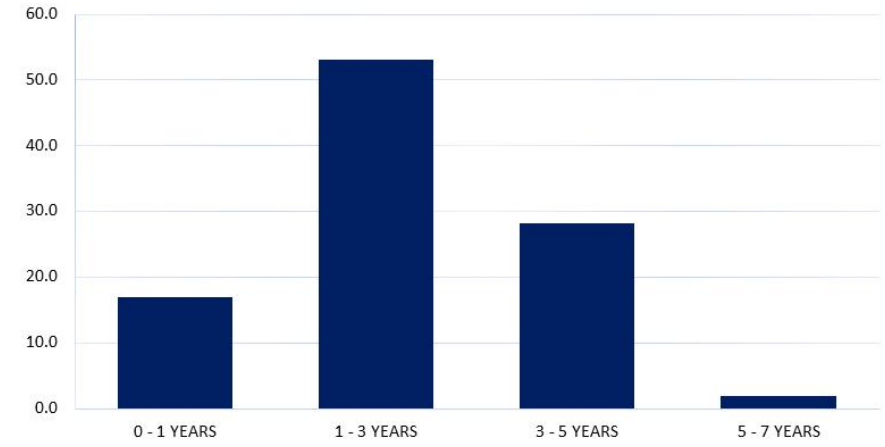
July 31, 2018

POOL 700 LGIP MD FF&C

Duration Distribution



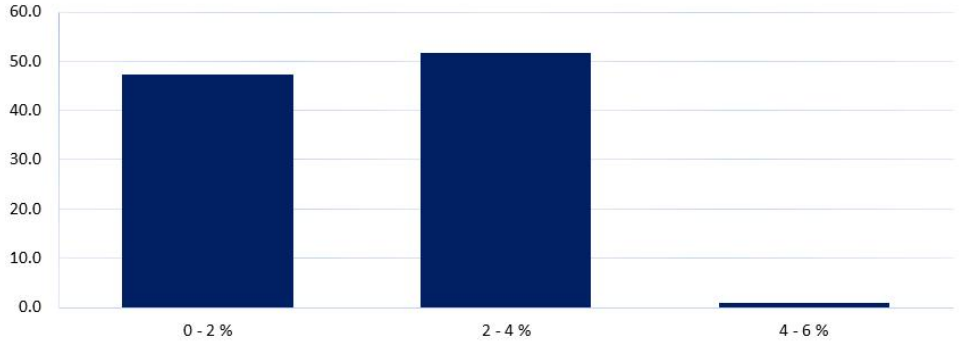
Expected Maturity Distribution



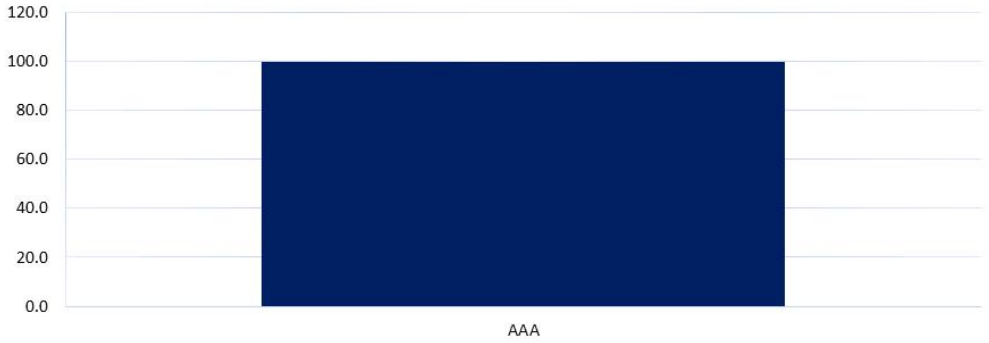
Portfolio Level Characteristics

	POOL 700 LGIP MD FF&C
Effective Maturity	2.31
Coupon	1.95
Effective Duration	1.99
Quality Rating (Moody's)	AAA

Coupon Distribution



Rating Distribution



EARNINGS DISTRIBUTED
ENDOWMENT FUNDS
JULY 2018

Recipient		Distributed in Current Month JULY 2018	Fiscal YTD 18/19	Fiscal YTD 17/18
101	A & M Colleges	$70,405	$70,405	$66,488
102	State Hospital	47,085	47,085	42,992
103	Leg., Exec., & Jud.	58,321	58,321	54,897
104	Military Institute	3,868	3,868	3,642
105	Miners Hospital	158,118	158,118	143,641
107	Normal School ASU/NAU	28,855	28,855	26,115
108	Penitentiaries	106,084	106,084	95,352
109	Permanent Common School	26,770,470	26,770,470	24,660,436
110	School for Deaf & Blind	38,606	38,606	35,595
111	School of Mines	79,866	79,866	75,273
112	State Charitable-Pioneers Home	394,116	394,116	370,145
112	State Charitable-Corrections	197,058	197,058	185,072
112	State Charitable-Youth Treatment	197,058	197,058	185,072
113	University Fund	143,386	143,386	132,996
114	U of A Land - 1881	492,037	492,037	433,184
	Total	**$28,785,331**	**$28,785,331**	**$26,510,900**

Land Sales Monthly Proceeds
Endowment Funds

Month	2013	2014	2015	2016	2017	2018	2019
January	85,209,777	29,493,046	7,126,212	5,108,687	2,960,815	809,822	
February	24,412,865	33,969,801	2,535,244	1,083,178	1,103,303	744,295	
March	13,469,847	1,323,549	1,096,232	1,106,860	3,045,043	8,296,029	
April	4,599,024	2,252,527	1,968,281	28,981,969	78,134,289	22,707,772	
May	12,685,871	1,100,261	19,123,417	20,147,116	27,642,672	16,234,823	
June	6,493,351	4,564,719	33,179,898	31,844,678	2,451,110	6,799,100	
July	5,694,705	4,196,738	6,092,396	2,469,997	13,838,188	27,835,379	
August	2,304,138	24,838,430	1,038,971	13,094,287	5,746,802		
September	10,399,639	1,960,673	1,967,125	(12,580,728)	19,937,751		
October	1,240,497	3,150,170	2,366,519	10,614,885	480,710		
November	8,995,327	34,193,583	1,358,711	28,490,238	9,500,048		
December	3,574,631	1,136,538	4,264,354	6,127,407	3,869,818		
Calendar Year	179,079,672	142,180,034	82,117,360	136,488,573	168,710,549	83,427,220	-
Fiscal Year (July 1st to June 30th)	234,004,734	104,912,840	134,505,415	105,360,563	163,553,318	108,965,158	27,835,379

NET REALIZED CAPITAL GAINS / LOSSES - ENDOWMENT FUNDS

Endowment Fund	July 2018 NET GAIN(LOSS)	July 2017 NET GAIN(LOSS)
Fixed Income Pool	($412,297)	**($418,213)**
500 Large-Cap Fund	(411)	**$1,746,545**
400 Mid-Cap Fund	1,517,181	**$8,889,006**
600 Small-Cap Fund	867,506	**$640,754**
Totals	$1,971,979	**$10,858,092**

Endowment Fund	2018/2019 FISCAL YEAR TO DATE GAINS(LOSSES)	2017/2018 FISCAL YEAR TO DATE GAINS(LOSSES)
Fixed Income Pool	($412,297)	**($418,213)**
500 Large-Cap Fund	(411)	**1,746,545**
400 Mid-Cap Fund	1,517,181	**8,889,006**
600 Small-Cap Fund	867,506	**640,754**
Totals	$1,971,979	**$10,858,092**

ENDOWMENT FUNDS FIXED-INCOME POOLS
PURCHASES & SALES
JULY 2018

I. Endowment Funds Purchases

POOL	SECURITY DESCRIPTION	RATE	MATURITY	*WAL YEARS	PAR VALUE	PURCHASE COST	YIELD	MOODY'S RATING
205	US TREASURY	0.00	06/20/2019	NA	$5,000,000	$4,891,843	2.35%	Aaa
205	US TREASURY	0.00	06/20/2019	NA	5,000,000	4,896,371	2.38%	Aaa
205	US TREASURY	0.00	07/18/2019	NA	5,000,000	4,885,925	2.41%	Aaa
205	US TREASURY	0.00	07/18/2019	NA	5,000,000	4,882,003	2.41%	Aaa
205	US TREASURY	1.63	07/31/2019	NA	5,000,000	4,959,400	2.46%	Aaa
205	US TREASURY	2.63	07/31/2020	NA	5,000,000	4,995,898	2.67%	Aaa
123	ARMY & AIR FORCE EXCH	0.00	08/01/2018	NA	12,000,000	11,999,367	1.90%	P-1
123	HALKIN	0.00	08/21/2018	NA	10,000,000	9,988,275	2.01%	P-1
123	MOUNTCLIFF	0.00	08/21/2018	NA	4,500,000	4,486,625	2.15%	P-1
	TOTAL ENDOWMENT FUNDS PURCHASES				**$56,500,000**	**$55,985,707**		

II. Endowment Funds Sales

POOL	SECURITY DESCRIPTION	RATE	MATURITY	PAR VALUE	AMORTIZED COST/PROCEEDS	SALES GAINS/(LOSSES)	MOODY'S RATING
	TOTAL ENDOWMENT FUNDS SALES			**$0**	**$0**	**$0**	

* 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 2018

I. Equity Fund Purchases

	SHARES	PURCHASE COST	COMMISSIONS
400 Mid-Cap Fund	34,838	$6,191,894	$261
500 Large-Cap Fund	14,001	$3,411,192	$105
600 Small-Cap Fund	142,715	9,260,787	1,070
TOTAL EQUITY PURCHASES	**191,554**	**$18,863,873**	**$1,436**

II. Equity Funds Sales

	SHARES	SALES AMOUNT	COMMISSIONS
400 Mid-Cap Fund	0	$0	$0
500 Large-Cap Fund	0	0	0
600 Small-Cap Fund	3,820	91,549	29
TOTAL EQUITY SALES	**3,820**	**$91,549**	**$29**

ENDOWMENT FUNDS
INVESTMENTS OUTSTANDING
JULY 31, 2018
(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	391	$2,753	$8,382	$5,629	
	Shares in Fixed Income Pools	3,912	2,801	5,213	2,412	
	Total	4,304	5,554	13,595	8,040	**2.448**
102	State Hospital					
	Shares in Equity Pools	308	2,671	6,593	3,922	
	Shares in Fixed Income Pools	3,166	2,631	4,219	1,588	
	Total	3,474	5,302	10,812	5,510	**2.039**
103	Leg., Exec, & Jud					
	Shares in Equity Pools	319	2,408	6,828	4,420	
	Shares in Fixed Income Pools	3,410	2,443	4,543	2,100	
	Total	3,729	4,851	11,371	6,520	**2.344**
104	Military Institute					
	Shares in Equity Pools	22	169	462	293	
	Shares in Fixed Income Pools	236	166	314	148	
	Total	257	335	776	441	**2.317**
105	Miners Hospital					
	Shares in Equity Pools	950	8,432	20,342	11,909	
	Shares in Fixed Income Pools	9,550	8,323	12,724	4,401	
	Total	10,500	16,755	33,065	16,310	**1.973**
107	Normal School ASU/NAU					
	Shares in Equity Pools	183	1,579	3,911	2,332	
	Shares in Fixed Income Pools	1,885	1,511	2,511	1,001	
	Total	2,068	3,090	6,422	3,333	**2.079**
108	Penitentiaries					
	Shares in Equity Pools	631	5,346	13,509	8,163	
	Shares in Fixed Income Pools	6,453	5,314	8,597	3,283	
	Total	7,083	10,660	22,107	11,446	**2.074**

ENDOWMENT FUNDS
INVESTMENTS OUTSTANDING
JULY 31, 2018
(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	161,063	1,310,344	3,449,203	2,138,859	
	Shares in Fixed Income Pools	1,621,812	1,327,181	2,160,827	833,645	
	Total	1,782,875	2,637,525	5,610,030	2,972,504	**2.127**
110	School for Deaf & Blind					
	Shares in Equity Pools	228	1,894	4,883	2,989	
	Shares in Fixed Income Pools	2,561	2,013	3,412	1,399	
	Total	2,789	3,907	8,294	4,388	**2.123**
111	School of Mines					
	Shares in Equity Pools	443	3,324	9,483	6,159	
	Shares in Fixed Income Pools	4,553	3,380	6,066	2,685	
	Total	4,995	6,704	15,549	8,845	**2.319**
112	State Charitable					
	Shares in Equity Pools	4,472	33,690	95,771	62,081	
	Shares in Fixed Income Pools	43,373	34,406	57,789	23,382	
	Total	47,845	68,096	153,560	85,463	**2.255**
113	University Fund					
	Shares in Equity Pools	809	6,412	17,325	10,913	
	Shares in Fixed Income Pools	8,329	6,350	11,097	4,747	
	Total	9,138	12,762	28,423	15,660	**2.227**
114	U Of A Land - 1881					
	Shares in Equity Pools	3,064	29,834	65,611	35,776	
	Shares in Fixed Income Pools	31,494	27,195	41,962	14,766	
	Total	34,558	57,030	107,573	50,543	**1.886**
	TOTALS - ALL FUNDS					
	Shares in Equity Pools	172,882	1,408,857	3,702,303	2,293,446	
	Shares in Fixed Income Pools	1,740,734	1,423,715	2,319,273	895,558	
	Grand Total	$1,913,616	$2,832,572	$6,021,576	$3,189,004	
	PRIOR YEAR: JULY 2017 BALANCES	**$1,980,536**	**$2,929,180**	**$5,662,127**	**$2,732,948**	

ENDOWMENT FUNDS
INVESTMENTS OUTSTANDING
JULY 31, 2018

ASSET ALLOCATION PERCENTAGE

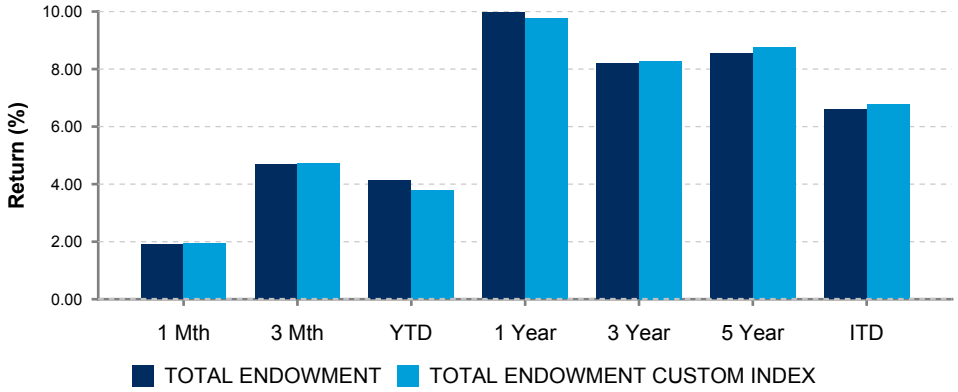
	SHARES OUTSTANDING	**BOOK VALUE**	MARKET VALUE	JULY 2017 MARKET VALUE
Shares in Equity Pools	9.03%	**49.74%**	61.48%	60.42%
Shares in Fixed Income Pools	90.97%	**50.26%**	38.52%	39.58%
Total	100.00%	**100.00%**	100.00%	100.00%

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

Total Endowment Summary

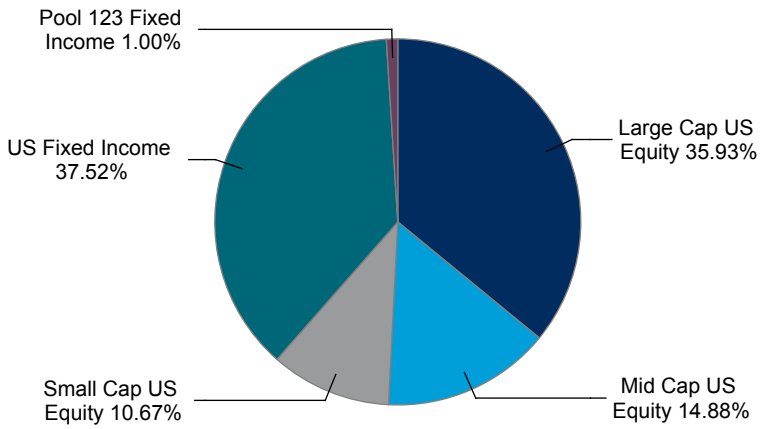
Performance



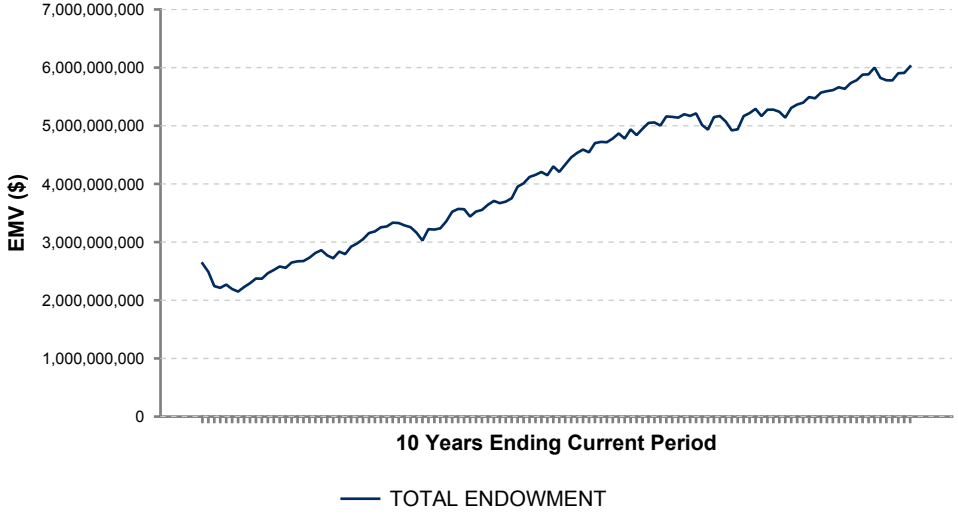
	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Incept Date
TOTAL ENDOWMENT	1.91	4.69	4.12	9.96	8.20	8.54	6.60	07/99
TOTAL ENDOWMENT CUSTOM INDEX	1.93	4.71	3.78	9.76	8.28	8.75	6.77	07/99
Excess	-0.01	-0.02	0.34	0.20	-0.07	-0.21	-0.17	

Asset Allocation

	Ending Market Value
TOTAL ENDOWMENT	6,021,575,917

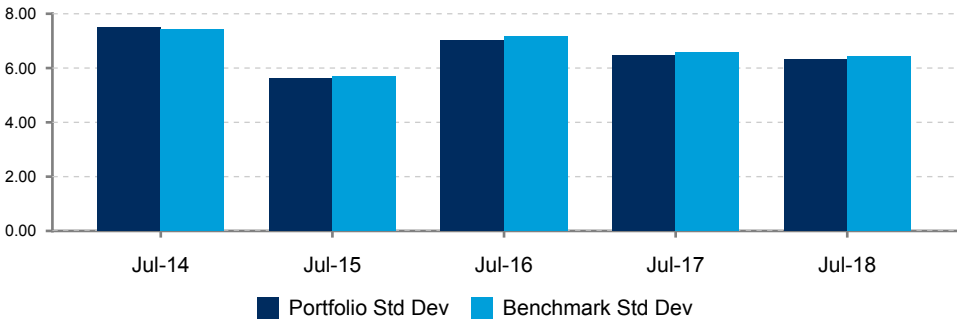


Ending Market Value



3 Year Risk Statistics

	Return	Portfolio Std Dev	Benchmark Std Dev	Sharpe Ratio	Beta	Tracking Error	Information Ratio
TOTAL ENDOWMENT	8.20	6.33	6.44	1.18	0.98	0.34	-0.21



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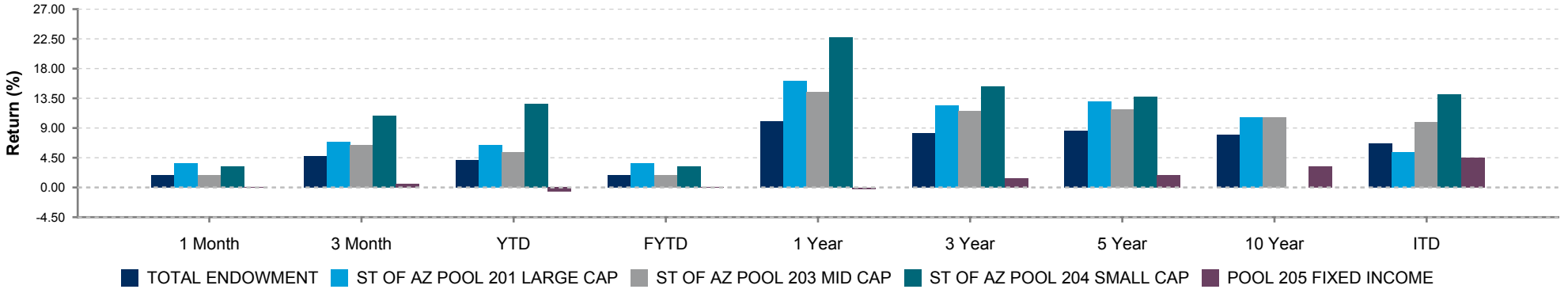
Total Returns Net Mgr

Return Comparison



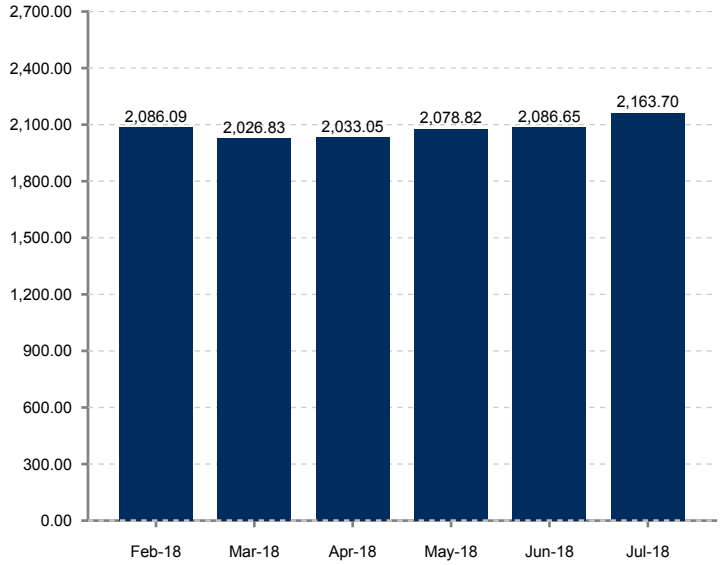
	Market Value	Actual Weight	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	10 Year	ITD	Inc Date
TOTAL ENDOWMENT	6,021,575,917	100.00	1.91	4.69	4.12	1.91	9.96	8.20	8.54	8.01	6.60	Jul-01-99
TOTAL ENDOWMENT CUSTOM INDEX			1.93	4.71	3.78	1.93	9.76	8.28	8.75	8.38	6.77	Jul-01-99
Excess			-0.01	-0.02	0.34	-0.01	0.20	-0.07	-0.21	-0.37	-0.17	
ST OF AZ POOL 201 LARGE CAP	2,163,703,261	35.93	3.71	6.90	6.40	3.71	16.14	12.43	13.05	10.66	5.35	Jul-01-99
S&P 500 INDEX (DAILY)			3.72	6.87	6.47	3.72	16.24	12.52	13.12	10.67	5.85	Jul-01-99
Excess			-0.01	0.03	-0.07	-0.01	-0.10	-0.09	-0.07	-0.01	-0.50	
ST OF AZ POOL 203 MID CAP	896,051,019	14.88	1.82	6.45	5.32	1.82	14.50	11.58	11.79	10.63	9.84	Aug-01-01
S&P 400 MIDCAP INDEX (DAILY)			1.76	6.41	5.31	1.76	14.50	11.49	11.73	11.19	9.84	Aug-01-01
Excess			0.05	0.04	0.00	0.05	0.01	0.09	0.06	-0.55	0.00	
ST OF AZ POOL 204 SMALL CAP	642,548,769	10.67	3.13	10.81	12.65	3.13	22.76	15.28	13.78		14.10	Mar-01-11
S&P SM 600 TR			3.16	11.06	12.84	3.16	23.11	15.35	13.80		14.11	Mar-01-11
Excess			-0.03	-0.25	-0.19	-0.03	-0.35	-0.07	-0.01		-0.01	
POOL 205 FIXED INCOME	2,259,095,577	37.52	0.01	0.56	-0.65	0.01	-0.20	1.43	1.88	3.23	4.55	Jul-01-99
FTSE BIG (DAILY)			0.04	0.59	-1.62	0.04	-0.86	1.50	2.24	3.76	4.82	Jul-01-99
Excess			-0.03	-0.03	0.97	-0.03	0.65	-0.07	-0.36	-0.54	-0.27	
POOL 123 FIXED INCOME	60,177,291	1.00	0.16	0.46	0.95	0.16	1.48				1.13	Jun-01-16
ASTO-POOL 5 BENCHMARK			0.17	0.49	1.01	0.17	1.48				1.02	Jun-01-16
Excess			-0.02	-0.03	-0.06	-0.02	-0.00				0.11	

OFFICE OF THE ARIZONA STATE TREASURER

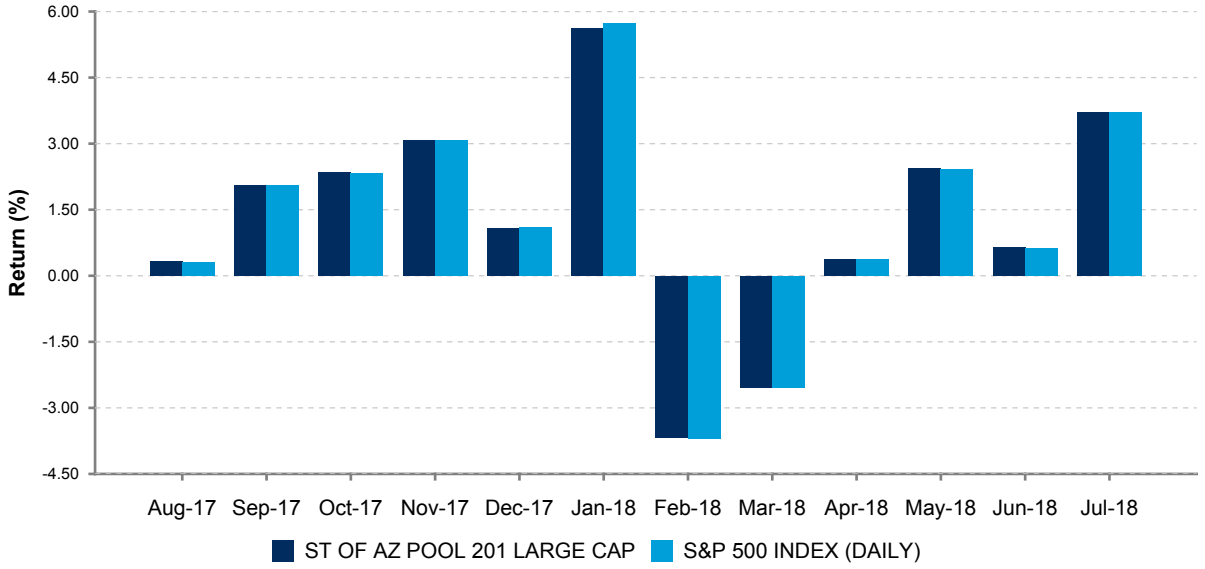
July 31, 2018

ST OF AZ POOL 201 LARGE CAP

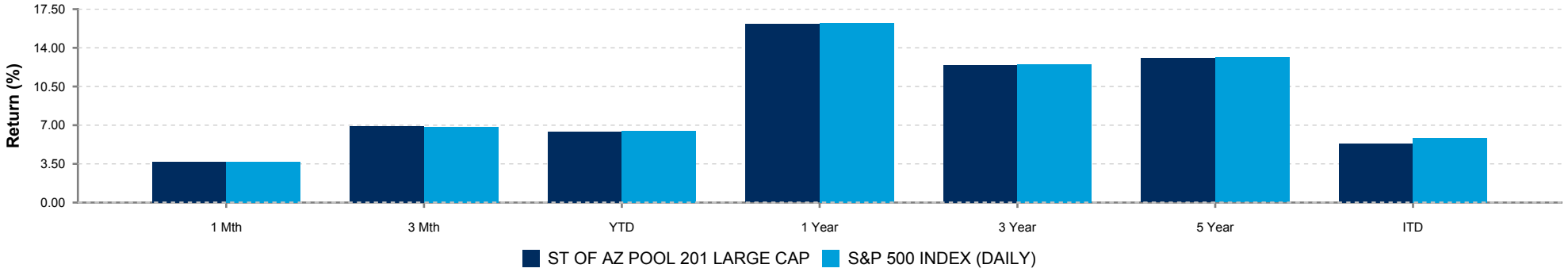
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return

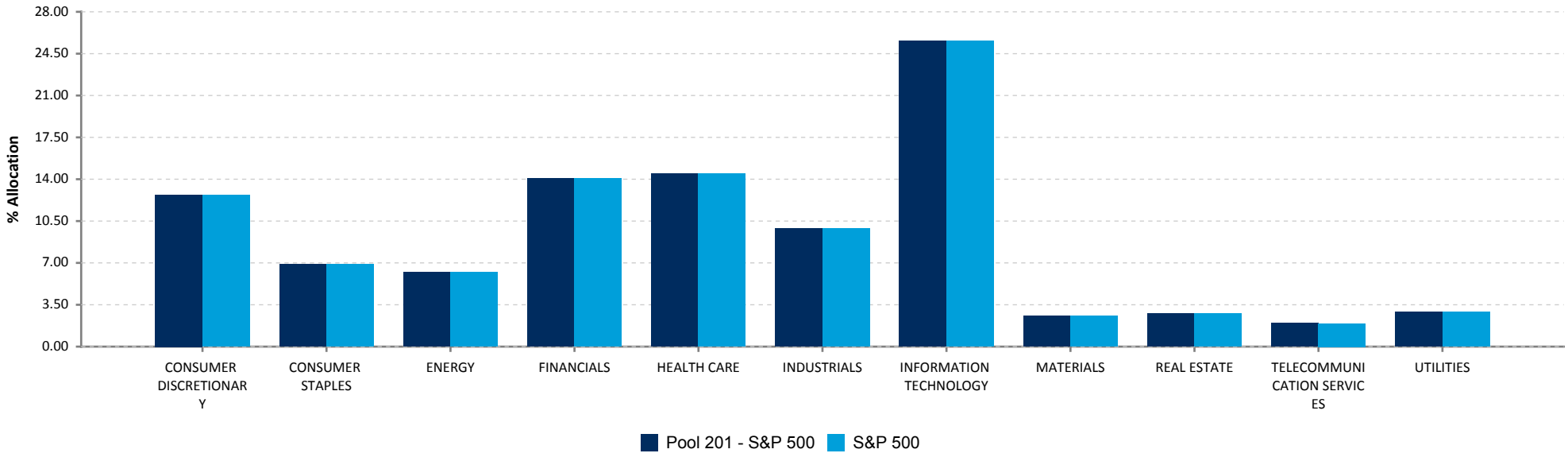


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2016	Jul 31 2017	Jul 31 2018
ST OF AZ POOL 201 LARGE CAP	3.71	6.90	6.40	16.14	12.43	13.05	5.35	5.46	16.02	16.14
S&P 500 INDEX (DAILY)	3.72	6.87	6.47	16.24	12.52	13.12	5.85	5.61	16.04	16.24
Excess	-0.01	0.03	-0.07	-0.10	-0.09	-0.07	-0.50	-0.16	-0.02	-0.10

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

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



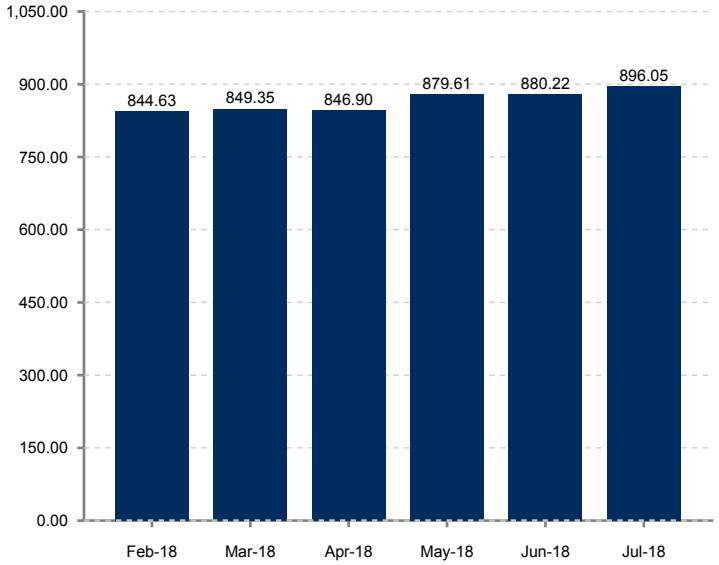
	Fund Weight	Benchmark Weight	Relative Weight
ST OF AZ POOL 201 LARGE CAP	100.00	100.00	0.00
CONSUMER DISCRETIONARY	12.95	12.92	0.03
CONSUMER STAPLES	6.89	6.96	-0.08
ENERGY	6.34	6.34	0.00
FINANCIALS	13.84	13.84	0.00
HEALTH CARE	14.08	14.07	0.00
INDUSTRIALS	9.54	9.51	0.03
INFORMATION TECHNOLOGY	25.96	25.96	-0.00
MATERIALS	2.61	2.60	0.00
REAL ESTATE	2.86	2.86	0.01
TELECOMMUNICATION SERVICES	1.99	1.99	-0.00
UTILITIES	2.95	2.95	0.00

OFFICE OF THE ARIZONA STATE TREASURER

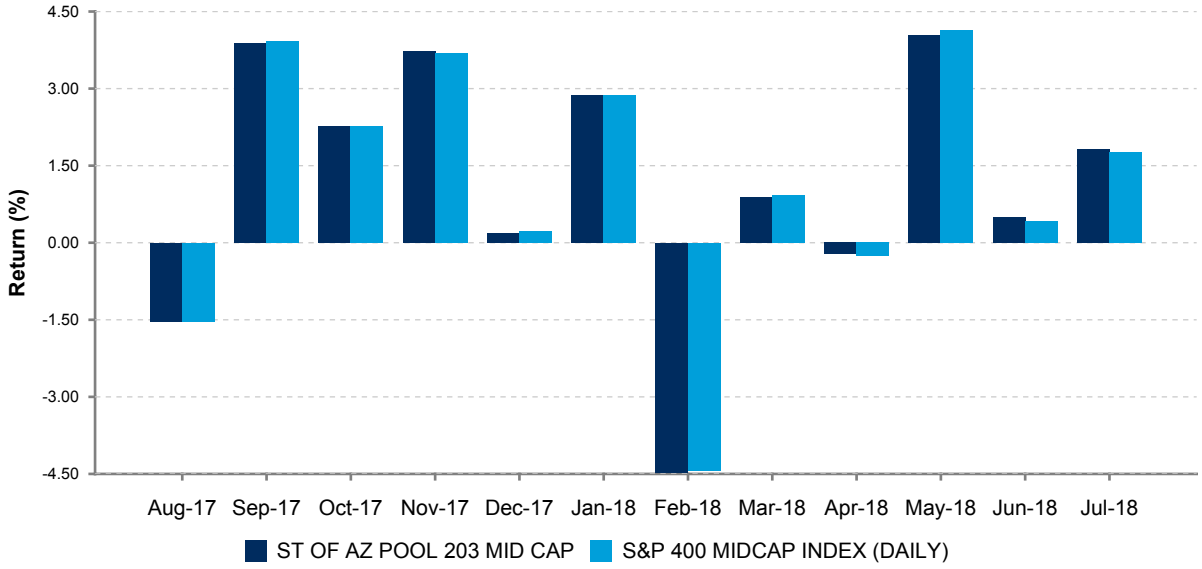
July 31, 2018

ST OF AZ POOL 203 MID CAP

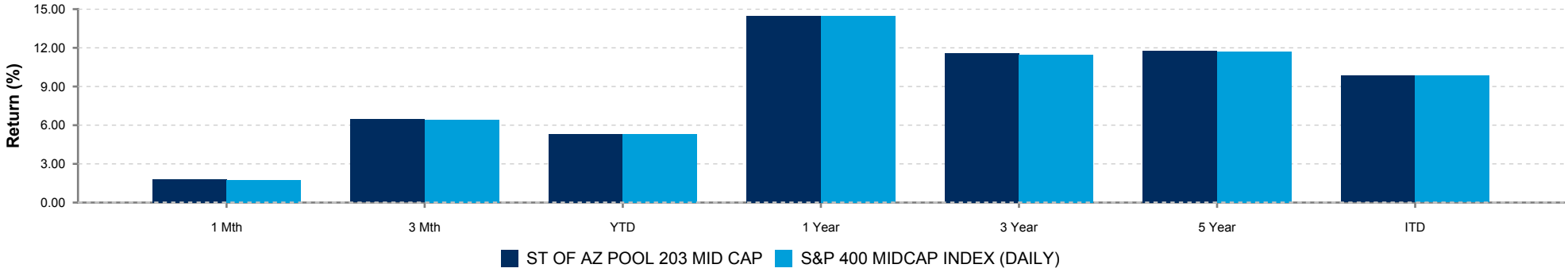
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return



	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2016	Jul 31 2017	Jul 31 2018
ST OF AZ POOL 203 MID CAP	1.82	6.45	5.32	14.50	11.58	11.79	9.84	5.59	14.90	14.50
S&P 400 MIDCAP INDEX (DAILY)	1.76	6.41	5.31	14.50	11.49	11.73	9.84	5.53	14.69	14.50
Excess	0.05	0.04	0.00	0.01	0.09	0.06	0.00	0.05	0.21	0.01

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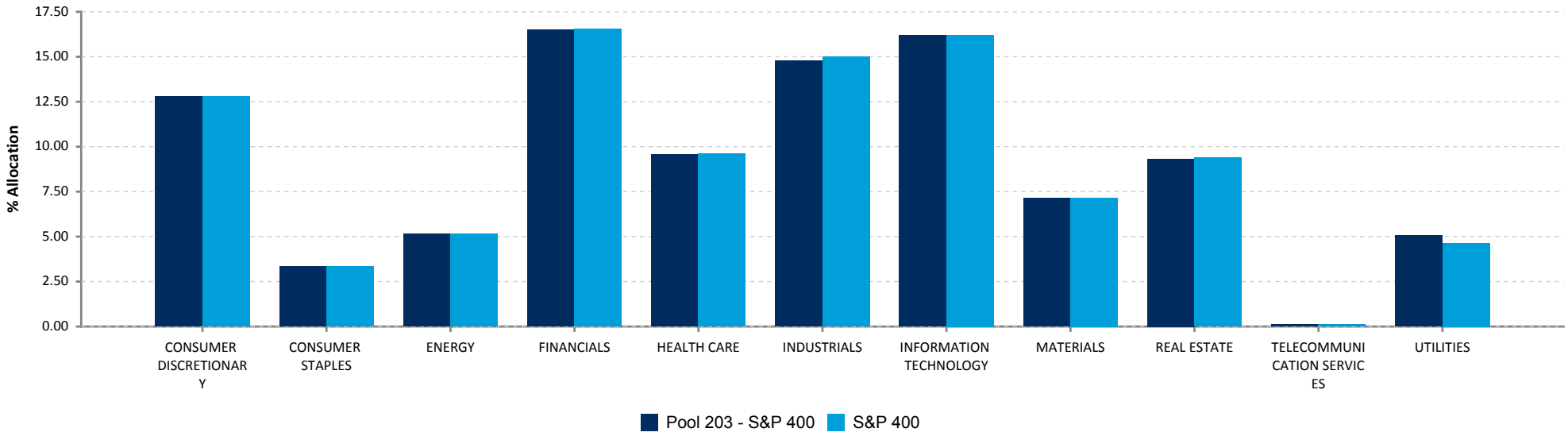
July 31, 2018

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
CONSUMER DISCRETIONARY	12.95	12.99	-0.04
CONSUMER STAPLES	3.48	3.48	0.00
ENERGY	5.32	5.32	0.00
FINANCIALS	16.47	16.47	0.01
HEALTH CARE	9.24	8.92	0.32
INDUSTRIALS	14.28	15.10	-0.82
INFORMATION TECHNOLOGY	16.13	16.12	0.01
MATERIALS	7.03	7.02	0.00
REAL ESTATE	9.66	9.57	0.09
TELECOMMUNICATION SERVICES	0.14	0.14	0.00
UTILITIES	5.30	4.87	0.42

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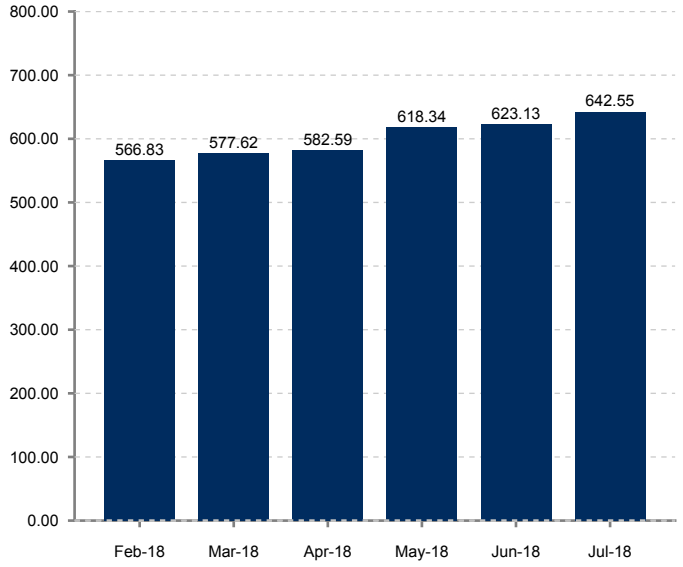
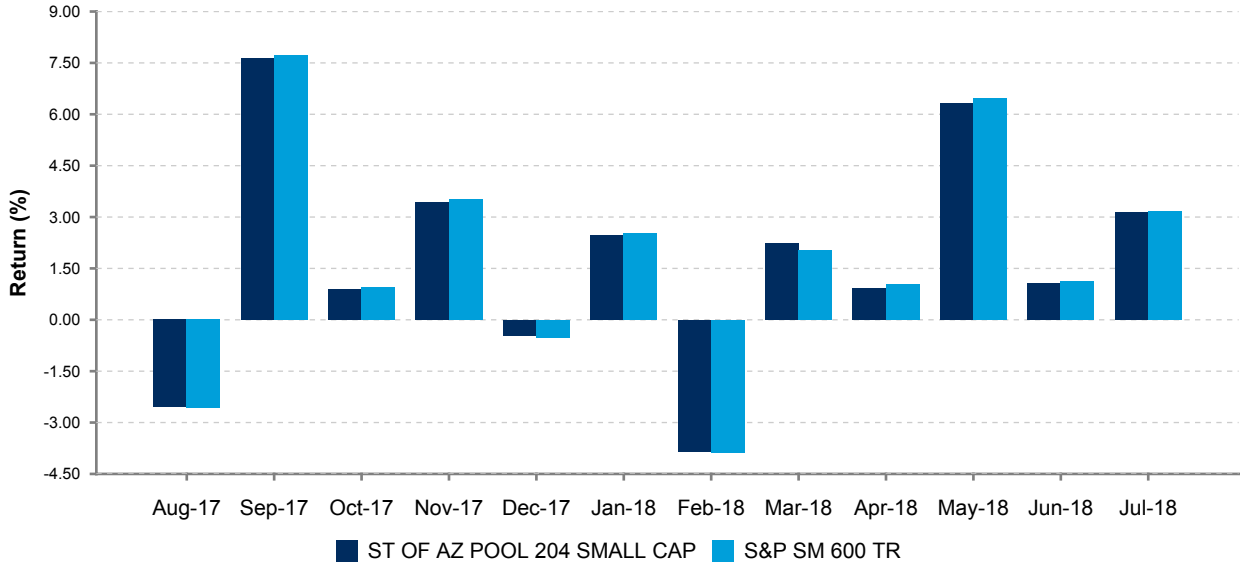
ST OF AZ POOL 204 SMALL CAP

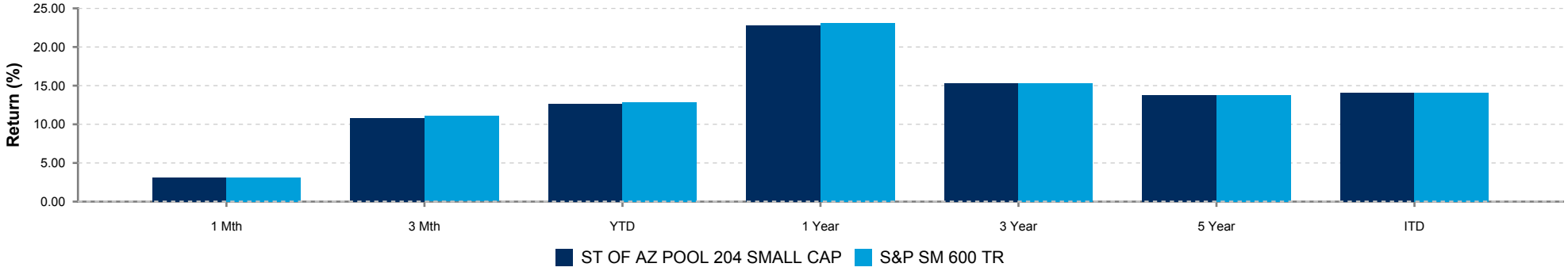
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return

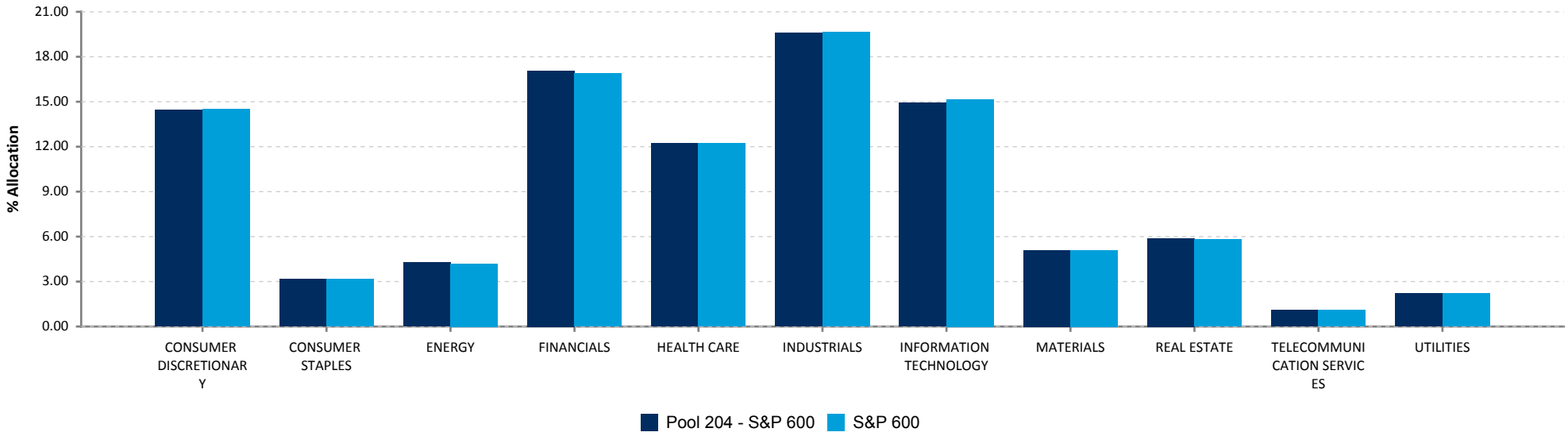


	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2016	Jul 31 2017	Jul 31 2018
ST OF AZ POOL 204 SMALL CAP	3.13	10.81	12.65	22.76	15.28	13.78	14.10	6.00	17.73	22.76
S&P SM 600 TR	3.16	11.06	12.84	23.11	15.35	13.80	14.11	5.96	17.66	23.11
Excess	-0.03	-0.25	-0.19	-0.35	-0.07	-0.01	-0.01	0.04	0.07	-0.35

OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

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



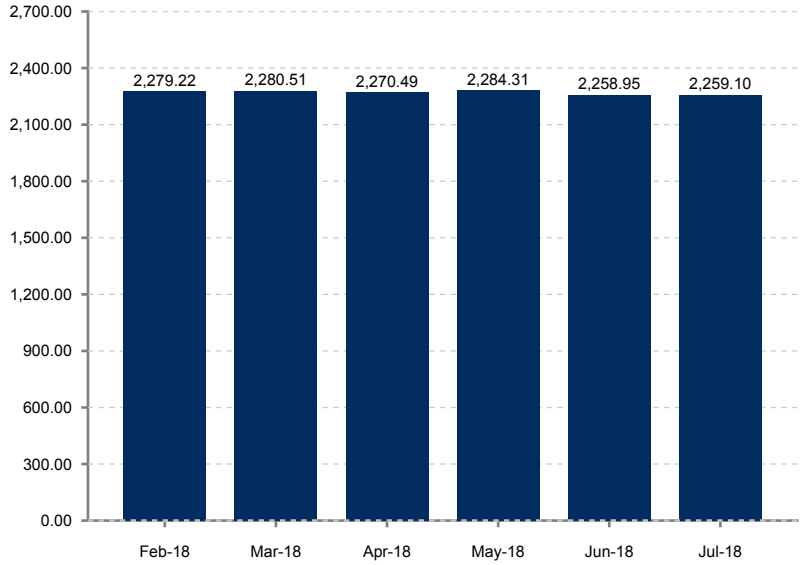
	Weight Fund	Weight Benchmark	Weight Relative
ST OF AZ POOL 204 SMALL CAP	100.00	100.00	0.00
CONSUMER DISCRETIONARY	14.73	14.80	-0.06
CONSUMER STAPLES	3.14	3.15	-0.00
ENERGY	4.30	4.24	0.06
FINANCIALS	17.30	17.03	0.28
HEALTH CARE	12.18	12.22	-0.04
INDUSTRIALS	18.90	18.95	-0.05
INFORMATION TECHNOLOGY	15.03	15.28	-0.26
MATERIALS	5.02	5.03	-0.01
REAL ESTATE	6.02	5.93	0.09
TELECOMMUNICATION SERVICES	1.13	1.13	-0.00
UTILITIES	2.23	2.24	-0.00

OFFICE OF THE ARIZONA STATE TREASURER

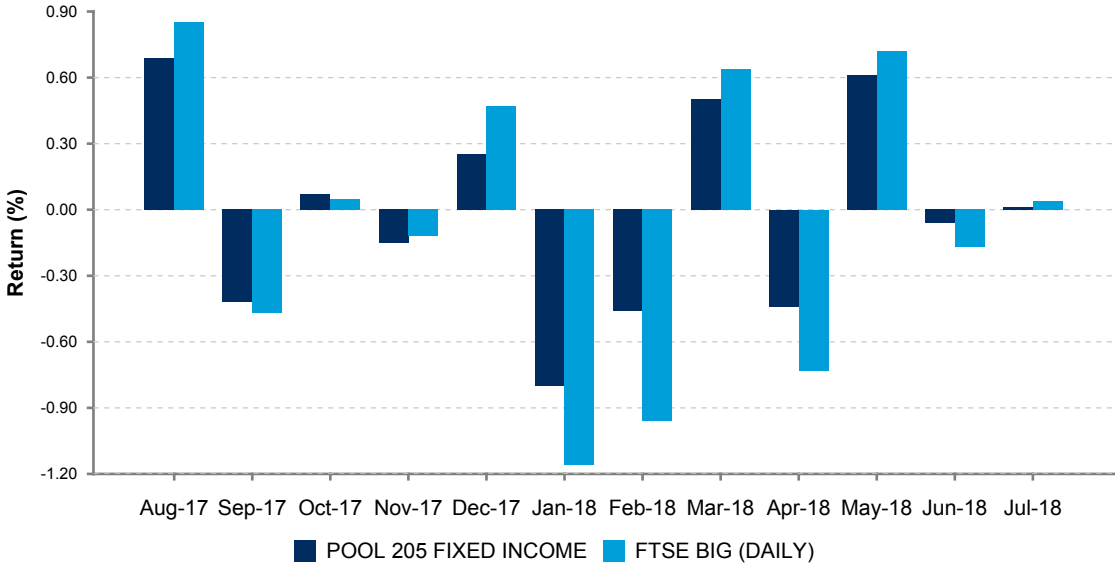
July 31, 2018

POOL 205 FIXED INCOME

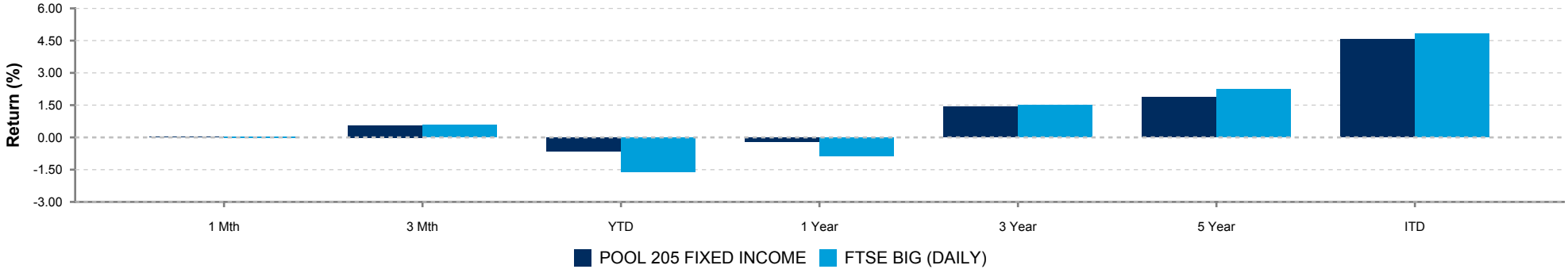
Net Asset Values over Time ($MM)



Monthly Returns



Rates of Return



	1 Mth	3 Mth	YTD	1 Year	3 Year	5 Year	ITD	Jul 31 2018	Jul 31 2017	Jul 31 2016
POOL 205 FIXED INCOME	0.01	0.56	-0.65	-0.20	1.43	1.88	4.55	-0.20	0.19	4.38
FTSE BIG (DAILY)	0.04	0.59	-1.62	-0.86	1.50	2.24	4.82	-0.86	-0.47	5.97
Excess	-0.03	-0.03	0.97	0.65	-0.07	-0.36	-0.27	0.65	0.66	-1.59

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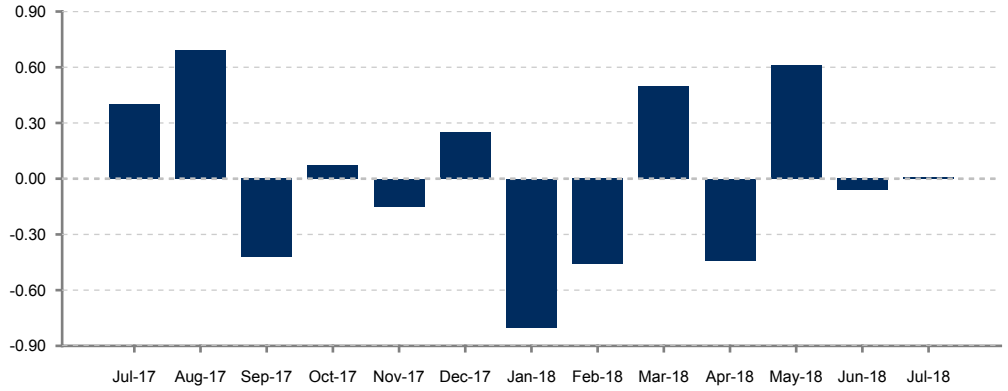
OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

POOL 205 FIXED INCOME

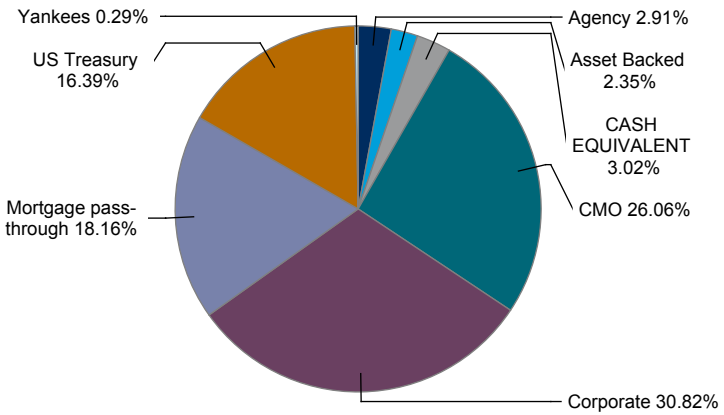
Net Mgr Return



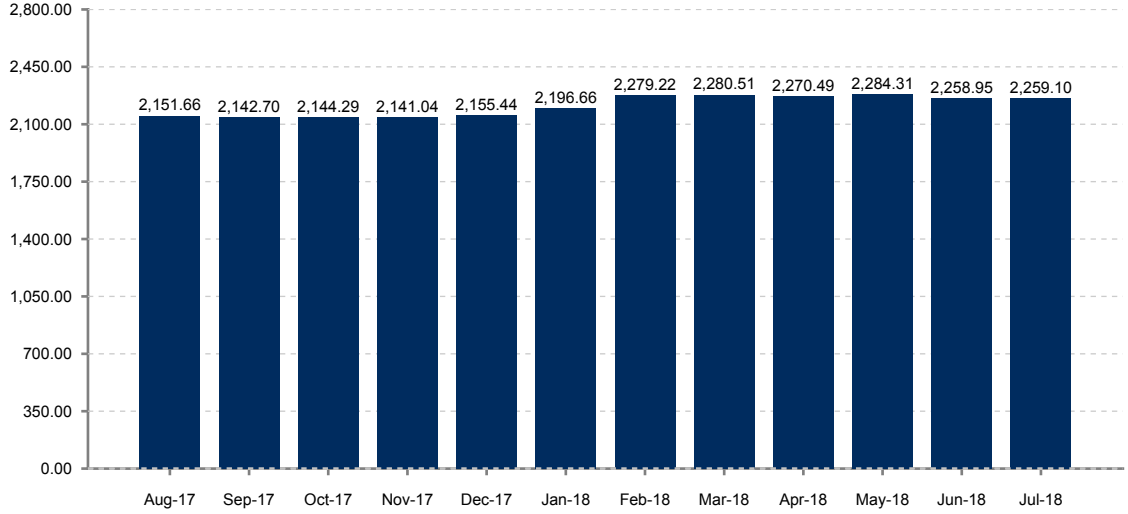
	Current Mth	Prior Mth	1 Year Ago
POOL 205 FIXED INCOME	0.01	-0.06	0.40

Asset Allocation

	Ending Market Value
POOL 205 FIXED INCOME	2,259,095,577



Net Asset Values over Time ($MM)



Top 10 Holdings

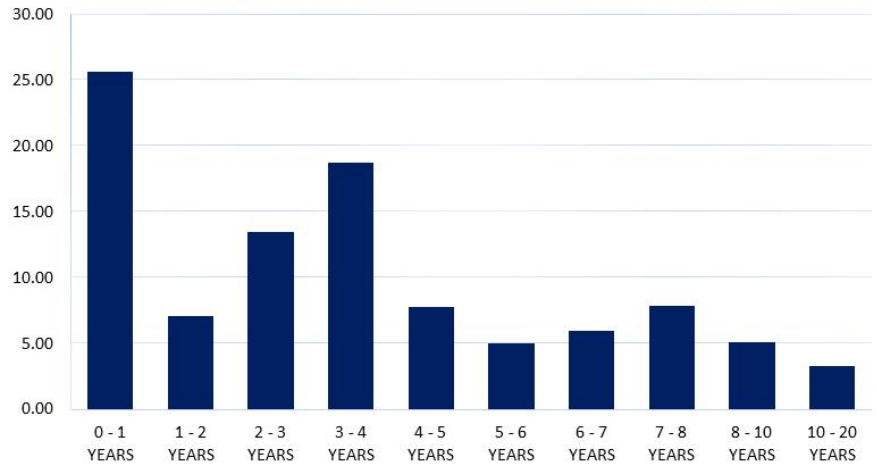
Security Name	Ending Market Value	% of Portfolio
POOL 205 FIXED INCOME		
BLACKROCK PROV TEMP	39,168,116	1.73
US TREASURY N/B	34,206,935	1.51
US TREASURY N/B	26,454,968	1.17
US TREASURY N/B	26,092,321	1.15
US TREASURY N/B	24,586,736	1.09
US TREASURY N/B	23,383,781	1.04
US TREASURY N/B	21,207,040	0.94
PEPSICO INC	20,262,942	0.90
PNC BANK NA	20,179,163	0.89
FORD MOTOR CREDIT CO	19,960,614	0.88

OFFICE OF THE ARIZONA STATE TREASURER

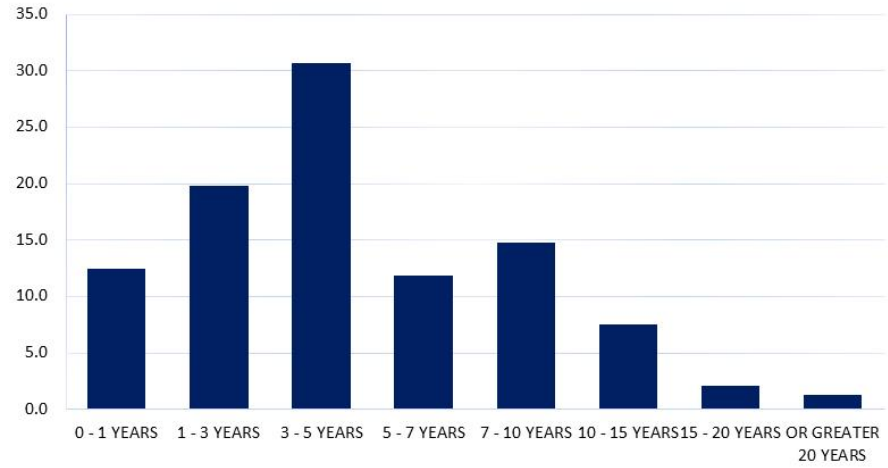
July 31, 2018

POOL 205 FIXED INCOME

Duration Distribution



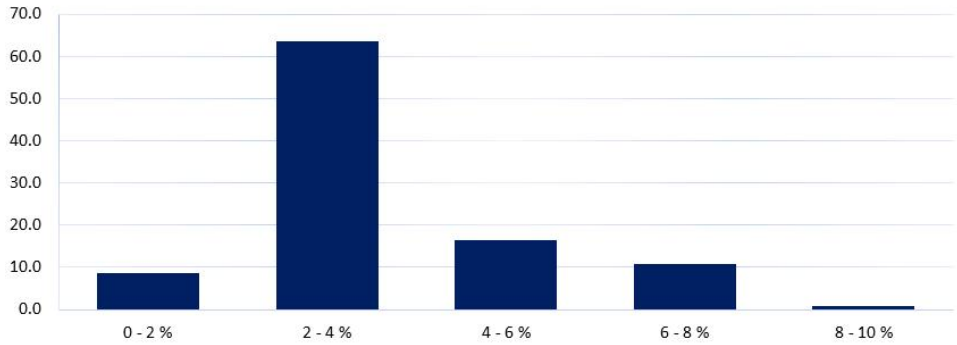
Expected Maturity Distribution



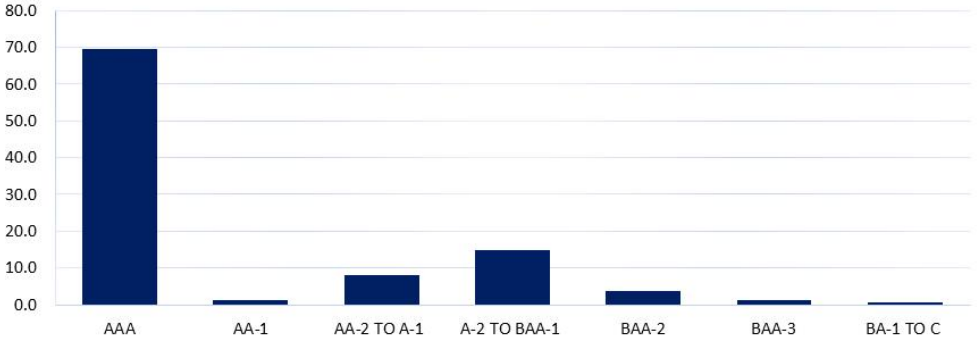
Portfolio Level Characteristics

	POOL 205 FIXED INCOME
Effective Maturity	5.06
Coupon	3.59
Effective Duration	3.62
Quality Rating (Moody's)	AA-2

Coupon Distribution



Rating Distribution

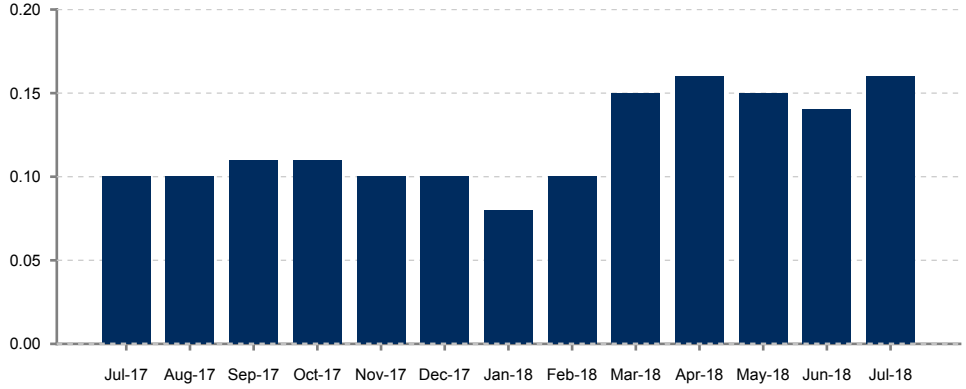


OFFICE OF THE ARIZONA STATE TREASURER

July 31, 2018

POOL 123 ST

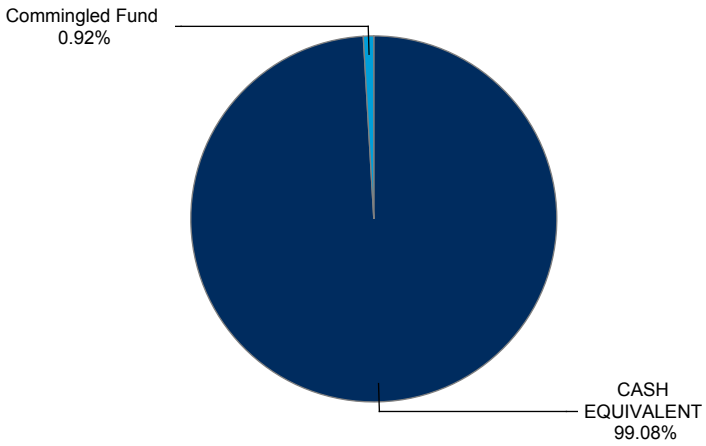
Net Yield



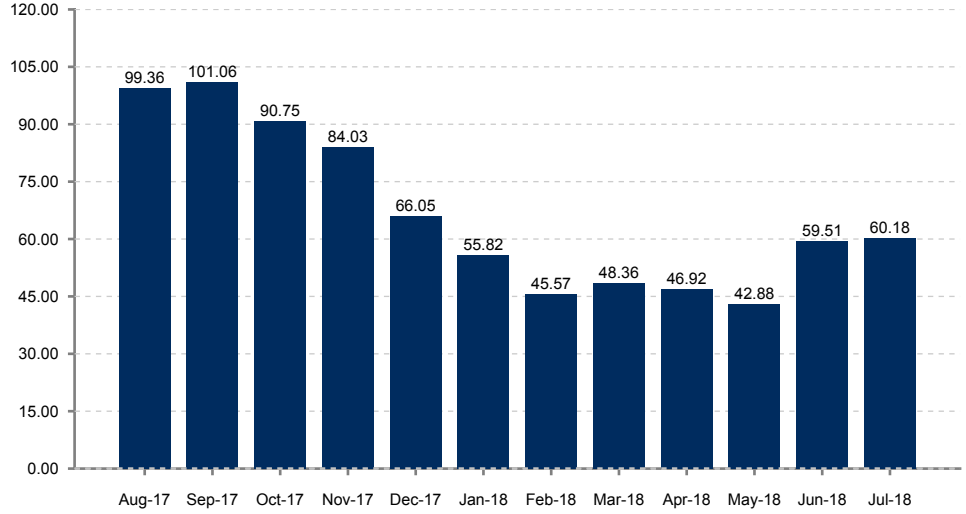
	Current Mth	Prior Mth	1 Year Ago
ST OF AZ POOL 123 ST FIXED INC	0.16	0.14	0.10

Asset Allocation

	Ending Market Value
ST OF AZ POOL 123 ST FIXED INC	60,177,291



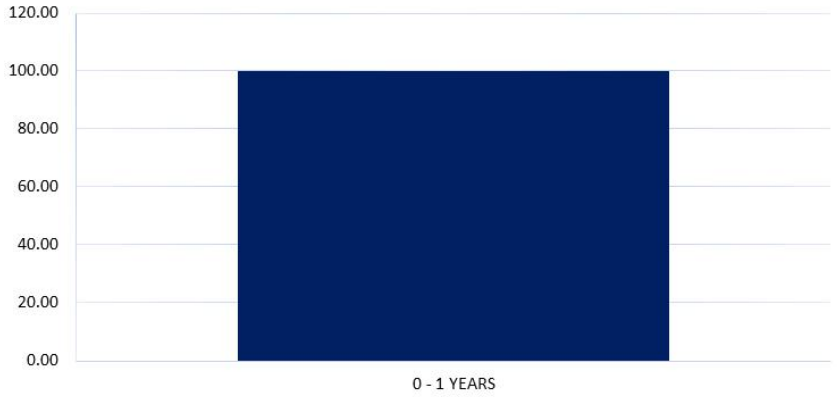
Net Asset Values over Time ($MM)



Top 10 Holdings

Security Name	Ending Market Value	% of Portfolio
ST OF AZ POOL 123 ST FIXED INC		
ARMY & AIR FORCE EXCHA	12,000,000	19.94
HALKIN FINANCE LLC USC	9,988,833	16.60
BLACKROCK PROV TEMP BLACKROCK PROV TEMP FUND 24	6,230,031	10.35
VICTORY RECEIVABLES	4,995,664	8.30
CONCORD MIN CPTL CO	4,994,111	8.30
LEXINGTN PKR CAP CO LL	4,994,083	8.30
MANHATTAN ASSET FDG.	4,994,000	8.30
MOUNTCLIFF	4,494,650	7.47
OLD LINE FUNDING LLC	2,998,613	4.98
MOUNTCLIFF	2,993,010	4.97

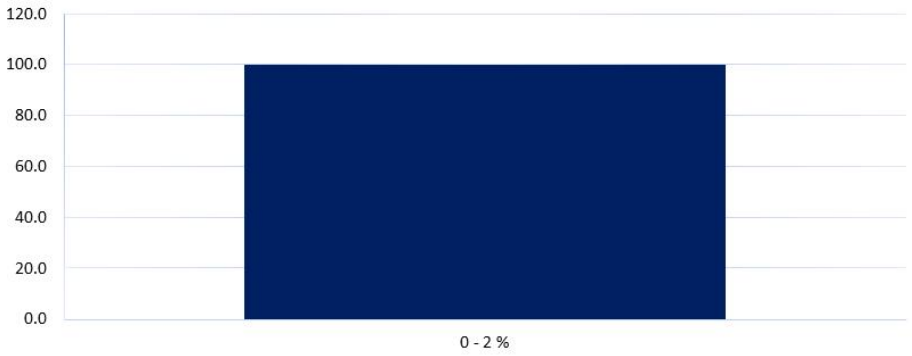
Duration Distribution



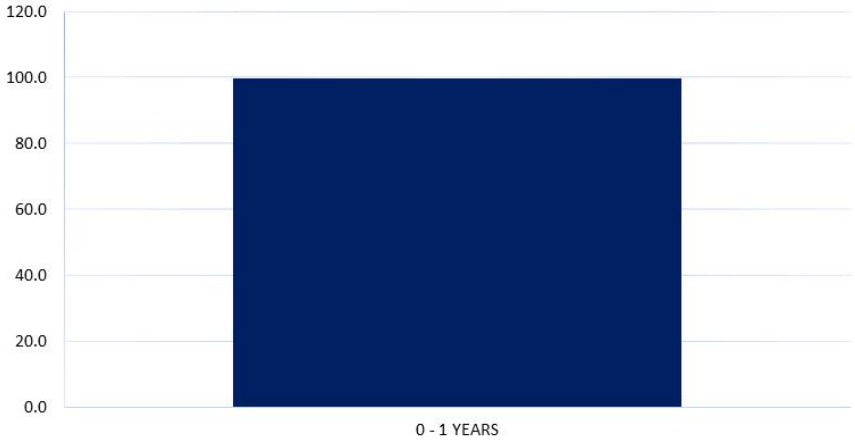
Portfolio Level Characteristics

	POOL 123 ST
Effective Maturity	0.04
Coupon	0.00
Effective Duration	0.04
Quality Rating (Moody's)	AAA

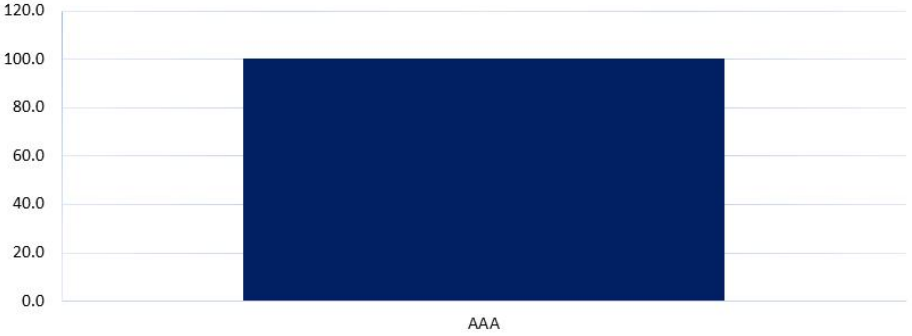
Coupon Distribution

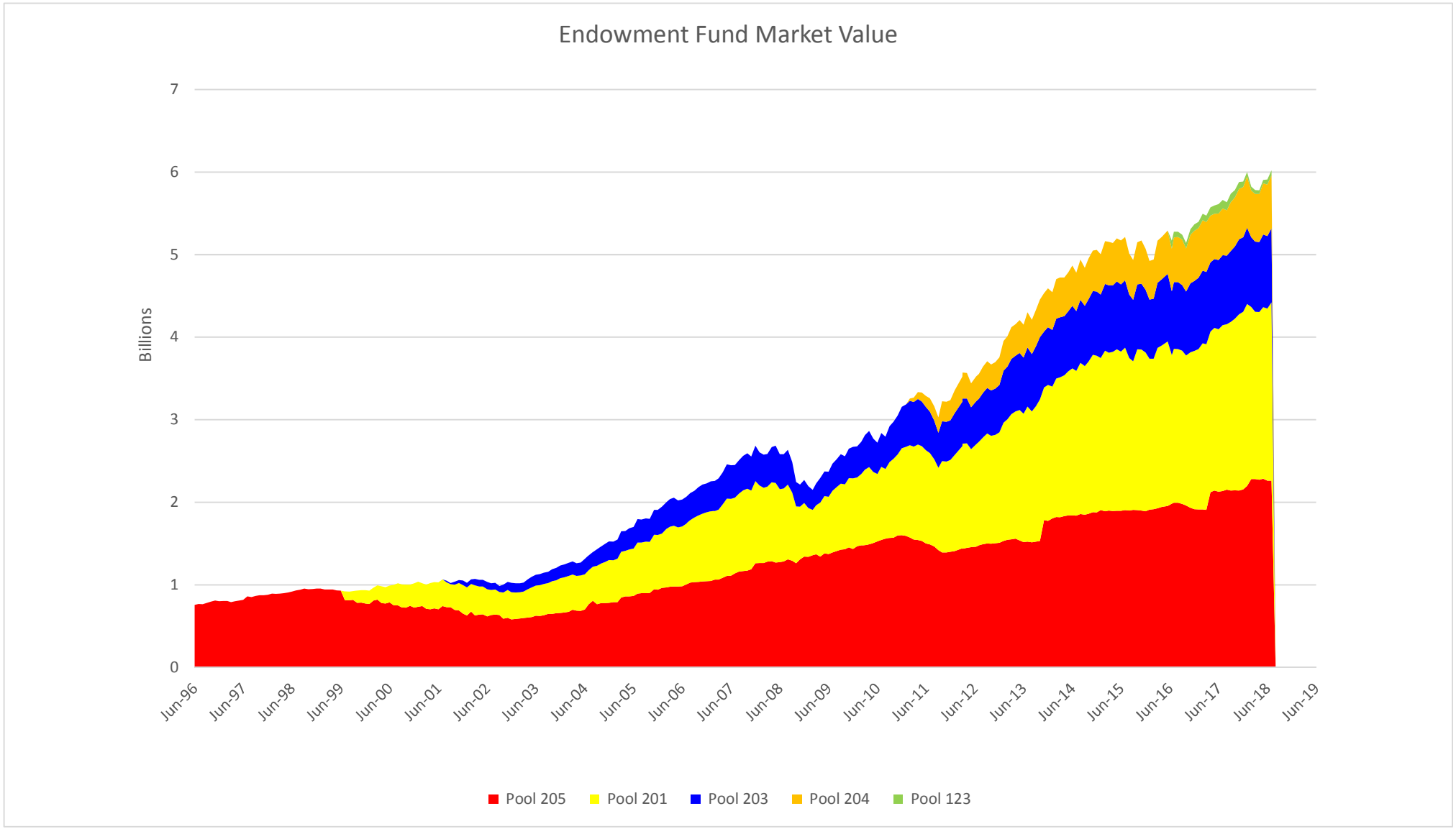


Expected Maturity Distribution



Rating Distribution




Endowment 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
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Jun-15
Jun-16
Jun-17
Jun-18
Jun-19
Pool 205
Pool 201
Pool 203
Pool 204
Pool 123