

Submitted by: William R. Decatur, Vice President, Finance and Business Operations

**Annual Report on the Cash Pool Investments and Debt Programs
For the Fiscal Year Ending September 30, 2018**

In accordance with the Board of Governors Statutes (WSUCA) 2.73.03 and 2.73.04, the Administration presents the annual report of our cash pool investment and debt programs for the fiscal year ending September 30, 2018.

Cash Pool Investment Program

This annual report was prepared by Wayne State University's investment consultants, NEPC, LLC. At September 30, 2018, the cash pool was approximately \$418 million. The main objective is to generate income to support the budget while protecting principal and maintaining sufficient liquidity.

The cash pool represents the cash reserves and working capital of the University and experiences variability in inflows and outflows throughout the fiscal year. Inflows are largely dependent on tuition and fees, sponsored programs and state appropriations. Outflows are driven by general disbursements, payroll and debt service payments. The University had access to a \$35 million line of credit that is used periodically throughout the year to support liquidity needs due to the cyclical nature of cash flows. In December 2018, the Board of Governors approved the renewal of the line of credit, and increase of total line(s) to \$50 million, and the award of the line of credit(s) to two banks, \$25 million to each bank.

The cash pool portfolio's investment returns were 0.2% for the fiscal year ending September 30, 2018. This was in line with the allocation index of 0.2%. Asset allocation is in compliance with the investment guidelines within the policy.

The portfolio had the following attributes at September 30, 2018:

- Average yield to maturity of 2.4%
- Average credit quality is A-
- Average effective maturity is 2.8 years
- Effective duration is 2.2 years

The University is in compliance with credit risk, concentration of credit risk and interest rate risk policies.

The University conducted an assessment of the portfolio's ability to achieve the appropriate balance between income needs and an acceptable level of risk. As a result of the assessment, University staff recommended, and the Board of Governors approved on September 21, a new asset allocation for the Cash Pool. The transition to the new asset allocation will be implemented opportunistically predominantly throughout the January through March 2019 timeframe. The new allocation is as follows:

Asset Class	Liquidity Pool (Tier 1)	Liquidity Reserve Pool (Tier 2)	Diversified Pool (Tier 3)	Total Portfolio	Tier 3 Policy Ranges
Cash	100%			30%	
Fixed Income		100%	30%	56%	+/- 7%
Equities			45%	9%	+/- 7%
Hedge Funds			10%	2%	+/- 5%
Real Assets			15%	3%	+/- 5%
Total	100%	100%	100%	100%	
Thresholds (\$mils)	\$70-\$110 Target \$105	\$140-\$175 Target \$165	Remainder		

Debt Program

The University uses debt as a source of funds for capital projects that support its Mission. In assessing the use of debt, other financing and revenue sources are considered as well, including State appropriations, philanthropy, project generating revenues, grant revenues and other sources.

The University's outstanding debt as of September 30, 2018 was \$422.4 million. In November 2017, a private-public partnership with Corvias for on-campus student housing closed and subsequently allowed the University to defease approximately \$100 million of debt related to housing projects. In February 2018, the University issued \$130 million of new debt. The bond proceeds had an average coupon interest rate of 4.5 percent and were used to fund various university projects and related issuance costs. The projects include a) construction, renovation and expansion of the Hilberry Theatre; b) construction of the Mike Ilitch School of Business; c) renovation and repurposing of the Science and Engineering Library; d) construction of a new Data Center; e) construction of building

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electrical upgrades; f) weight room addition; g) construction and relocation of Campus Health Center; h) construction of an art gallery; i) various relocation activities.

All debt in the portfolio is fixed rate debt. Approximately \$13 million per year amortizes each year. The weighted average life of the portfolio is 14 years and the average interest cost is 3.76%. All of the debt has a 10 year par call feature, with the exception of Series 2009B bonds which have a make whole call until 2019, when the call provision becomes a par call, and a certain maturities of the Series 2018A series have a 7 year par call. The Series 2009B bonds are taxable Build America Bonds (BABs) and therefore a federal subsidy is received which makes the interest rate paid approximately equivalent to the tax-exempt interest rate that was available at the time of issuance.

The University has two basis swaps outstanding related to the Series 2015A bonds with a total notional amount of \$40.9 million as of September 30, 2018. The swaps have a combined positive mark-to-market of \$266 thousand as of September 30, 2018. The University has not had to post collateral. Since inception, the swaps have generated about \$2 million in cash receipts.

Reports attached:

- Wayne State University Cash Pool Investment Performance Report
- Schedule of Long-Term Debt Outstanding
- Bond Debt Service Schedule

PORTFOLIO REVIEW

NEPC, LLC

Wayne State Cash Pool

TOTAL FUND PERFORMANCE SUMMARY

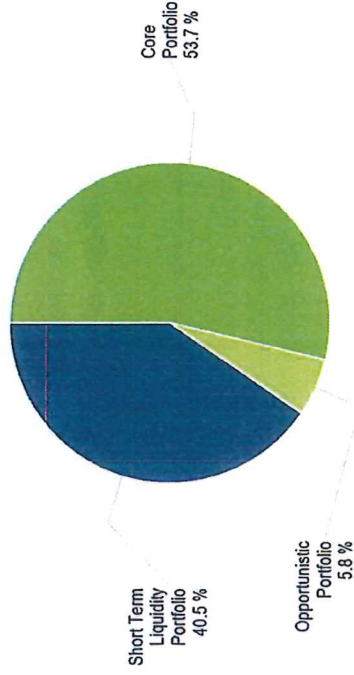
	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	Inception	Inception Date
Composite	\$418,393,554	0.5%	0.1%	0.2%	0.2%	1.0%	1.9%	2.0%	1.7%	Mar-13
Allocation Index		0.4%	0.1%	0.2%	0.2%	0.5%	1.4%	1.5%	1.3%	Mar-13
Composite - ex ST Liquidity	\$249,093,327	0.7%	-0.2%	0.0%	0.0%	1.0%	2.1%	2.3%	2.5%	Oct-11
Allocation Index		0.2%	-0.6%	-0.6%	-0.6%	0.1%	1.3%	1.7%	1.6%	Oct-11
Policy Index		0.3%	-0.2%	-0.2%	-0.2%	0.3%	1.3%	1.6%	1.7%	Oct-11

Performance Commentary:

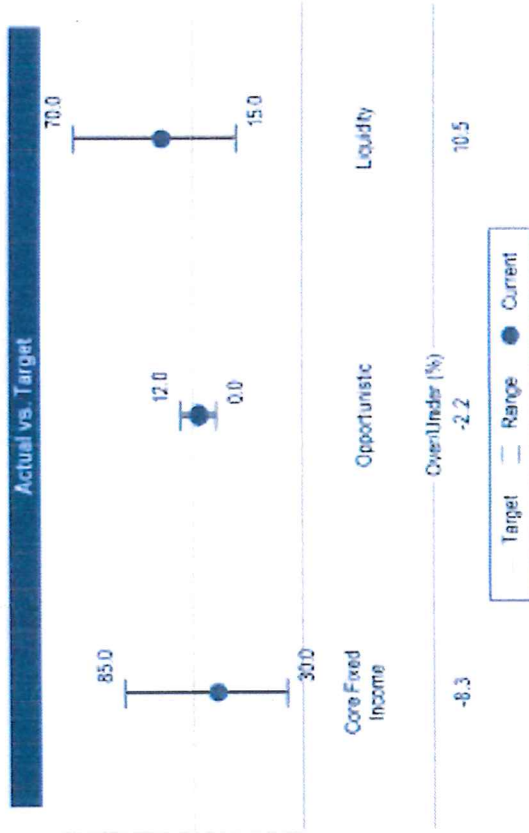
- The total portfolio returned 0.5% for the quarter; due to cash inflows the quarter ended at \$418.4 million, a \$55.7 million increase vs. the prior quarter end
 - Gain on investment totaled \$1.9 million
- The portfolio (ex ST Liquidity Portfolio) returned 0.7% during the quarter
- The total portfolio slightly outperformed the Allocation Index, and the portfolio (ex ST Liquidity) significantly outperformed the allocation and policy indices
- Asset allocations are within the ranges set by the policy

Fiscal YTD represents a 1-year period.

Allocation



PORTFOLIO COMPLIANCE VERIFICATION



	Credit Rating	Duration	Concentration Limit
Baird Intermediate Gov/Credit	A-✓	2.7 ✓	✓
IR&M Intermediate Gov/Credit	A-✓	4.1 ✓	✓

*Average duration of the entire portfolio is required to remain under 5 years. The current average duration of 2.2 years is in compliance.

*As separate accounts in the core investment portfolio, Baird Intermediate Gov/Credit and IR&M Gov/Credit are required to have credit ratings of BBB- or above, durations of no more than 7 years, and no more than 5% of market value in any one security.



Wayne State Cash Pool

TOTAL FUND ASSET GROWTH SUMMARY

	Last Three Months	One Year	Two Years	Three Years
Beginning Market Value	\$362,675,167	\$362,359,496	\$349,987,212	\$344,003,791
Net Cash Flow	\$53,795,235	\$55,007,598	\$61,675,688	\$54,837,260
Net Investment Change	\$1,923,152	\$1,026,460	\$6,730,654	\$19,552,503
Ending Market Value	\$418,393,554	\$418,393,554	\$418,393,554	\$418,393,554



Wayne State Cash Pool

TOTAL FUND PERFORMANCE DETAIL

Performance Summary (Net)

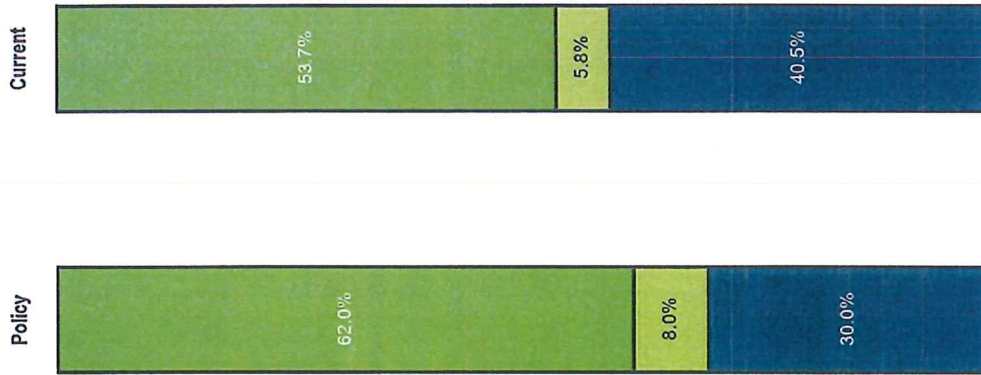
		Ending September 30, 2018										Inception					
Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
418,393,554	100.00	0.52	--	0.06	--	0.21	--	0.21	--	0.95	--	1.89	--	1.99	--	1.71	Mar-13
Allocation Index																	
249,093,327	59.54	0.65	--	-0.15	--	0.00	--	0.00	--	1.04	--	2.13	--	2.34	--	2.54	Oct-11
Allocation Index																	
		0.24	--	-0.59	--	-0.60	--	-0.60	--	0.12	--	1.33	--	1.66	--	1.63	Oct-11
Policy Index																	
		0.29	--	-0.23	--	-0.24	--	-0.24	--	0.27	--	1.29	--	1.59	--	1.69	Oct-11
Core Portfolio																	
224,706,055	53.71	0.53	--	-0.35	--	-0.25	--	-0.25	--	0.65	--	1.74	--	2.20	--	2.40	Oct-11
Baird Intermediate Gov/Credit																	
57,169,962	16.05	0.69	4	0.11	5	0.02	8	0.02	8	0.75	8	1.64	15	1.90	26	2.37	Jan-12
BBgBarc US Gov/Credit 1-5 Yr. TR																	
		0.26	72	-0.07	6	-0.38	14	-0.38	14	0.06	30	0.72	93	1.06	98	1.13	Jan-12
IR&M Intermediate Gov/Credit																	
69,840,746	16.69	0.75	3	-0.79	72	-0.81	63	-0.81	63	0.42	14	1.88	12	2.38	12	2.83	Jan-12
BBgBarc US Gov/Credit Int TR																	
		0.21	79	-0.76	64	-0.96	86	-0.96	86	-0.37	73	0.91	73	1.52	71	1.57	Jan-12
JPMorgan Core Bonds																	
33,924,863	8.11	0.07	70	-1.42	42	-0.96	36	-0.96	36	-0.20	36	1.46	53	2.30	51	2.25	Feb-12
BBgBarc US Aggregate TR																	
		0.02	76	-1.60	62	-1.22	67	-1.22	67	-0.57	72	1.31	68	2.16	65	1.82	Feb-12
Doubleline Total Return																	
37,399,356	8.94	0.18	39	-0.04	5	0.20	6	0.20	6	0.92	5	1.80	29	2.93	11	2.93	Oct-13
BBgBarc US Aggregate TR																	
		0.02	76	-1.60	62	-1.22	67	-1.22	67	-0.57	72	1.31	68	2.16	65	2.16	Oct-13
Doubleline Low Duration																	
16,372,127	3.91	0.75	5	1.22	7	1.47	6	1.47	6	1.93	7	2.21	6	--	--	1.91	Feb-14
BBgBarc US Gov/Credit 1-3 Yr. TR																	
		0.33	81	0.41	66	0.20	74	0.20	74	0.43	73	0.73	77	--	77	0.79	Feb-14
Opportunistic Portfolio																	
24,387,272	5.83	1.77	--	1.68	--	2.36	--	2.36	--	4.33	--	5.46	--	3.53	--	5.09	Jan-12
Loomis Sayles Fixed Income																	
14,670,532	3.51	1.59	1	0.61	4	1.39	1	1.39	1	4.14	1	5.97	1	3.96	1	5.73	Jan-12
BBgBarc US Aggregate TR																	
		0.02	85	-1.60	77	-1.22	79	-1.22	79	-0.57	95	1.31	96	2.16	86	1.93	Jan-12
Sky Harbor Short Duration High Yield																	
9,716,740	2.32	2.03	59	3.35	11	3.86	17	3.86	17	4.77	73	5.25	91	--	--	2.89	Apr-14
ICE BofA ML US 1-3 Year Cash Pay High Yield																	
		2.07	57	4.68	4	4.88	8	4.88	8	6.55	22	8.04	17	--	28	5.23	Apr-14
Short Term Liquidity Portfolio																	
169,300,226	40.46	0.14	--	0.33	--	0.45	--	0.45	--	0.59	--	0.59	--	0.46	--	0.46	Oct-11
Comerica Cash																	
58,485,295	13.98	0.00	--	0.00	--	0.00	--	0.00	--	0.00	--	0.00	--	0.00	--	0.04	Oct-11
Fifth Third Cash																	
88,032,175	21.04	0.00	--	0.00	--	0.00	--	0.00	--	0.00	--	0.00	--	0.00	--	0.04	Oct-11
PIMCO Short-Term Fund																	
22,782,756	5.45	0.82	1	1.87	1	2.43	1	2.43	1	2.57	1	2.57	1	1.90	1	1.77	Sep-12
91 Day T-Bills																	
		0.49	76	1.34	54	1.64	48	1.64	48	1.18	78	0.86	80	0.53	83	0.44	Sep-12

Returns longer than one year are annualized.
 Policy Index consists of 30% BC 1-3 Yr Gov/Credit, 30% BC Inter. Gov/Credit, 35% BC Aggregate, 5% ML 1-3 Yr High Yield.
 Fiscal year begins October 1st.



Wayne State Cash Pool

TOTAL FUND ASSET ALLOCATION VS. POLICY



Allocation vs. Targets and Policy						
	Current Balance	Current Allocation	Policy	Difference	Policy Range	
Core Fixed Income	\$224,706,055	53.7%	62.0%	-8.3%	30.0% - 85.0%	
Baird Intermediate Gov/Credit	\$67,169,962	16.1%				
IR&M Intermediate Gov/Credit	\$69,840,746	16.7%				
JPMorgan Core Bonds	\$33,924,863	8.1%				
Doubleline Total Return	\$37,398,356	8.9%				
Doubleline Low Duration	\$16,372,127	3.9%				
Opportunistic	\$24,387,272	5.8%	8.0%	-2.2%	0.0% - 12.0%	
Loomis Sayles Fixed Income	\$14,670,532	3.5%				
Sky Harbor Short Duration High Yield	\$9,716,740	2.3%				
Liquidity	\$169,300,226	40.5%	30.0%	10.5%	15.0% - 70.0%	
Camerica Cash	\$58,485,295	14.0%				
Fifth Third Cash	\$88,032,175	21.0%				
PIMCO Short-Term Fund	\$22,782,766	5.4%				
Total	\$418,893,554	100.0%	100.0%			



MANAGER INFORMATION SUMMARY

Manager	Investment Product	Portfolio	Style	Universe*	Date Funded
Comerica Cash	Cash	Short Term Liquidity	Cash Equivalent	Cash Management	n/a
Fifth Third Cash	Cash	Short Term Liquidity	Cash Equivalent	Cash Management	n/a
PIMCO Short-Term Fund	Short-Term Bond	Short Term Liquidity	Short Term Fixed Income	Cash Management	8/2012
Baird Intermediate Gov/Credit	Intermediate Bond	Core	Core Fixed Income	Interm. Duration Fixed Income	12/2011
IR&M Intermediate Gov/Credit	Intermediate Bond	Core	Core Fixed Income	Interm. Duration Fixed Income	12/2011
JPMorgan Core Bonds	Core Bond	Core	Core Fixed Income	Core Fixed Income	1/2012
DoubleLine Total Return Fund	MBS, Core Bond	Core	Core Fixed Income	Core Fixed Income	10/2013
DoubleLine Low Duration Fund	Low Duration - Core	Core	Core Fixed Income	Short Duration Fixed Income	2/2014
Loomis Sayles MSFD	Multi-sector Full Discretion	Opportunistic	Core-Plus Fixed Income	Core Plus Fixed Income	1/2012
Sky Harbor Short Duration High Yield	Limited Term High Yield	Opportunistic	High Yield	High Yield Fixed Income	4/2014

*eVestment (Net)



Wayne State University's Debt Portfolio

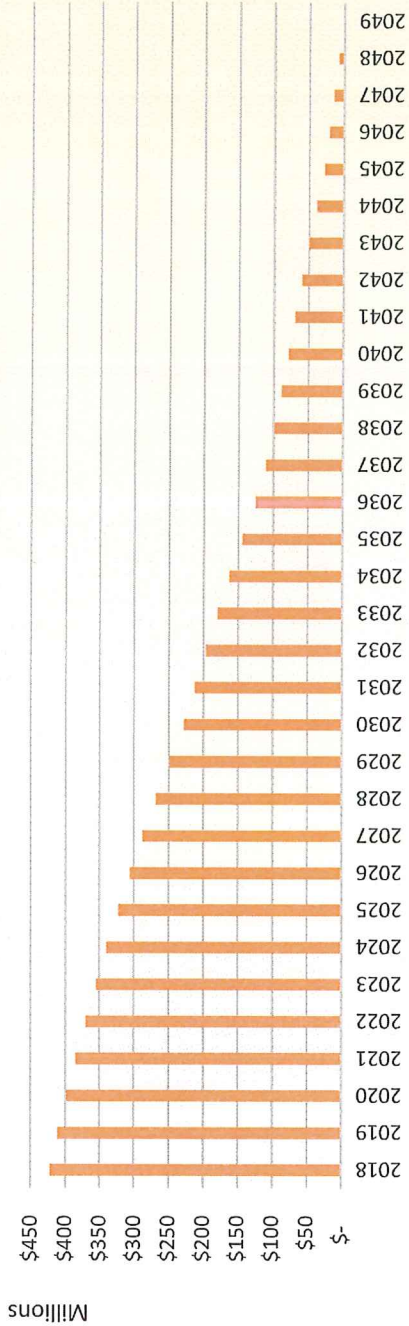
LONG-TERM DEBT OUTSTANDING (par amount)

	<u>Balance 9/30/2018</u>	<u>Balance 11/30/2018</u> <i>(after Princ Payment)</i>	Final Maturity	Type of Bond
Series 2018A	122,225,000	122,225,000	2049	Tax-exempt
Series 2016A	89,975,000	89,975,000	2037	Tax-exempt
Series 2016B	11,285,000	10,315,000	2037	Taxable
Series 2015A	48,300,000	46,710,000	2036	Tax-exempt
Series 2013A	79,375,000	77,795,000	2044	Tax-exempt
Series 2009A	36,505,000	32,790,000	2029	Tax-exempt
Series 2009B	25,500,000	24,745,000	2039	Taxable
Series 2008	4,555,000	2,335,000	2035	Tax-exempt
Series 2007B	4,220,000	4,220,000	2030	Taxable
Series 2003B	435,000	-	2018	Taxable
	\$ 422,375,000	\$ 411,110,000		





Bond Principal Amount Outstanding at Fiscal Year End



Total Debt Service

