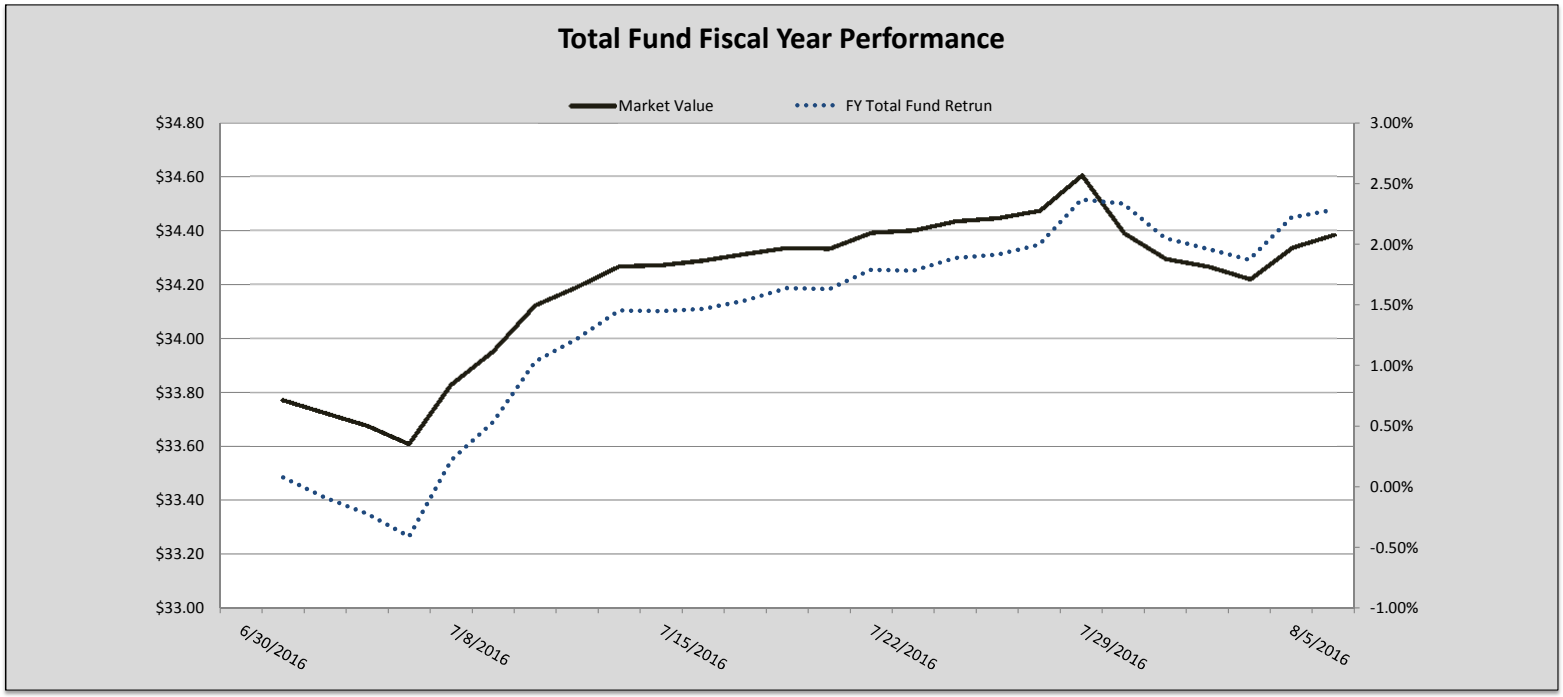
Investment Report

Arizona State Retirement System

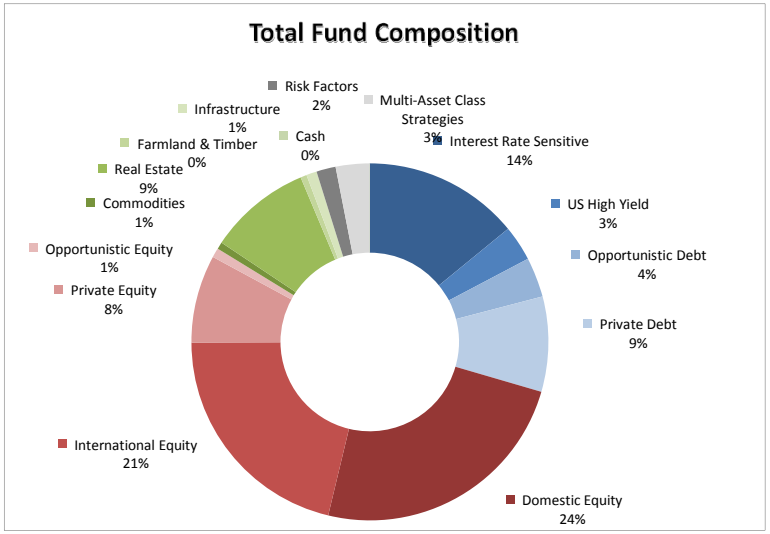
August 22, 2016

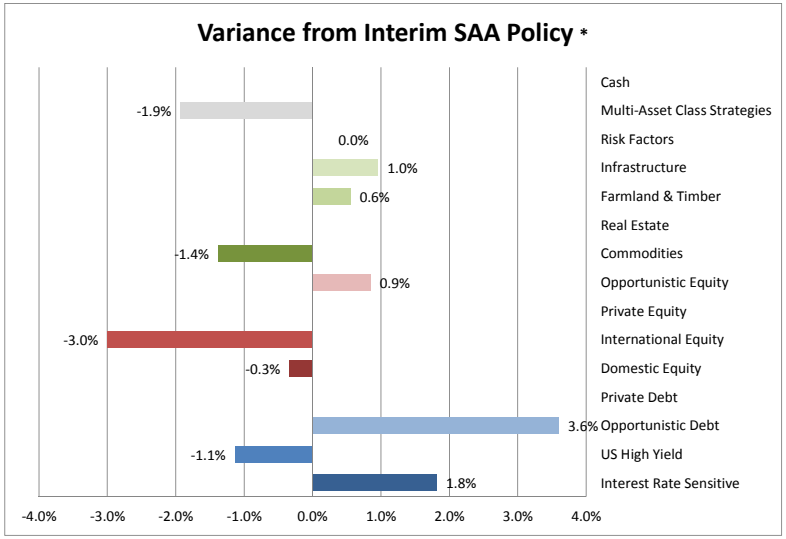
Fiscal Year Performance



Total Fund Positioning

Total Fund Positioning August 8, 2016





All Private Markets asset classes' market values are reported on a quarter-lag basis and adjusted to include the current quarter's cash flow.

Asset Allocation

Total Fund	ASRS Market Value Report								Monday, August 08, 2016
Account Manager	Account Manager Style	Fixed Income		Equity		Inflation Linked	Multi-Asset	Market Value	%
		Active	Passive	Active	Passive				
Master Cash	Operating Cash (non-assetized)		4,412,130					4,412,130	0.01%
	Cash Total							**$4,412,130**	0.01%
								Total Cash	0.00%
Blackrock: San Francisco	Treasuries (Long Duration)		557,343,135					557,343,135	1.62%
	Treasuries (Long Duration) Total							**$557,343,135**	1.62%
								Long Treasuries (Range: 0% - 10%)	0.00%
ASRS: Phoenix	Enhanced Passive F2		1,915,238,753					1,915,238,753	5.57%
Blackrock: San Francisco	Passive (US Debt Index)		1,931,578,805					1,931,578,805	5.61%
Assetized Cash	US Treasuries		436,800,850					436,800,850	1.27%
	Core Fixed Income Total							**$4,283,618,408**	12.45%
	Interest Rate Sensitive							**$4,840,961,543**	14.07%
								Interest Rate Sensitive Policy	11.00%
Columbia: Minneapolis	Active	733,465,224						733,465,224	2.13%
JP Morgan: Indianapolis	Active	378,106,910						378,106,910	1.10%
	High Yield Fixed Income Total							**$1,111,572,141**	3.23%
								High Yield Policy	4.00%
	Opportunistic Debt	1,239,871,537						**$1,239,871,537**	3.60%
								Opportunistic Debt Policy	0.00%
	Private Debt Total	2,959,900,407						**$2,959,900,407**	8.60%
								Private Debt (Range: 8% - 12%)	10.00%
	Fixed Income Total							**$10,152,305,628**	29.50%
								Total Fixed Income (Range: 18% - 35%)	25.00%
LSV: Chicago	Active (Value)			583,647,571				583,647,571	1.70%
ASRS: Phoenix	Passive E2				4,656,015,916			4,656,015,916	13.53%
ASRS: Phoenix	Enhanced Passive E7				596,207,741			596,207,741	1.73%
ASRS: Phoenix	Enhanced Passive E8				569,337,616			569,337,616	1.65%
	Large Cap Equity Total							**$6,405,209,276**	**18.61%**
								U.S. Equity Large Cap Policy	20.00%
Wellington: Boston	Active (Core)			289,411,375				289,411,375	0.84%
ASRS: Phoenix	Passive E3 (Growth)				323,895,507			323,895,507	0.94%
ASRS: Phoenix	Passive E4 (Value)				316,614,415			316,614,415	0.92%
	Mid Cap Equity Total							**$929,921,297**	**2.70%**
								U.S. Equity Mid Cap Policy	3.00%
TimesSquare: New York	Active (Growth)			377,674,398				377,674,398	1.10%
DFA: Santa Monica	Active (Value)			287,810,782				287,810,782	0.84%
ASRS: Phoenix	Passive E6				338,784,771			338,784,771	0.98%
	Small Cap Equity Total							**$1,004,269,951**	**2.92%**
								U.S. Equity Small Cap Policy	3.00%
	U.S. Equity Total							**$8,339,400,524**	**24.23%**
								U.S. Equity (Range: 16% - 36%)	26.00%

Asset Allocation (Continued)

LSV: Chicago	Active (Value)			583,647,571				583,647,571	1.70%
ASRS: Phoenix	Passive E2				4,656,015,916			4,656,015,916	13.53%
ASRS: Phoenix	Enhanced Passive E7				596,207,741			596,207,741	1.73%
ASRS: Phoenix	Enhanced Passive E8				569,337,616			569,337,616	1.65%
	Large Cap Equity Total							**$6,405,209,276**	**18.61%**
								U.S. Equity Large Cap Policy	**20.00%**
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	Small Cap Equity Total							**$1,004,269,951**	**2.92%**
								U.S. Equity Small Cap Policy	**3.00%**
	U.S. Equity Total							**$8,339,400,524**	**24.23%**
								U.S. Equity (Range: 16% - 36%)	**26.00%**
Brandes: San Diego	Active (EAFE)			551,412,851				551,412,851	1.60%
American Century	Active (EAFE)			538,833,816				538,833,816	1.57%
Trinity Street	Active (EAFE)			316,610,093				316,610,093	0.92%
Thompson Siegel Walmsley	Active (EAFE)			297,291,846				297,291,846	0.86%
Blackrock: San Francisco	Passive (EAFE)				4,023,013,202			4,023,013,202	11.69%
	Large Cap Developed Non-US Equity Total							**$5,727,692,921**	16.64%
								Large Cap Developed Policy	**17.00%**
AQR: Greenwich	Active (EAFE SC)			98,690,073				98,690,073	0.29%
DFA: Santa Monica	Active (EAFE SC)			105,616,674				105,616,674	0.31%
Franklin Templeton: San Mateo	Active (EAFE SC)			99,945,843				99,945,843	0.29%
Blackrock: San Francisco	Passive (EAFE SC)				127,848,114			127,848,114	0.37%
	Small Cap Developed Non-US Equity Total							**$432,103,146**	1.26%
								Small Cap Developed Policy	**2.00%**
William Blair: Chicago	Active (EM)			380,704,036				380,704,036	1.11%
Eaton Vance: Boston	Active (EM)			292,098,435				292,098,435	0.85%
LSV: Chicago	Active (EM)			125,327,581				125,327,581	0.36%
Blackrock: San Francisco	Passive (EM)				342,737,405			342,737,405	1.00%
	Emerging Markets Equity Total							**$1,140,867,457**	3.32%
								Emerging Markets Policy	**5.00%**
	Non-US Equity Total							**$7,300,663,525**	21.21%
								Non-US Equity (Range: 14% - 34%)	**24.00%**
ASRS: Phoenix	Risk Factor Portfolio				602,617,035			602,617,035	1.75%
	Public Equity Total							**$16,244,123,632**	47.20%
	Private Equity Total			2,740,702,706				**$2,740,702,706**	7.96%
								Private Equity (Range: 6% - 10%)	**8.00%**
	Opportunistic Equity			291,745,981				**$291,745,981**	0.85%
								Opportunistic Equity Policy:	**0.00%**
	Equity Total							**$19,276,572,319**	56.01%
								Total Equity (Range: 48% - 65%)	**58.00%**
Gresham: New York						220,187,490		220,187,490	0.64%
	Commodities Total							**$220,187,490**	0.64%
								Commodities (Range: 0% - 4%)	**2.00%**
	Real Estate Total					3,185,482,170		**$3,185,482,170**	9.26%
								Real Estate (Range: 8% - 12%)	**10.00%**
	Infrastructure Total					331,287,205		**$331,287,205**	0.96%
								Infrastructure (Range: 0% - 3%)	**0.00%**
	Farmland & Timber Total					188,017,561		**$188,017,561**	0.55%
								Farmland & Timber (Range: 0% - 3%)	**0.00%**
	Inflation Linked Total							**$3,924,974,426**	11.41%
								Inflation Linked (Range: 10% - 16%)	**12.00%**
Bridgewater							1,055,460,331	1,055,460,331	3.07%
	Multi-Asset Class Strategies							1,055,460,331	3.07%
								Multi-Asset Class (Range: 0% - 12%)	**5.00%**
	TOTAL Amounts	**$5,311,344,085**	**$4,845,373,672**	**$7,377,719,574**	**$11,898,852,745**	**$3,924,974,426**	**$1,055,460,331**	**$34,413,724,833**	**100.00%**
	TOTAL Percent	**15.43%**	**14.08%**	**21.44%**	**34.58%**	**11.41%**	**3.07%**		

Asset Allocation (Continued)

Asset Class	Actual Portfolio	SAAP Target	SAAP Range	Interim SAA Adj Policy	Interim SAA Range	Actual - Interim SAA % diff	Actual - Interim SAA $ diff	Policy Band check Actual - Adj Policy
Tactical Cash	0.00%	0%	(0-3%)	0.00%	(0-3%)	0.00%	0	
Cash	0.01%	0%		0.00%		0.01%	4,412,130	
Total Cash	0.01%	**0%**	**(0-3%)**	**0.00%**	**(0-3%)**	**0.01%**	**$4,412,129.79**	
Interest Rate Sensitive	14.07%	11%		12.25%		1.82%	625,605,194	
High Yield	3.23%	4%		4.37%		-1.14%	-$393,369,406	
Opportunistic Debt	3.60%	0%		0.00%		3.60%	$1,239,871,537	
Private Debt	8.60%	10%	(8-12%)	8.60%	(7-11%)	0.00%	$0	
Total Fixed Income	**29.50%**	**25%**	**(18-35%)**	**25.22%**	**(18-35%)**	**4.28%**	**$1,472,107,326**	**OK**
Large Cap	18.61%	20%		18.80%		-0.19%	-$64,730,099	
Mid Cap	2.70%	3%		2.77%		-0.07%	-$24,150,234	
Small Cap	2.92%	3%		3.00%		-0.08%	-$28,141,794	
US Equity	**24.23%**	**26%**	**(16-36%)**	**24.57%**	**(15-35%)**	**-0.34%**	**-$117,022,127**	**OK**
Developed Large Cap	16.64%	17%		17.21%		-0.57%	-$196,127,217	
Developed Small Cap	1.26%	2%		2.00%		-0.74%	-$256,171,350	
Emerging Markets	3.32%	5%		5.00%		-1.68%	-$579,818,784	
Non-US Equity	**21.21%**	**24%**	**(14-34%)**	**24.21%**	**(14-34%)**	**-3.00%**	**-$1,032,117,352**	**OK**
Total Equity Transition	0.00%	0%		0.00%		0.00%	$0	
Risk Factors	1.75%	0%		1.75%		0.00%	$0	
Total Public Equity	**47.20%**			**1.76%**		**0.00%**	**$0**	
Private Equity	7.96%	8%		7.96%	(6-10%)	0.00%	$0	**OK**
Opportunistic Equity	0.85%	0%		0.00%		0.85%	$291,745,981	
Total Equity	**56.01%**	**58%**	**(48-65%)**	**58.51%**	**(48-65%)**	**-2.49%**	**-$857,393,498**	**OK**
Commodities	0.64%	2%	(0-4%)	2.01%	(0-4%)	-1.38%	-$473,204,813	**OK**
Real Estate	9.26%	10%	(8-12%)	9.26%	(7-11%)	0.00%	$0	**OK**
Infrastructure	0.96%	0%	(0-3%)	0.00%	(0-3%)	0.96%	$331,287,205	**OK**
Farmland & Timber	0.55%	0%	(0-3%)	0.00%	(0-3%)	0.55%	$188,017,561	**OK**
Opportunistic I/L	0.00%	0%		0.00%		0.00%	$0	
Total Inflation Linked	**11.41%**	**12%**	**(10-14%)**	**11.27%**		**0.13%**	**$46,099,953**	**OK**
Multi-Asset Strategies	3.07%	5%	(0-12%)	5.00%	(0-12%)	-1.93%	-$665,225,911	**OK**
Total	**100.00%**	**100.00%**		**100.00%**		**0.00%**	**$0**	

Internally Managed Portfolios:	
$8,716,094,719	**25%**

***Interim SAA includes a proration of unfunded Private Equity, Private Debt, and Real Estate**
****Private Equity is prorated to domestic equity; Real Estate is prorated to equity, commodities, and fixed income; Private Debt is prorated to Interest Rate Sensitive and High Yield**

Opportunistic definitions:
An investment in a category that is not included in the ASRS Asset Allocation policy and represents an investment opportunity that is tactical in nature.
Opportunistic investments have a 0% target (0%-10% range), regardless of asset class.

Total Opportunistic		
Opportunistic Debt	**$1,239,871,537**	**3.6%**
Opportunistic Equity	**$291,745,981**	**0.8%**
Opoprtunistic IL	**$0**	**0.0%**
	$1,531,617,518	**4.5%**

Total Public Equity Returns as of June 30, 2016

Arizona State Retirement System

Total Domestic and International Equity Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Domestic and International Equity	**15,720,048,177**	**46.30**	**-1.14**	**0.83**	**-2.84**	**-2.84**	**7.02**	**7.39**	**5.57**	**6.24**	**Jan-98**
ASRS Custom Total Equity Benchmark			*-0.79*	*0.93*	*-3.23*	*-3.23*	*7.11*	*7.46*	*5.77*	*5.63*	*Jan-98*
Over/Under			-0.35	-0.10	0.39	0.39	-0.09	-0.07	-0.20	0.61	
Equity Risk Factor Portfolio	582,483,089	1.72	0.64	2.55	4.38	4.38	12.30	--	--	11.33	Jun-13
ASRS Custom Total Equity Benchmark			*-0.79*	*0.93*	*-3.23*	*-3.23*	*7.11*	*7.46*	*5.77*	*6.04*	*Jun-13*
Over/Under			1.43	1.62	7.61	7.61	5.19			5.29	
Total Domestic and Int'l Equity ex-Equity Risk Factor Portfolio	**15,137,565,088**	**44.58**	**-1.20**	**0.77**	**-3.07**	**-3.07**	**6.91**	**7.33**	**5.55**	**6.23**	**Jan-98**
ASRS Custom Total Equity Benchmark			*-0.79*	*0.93*	*-3.23*	*-3.23*	*7.11*	*7.46*	*5.77*	*5.63*	*Jan-98*
Over/Under			-0.41	-0.16	0.16	0.16	-0.20	-0.13	-0.22	0.60	

1. Total Domestic and International Equity market value includes $1,979,854 remaining in terminated manager and transition accounts.
2. Performance of ASRS Total Domestic and International Equity includes the performance of the ASRS Domestic Equity and ASRS International Equity asset classes and the Equity Risk Factor Portfolio with an inception date of 6/1/2013. NEPC began calculating Total Domestic and International Equity performance in January 2009.
Monthly performance data from January 1998 - December 2008 was provided by State Street.
Note: Performance is based on net of fee performance data.
Composition of ASRS Custom Total Equity Benchmark can be found in the appendix.

Domestic Equity Returns as of June 30, 2016

Arizona State Retirement System

Domestic and Large Cap Equity Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Domestic Equity	**8,048,988,456**	**23.70**	**0.56**	**2.98**	**3.67**	**3.67**	**11.31**	**11.63**	**7.90**	**11.10**	**Jul-75**
ASRS Custom Domestic Equity Benchmark			*0.32*	*2.75*	*3.24*	*3.24*	*11.43*	*11.84*	*7.86*	*11.17*	*Jul-75*
Over/Under			0.24	0.23	0.43	0.43	-0.12	-0.21	0.04	-0.07	
Total Large Cap Equity	**6,194,076,417**	**18.24**	**0.77**	**2.84**	**5.26**	**5.26**	**11.80**	**11.95**	**7.49**	**7.81**	**Jul-02**
S&P 500			*0.26*	*2.46*	*3.99*	*3.99*	*11.66*	*12.10*	*7.42*	*7.69*	*Jul-02*
Over/Under			0.51	0.38	1.27	1.27	0.14	-0.15	0.07	0.12	
Active Large Cap Equity											
LSV	558,733,181	1.65	-1.10	0.68	-3.76	-3.76	8.75	11.03	6.81	10.09	Jan-03
S&P/Citigroup 500 Value			*0.89*	*3.96*	*3.38*	*3.38*	*9.66*	*11.18*	*5.77*	*8.52*	*Jan-03*
Over/Under			-1.99	-3.28	-7.14	-7.14	-0.91	-0.15	1.04	1.57	
Enhanced/Passive Large Cap Equity											
Internally Managed E2	4,486,400,132	13.21	0.26	2.46	3.99	3.99	11.65	12.08	7.45	7.49	Apr-97
S&P 500			*0.26*	*2.46*	*3.99*	*3.99*	*11.66*	*12.10*	*7.42*	*7.42*	*Apr-97*
Over/Under			0.00	0.00	0.00	0.00	-0.01	-0.02	0.03	0.07	
Internally Managed E7	582,806,219	1.72	3.08	5.10	14.41	14.41	12.76	--	--	13.87	Aug-12
MSCI USA High Dividend Yield Index			*3.08*	*5.11*	*14.65*	*14.65*	*12.88*	*13.63*	*9.11*	*13.90*	*Aug-12*
Over/Under			0.00	-0.01	-0.24	-0.24	-0.12			-0.03	
Internally Managed E8	566,136,835	1.67	4.56	5.68	17.10	17.10	15.06	--	--	15.17	Aug-12
MSCI USA Minimum Volatility Index			*4.58*	*5.78*	*17.33*	*17.33*	*15.02*	*14.77*	*9.48*	*14.90*	*Aug-12*
Over/Under			-0.02	-0.10	-0.23	-0.23	0.04			0.27	

1. Total Domestic Equity includes $482 in terminated manager and transition accounts
2. In mid-December, 2005 the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra indices prior to mid-December 2005 and S&P/Citigroup indices going forward.
Note: Performance is reported net of fees.
Composition of ASRS Custom Domestic Equity Benchmark can be found in the appendix.

Domestic Equity Returns as of June 30, 2016

Arizona State Retirement System

Mid Cap Equity Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Mid Cap Equity	**898,662,281**	**2.65**	**-0.06**	**3.66**	**0.66**	**0.66**	**10.53**	**10.38**	**8.53**	**9.81**	**Jul-02**
S&P 400 MidCap			*0.42*	*3.99*	*1.33*	*1.33*	*10.53*	*10.55*	*8.55*	*9.83*	*Jul-02*
Over/Under			-0.48	-0.33	-0.67	-0.67	0.00	-0.17	-0.02	-0.02	
Active Mid Cap Equity											
Wellington	280,036,805	0.82	-1.43	2.50	-0.88	-0.88	11.34	10.76	9.29	10.68	Jul-02
S&P 400 MidCap			*0.42*	*3.99*	*1.33*	*1.33*	*10.53*	*10.55*	*8.55*	*9.83*	*Jul-02*
Over/Under			-1.85	-1.49	-2.21	-2.21	0.81	0.21	0.74	0.85	
Passive Mid Cap Equity											
Internally Managed E3	309,118,090	0.91	0.46	4.51	1.20	1.20	10.82	10.19	9.85	8.40	Dec-00
S&P/Citigroup 400 Growth			*0.35*	*4.35*	*1.17*	*1.17*	*10.77*	*10.07*	*9.29*	*7.90*	*Dec-00*
Over/Under			0.11	0.16	0.03	0.03	0.05	0.12	0.56	0.50	
Internally Managed E4	309,507,386	0.91	0.50	3.71	1.20	1.20	10.03	10.81	8.01	9.84	Jul-02
S&P/Citigroup 400 Value			*0.48*	*3.67*	*1.28*	*1.28*	*10.13*	*10.96*	*7.75*	*9.67*	*Jul-02*
Over/Under			0.02	0.04	-0.08	-0.08	-0.10	-0.15	0.26	0.17	

1. In mid-December, 2005 the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra indices prior to mid-December 2005 and S&P/Citigroup indices going forward.
Note: Performance is reported net of fees.

Domestic Equity Returns as of June 30, 2016

Arizona State Retirement System

Small Cap Equity Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Small Cap Equity	**956,249,325**	**2.82**	**-0.20**	**2.94**	**-4.70**	**-4.70**	**8.36**	**10.29**	**7.92**	**9.77**	**Jul-02**
ASRS Custom Small Cap Equity Blended Benchmark			*0.61*	*3.48*	*-0.03*	*-0.03*	*10.23*	*11.20*	*8.11*	*9.55*	*Jul-02*
Over/Under			-0.81	-0.54	-4.67	-4.67	-1.87	-0.91	-0.19	0.22	
Active Small Cap Equity											
TimesSquare	357,943,561	1.05	-0.14	4.50	-7.71	-7.71	8.38	10.97	9.95	10.80	Apr-05
Times Square Blended Benchmark			*-0.46*	*3.24*	*-10.75*	*-10.75*	*8.33*	*8.83*	*7.74*	*8.49*	*Apr-05*
Over/Under			0.32	1.26	3.04	3.04	0.05	2.14	2.21	2.31	
Active Small Cap Equity											
DFA - US Small Cap	273,912,432	0.81	-1.25	0.71	-5.96	-5.96	6.72	9.08	6.57	11.01	Sep-98
DFA Blended Benchmark			*0.78*	*3.40*	*0.72*	*0.72*	*9.43*	*11.36*	*7.35*	*10.47*	*Sep-98*
Over/Under			-2.03	-2.69	-6.68	-6.68	-2.71	-2.28	-0.78	0.54	
Passive Small Cap Equity											
Internally Managed E6	324,393,332	0.96	0.62	3.19	-0.14	-0.14	10.17	11.14	--	7.65	Feb-07
S&P 600 SmallCap			*0.61*	*3.48*	*-0.03*	*-0.03*	*10.23*	*11.20*	*7.86*	*7.37*	*Feb-07*
Over/Under			0.01	-0.29	-0.11	-0.11	-0.06	-0.06		0.28	

Note: Performance is reported net of fees.
Composition of ASRS Custom Small Cap Equity Blended Benchmark, Times Square Blended Benchmark and DFA Blended Benchmark can be found in the appendix.

International Equity Returns as of June 30, 2016

Arizona State Retirement System

International Developed Markets Equity Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total International Equity	**7,087,123,001**	**20.87**	**-2.84**	**-1.64**	**-10.43**	**-10.43**	**1.47**	**0.75**	**1.76**	**5.59**	**Apr-87**
ASRS Custom Int'l Equity Benchmark			*-1.97*	*-1.05*	*-9.90*	*-9.90*	*1.77*	*0.89*	*2.54*	*5.31*	*Apr-87*
Over/Under			-0.87	-0.59	-0.53	-0.53	-0.30	-0.14	-0.78	0.28	
Total International Developed Markets Equity	**6,013,441,965**	**17.71**	**-3.79**	**-1.84**	**-9.45**	**-9.45**	**2.69**	**2.28**	**2.74**	**5.94**	**Apr-87**
ASRS Custom Int'l Developed Markets Equity Benchmark			*-3.57*	*-1.58*	*-9.46*	*-9.46*	*2.77*	*2.32*	*3.33*	*5.59*	*Apr-87*
Over/Under			-0.22	-0.26	0.01	0.01	-0.08	-0.04	-0.59	0.35	
Active Large Cap International Equity											
Brandes	537,161,799	1.58	-4.17	-3.15	-10.89	-10.89	3.81	2.78	1.93	7.95	Oct-98
Brandes Custom Benchmark			*-3.36*	*-1.46*	*-10.16*	*-10.16*	*2.09*	*1.89*	*2.92*	*5.24*	*Oct-98*
Over/Under			-0.81	-1.69	-0.73	-0.73	1.72	0.89	-0.99	2.71	
American Century	523,712,929	1.54	-4.82	-2.99	-10.21	-10.21	--	--	--	-5.46	Jul-14
MSCI EAFE			*-3.36*	*-1.46*	*-10.16*	*-10.16*	*2.09*	*1.89*	*1.92*	*-7.24*	*Jul-14*
Over/Under			-1.46	-1.53	-0.05	-0.05				1.78	
Trinity Street	300,105,238	0.88	-7.67	-5.53	-11.63	-11.63	--	--	--	-7.66	Jul-14
MSCI EAFE			*-3.36*	*-1.46*	*-10.16*	*-10.16*	*2.09*	*1.89*	*1.92*	*-7.24*	*Jul-14*
Over/Under			-4.31	-4.07	-1.47	-1.47				-0.42	
TS&W International	280,891,221	0.83	-4.92	-3.65	-9.98	-9.98	--	--	--	-6.23	Jul-14
MSCI EAFE			*-3.36*	*-1.46*	*-10.16*	*-10.16*	*2.09*	*1.89*	*1.92*	*-7.24*	*Jul-14*
Over/Under			-1.56	-2.19	0.18	0.18				1.01	

1. Total International Equity market value includes $1,979,372 in terminated manager and transition accounts.
2. Total International Developed Markets Equity market value includes $192,971 in terminated manager accounts.
3. American Century, Trinity Street and TS&W were funded in mid-June 2014. Inception date for performance reporting purposes is July 1, 2014.
Note: Performance is reported net of fees.
Composition of ASRS Custom Int'l Equity Benchmark, ASRS Custom Int'l Developed Markets Equity Benchmark, and Brandes Custom Benchmark can be found in the appendix.

International Equity Returns as of June 30, 2016

Arizona State Retirement System

International Developed Markets Equity Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Passive Large Cap International Equity											
BlackRock EAFE Equity Index	3,858,562,248	11.36	-3.33	-1.25	-9.85	-9.85	2.35	1.96	--	6.29	Jul-09
MSCI EAFE			*-3.36*	*-1.46*	*-10.16*	*-10.16*	*2.09*	*1.89*	*1.92*	*6.26*	*Jul-09*
Over/Under			0.03	0.21	0.31	0.31	0.26	0.07		0.03	
Active Small Cap International Equity											
DFA - International Small Cap	98,245,173	0.29	-6.17	-3.42	-10.82	-10.82	3.87	2.49	2.69	4.18	Sep-05
MSCI EAFE Small Cap			*-5.28*	*-2.60*	*-3.67*	*-3.67*	*7.28*	*5.00*	*3.83*	*5.27*	*Sep-05*
Over/Under			-0.89	-0.82	-7.15	-7.15	-3.41	-2.51	-1.14	-1.09	
Franklin Templeton	198,190,014	0.58	-10.50	-8.87	-13.20	-13.20	1.80	4.43	--	4.17	Apr-11
MSCI EAFE Small Cap			*-5.28*	*-2.60*	*-3.67*	*-3.67*	*7.28*	*5.00*	*3.83*	*4.96*	*Apr-11*
Over/Under			-5.22	-6.27	-9.53	-9.53	-5.48	-0.57		-0.79	
AQR Capital	94,413,827	0.28	-4.97	-3.32	-2.86	-2.86	8.36	--	--	7.09	Jun-13
MSCI EAFE Small Cap			*-5.28*	*-2.60*	*-3.67*	*-3.67*	*7.28*	*5.00*	*3.83*	*5.80*	*Jun-13*
Over/Under			0.31	-0.72	0.81	0.81	1.08			1.29	
Passive Small Cap International Equity											
BlackRock EAFE Small Cap Equity Index	121,964,094	0.36	-5.20	-2.40	-3.40	-3.40	7.42	4.95	--	9.48	Jun-10
MSCI EAFE Small Cap			*-5.28*	*-2.60*	*-3.67*	*-3.67*	*7.28*	*5.00*	*3.83*	*9.53*	*Jun-10*
Over/Under			0.08	0.20	0.27	0.27	0.14	-0.05		-0.05	

Note: Performance is reported net of fees.

Fixed Income and Commodity Returns as of June 30, 2016

Arizona State Retirement System

Fixed Income and Interest Rate Sensitive Fixed Income Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Public Markets Fixed Income	**5,473,275,115**	**16.12**	**1.82**	**2.84**	**5.88**	**5.88**	**3.78**	**3.79**	**5.35**	**8.26**	**Jul-75**
ASRS Custom Public Markets Fixed Income Benchmark			*1.56*	*3.11*	*4.87*	*4.87*	*2.91*	*3.17*	*4.85*	--	*Jul-75*
Over/Under			0.26	-0.27	1.01	1.01	0.87	0.62	0.50		
Total Interest Rate Sensitive Fixed Income	**4,396,892,443**	**12.95**	**2.20**	**2.66**	**6.95**	**6.95**	**4.46**	**4.10**	**5.40**	**8.28**	**Jul-75**
Barclays Aggregate			*1.80*	*2.21*	*6.00*	*6.00*	*4.06*	*3.76*	*5.13*	--	*Jul-75*
Over/Under			0.40	0.45	0.95	0.95	0.40	0.34	0.27		
Treasuries (Long Duration)											
BlackRock Long Gov't Bond Index	556,096,406	1.64	6.14	6.48	--	--	--	--	--	15.35	Sep-15
Barclays U.S. Treasury Long TR USD			*6.14*	*6.44*	*19.30*	*19.30*	*10.46*	*10.32*	*8.77*	*15.29*	*Sep-15*
Over/Under			0.00	0.04						0.06	
Core Fixed Income											
BlackRock US Debt Index	1,928,330,908	5.68	1.77	2.25	6.12	6.12	--	--	--	4.32	May-14
Barclays Aggregate			*1.80*	*2.21*	*6.00*	*6.00*	*4.06*	*3.76*	*5.13*	*4.17*	*May-14*
Over/Under			-0.03	0.04	0.12	0.12				0.15	
Internally Managed F2	1,912,465,128	5.63	1.80	2.26	6.23	6.23	4.30	4.06	5.40	5.51	Oct-00
Barclays Aggregate			*1.80*	*2.21*	*6.00*	*6.00*	*4.06*	*3.76*	*5.13*	*5.34*	*Oct-00*
Over/Under			0.00	0.05	0.23	0.23	0.24	0.30	0.27	0.17	

1. Total Public Markets Fixed Income market value includes $13,774 remaining in terminated manager accounts.
2. BlackRock Long Gov't Bond Index was funded in mid-August 2015. Inception date for performance reporting purposes is September 1, 2015.
3. BlackRock US Debt Index was funded in mid-April 2014. Inception date for performance reporting purposes is May 1, 2014.
Note: Performance is reported net of fees.
Composition of ASRS Custom Public Markets Fixed Income Benchmark can be found in the appendix.

Fixed Income and Commodity Returns as of June 30, 2016

Arizona State Retirement System

Total High Yield Fixed Income Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total High Yield Fixed Income	**1,076,382,672**	**3.17**	**0.48**	**3.60**	**2.47**	**2.47**	**4.83**	**6.15**	**--**	**7.89**	**Oct-09**
Barclays High Yield			*0.92*	*5.52*	*1.62*	*1.62*	*4.18*	*5.84*	*7.56*	*8.22*	*Oct-09*
Over/Under			-0.44	-1.92	0.85	0.85	0.65	0.31		-0.33	
Active High Yield Fixed Income											
Columbia Management	711,566,900	2.10	0.38	2.87	3.22	3.22	5.23	6.53	--	8.30	Oct-09
Barclays High Yield			*0.92*	*5.52*	*1.62*	*1.62*	*4.18*	*5.84*	*7.56*	*8.22*	*Oct-09*
Over/Under			-0.54	-2.65	1.60	1.60	1.05	0.69		0.08	
JP Morgan High Yield	364,801,998	1.07	0.68	5.05	1.14	1.14	4.14	--	--	4.14	Jul-13
Barclays High Yield			*0.92*	*5.52*	*1.62*	*1.62*	*4.18*	*5.84*	*7.56*	*4.18*	*Jul-13*
Over/Under			-0.24	-0.47	-0.48	-0.48	-0.04			-0.04	

1. Total High Yield Fixed Income includes $13,773 in terminated manager and transition accounts.
Note: Performance is reported net of fees.

Fixed Income and Commodity Returns as of June 30, 2016

Arizona State Retirement System

Inflation-Linked Assets Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Inflation-Linked Assets	**231,422,935**	**0.68**	**3.20**	**11.70**	**-15.92**	**-15.92**	**-11.06**	**-10.42**	**--**	**-5.51**	**Feb-10**
ASRS Custom Inflation-Linked Benchmark			*4.13*	*12.78*	*-13.32*	*-13.32*	*-10.55*	*-10.82*	*-1.80*	*-6.24*	*Feb-10*
Over/Under			-0.93	-1.08	-2.60	-2.60	-0.51	0.40		0.73	
Total Commodities	**231,422,935**	**0.68**	**3.20**	**11.70**	**-15.92**	**-15.92**	**-11.06**	**-10.39**	**--**	**-5.73**	**Sep-10**
Bloomberg Commodity Index			*4.13*	*12.78*	*-13.32*	*-13.32*	*-10.55*	*-10.82*	*-5.59*	*-6.34*	*Sep-10*
Over/Under			-0.93	-1.08	-2.60	-2.60	-0.51	0.43		0.61	
Gresham	231,422,935	0.68	3.20	11.70	-15.92	-15.92	-11.07	-10.23	--	-5.14	Sep-10
Bloomberg Commodity Index			*4.13*	*12.78*	*-13.32*	*-13.32*	*-10.55*	*-10.82*	*-5.59*	*-6.34*	*Sep-10*
Over/Under			-0.93	-1.08	-2.60	-2.60	-0.52	0.59		1.20	

Note: Performance is reported net of fees.
Composition of ASRS Custom Inflation-Linked Benchmark can be found in the appendix.

Multi-Asset Class Returns as of June 30, 2016

Arizona State Retirement System

Multi-Asset Class Strategies Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Multi-Asset Class Strategies	**1,024,888,651**	**3.02**	**-1.75**	**-3.25**	**-12.02**	**-12.02**	**2.78**	**4.61**	**5.74**	**6.18**	**Jan-04**
Multi-Asset Class Strategies Custom Benchmark			*0.02*	*0.06*	*-0.91*	*-0.91*	*5.68*	*6.33*	*5.25*	*5.74*	*Jan-04*
Over/Under			-1.77	-3.31	-11.11	-11.11	-2.90	-1.72	0.49	0.44	
Bridgewater	1,024,888,651	3.02	-1.75	-3.25	-10.56	-10.56	3.99	5.88	6.94	7.29	Jan-04
ASRS Bridgewater Custom Benchmark			*0.02*	*0.06*	*0.14*	*0.14*	*6.25*	*6.67*	*5.42*	*5.87*	*Jan-04*
Over/Under			-1.77	-3.31	-10.70	-10.70	-2.26	-0.79	1.52	1.42	

Note: Performance is reported net of fees.
Composition of Multi-Asset Class Strategies Custom Benchmark and ASRS Bridgewater Custom Benchmark can be found in the appendix.

Private Markets Returns

Returns as of March 31, 2016

	Benchmark	Portfolio Return	Benchmark Return	Excess Return
Private Equity	Russell 2000	10.65	8.78	1.87
Private Real Estate	ODCE Net	8.07	7.26	0.81
Private Opportunistic Equity	Absolute Eight	23.59	8.00	15.59
Opportunistic Fixed Income	Absolute Eight	8.96	8.00	0.96
Private Debt	Lev Loan+250	10.59	4.10	6.49
Farmland	Core CPI+350	5.26	5.63	-0.37

LTD Plan

Long Term Disability (LTD) — Monday, August 08, 2016

Account Manager	Account	Account Manager Style	Fixed Income	Equity	Inflation Linked	Total	Pct of Fund	Target (Range)	trading window	check	range			LTD OW/UW	rebalancing TF OW/UW	vs TF	Rebalance
StateStreet B&T: Boston	A1UB	Cash	$3,068,866			$3,068,866	1.52%							**1.52%**			
BlackRock: San Francisco	A1QR	Fixed Core (Passive)	$41,313,225			$41,313,225	20.45%	19%	daily (T-2, T+3)					1.45%			
BlackRock: San Francisco	A1QP	Fixed High Yield (Passive	$14,685,434			$14,685,434	7.27%	7%	weekly (T-2, T+3)	27.72%	12%	41%	US Fixed Income	0.27%			
							29.24%	**26% (19-36%)**		29.24%	19%	36%	Total Fixed Income	**1.72%**	**4.28%**	-2.56%	$ 5,167,993.61
BlackRock: San Francisco	A1QO	Russell 1000 (Passive)		$44,210,326		$44,210,326	21.88%	24%	daily (T-1, T+3)					-2.12%			
BlackRock: San Francisco	A1QN	Russell 2000 (Passive)		$27,798,751		$27,798,751	13.76%	12%	daily (T-1, T+3)					1.76%			
							35.64%	**36% (26-46%)**		35.64%	26%	46%	US Equity	**-0.36%**	**-0.34%**	-0.02%	$ 30,803.78
BlackRock: San Francisco	A1QM	EAFE (Passive)		$33,714,624		$33,714,624	16.69%	18%	weekly (T-3, T+3)					-1.31%			
BlackRock: San Francisco	A1QL	EAFE SC (Passive)		$4,078,222		$4,078,222	2.02%	2%	weekly (T-3, T+3)					0.02%			
BlackRock: San Francisco	A1QJ	Emerging Markets (Passive)		$8,769,882		$8,769,882	4.34%	5%	weekly (T-3, T+3)					-0.66%			
							23.05%	**25% (15-35%)**		23.05%	15%	35%	Non-US Equity	**-1.95%**	**-3.00%**	1.05%	$(2,116,821.74)
BlackRock: San Francisco	A1QI	Dow Jones UBS Commodities (Passive)			$1,677,471	$1,677,471	0.83%	2% (0-4%)	weekly (T-2, T+1)	0.83%	0%	4%	Commodities	-1.17%	-1.38%		
BlackRock: San Francisco	A1UG	US Real Estate (Passive)			$22,702,187	$22,702,187	11.24%	11% (9-13%)	daily (T-1, T+3)	11.24%	9%	13%	Real Estate	0.24%	0.00%		
							12.07%	**13% (10-16%)**		12.07%	10%	16%	Total Inflation Linked	**-0.93%**	**0.13%**	-1.07%	$ 2,153,430.52
		TOTAL Amounts	$59,067,525	$118,571,804	$24,379,659	**$202,018,988**	**100.00%**										
		Actual Portfolio	**29.24%**	**58.69%**	**12.07%**												
		Policy	**26% (19-36%)**	**61% (51-68%)**	**13% (10-16%)**												

Monthly Cash Raise	
$ 3,000,000.00	1.49%