



CY 2024 Public Equity Implementation Plan

Cole Smith, Senior Public Equity Portfolio Manager

ARIZONA STATE RETIREMENT SYSTEM



Executive Summary

- The objective of the Public Equity Implementation Plan is to provide alignment with the Strategic Asset Allocation Policy Investment Strategy (“SAA”) approved by the ASRS Board on September 30, 2022.
- The Public Equity Team took a strategic shift in 2018 – 2020, with regards to managing the domestic and international equity portfolios. This initiative included terminating externally managed active strategies and repurposing internally managed equity factor strategies due to persistent underperformance.
- Starting in 2020, the Public Equity Team has implemented an enhanced passive portfolio management strategy. We now utilize passive trading strategies which gives the portfolio managers discretion to take advantage of market opportunities without adding significant tracking error against our benchmarks.
 - These changes have started to show incremental outperformance across the portfolios with a lower tracking error (i.e., less volatility away from the benchmark). Further, we expect this incremental outperformance to compound over time, resulting in consistent excess returns over longer time periods.
- In August 2023, the Public Equity Team adopted new custom benchmarks to align with strategy.
- House Views: We are constructive on public equities in 2024 as we move past a potential mild profit recession in Q1. Profit margins are projected to expand thereafter, and valuations appear reasonable as the forward-looking price-to-earnings multiples rest just below the long-term average. We expect a range of values between 4,300 – 5,267 for US equities, as represented by the S&P 500 Index. We are also constructive on International equity markets as headwinds begin to diminish and equity markets discount future growth projections.
- For our 2024 Implementation Plan, the Public Equity Team has maintained a target outperformance of 0.25%, with a tracking error budget of 0.50%.



Performance

ARIZONA STATE RETIREMENT SYSTEM



Total Public Equity Performance

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
Total Public Equity	19,246,348,754	(3.21)	2.59	20.88	7.42	6.01	8.26	7.63
MSCI ACWI IMI Custom		(3.12)	2.66	20.78	7.25	6.45	8.75	8.00
Excess Return		(0.09)	(0.07)	0.10	0.17	(0.43)	(0.49)	(0.38)

- The benchmark for the Total Public Equity asset class is MSCI ACWI IMI Custom (MSCI All Country World Index - Investable Market Index), which captures large, mid and small cap representation across 22 Developed Markets and 23 Emerging Markets countries.

ARIZONA STATE RETIREMENT SYSTEM



Public Equity Performance, US Equities

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
Total US Equity	12,149,959,721	(3.28)	4.81	20.70	9.72	8.51	10.91	10.78
MSCI USA IMI		(3.24)	4.87	20.70	9.57	9.31	11.82	11.47
Excess Return		(0.04)	(0.06)	(0.01)	0.15	(0.80)	(0.91)	(0.69)

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
US Equity Large Cap	9,686,483,232	(2.85)	6.17	23.03	9.77	9.33	11.58	11.47
MSCI USA Large Cap		(2.80)	6.24	23.10	9.68	10.34	12.59	12.16
Excess Return		(0.04)	(0.07)	(0.08)	0.08	(1.01)	(1.01)	(0.69)

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
US Equity Mid Cap	1,327,166,500	(4.96)	(0.48)	12.04	8.48	6.06	8.82	8.96
MSCI USA Mid Cap		(4.92)	(0.46)	11.61	8.16	6.84	9.45	9.42
Excess Return		(0.05)	(0.02)	0.42	0.32	(0.78)	(0.64)	(0.47)

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
US Equity Small Cap	1,136,309,989	(4.89)	0.12	12.51	9.94	4.33	8.33	7.98
MSCI USA Small Cap		(4.88)	0.11	12.36	9.91	4.85	8.91	8.95
Excess Return		(0.01)	0.01	0.15	0.02	(0.52)	(0.58)	(0.98)

ARIZONA STATE RETIREMENT SYSTEM



Public Equity Performance, International Equities

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
Total International Equity	7,096,389,033	(3.05)	(0.64)	21.25	4.22	2.75	4.98	3.59
MSCI ACWI IMI ex-US Custom		(3.02)	(0.70)	20.78	3.94	2.67	4.87	3.60
Excess Return		(0.03)	0.06	0.47	0.29	0.08	0.11	(0.01)

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
International Developed Large Cap	4,751,314,532	(3.88)	(0.78)	25.15	6.66	3.78	5.81	4.25
MSCI World ex-US Custom		(3.95)	(1.04)	24.19	6.13	3.47	5.46	3.94
Excess Return		0.07	0.27	0.96	0.53	0.31	0.35	0.31

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
International Developed Small Cap	735,101,059	(3.31)	(2.66)	17.89	2.40	1.85	4.93	4.25
MSCI World ex-US Small Cap Custom		(3.46)	(0.53)	24.84	6.31	3.58	5.48	3.91
Excess Return		0.14	(2.13)	(6.94)	(3.91)	(1.73)	(0.56)	0.34

Name	Ending Market Value	3 Months	6 Months	1 Year	3 Years	5 Years	7 Years	10 Years
Emerging Markets IMI	1,609,973,441	(1.13)	0.31	14.17	(0.19)	0.98	3.53	2.26
MSCI Emerging Markets IMI Custom		(0.64)	0.97	14.92	0.21	1.58	3.80	2.54
Excess Return		(0.49)	(0.65)	(0.75)	(0.40)	(0.60)	(0.27)	(0.28)



Positioning and Strategy Targets



Current and Target Weights of Sub-Asset Classes

- As of October 31, 2023, we had \$19.05 billion invested in the Public Equity asset class, representing a 37.9% allocation within Total Fund.
- We are at equal weight to our benchmark index: MSCI ACWI IMI Custom
 - Sub-asset class benchmark weights will drift based on respective performance
 - We rebalance these weights periodically to keep in line with the benchmark index

Sub-Asset Class	Benchmark	% of Public Equity	
		Current	Target
US Large Cap	MSCI USA Large Cap	50.9%	51.0%
US Mid Cap	MSCI USA Mid Cap	7.0%	7.0%
US Small Cap	MSCI USA Small Cap	5.7%	5.7%
Int'l Developed Large Cap	MSCI World ex-US Custom	24.4%	24.2%
Int'l Developed Small Cap	MSCI World ex-US Small Cap Custom	3.6%	3.8%
Emerging Markets IMI	MSCI Emerging Markets IMI Custom	8.4%	8.4%

ARIZONA STATE RETIREMENT SYSTEM



Excess Returns & Tracking Error Targets

- The Public Equity Asset Class excess return target is 25 basis points (0.25%)
- Target tracking error will not exceed our allocated budget of 50 basis points (0.50%)
 - *FY2023 Total Public Equity realized tracking error was 16 basis points, versus a budget of 40 basis points
- Excess return targets and tracking error budgets for portfolios are as follows:

Portfolio	Notional Split of Passive / Active		Weight of Passive / Active		Tracking Error Budget		Excess Return Target
	Passive (\$MM)	Active (\$MM)	Passive	Active	Passive	Active	
Internal US Large Cap	\$ 8,985	\$ 300	97%	3%	0.05%	6.00%	0.10%
Internal US Mid Cap	\$ 1,133	\$ 150	88%	12%	0.08%	7.50%	0.10%
Internal US Small Cap	\$ 890	\$ 150	86%	14%	0.08%	7.50%	0.10%
BlackRock World ex-US Custom	\$ 3,594	\$ -	100%	0%	0.50%	0.00%	0.50%
LGIM World ex-US Custom	\$ 826	\$ -	100%	0%	0.50%	0.00%	0.50%
BlackRock World ex-US Small Cap Custom	\$ 691	\$ -	100%	0%	0.50%	0.00%	0.50%
BlackRock Emerging Markets Custom	\$ 872	\$ -	100%	0%	0.70%	0.00%	0.40%
LGIM Emerging Markets Custom	\$ 289	\$ -	100%	0%	0.70%	0.00%	0.40%
LGIM Emerging Markets Small Cap Custom	\$ 264	\$ -	100%	0%	0.70%	0.00%	0.40%
Emerging Markets Enhanced Sleeve	\$ -	\$ 100	0%	100%	0.00%	10.00%	2.50%
Subtotals	\$ 17,544	\$ 700	96%	4%	0.23%	0.28%	0.25%
TOTAL PUBLIC EQUITY	18,244		100.00%		0.50%		0.25%

*See Appendix for details

As of 31-Oct-2023



Public Equity House Views

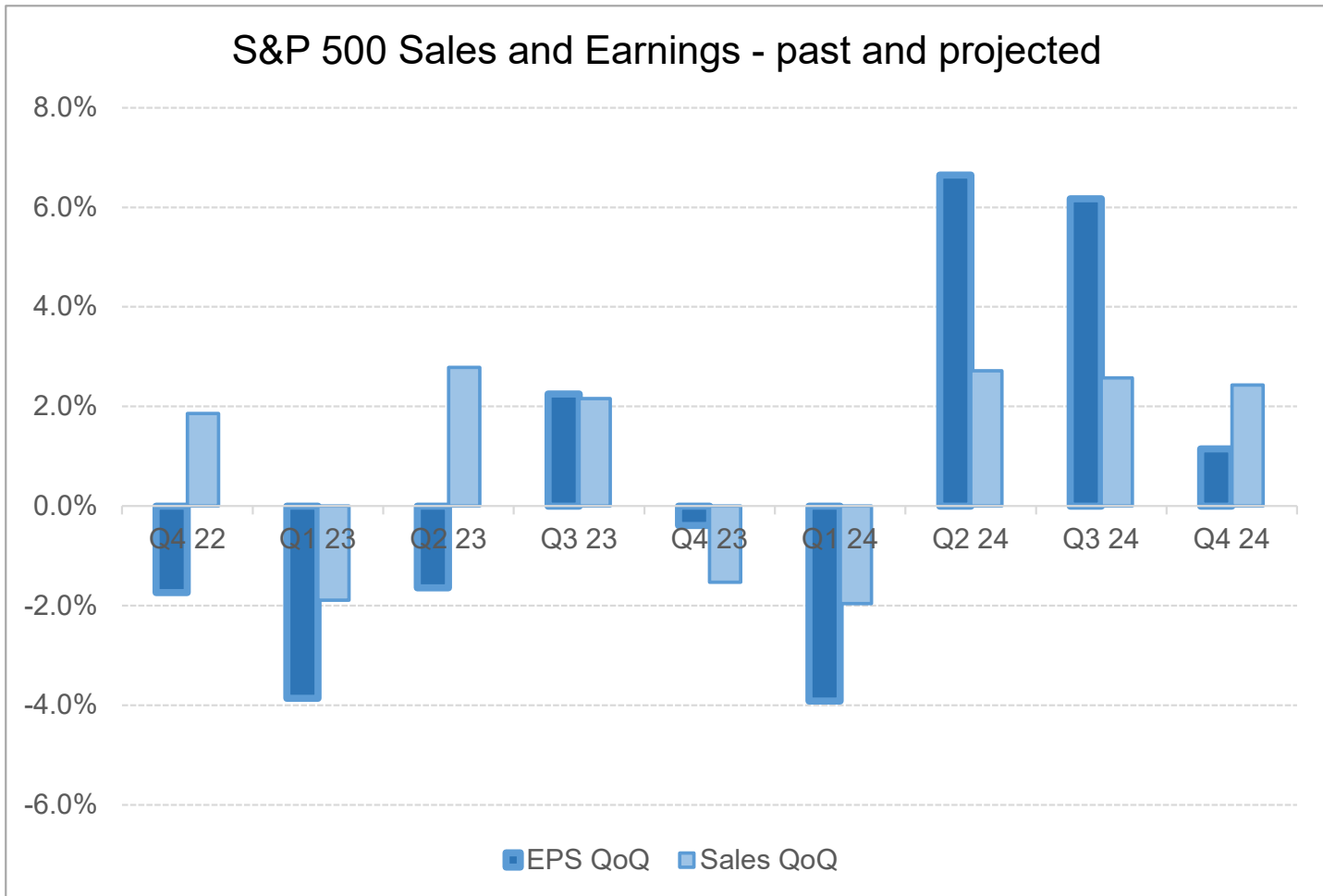


Public Equity House Views

- Equity markets – as measured by the S&P 500 Index – have rallied 21.5% YTD*, after experiencing the drawdown in 2022. We currently sit at 4,560 for the S&P 500, near the top of our projected range of 4,200 – 4,700 in our prior CY2023 House Views. The rally has richened valuations, with the current CY2024 forward P/E at 21x, but we rest well below the lofty valuations we experienced in 2020.
- Looking forward, we continue to be constructive on public equities. The market is currently projecting a CY2025 forward P/E of 18.3x, just below the long-term average of 19x.
- The market is pricing in a mild recession in 1Q2024, but both revenues and profits are projected to grow thereafter.
- Further, profit margins have bottomed and are forecasted to expand in 2024.
- The market expectation of S&P 500 earnings-per-share (EPS) by 2025 stands at \$252. With the average forward multiple for the last 10 years at 19x, this would yield an S&P 500 level of 4,788 – a return of approximately 5%. In a *hard-landing* scenario, we project EPS to drop to \$227 and yield a level of 4,300 – a return of -5.7%. In a *no-recession* scenario, we project EPS of \$277 which would yield a level of 5,267, a return of 15.5%.

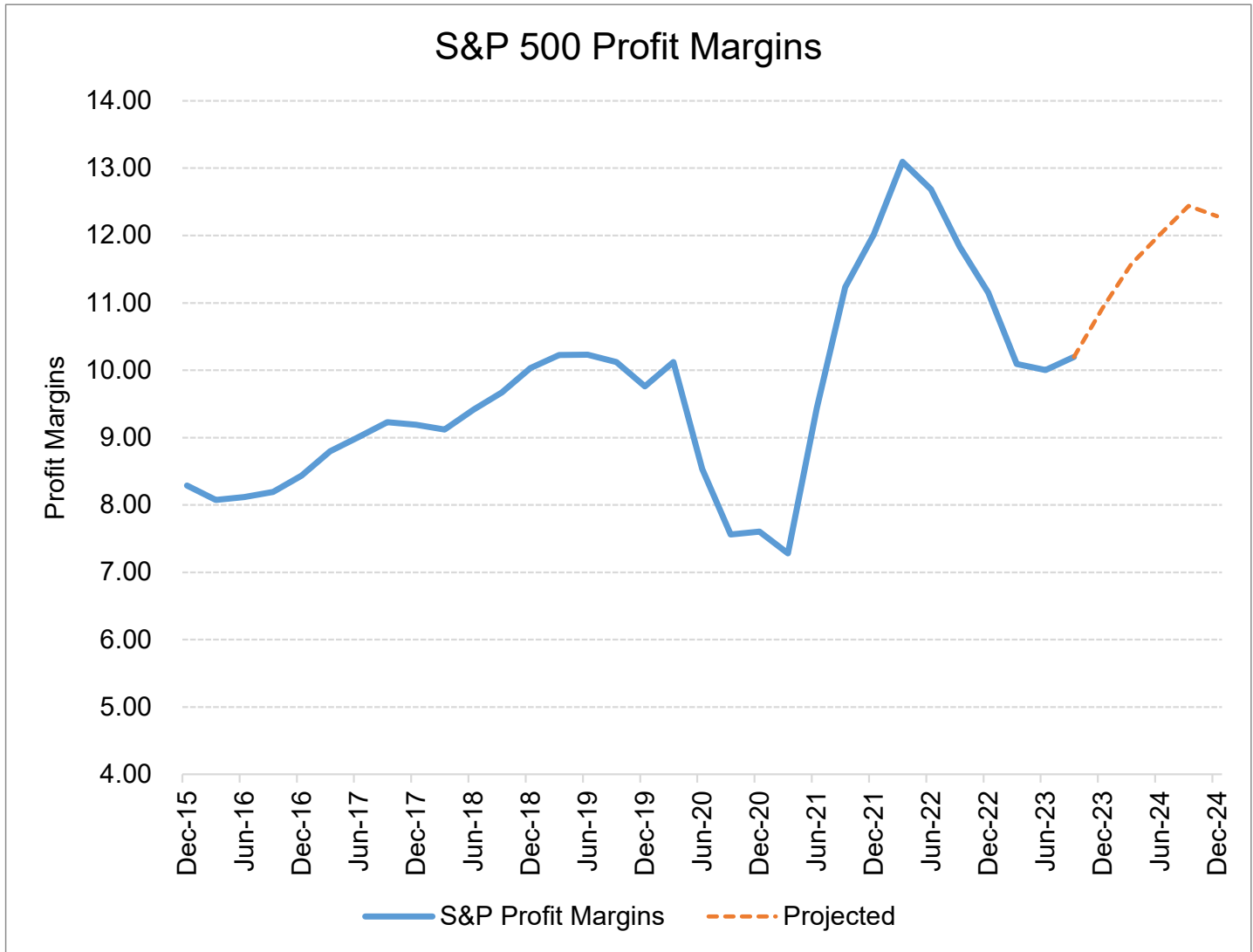


Market is pricing in a mild recession in 1Q2024, with EPS contracting by 4%



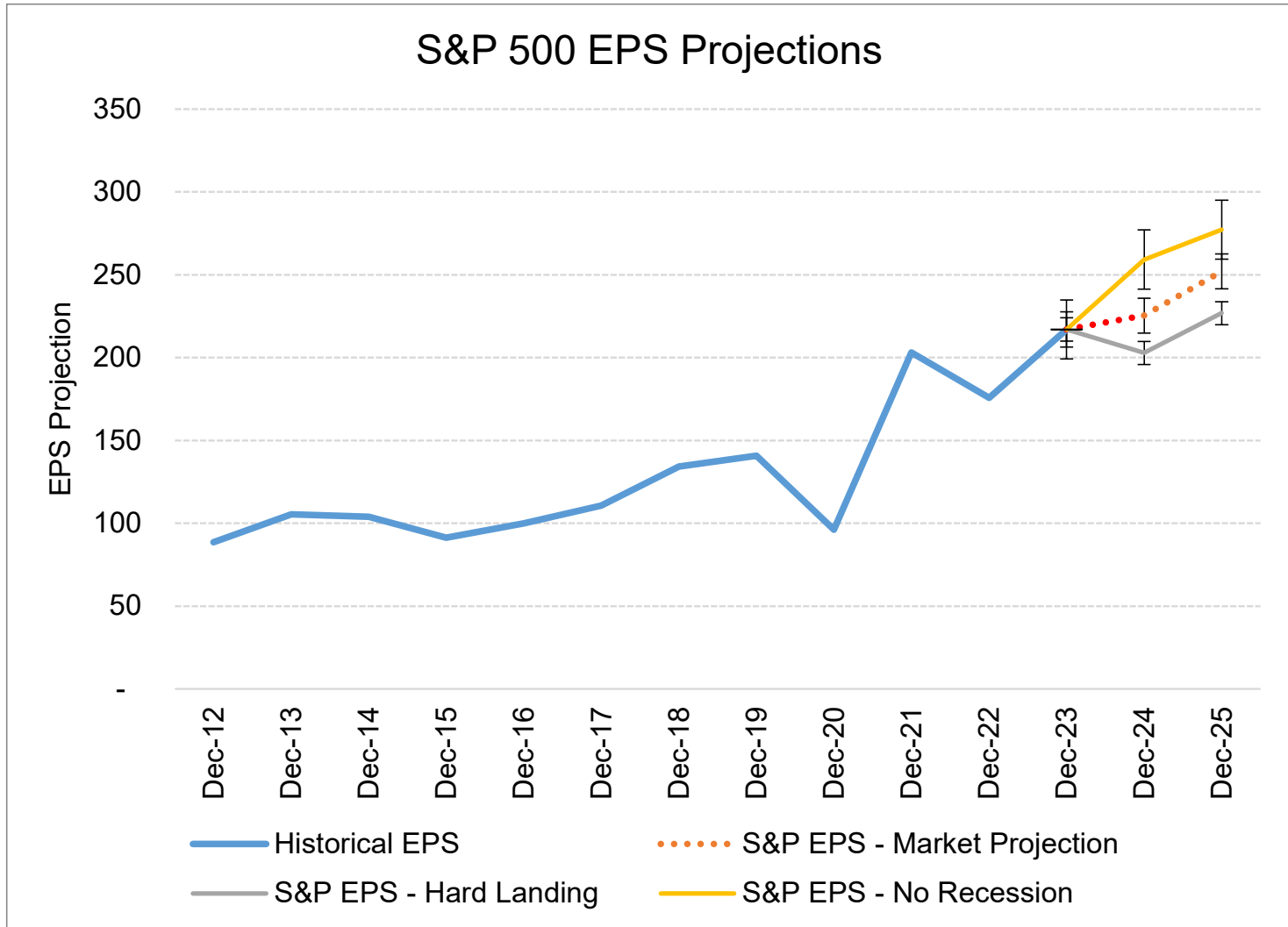


Profit margins have bottomed; the market is projecting expansion of up to 12% in 2024





Market pricing in near-term mild recession, with EPS of \$225 in 2024 and \$252 in 2025





Appendix



Strategies & Benchmarks

- The benchmark for the Total Public Equity asset class is MSCI ACWI IMI Custom (MSCI All Country World Index - Investable Market Index), which captures large, mid and small cap representation across 22 Developed Markets and 23 Emerging Markets countries.
- Sub-asset classes within Public Equity retain specific regional and market capitalization benchmarks that roll up to the total MSCI ACWI IMI Custom benchmark index, as detailed in the table below:

Sub-Asset Class	Portfolio	Strategy	Benchmark	Manager
US Large Cap	Internal US Large Cap	Enhanced Indexing	MSCI USA Large Cap	ASRS Internal
	US Large Cap futures	Passive / Cash Equitization		ASRS Internal
US Mid Cap	Internal US Mid Cap	Enhanced Indexing	MSCI USA Mid Cap	ASRS Internal
	US Mid Cap futures	Passive / Cash Equitization		ASRS Internal
US Small Cap	Internal US Small Cap	Enhanced Indexing	MSCI USA Small Cap	ASRS Internal
	US Small Cap futures	Passive / Cash Equitization		ASRS Internal
International: World ex-US Custom	BlackRock World ex-US Custom	Enhanced Indexing	MSCI World ex-US Custom	BlackRock
	LGIM World ex-US Custom	Enhanced Indexing		LGIM
	EAFE futures	Passive / Cash Equitization		ASRS Internal
International: World ex-US Small Cap Custom	BlackRock World ex-US Small Cap Custom	Enhanced Indexing	MSCI World ex-US Small Cap Custom	BlackRock
International: Emerging Markets IMI Custom	BlackRock Emerging Markets	Passive	MSCI Emerging Markets Custom	BlackRock
	LGIM Emerging Markets	Passive		LGIM
	LGIM Emerging Markets Small Cap	Passive	MSCI Emerging Markets Small Cap Custom	LGIM
	Emerging Markets futures	Passive / Cash Equitization	MSCI Emerging Markets IMI	ASRS Internal



Public Equity Tracking Error, FY2023

Portfolio / Asset Class	Realized FY23 Tracking Error (bps)	Tracking Error Budget (bps)
Internal US Large Cap	3	30
Internal US Mid Cap	22	30
Internal US Small Cap	8	30
BlackRock World ex-US	27	50
LGIM World ex-US	23	50
BlackRock World ex-US Small Cap	34	50
BlackRock Emerging Markets IMI	155	70
LGIM Emerging Markets IMI	45	70
TOTAL PUBLIC EQUITY	16	40