



# Annual Review: Global Public Equity

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# Global Public Equity Overview

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- The Global Public Equity allocation is intended to provide the TMRS portfolio with capital appreciation, over time.
  - Capital appreciation has historically been achieved by owning stocks for the long-term.
- The portfolio is structured using passive and active strategies.
- The objective of the portfolio is to exceed the stated IPS benchmark over rolling five-year periods, net of fees.

# What is Global Public Equity?

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- Global Public Equity includes most publicly traded stocks including:
  - Geography – United States, International Developed Markets, Emerging Markets
  - Company size (Large Cap, Mid Cap and Small Capitalization companies)
  - Industry sector (technology, healthcare, consumer, industrials, etc.)
  - Quantitative factor exposure (Value, Momentum, Minimum volatility, Quality, etc.)
  - Implementation strategy (Core or Satellite)
- The portfolio is benchmarked to the MSCI ACWI IMI
  - Morgan Stanley Capital International All Country World Index, Investible Market Index
- There are approximately 8,450 stocks in the Global Public Equity benchmark worth approximately \$67 Trillion USD

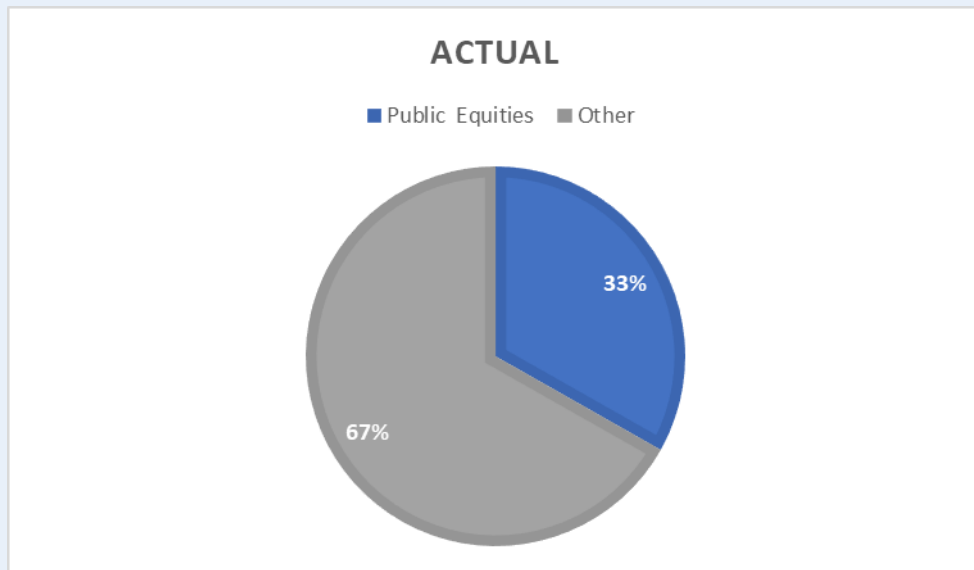
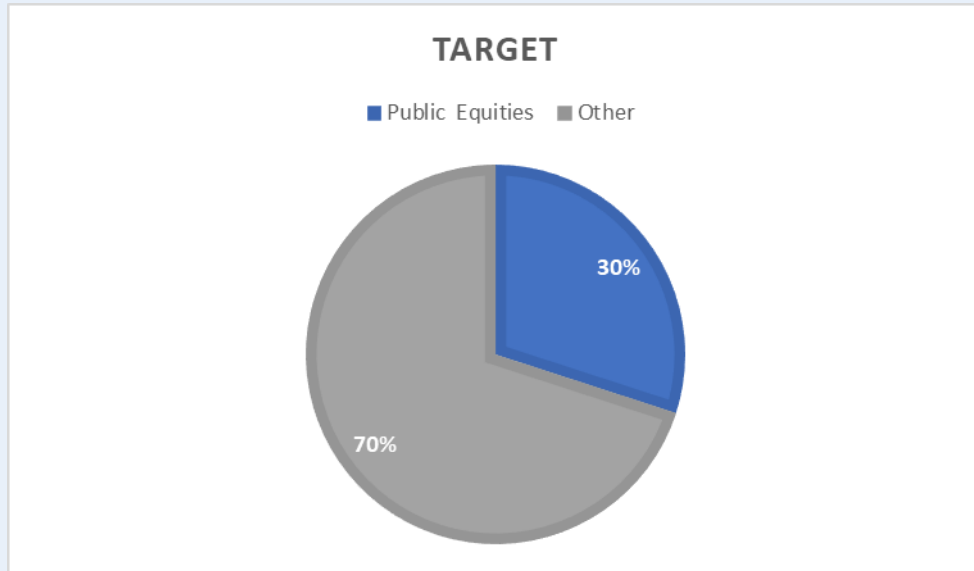
# Benchmark Overview

- Of the ~8,500 stocks in the MSCI ACWI IMI (which includes small cap):
  - The largest ~600 stocks make up about 65% of total (Large and Mega Capitalization equities)
    - Well known companies such as Disney, Microsoft, Apple in the U.S. and international large caps such as Nestle, Samsung, Alibaba – very liquid. Makes up about 2/3 of the \$67 Trillion total.
  - The remaining 7,900 make up about 35% (Mid Cap and Small Capitalization Stocks under \$15B)
    - Less well known, less liquidity, but drive much of the innovation and growth of global economies.

	Benchmark Breakdown	Number of Stocks in MSCI ACWI IMI
Equity Sub-class	MSCI ACWI IMI Weight	
U.S. Mega Cap	21.1%	31
U.S. Large Cap	26.3%	357
U.S. Midcap	7.8%	791
U.S. Small Cap	1.9%	1,141
<b>Total U.S.</b>	<b>57.1%</b>	<b>2,320</b>
Int'l Developed Large and Mega	18.7%	266
Int'l Developed SMID	11.3%	2,935
Emerging Markets Excl. China	8.0%	1,992
China	4.7%	945
<b>Total Ex U.S.</b>	<b>42.7%</b>	<b>6,138</b>
<b>Total</b>	<b>100%</b>	<b>8,458</b>

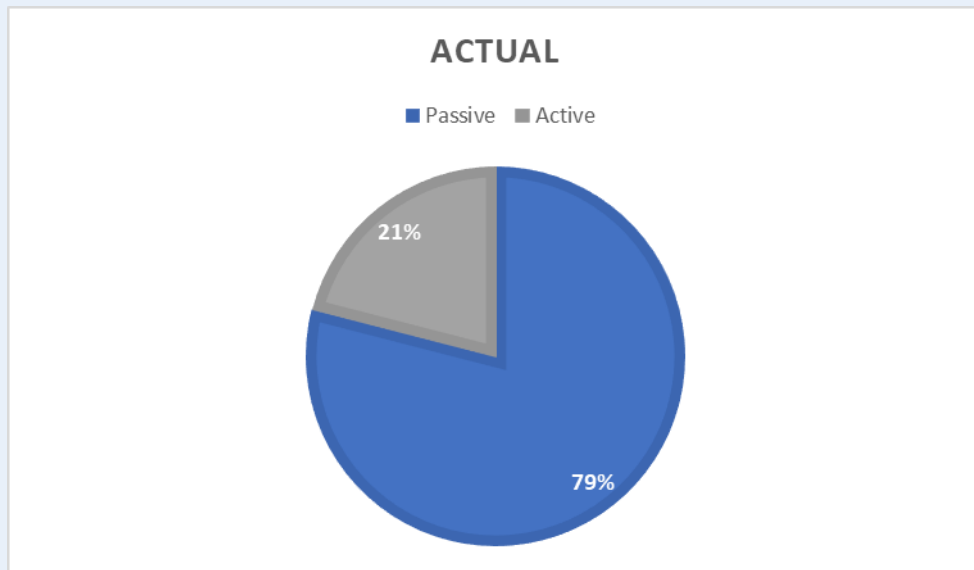
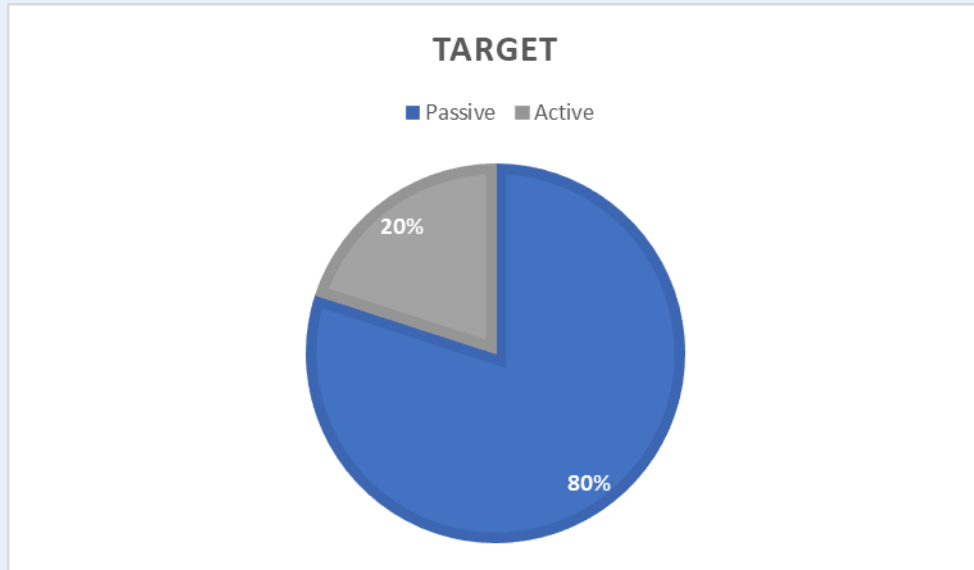
Source: MSCI Indexes and MSCI Barra Risk Analytics

# Target / Actual Allocation



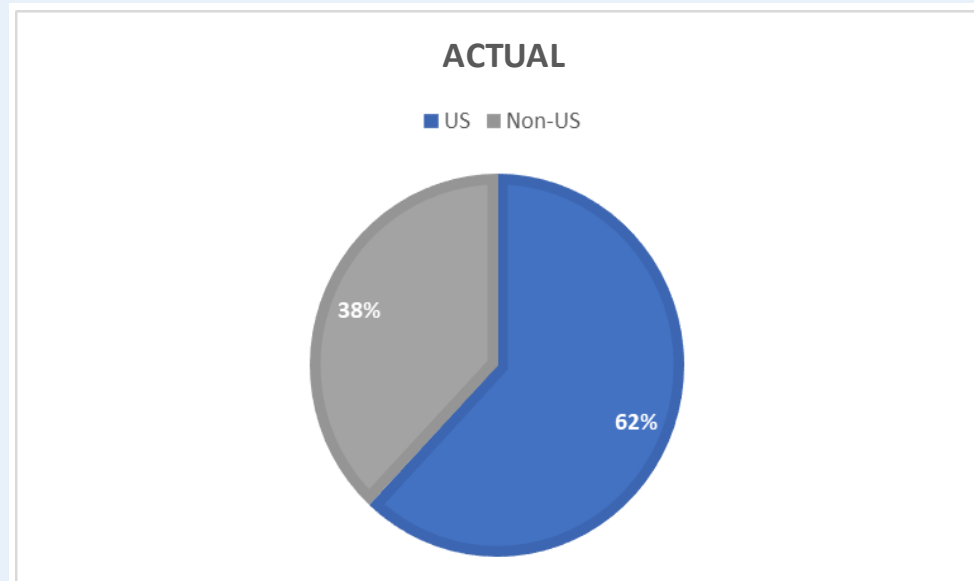
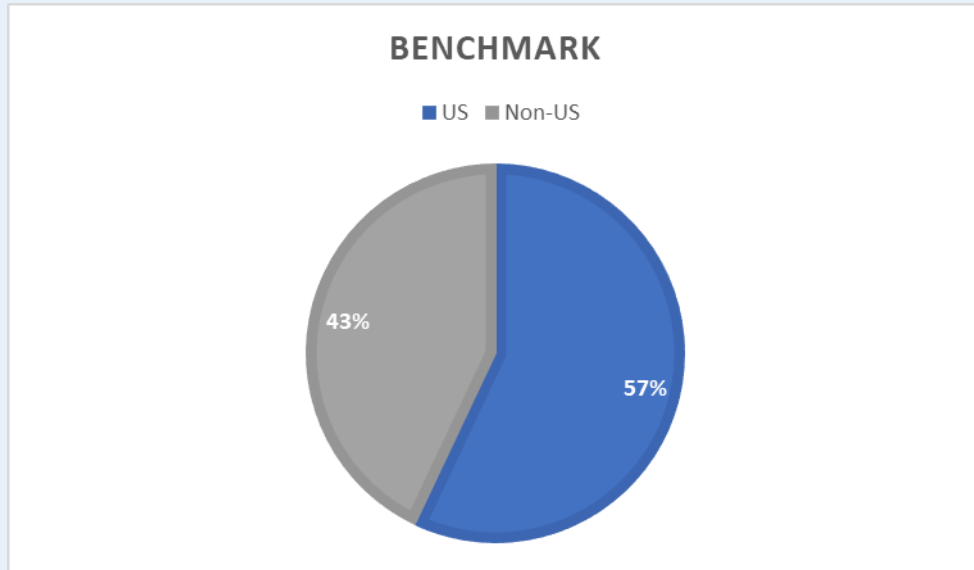
- Global Public Equity has a 30% target allocation in the TMRS portfolio.
- TMRS is currently slightly over this target for several reasons.
  - The current economic backdrop is highly supportive of equity markets in the near-term with massive fiscal stimulus and loose monetary policy.
  - This allocation helps offset the total return impact on the TMRS portfolio by being underweight private equity.

# Passive / Active Split



- The Global Public Equity allocation currently has an 80% passive, 20% active split.
- The large allocation to passive investments is for cost savings and risk management purposes.
  - Having a meaningful allocation to passive equities controls costs, 0.7 basis points on the U.S. passive and 2.5 basis points on the ex-U.S.
  - Recognizes the difficulties in consistently beating a passive benchmark with active investing.

# US / non-US Split



- The Global Public Equity portfolio is structured to closely resemble the global benchmark allocations between the US, Developed non-US and Emerging markets.
- The portfolio is slightly overweight in both the US and Emerging markets and is underweight in the Developed non-US markets due to the better growth prospects in these markets.

# 2020 Global Public Equity Performance

Prior to 2020, the underperforming active managers in the portfolio were eliminated and the assets were transferred to the passive portfolio. During the 2020 market volatility, the relative underperformance of the portfolio was driven mainly by the “Low Volatility” exposure in the portfolio not tracking the portfolio benchmark as it had historically.

## Texas Municipal Retirement System

SUMMARY OF PERFORMANCE

RATES OF RETURN - Net All

PERIODS ENDING December 31, 2020

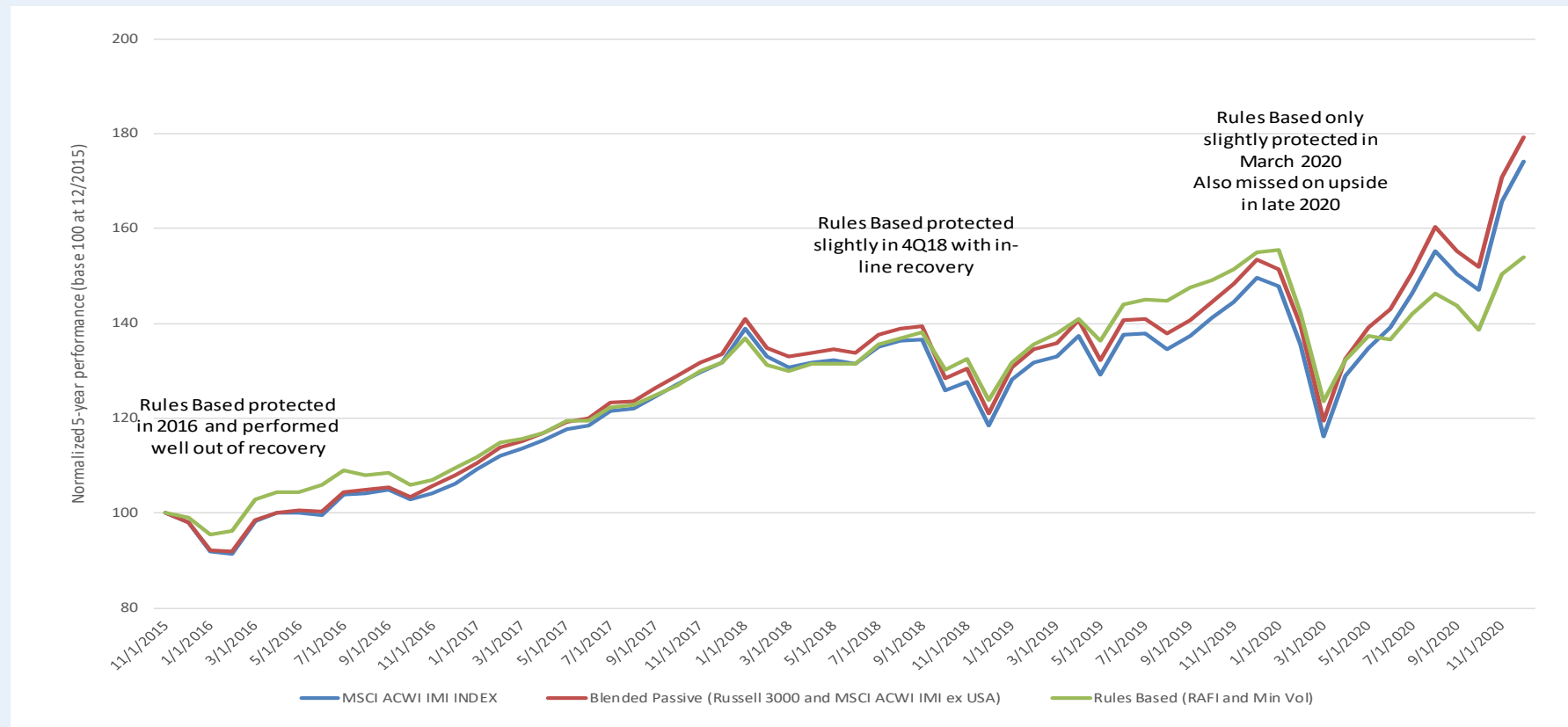
	<u>MKT VAL</u>	<u>% of plan</u>	<u>1 Month</u>	<u>3 Months</u>	<u>YTD</u>	<u>1 Yr.</u>	<u>3 Yrs.</u>	<u>5 Yrs.</u>	<u>7 Yrs.</u>	<u>10 Yrs.</u>	<u>ITD</u>	<u>Incept Date</u>
<b>TMRS - TOTAL EQUITY</b>	<b>11,077,192,876.99</b>	<b>32.88</b>	<b>5.07</b>	<b>15.19</b>	<b>14.46</b>	<b>14.46</b>	<b>9.09</b>	<b>11.98</b>	<b>8.99</b>	<b>9.57</b>	<b>6.46</b>	<b>01-01-08</b>
<i>TOTAL EQUITY INDEX (DAILY)</i>			4.97	15.70	16.25	16.25	9.88	12.47	9.29	9.77	6.58	01-01-08
<i>Excess</i>			0.10	-0.51	-1.79	-1.79	-0.79	-0.49	-0.30	-0.20	-0.12	
<b>TMRS - TOTAL DOMESTIC EQUITY</b>	<b>6,838,112,143.01</b>	<b>20.30</b>	<b>4.56</b>	<b>14.67</b>	<b>17.13</b>	<b>17.13</b>	<b>12.54</b>	<b>14.18</b>	<b>11.74</b>	<b>13.03</b>	<b>9.72</b>	<b>01-01-08</b>
<i>TMRS - RUSSELL 3000 DAILY</i>			4.50	14.68	20.89	20.89	14.49	15.43	12.76	13.79	10.29	01-01-08
<i>Excess</i>			0.06	-0.01	-3.76	-3.76	-1.95	-1.25	-1.02	-0.77	-0.57	
<b>TMRS - TOTAL INTERNATIONAL EQUITY</b>	<b>4,239,049,002.68</b>	<b>12.58</b>	<b>5.90</b>	<b>16.03</b>	<b>12.02</b>	<b>12.02</b>	<b>5.32</b>	<b>9.32</b>	<b>5.56</b>	<b>5.59</b>	<b>2.79</b>	<b>01-01-08</b>
<i>INTL EQ ACTIVE WEIGHTED INDEX(DAILY)</i>			5.62	17.22	11.12	11.12	4.83	8.98	5.03	5.16	2.40	01-01-08
<i>Excess</i>			0.28	-1.20	0.90	0.90	0.49	0.34	0.53	0.44	0.39	

Source: State Street



# 2020 Rules Based Performance Impact

In prior downturns, a blend of fundamental-weighted and minimum-volatility strategies protected on the downside and kept fairly in line with market upside. However, during 2020's unprecedented market volatility in February, March and April of last year. These strategies appear to have become less effective and missed out on significant upside.



Source: MSCI Indexes, manager returns and MSCI Barra Risk Analytics

# Recent Actions Taken

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- Underperforming active managers were eliminated.
- The portfolio was transitioned to a single index fund provider using two vehicles to save fees and increase the alignment with the benchmark. Previously the small benchmark mismatch caused some tracking error to the total fund benchmark.
- Eliminated the Rules Based and Minimum-Volatility strategies in late 2020 as they were causing material portfolio tracking error and benchmark under-performance. These structural portfolio decisions were made before the inclusion of alternative assets (PE, RE, ARS, RA) and are no longer needed for diversification.
  - Rules Based and Minimum-Volatility strategies include systematic exposures to certain definable traits or factor exposures. While over the long term these strategies served TMRS well, giving downside protection and upside participation, more recent differences with the benchmark have caused tracking error larger than expected.
- Team assignments were adjusted to align with the updated portfolio.

# Action Plan for 2021

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- Separate the non-US passive portfolio into its two underlying components to increase implementation flexibility.
- Monitor the re-aligned passive portfolio to ensure it is working as expected.
- Continue to monitor the current active equity investment relationships and adjust their size as necessary.
- Deploy assets into new opportunistic equity relationships.
- Keep fees low.

# Appendix A

# 2019 Global Public Equity Performance

Over the last several years, Staff has been working to improve the relative performance of the Global Public Equity portfolio. The relative underperformance of the portfolio was being driven mainly by the underperformance of the active US exposures.

## Texas Municipal Retirement System

### SUMMARY OF PERFORMANCE

RATES OF RETURN - Net All

PERIODS ENDING December 31, 2019

FUND NAME	MKT VAL	% of plan	1 Month	3 Months	1 Yr.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	Since Inception	Incept Date	YTD March 19 2020
<b>TMRS TOTAL GLOBAL PUBLIC EQUITY</b>	<b>11,534,798,927.49</b>	<b>36.68</b>	<b>3.30</b>	<b>8.42</b>	<b>26.41</b>	<b>12.03</b>	<b>8.67</b>	<b>10.35</b>	<b>9.39</b>	<b>5.82</b>	01-01-08	<b>-29.26</b>
<i>Total Equity Portfolio Policy Index</i>			3.55	9.05	26.35	12.24	8.81	10.40	9.42	5.81	01-01-08	-29.45
<i>Excess</i>			-0.25	-0.63	0.06	-0.21	-0.14	-0.05	-0.03	0.01		0.19
<b>TMRS TOTAL DOMESTIC EQUITY</b>	<b>6,245,678,274.02</b>	<b>19.86</b>	<b>2.52</b>	<b>7.69</b>	<b>30.00</b>	<b>13.56</b>	<b>10.54</b>	<b>13.81</b>	<b>13.00</b>	<b>9.12</b>	01-01-08	<b>-26.91</b>
<i>RUSSELL 3000 (DAILY)</i>			2.89	9.10	31.02	14.57	11.24	14.38	13.42	9.45	01-01-08	-26.61
<i>Excess</i>			-0.37	-1.41	-1.02	-1.01	-0.70	-0.57	-0.41	-0.33		-0.30
<b>TMRS - TOTAL INTERNATIONAL EQUITY</b>	<b>5,289,120,316.25</b>	<b>16.82</b>	<b>4.24</b>	<b>9.30</b>	<b>22.31</b>	<b>10.43</b>	<b>6.13</b>	<b>6.12</b>	<b>5.24</b>	<b>2.05</b>	01-01-08	<b>-32.04</b>
<i>INTL EQ ACTIVE WEIGHTED INDEX(DAILY)</i>			4.41	9.20	21.63	9.84	5.71	5.65	4.87	1.70	01-01-08	-32.77
<i>Excess</i>			-0.17	0.10	0.68	0.59	0.42	0.47	0.37	0.35		0.73

Source: State Street

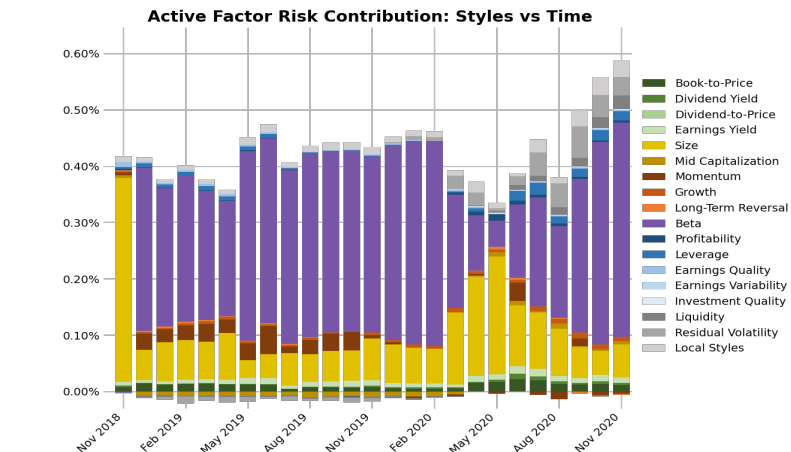
# Summary of Existing TMRS Portfolio

- TMRS Portfolio is slightly underweight Large and Mega-Cap stocks (3.6% less exposure to Mega-cap and 2.6% less exposure to Large Cap).
- TMRS is slightly overweight U.S. (by 4.6%) Emerging Markets (by 1.0%), and Underweight Japan and Developed Europe.
- From a factor/style perspective the portfolio is most tilted toward size factor (slightly smaller cap oriented) and Low Volatility Factor – mostly as a result of the Min Volatility and Fundamental weighted funds (which have been transitioned as of Feb).

Industry Sector	TMRS Portfolio Weight	MSCI ACWI IMI Benchmark Weight	Difference From Benchmark
Communication Services	8.4%	8.7%	-0.2%
Consumer Discretionary	11.8%	13.0%	-1.2%
Consumer Staples	7.9%	7.2%	0.7%
Energy	2.1%	3.0%	-0.9%
Financials	13.2%	13.3%	-0.1%
Health Care	12.9%	11.9%	1.0%
Industrials	11.3%	10.8%	0.5%
Information Technology	20.9%	20.7%	0.2%
Materials	4.2%	5.1%	-0.9%
Real Estate	3.4%	3.5%	-0.1%
Utilities	3.3%	3.0%	0.3%
N/A	0.6%	0.0%	0.6%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.3%</b>

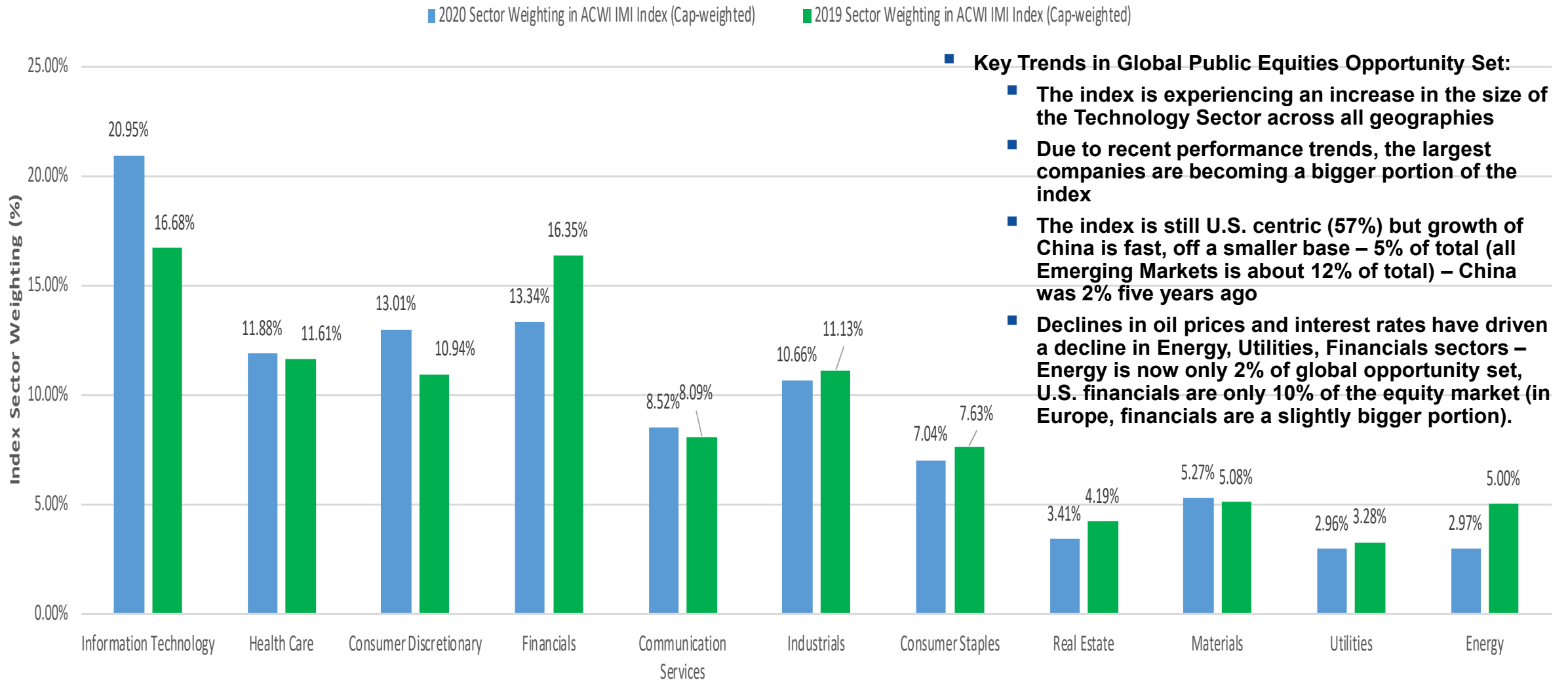
Geographic Exposure	TMRS Portfolio Weight	MSCI ACWI IMI Benchmark Weight	Difference From Benchmark
Developed Americas	64.9%	60.3%	4.6%
Developed Asia & Pacific Rim	8.5%	10.5%	-2.0%
Developed Europe	13.2%	17.0%	-3.8%
Developed Middle East & Africa	0.2%	0.2%	0.0%
Emerging Americas	1.0%	1.0%	0.0%
Emerging Asia & Pacific Rim	10.9%	9.9%	1.0%
Emerging Europe	0.6%	0.6%	0.0%
Emerging Middle East & Africa	0.7%	1.0%	-0.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

Market Capitalization	TMRS Portfolio Weight	MSCI ACWI IMI Benchmark Weight	Difference From Benchmark
Mega (Greater than \$200B)	21.3%	24.9%	-3.6%
Large (\$15B to \$200B USD)	48.9%	51.4%	-2.6%
Medium (\$2.5B to \$15B USD)	23.3%	18.8%	4.5%
Small (Less than \$2.5B)	6.0%	5.2%	0.8%
N/A	0.5%	0.0%	0.5%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-0.3%</b>



Source for all charts on this page: TMRS Risk Group, MSCI Indexes and MSCI Barra Risk Analytics

# Drill Down into MSCI ACWI IMI Exposure



# Benchmark Country Weights and Returns

## MSCI ACWI IMI

As of December 31, 2020

COUNTRY	WEIGHT	COUNTRY	WEIGHT
US	56.55%	TH	0.26%
JP	7.14%	IL	0.24%
CN	4.73%	NO	0.23%
GB	4.03%	MX	0.23%
CA	2.74%	MY	0.22%
FR	2.74%	IE	0.19%
CH	2.48%	ID	0.18%
DE	2.43%	NZ	0.11%
AU	2.03%	PH	0.10%
KR	1.83%	PL	0.10%
TW	1.78%	QA	0.09%
IN	1.29%	AT	0.08%
SE	1.10%	CL	0.07%
NL	1.01%	AE	0.07%
HK	0.84%	KW	0.07%
BR	0.69%	TR	0.06%
IT	0.68%	PT	0.05%
DK	0.66%	GR	0.03%
ES	0.66%	PE	0.03%
ZA	0.45%	CO	0.03%
RU	0.36%	HU	0.03%
SG	0.32%	AR	0.02%
SA	0.32%	EG	0.01%
FI	0.32%	CZ	0.01%
BE	0.29%	PK	0.01%
		TOTAL	100.00%

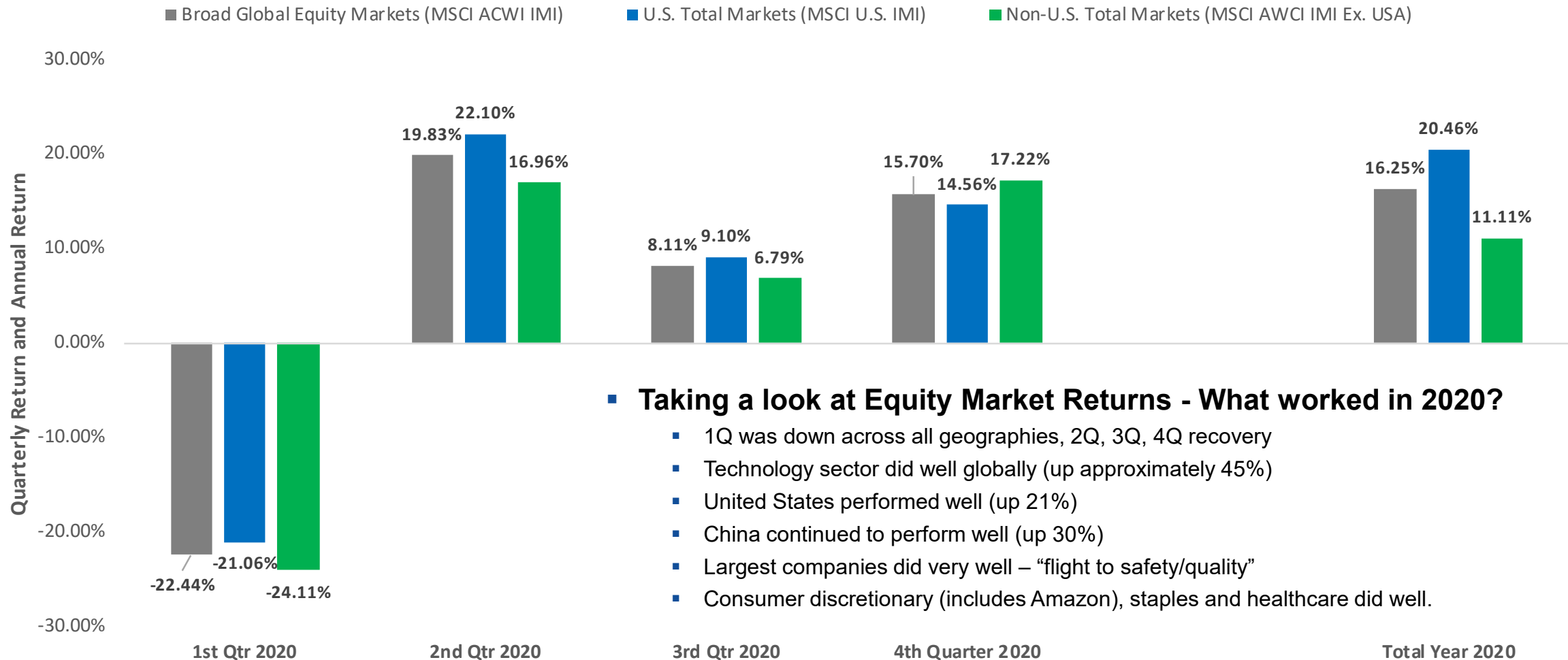
Country	2020 Total Return
United States	21.10%
Japan	13.52%
United Kingdom	-8.92%
China	29.59%
France	4.59%
Canada	7.76%
Switzerland	13.70%
Germany	13.53%
Australia	11.58%
Taiwan	40.08%
Korea	46.55%
Netherlands	24.86%
India	16.48%

Source: MSCI Index Data



# Broad Benchmark Performance for 2020

Quarterly MSCI ACWI Performance By Region



- Taking a look at Equity Market Returns - What worked in 2020?**

- 1Q was down across all geographies, 2Q, 3Q, 4Q recovery
  - Technology sector did well globally (up approximately 45%)
  - United States performed well (up 21%)
  - China continued to perform well (up 30%)
  - Largest companies did very well – “flight to safety/quality”
  - Consumer discretionary (includes Amazon), staples and healthcare did well.

# Risks Summary

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- Market risk (Beta) – movement in the market will impact the passive side fully and the opportunistic equity side to a degree.
- Manager risk – new structure will simplify the passive manager exposure and vehicles.
- Managing benchmark mismatch in the Opportunistic sleeve. Team will work to mitigate unintended factor, geography and style biases.
- Correlation matrix may reduce volatility on opportunistic side to a degree.

## **DISCLOSURES**

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