



INVESTMENT COMMITTEE CALENDAR SHEET

Investment Committee Meeting of April 21, 2021

To: The Investment Committee

Through: Jay Huish
Executive Director

William Coaker, CFA
Chief Investment Officer

From: Kurt Braitberg, CFA, CAIA
Managing Director, Public Markets

Patrick Li
Analyst, Public Equity

Han N. Pham
Director, Public Equity

Date: April 21, 2021

Agenda Item:

Annual update regarding the Public Equity portfolio.

Background:

Staff, in collaboration with NEPC, will present to the Board an annual update for the Public Equity portfolio. This update will provide an overview of the portfolio's strategic plan, performance, activity and initiatives.

For the year ending December 31, 2020, the Public Equity portfolio was valued at \$12.1 billion and accounted for 39.4% of the Retirement Trust.

Recommendation:

This is a discussion only item.

Attachments:

Staff and NEPC's materials for SFERS' Public Equity Update

Public Equity Update

Kurt Braitberg, CFA, CAIA, Managing Director

Han N. Pham, Director

Patrick Li, CFA, Analyst

April 21, 2021



SFERS

San Francisco Employees' Retirement System

Agenda

• Executive Summary	3
• Role of Public Equity	5
• Performance	7
• Portfolio Evolution	13
• Portfolio Exposures	17
• Liquidity	25
• 2021-2022 Initiatives	28
• NEPC Capital Market Assumptions	30
• NEPC 2020 Market Review	

1. Executive Summary

Executive Summary

- The role of SFERS' Public Equity portfolio is to provide long-term growth, capital appreciation, and liquidity.
- The Public Equity portfolio was \$12.1 billion as of 12/31/2020 and has significantly evolved over the last 5 years:
 - Removed sub-allocation targets
 - Increased tracking error (0.6% to 2.6%) and active share (31.9% to 53.2%)
 - Increased alpha (5-year annualized from 1.2% to 2.6%)
- Continue to upgrade the portfolio
 - Evaluate opportunistic investments
 - Research emerging markets
 - Incorporate more ESG considerations

Notes: Tracking error, active share, and alpha are calculated as of December 31, 2015 and December 31, 2020.

2. Role of Public Equity

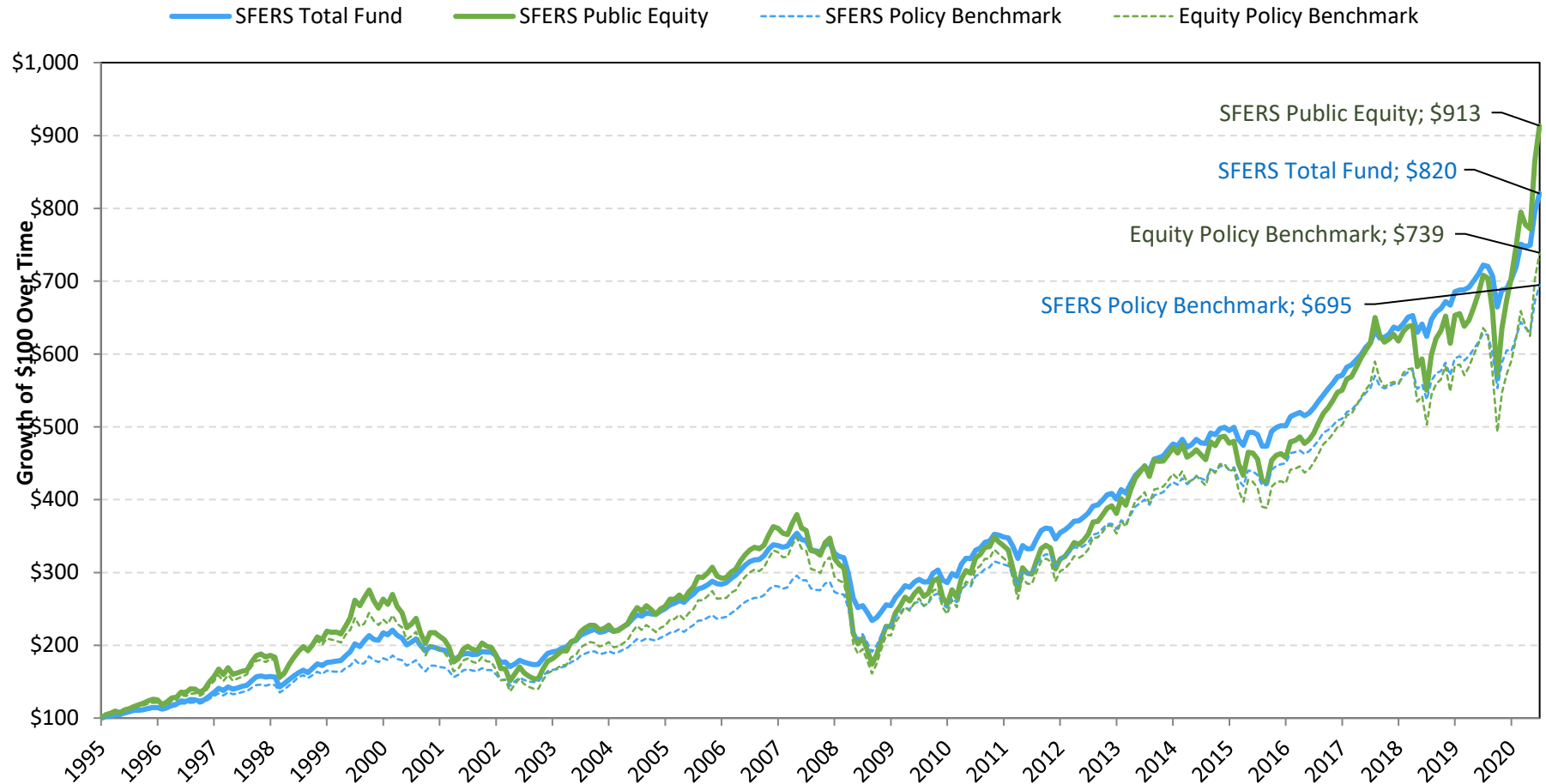
Role of Public Equity

- SFERS' Public Equity portfolio is structured for long-term growth and capital appreciation.
 - Technology, biotechnology, and China tilts due to expected outsized growth opportunity
 - Historical performance:
 - 1-year annualized return of 28.9% vs. MSCI ACWI 16.3%
 - 5-year annualized return of 14.9% vs. 12.3%
 - 10-year annualized return of 11.1% vs. 9.1%
 - 30-year annualized return of 9.9% vs. 8.1%
- Public Equity is also a source of liquidity to fund other asset classes and meet pension obligations.
 - \$5.1 billion in net cash outflows from public equity over the last 7 years

3. Performance

SFERS Public Equity Performance Over Time

Growth of \$100 over Time



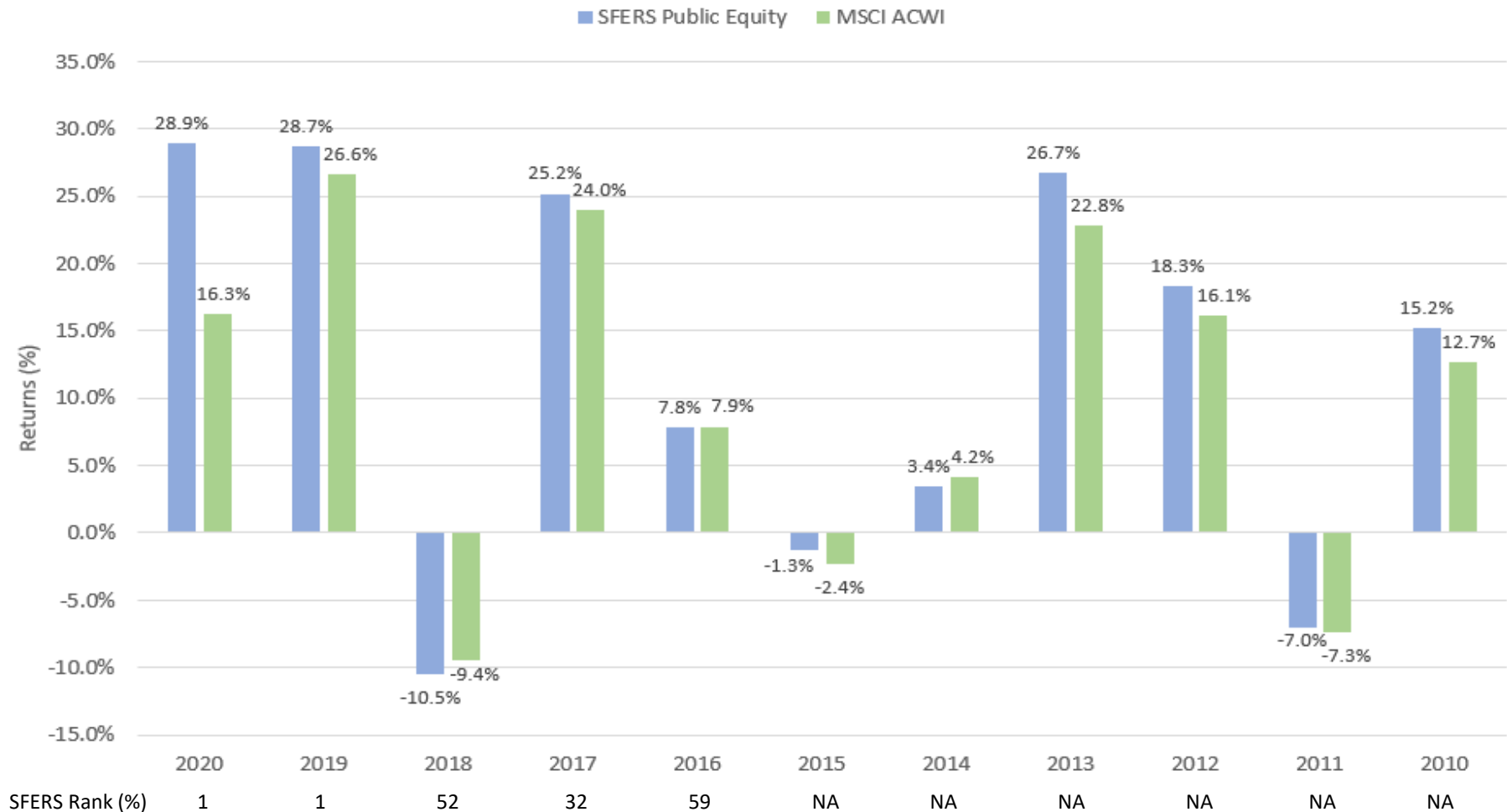
Notes: Data from NEPC via BNYM and Northern Trust. SFERS Policy Benchmark inception in July 1995.



SFERS
San Francisco Employees' Retirement System

Public Equity Performance

SFERS Public Equity vs MSCI ACWI Annual Performance



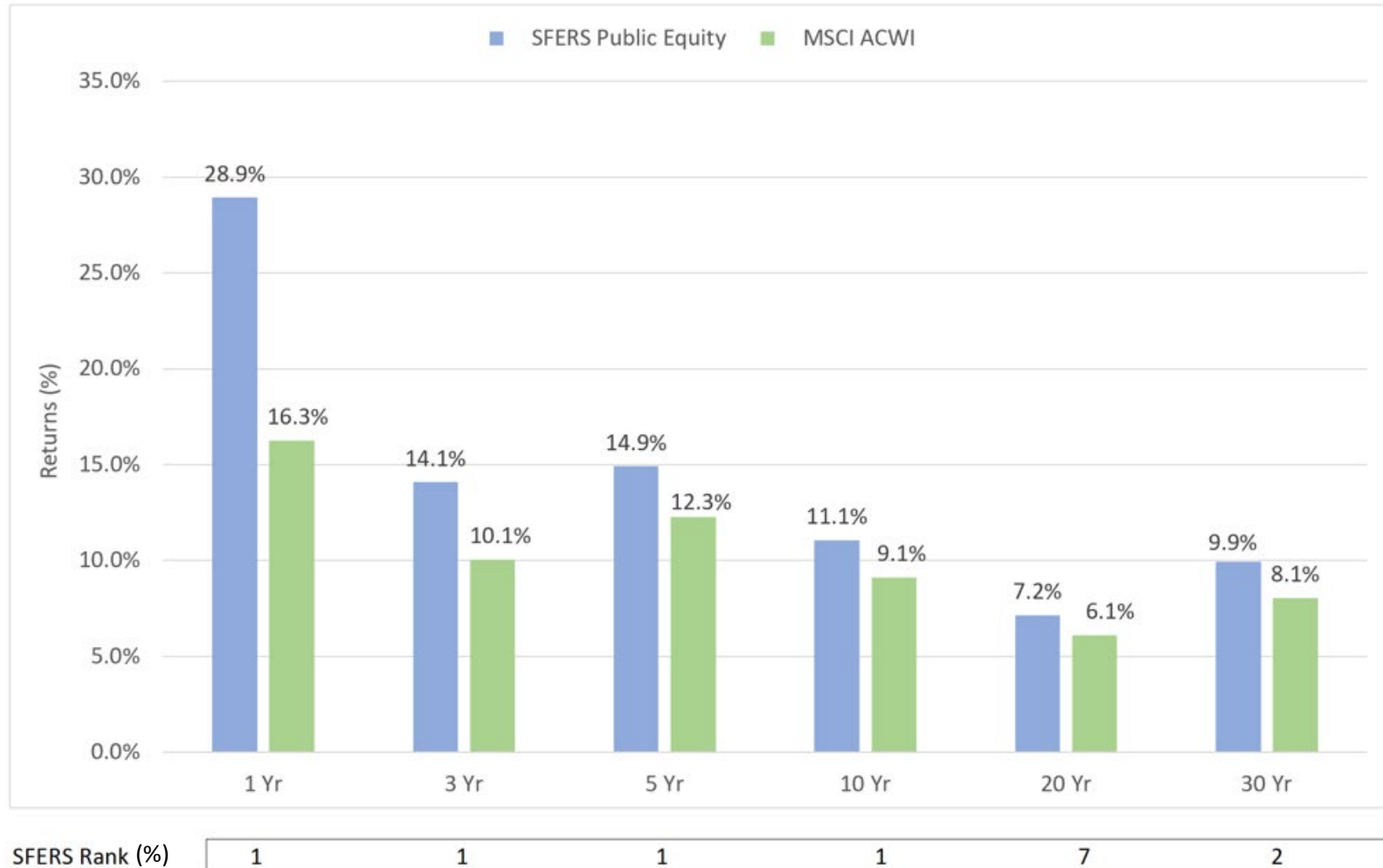
Source: BNY Mellon & NEPC
Data as of December 31, 2020



SFERS
San Francisco Employees' Retirement System

Public Equity Performance

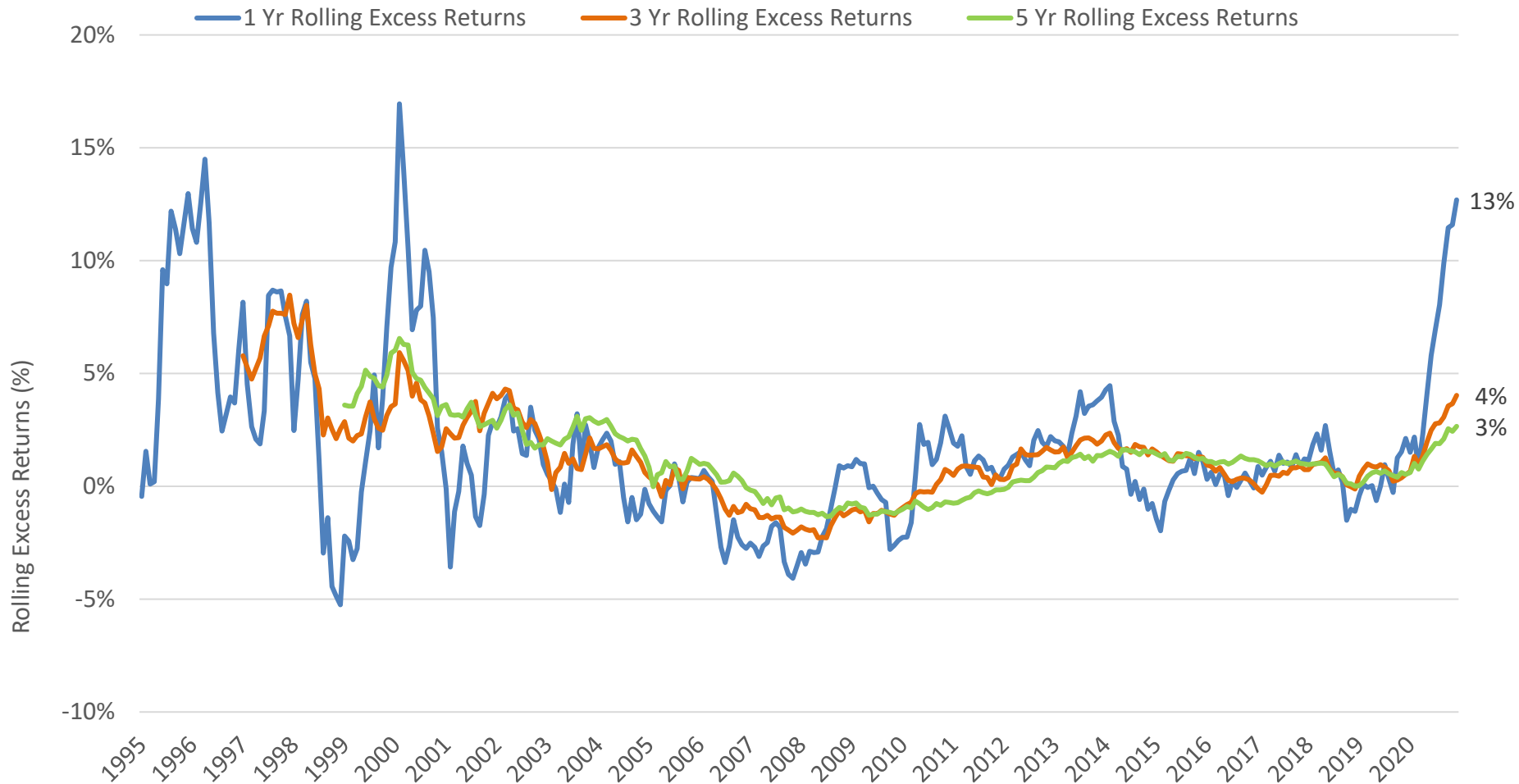
SFERS Public Equity vs MSCI ACWI Annualized Performance



Source: BNY Mellon & NEPC
Data as of December 31, 2020

Public Equity Performance

SFERS Public Equity Rolling Excess Returns vs MSCI ACWI (Dec '94 – Dec '20)



Source: BNY Mellon & NEPC
Data as of December 31, 2020

Public Equity Performance

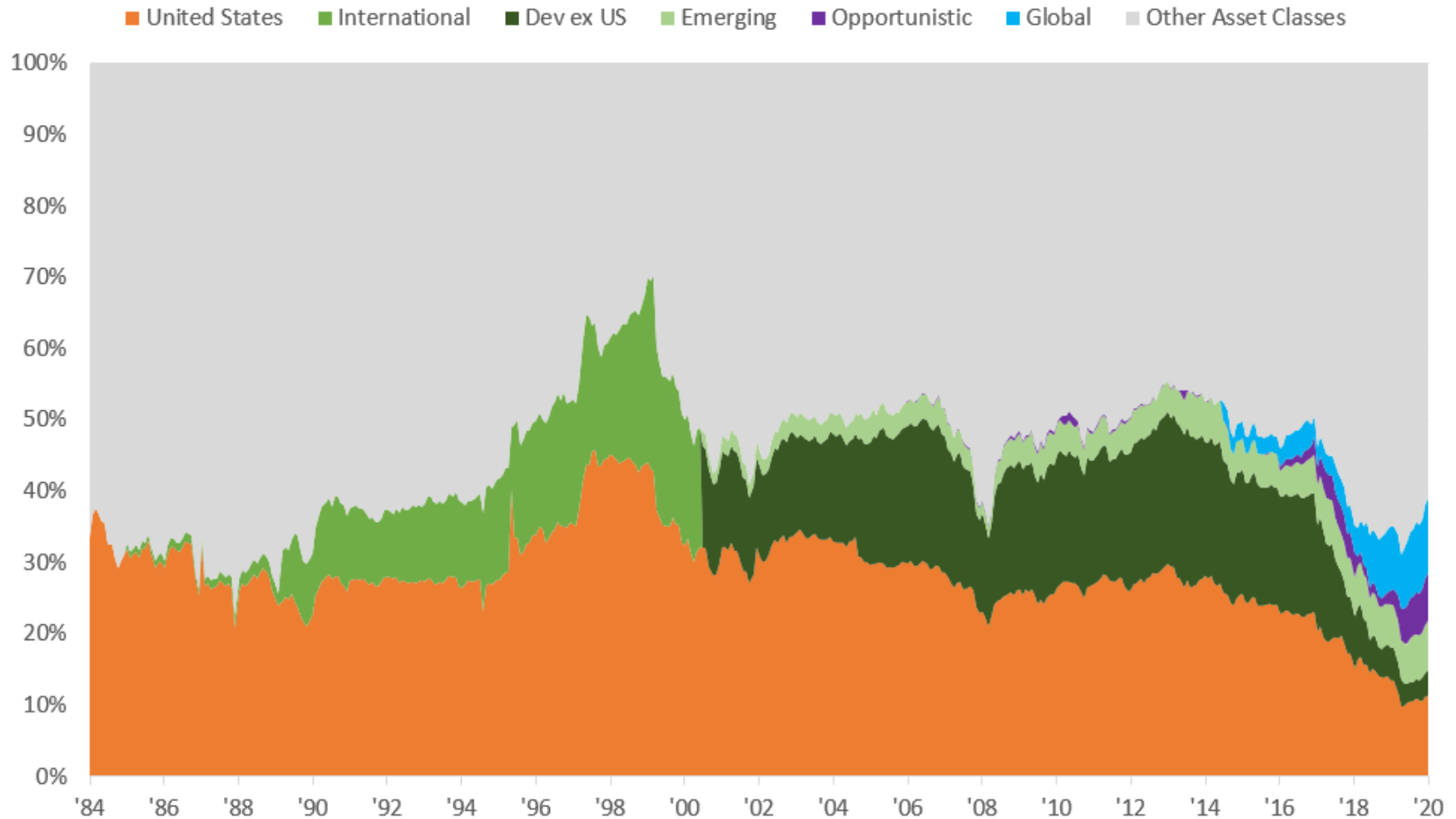
Average Annual Compound Returns (%) Through Dec 31, 2020

	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr	Incept.	Incept. Date
Total Public Equity							
SFERS Public Equity	28.9	14.1	14.9	11.1	7.2	9.4	1-Dec-89
Total Equity Policy Index	16.3	9.7	12.1	9.3	6.4	8.3	1-Dec-89
US Equity							
SFERS U.S. Equity	30.1	17.6	17.0	14.3	8.2	8.0	1-Jan-99
SP500	17.8	13.5	14.5	13.2	6.8	6.6	1-Jan-99
Russell 3000	20.3	14.1	15.2	13.7	7.8	7.6	1-Jan-99
Developed Market Equity							
SFERS Developed Market Equity	11.6	4.4	8.2	6.3	---	5.7	1-Jun-01
MSCI EAFE	5.4	2.5	6.3	5.0	4.2	4.9	1-Jun-01
MSCI World ex USA	8.3	4.6	7.9	5.3	4.6	5.4	1-Jun-01
Emerging Market Equity							
SFERS Emerging Market Equity	32.4	10.9	15.8	5.3	---	9.7	1-Jun-01
MSCI Emerging Markets	15.8	4.5	11.8	3.1	9.3	9.5	1-Jun-01
Global Equity							
SFERS Global Equity	19.4	12.5	14.8	---	---	11.7	1-Jun-15
MSCI ACWI	16.3	10.1	12.3	9.1	6.1	9.4	1-Jun-15
Opportunistic Equity							
SFERS Opportunistic Public Equity	57.0	28.9	---	---	---	28.0	1-Dec-17
MSCI ACWI	16.3	10.1	12.3	9.1	6.1	10.3	1-Dec-17
S&P 500 Healthcare	11.4	12.1	10.8	15.7	7.4	11.5	1-Dec-17
NASDAQ Biotech	25.7	12.3	6.1	17.2	7.7	12.5	1-Dec-17
NASDAQ Composite	44.9	24.4	22.1	18.5	---	23.9	1-Dec-17
SP500	17.8	13.5	14.5	13.2	6.8	13.5	1-Dec-17



4. Portfolio Evolution

SFERS Public Equity Allocation Over Time



Notes: Data from NEPC via BNYM and Northern Trust. Information is approximate. Missing data is inferred as of December 31, 2020. Other Asset Classes include Private Equity, Real Assets, Absolute Return, Private and Liquid Credit.



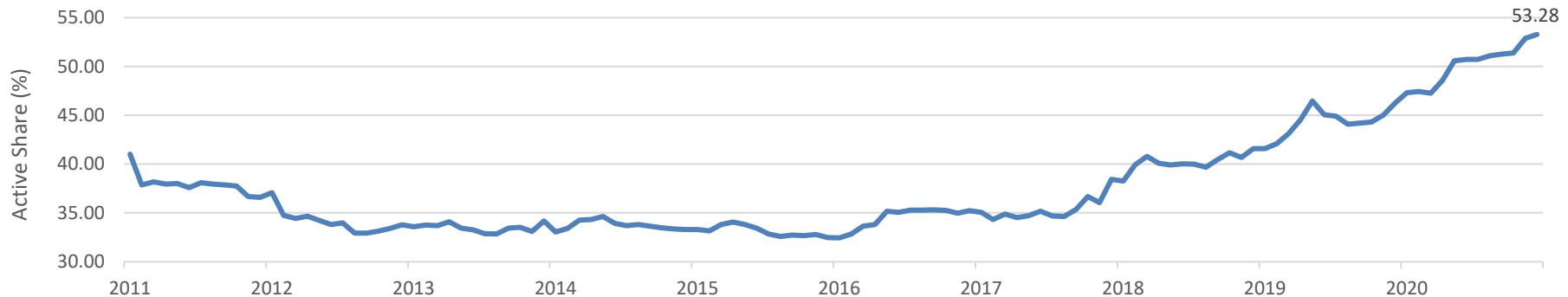
SFERS Asset Allocation Over Time

Asset Class	12/31/2020	Current Targets	2017 Targets	2016 Targets	2012 Targets
Public Equity	39.4%	37.0%	31.0%	40.0%	47.0%
Private Equity	22.3%	23.0%	18.0%	18.0%	16.0%
Liquid Fixed Income	8.0%	13.0%	9.0%	20.0%	25.0%
Private Credit	5.1%	10.0%	10.0%	NA	NA
Absolute Return	11.4%	10.0%	15.0%	5.0%	NA
Real Assets	12.1%	10.0%	17.0%	17.0%	12.0%
Cash	1.8%	0.0%	0.0%	0%	0%
Leverage	0%	-3.0%	NA	NA	NA

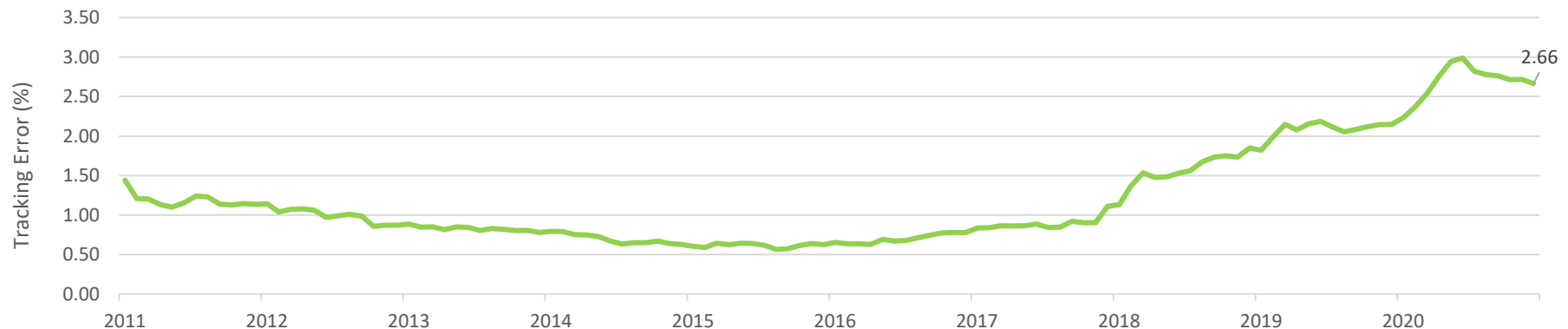
Note: Public Equity allocation of 39.4% is within SFERS' long-term target range of 25.0% to 50.0%.

Tracking Error and Active Share Over Time

SFERS Public Equity Active Share vs MSCI ACWI Trailing 10 Years



SFERS Public Equity Tracking Error vs MSCI ACWI Trailing 10 Years



Source: Style Analytics. Active Share is a measure of the percentage of stock holdings in a manager's portfolio that differs from the benchmark index. Tracking Error (or Active Risk) is an estimate of the expected relative volatility of the portfolio versus the benchmark and is expressed as an annualized percentage.

Data as of December 31, 2020



SFERS
San Francisco Employees' Retirement System

5. Portfolio Exposures

Regional/Country Exposures

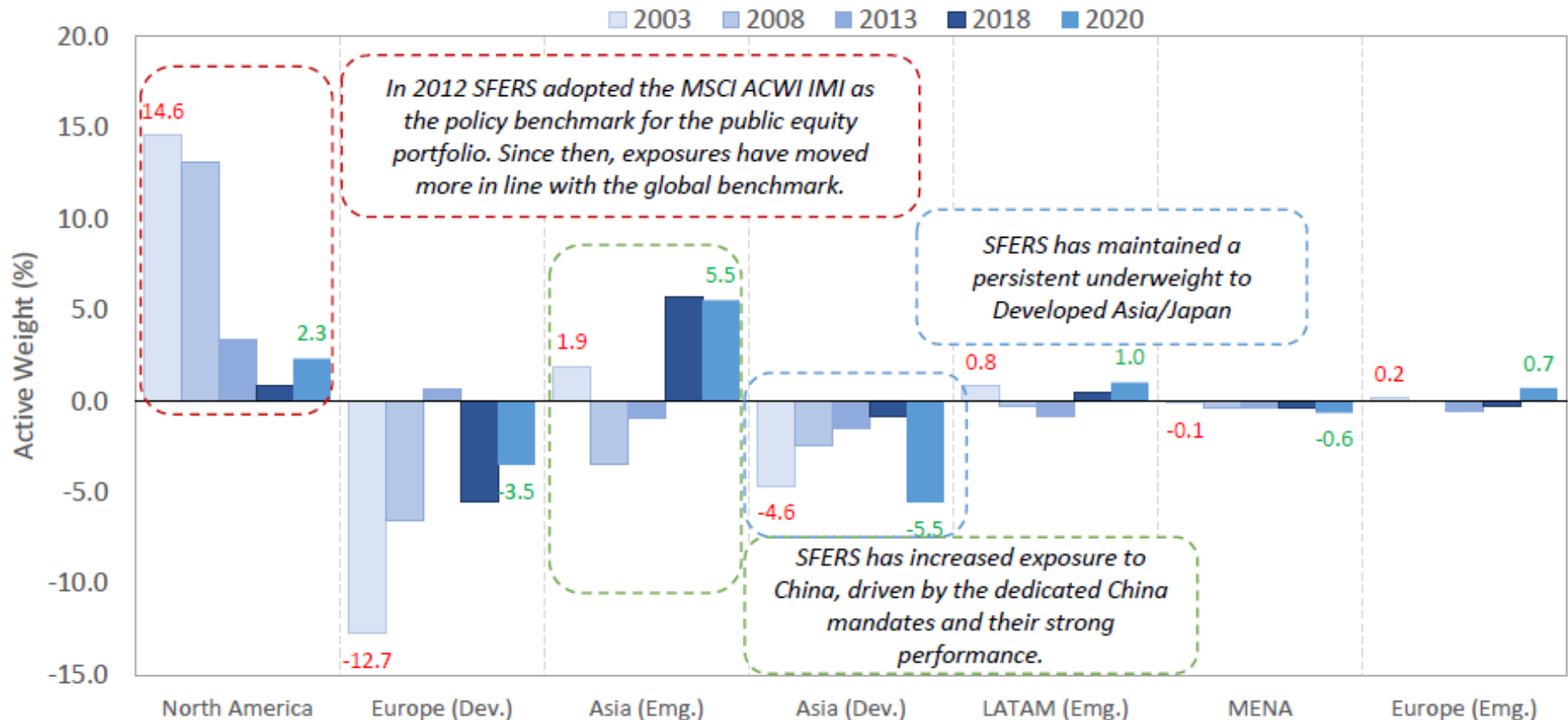
- Overweight to US
 - Driven by tilts to information technology and biotech (opportunistic)
 - Opportunistic allocation +28.0% annualized since inception vs. ACWI 10.3%
 - Expect US to continue to be leader in innovation
- Overweight China
 - Expect long-term structural growth
 - Growing middle class driving consumer demand
 - Strong technological innovation
 - Market inefficiencies provide alpha opportunities for active managers
 - High retail investor participation
 - China managers +16.3% annualized over last 3 years vs. MSCI China +9.3%
- Underweight to Japan and Europe
 - Lower economic growth
 - Shrinking population
 - Political tensions in Eurozone
 - Historical corporate governance concerns in Japan

Notes: SFERS' Opportunistic public equity allocation began on December 1, 2017 with its first dedicated healthcare strategy. The allocation currently consists of dedicated healthcare/biotech and tech/innovation strategies. SFERS invested in its first dedicated China strategy on January 1, 2017.



Regional Exposures

Active Weight over Time by Region: Public Equity vs. MSCI ACWI



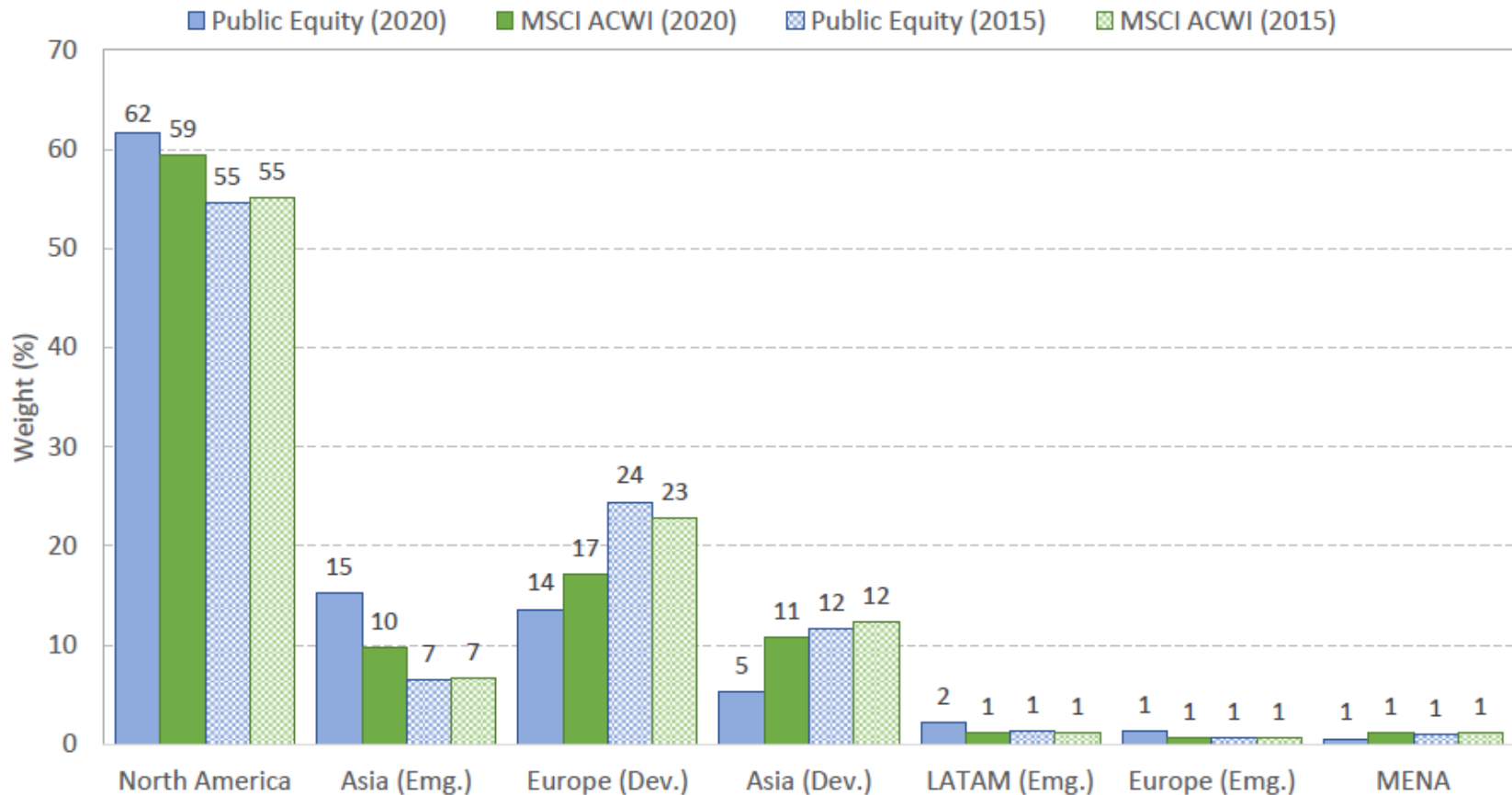
Notes: Exposures as of December 31 of each year. Weights are re-weighted to a base of 100%. Undefined exposures are excluded.

Data provided by Caissa. Numbers in green represent the active weights as of 2020 and numbers in red represent the active weight as of 2003. SFERS Public Equity is compared versus the MSCI ACWI for all time periods. In 2003 SFERS Public Equity benchmark was 67% Russell 3000 Index and 33% MSCI ACWI ex US. In 2008 SFERS Public Equity benchmark was 53% Russell 3000 and 47% MSCI ACWI IMI. Beginning in October 2012, SFERS Public Equity benchmark became 100% MSCI ACWI IMI.



Region Exposures

Percent of Net Exposures by Region: Public Equity vs. MSCI ACWI

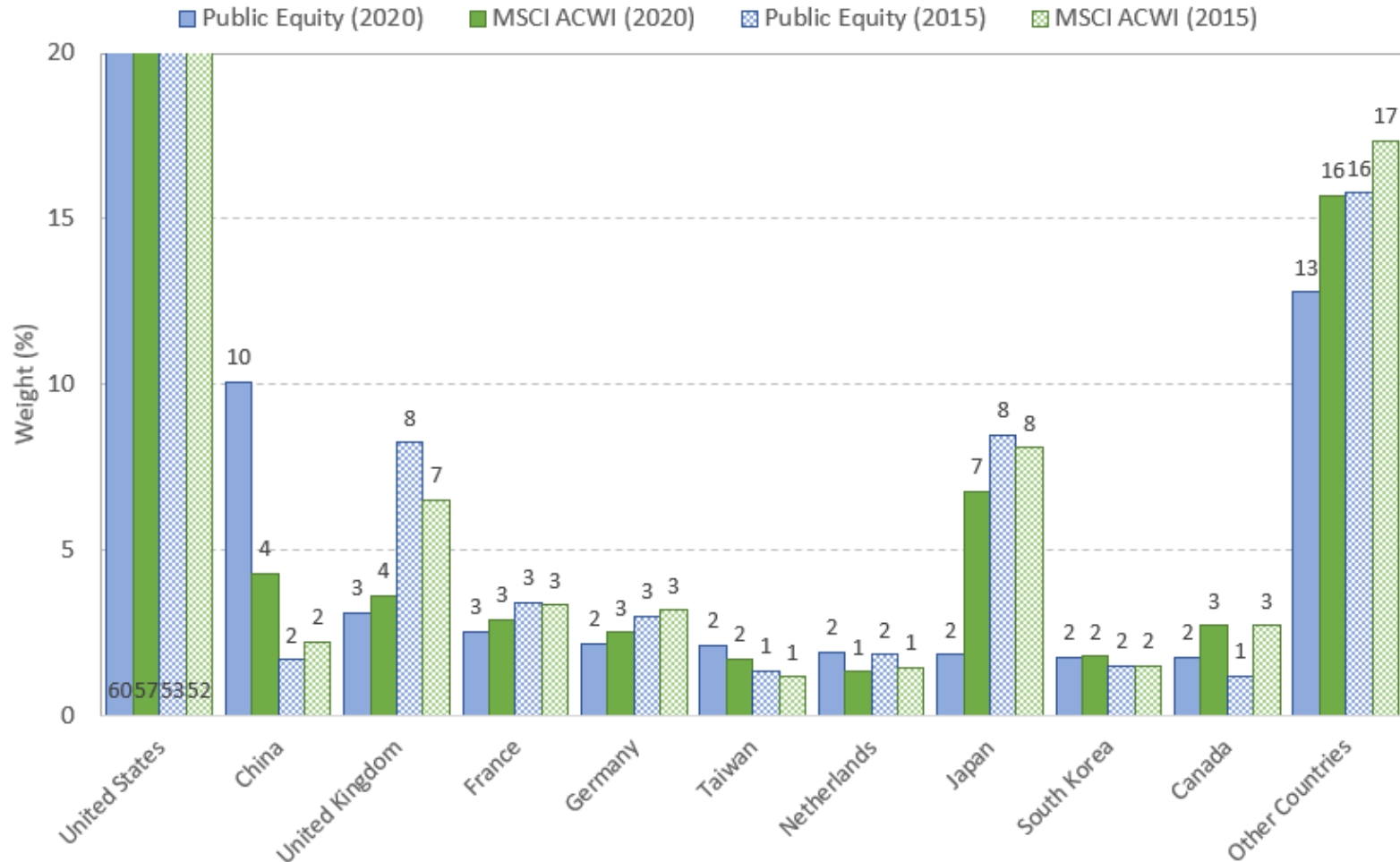


Notes: Exposures as of December 31, 2020. Weights are re-weighted to a base of 100%. Undefined exposures are excluded. Data from Caissa.



Country Exposures

Percent of Net Exposures by Country: Public Equity vs. MSCI ACWI



Notes: Exposures as of December 31, 2020. Weights are re-weighted to a base of 100%. Undefined exposures are excluded. Data from Caissa. The China weight in ACWI grew from <1% as of 12/31/1996 to 5.2% in 12/31/2020.



Sector Exposures

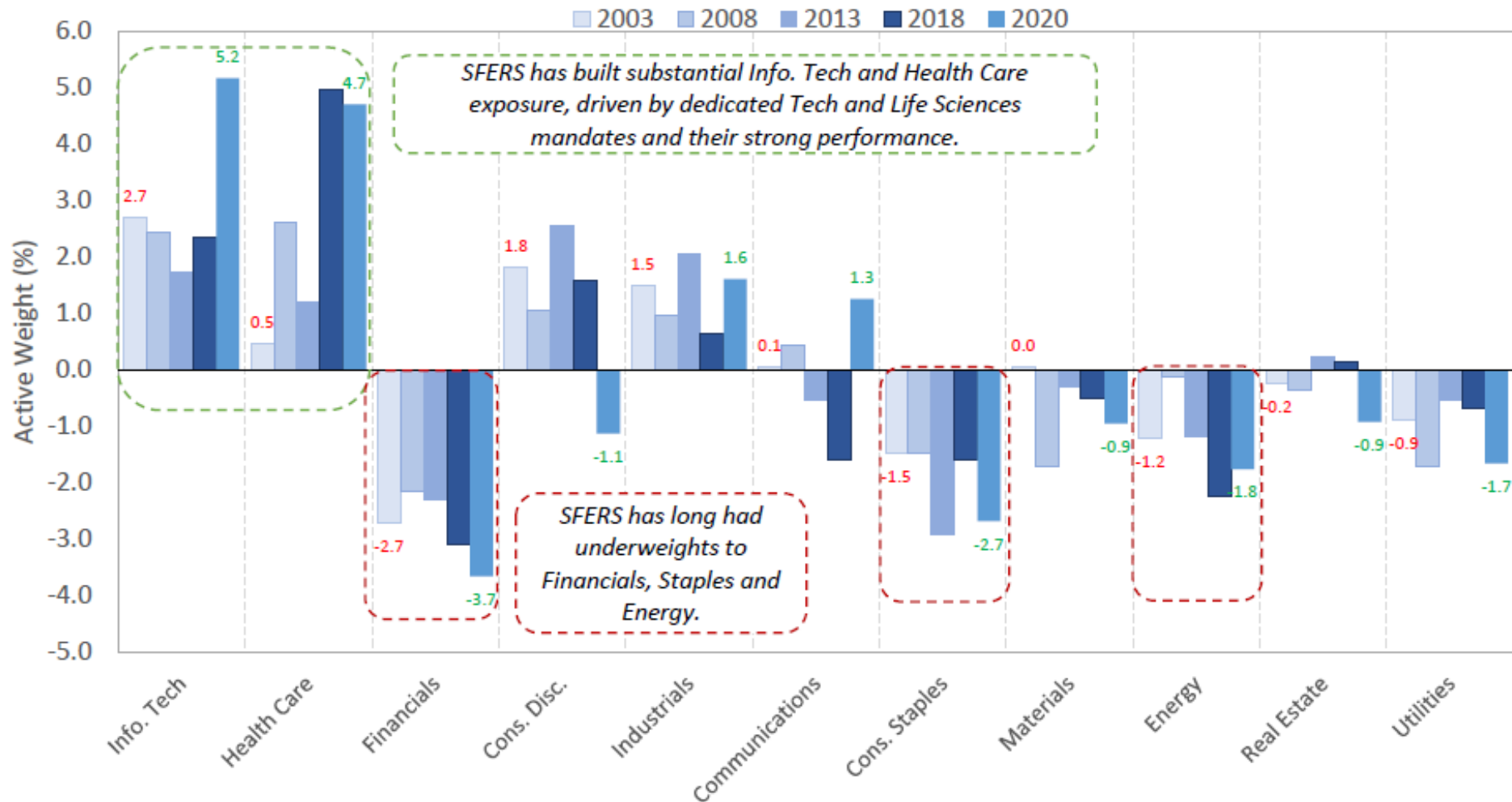
- Overweight Information Technology
 - Technology disrupting all sectors
 - Proliferation of data, digitization, cloud computing, and robotics driving innovation
 - SFERS opportunistic tech/innovation managers +62.0% in 2020
- Overweight Healthcare and Biotechnology
 - Decreasing cost of capital (sequencing of human genome) driving innovation
 - Patent cliffs at large pharma fueling acquisitions of small biotech
 - Accommodative FDA (regulatory environment)
 - Aging demographics will increase demand
 - SFERS healthcare/biotech managers +29.5% annualized since inception
- Underweight Energy and Materials
 - SFERS public equity portfolio had carbon emission 28.1% lower than ACWI.
 - Weighted average carbon intensity declined 47% over the last 10 years vs. 34% decline in ACWI.
 - Structural headwinds to traditional energy and materials
 - Net-zero emissions goals set by countries and companies

Notes: SFERS invested in its first dedicated tech/innovation strategy on January 1, 2020 and in dedicated healthcare and biotech on December 1, 2017.



Sector Exposures

Active Weight over Time by Sector: Public Equity vs. MSCI ACWI



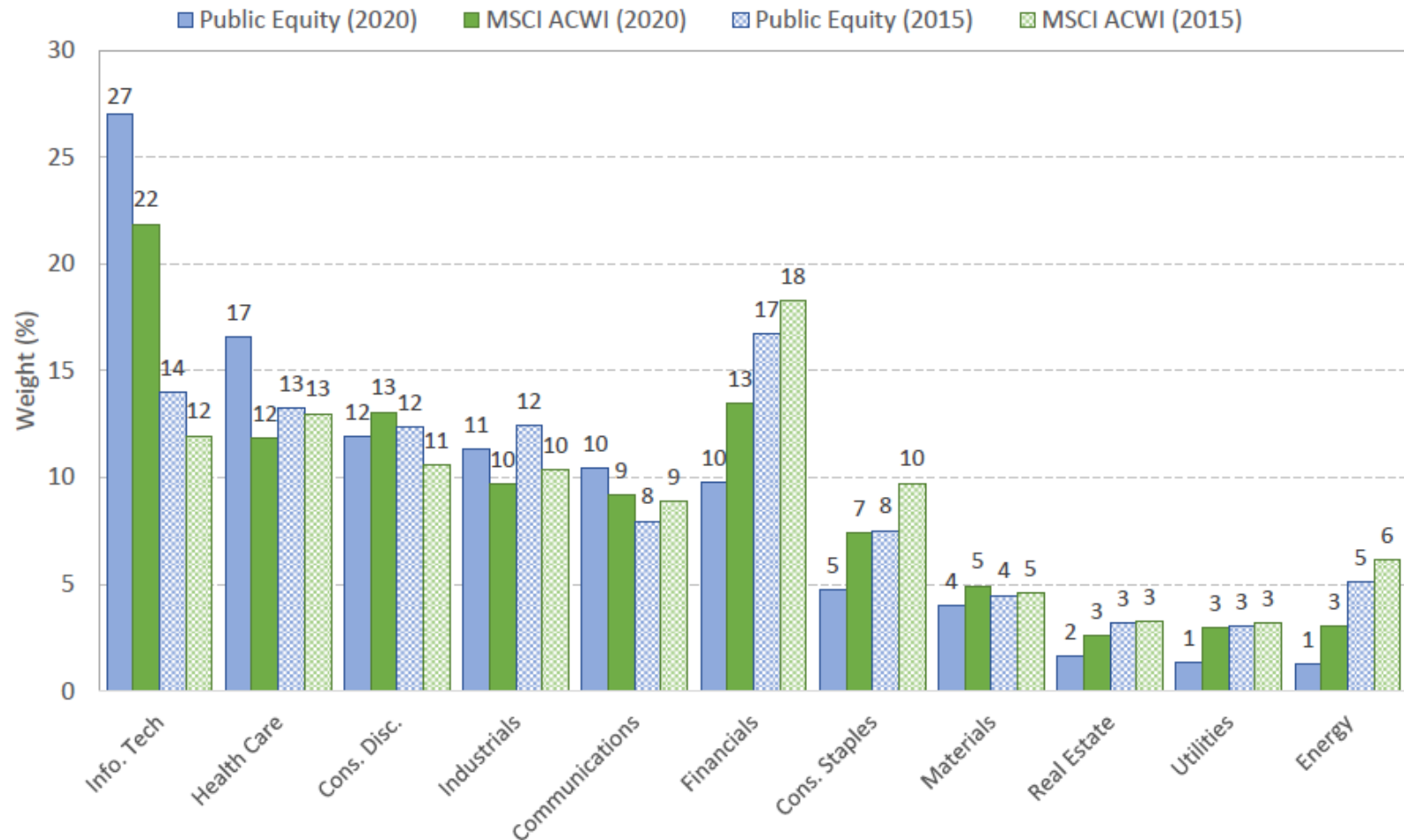
Notes: Please see notes under the previous 'Regional Exposures' page for methodology.



SFERS
San Francisco Employees' Retirement System

Sector Exposures

Percent of Net Exposures by Sector: Public Equity vs. MSCI ACWI

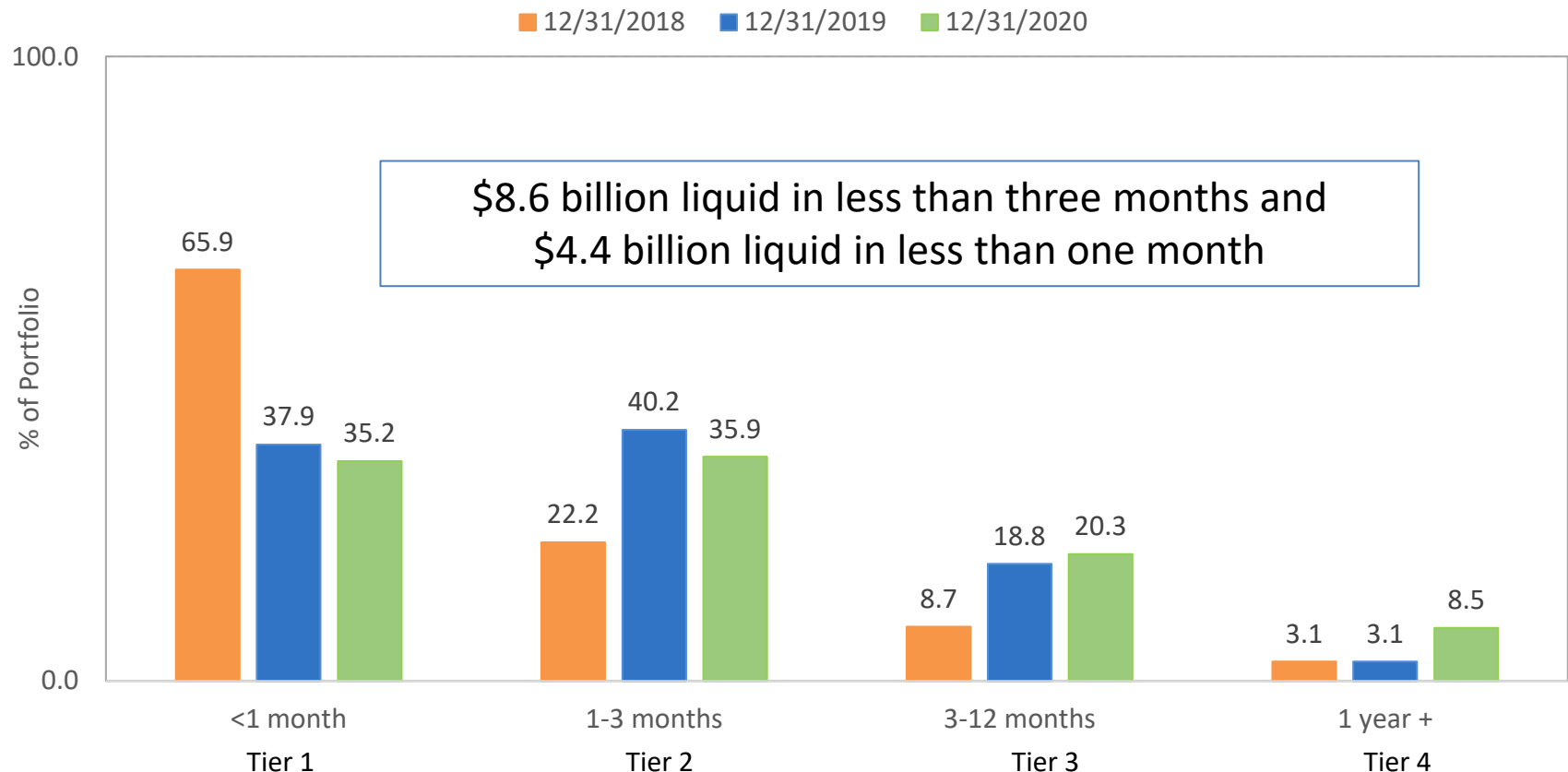


Notes: Exposures as of December 31, 2020. Weights are re-weighted to a base of 100%. Undefined exposure are excluded. Data from Caissa.



6. Liquidity

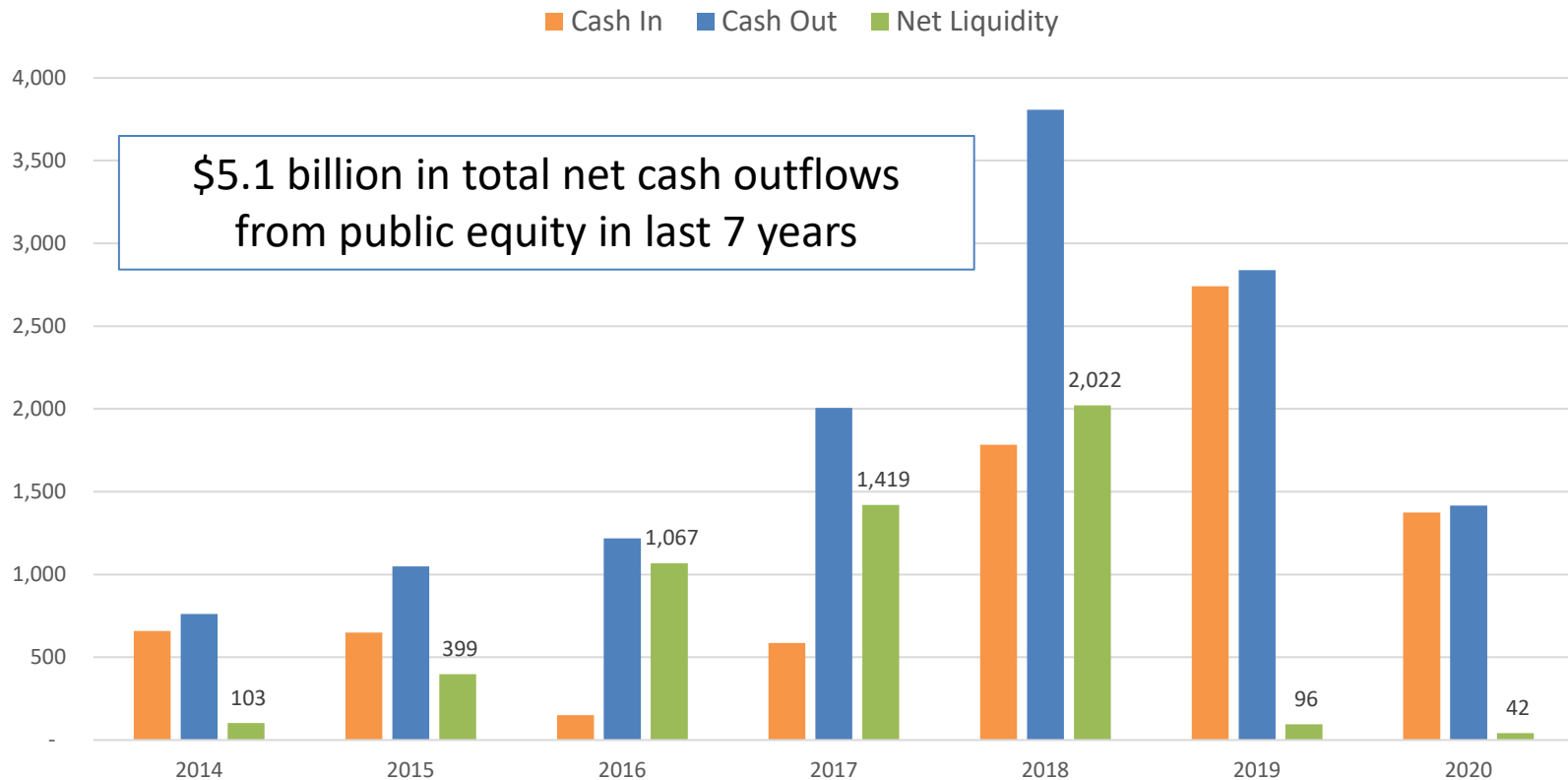
Public Equity – Source for Liquidity



Notes: SFERS' Investment Policy Statement requires a minimum liquidity of 25% in Tier 1 and maximum of 15% in Tier 4.

Public Equity Liquidity History

Public Equity Liquidity over Time (\$ millions)



Notes: Public Equity has provided \$5.1bn in cash in total over the last 7 years to fund other asset classes and to meet pension obligations.



7. 2021-2022 Initiatives

SFERS Public Equity Initiatives for 2021 – 2022

- Opportunistic Investments
 - Added two dedicated biotech managers in early 2021
 - Continue to evaluate new opportunistic investments
- Emerging Markets
 - Research emerging markets focused strategies
 - Upgrade emerging markets portfolio
- Japan Strategies
 - Look for alpha in leading global franchises and emerging growth companies
 - Focus on attractive valuations, improving economy, and corporate governance
- Passive Strategies
 - Research opportunities to increase alpha
 - Integrate more ESG considerations
- ESG Initiatives
 - Continue to engage with existing managers and vote proxies
 - Explore ESG dedicated strategies



8. NEPC Capital Market Assumptions

NEPC Public Equity Assumptions

Equity Building Blocks	
Illiquidity Premium	The return expected for investments with illiquidity risk
Valuation	Represents P/E multiple contraction or expansion relative to long-term trend
Inflation	Market-specific inflation based on country revenue and region-specific inflation
Real Earnings Growth	Market-specific real growth based on a weighted-average derived from country revenue contribution and GDP growth
Dividend Yield	Income distributed to shareholders adjusted to reflect market trends

Asset Class	12/31/20 10-Year Return	Change from 09/30/20
US Large-Cap Equity	5.4%	-0.4%
US Small/Mid-Cap Equity	5.7%	-0.7%
US Microcap Equity	6.6%	-0.6%
Non-US Developed Equity	5.9%	-0.3%
Non-US Developed Small-Cap Equity	6.1%	-0.3%
Emerging Market Equity	7.5%	-0.5%
Emerging Market Small-Cap Equity	8.1%	-0.4%
China Equity	7.0%	-
Absolute Return - Equity	4.0%	-0.3%
<i>Global Equity*</i>	6.2%	-0.4%

Source: NEPC

*Calculated as a blend of other asset classes



SFERS
San Francisco Employees' Retirement System

NEPC Public Equity Assumptions

	Asset Class	10-Year Return	30-Year Return	Standard Deviation
EQUITY	US Large-Cap Equity	5.4%	6.3%	16.6%
	US Small/Mid-Cap Equity	5.7%	6.6%	20.7%
	Non-US Developed Equity	5.9%	6.5%	19.7%
	Non-US Developed Equity (USD Hedge)	6.1%	6.7%	17.7%
	Non-US Developed Small-Cap Equity	6.1%	6.8%	22.5%
	Emerging Market Equity	7.5%	8.4%	28.7%
	Emerging Market Small-Cap Equity	8.1%	8.6%	31.5%
	<i>Global Equity*</i>	6.2%	7.0%	18.0%
	Absolute Return – Equity	4.0%	5.0%	11.5%
	China Equity	7.0%	7.8%	29.5%
	US Microcap Equity	6.6%	7.4%	25.0%

Source: NEPC
Data as of December 31, 2020

9. NEPC Public Equity Market Review

JANUARY 2021

EQUITY OUTLOOK AND MARKET REVIEW

NEPC Research

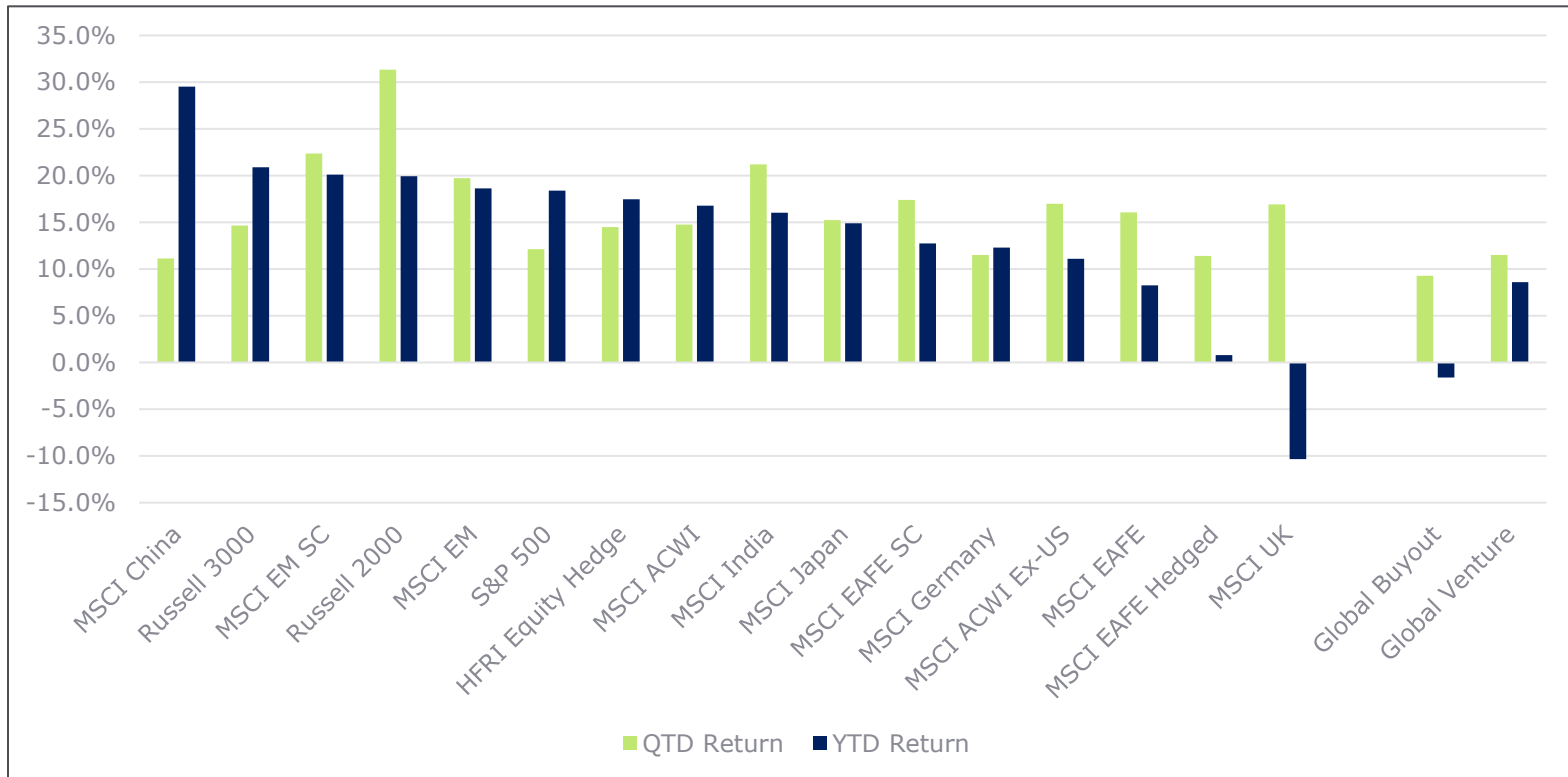
Equity Beta Group



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

EQUITY MARKET PERFORMANCE REVIEW

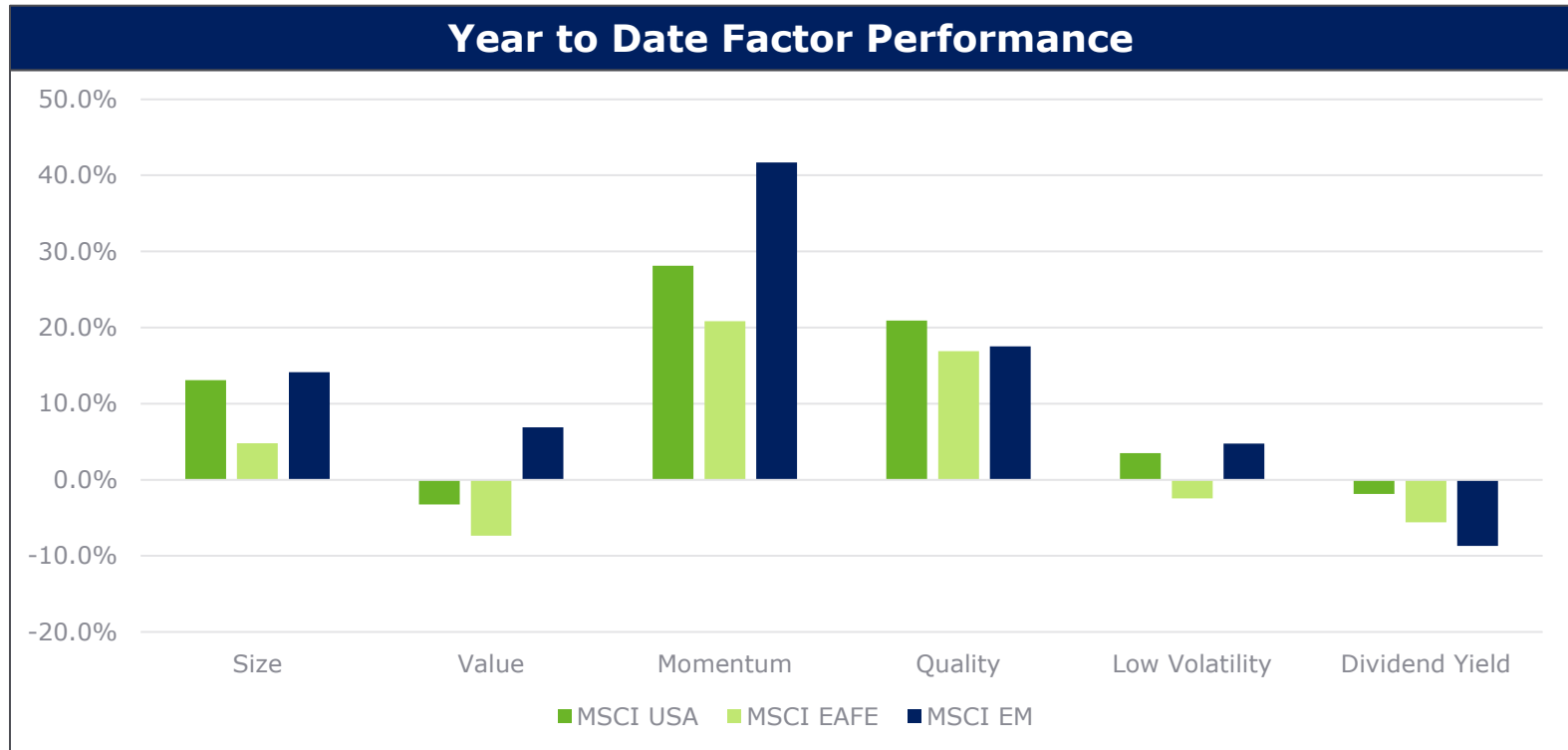
PUBLIC EQUITY PERFORMANCE



Commentary

- **Emerging markets and domestic equities led global stocks in 2020, while international developed lagged**
- **Small caps surged in the fourth quarter to eclipse their large cap counterparts on the year**
- **First quarter writedowns in the buyout universe have not been fully recovered. Venture more resilient due to tech concentration, insulated business models, strong public market comps**

EQUITY FACTOR PERFORMANCE



Commentary

- **Factors group securities together based on characteristics that have historically earned a persistent premium over long periods of time**
- **Momentum and quality factors outperformed across geographies, while value, high dividend, and low volatility factors underperformed**

Source: FactSet; as of 12/31/2020

PUBLIC MARKET EQUITY VIEWS

BETA GROUP MARKET THOUGHTS

Public equity valuations remain elevated relative to history. Despite valuation expansion, stimulative policy backdrop and all time low rates are supportive of equities.

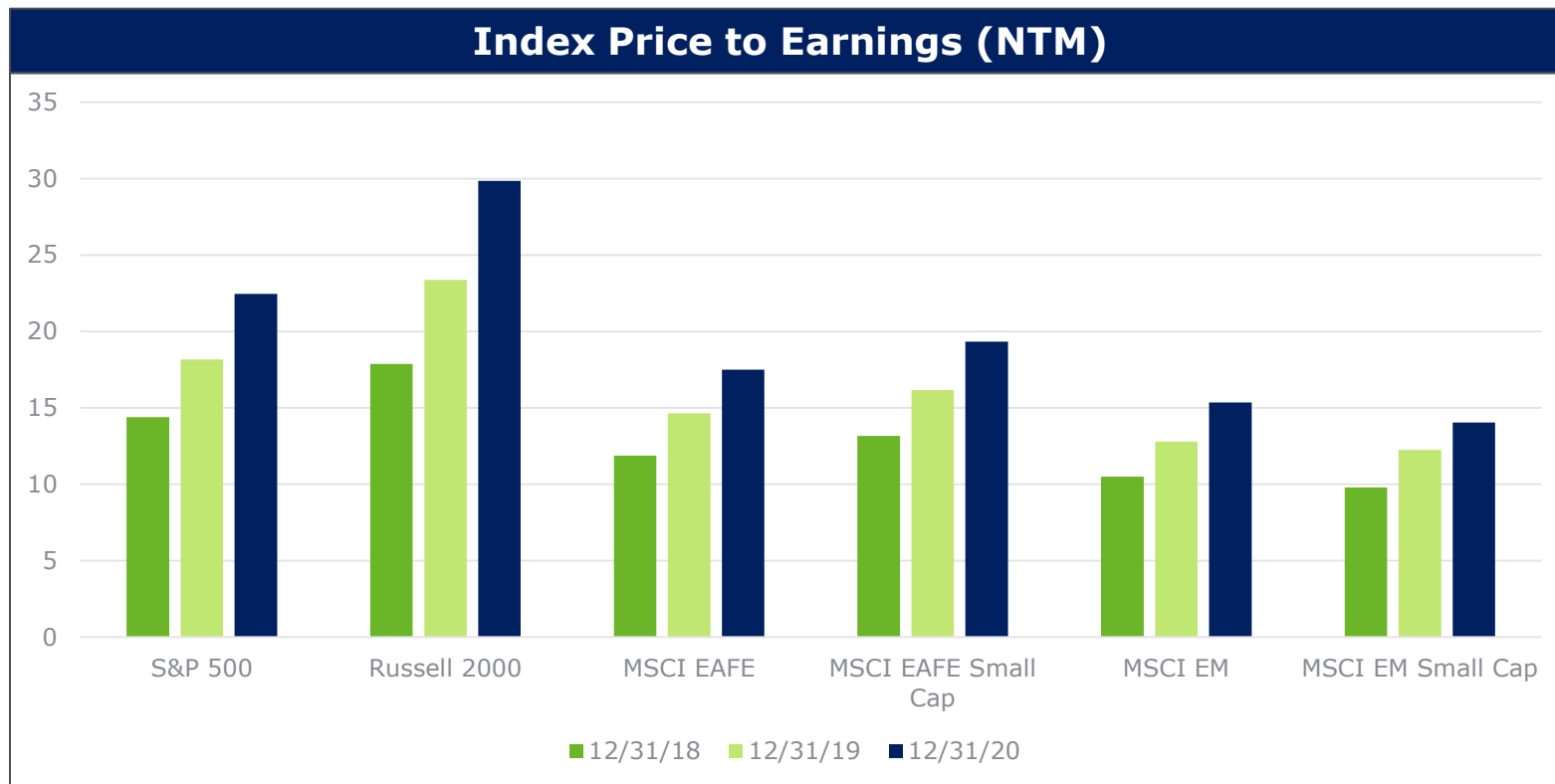
Major public market index concentration continued to increase as technology and consumer sectors outperformed. Domestic and emerging market concentration are at multi-decade highs. As a result, mega-cap tech names are driving returns and skewing valuations higher.

Capital markets had an extraordinary year, with IPO fundraising and performance setting records. SPACs reemerged onto the scene with record issuance.

Private equity valuations of existing portfolios more reasonably reflect deteriorating fundamentals than public equity counterparts.

New private capital deployed in recession-era private equity vintages have the best opportunity for higher returns and illiquidity premia.

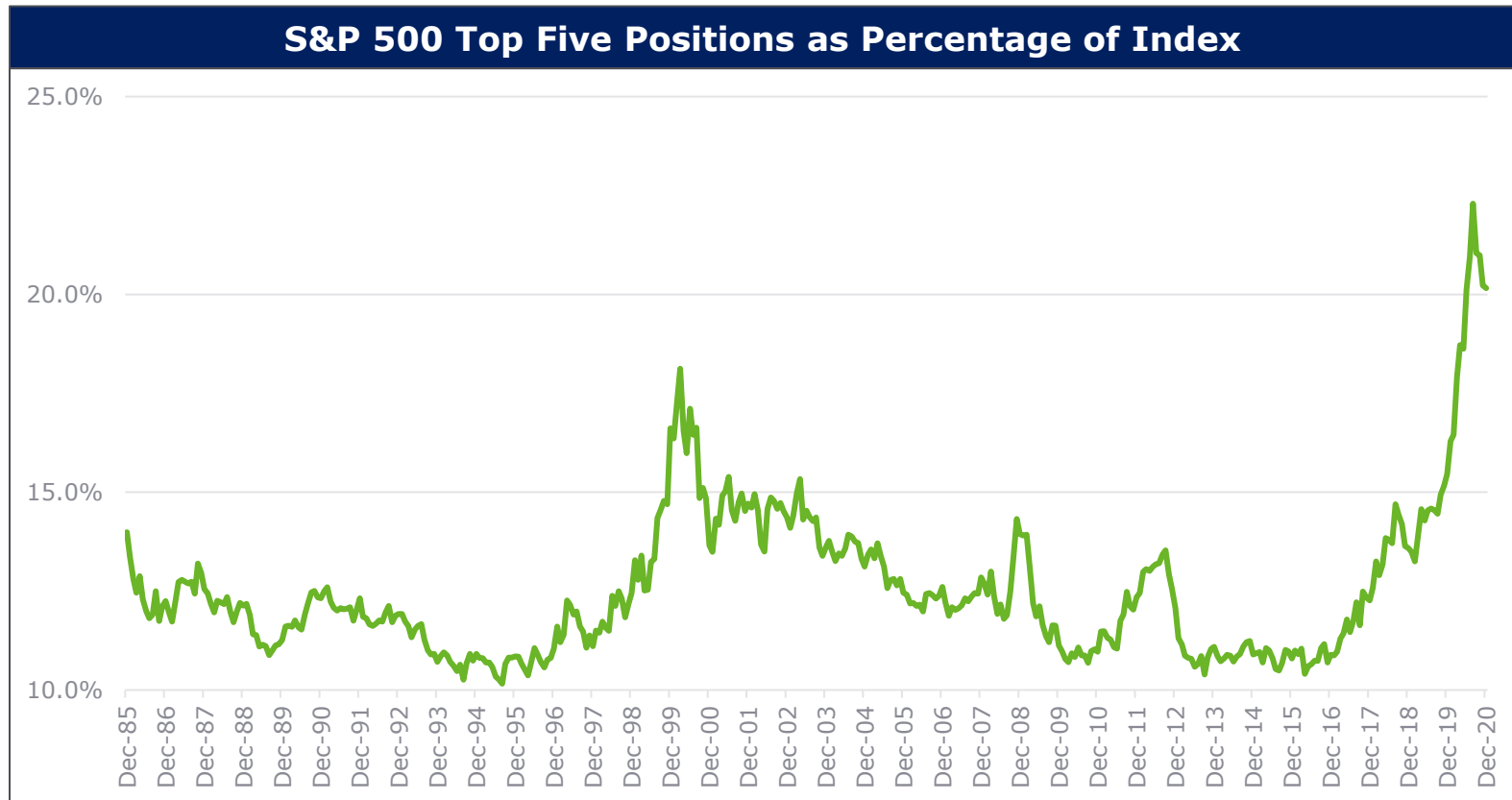
MULTIPLES EXPANDED ACROSS THE BOARD



Commentary

- **Valuations increased across geographies and market capitalizations, as a result of an advance in equity prices in combination with decrease in earnings, while interest rates fell to all time lows**
- **Multiple expansion was most pronounced in the US, with a peak in negative earning companies in the small cap index driving higher multiples in the Russell 2000**

INDEX CONCENTRATION AT MULTI-DECADE HIGHS

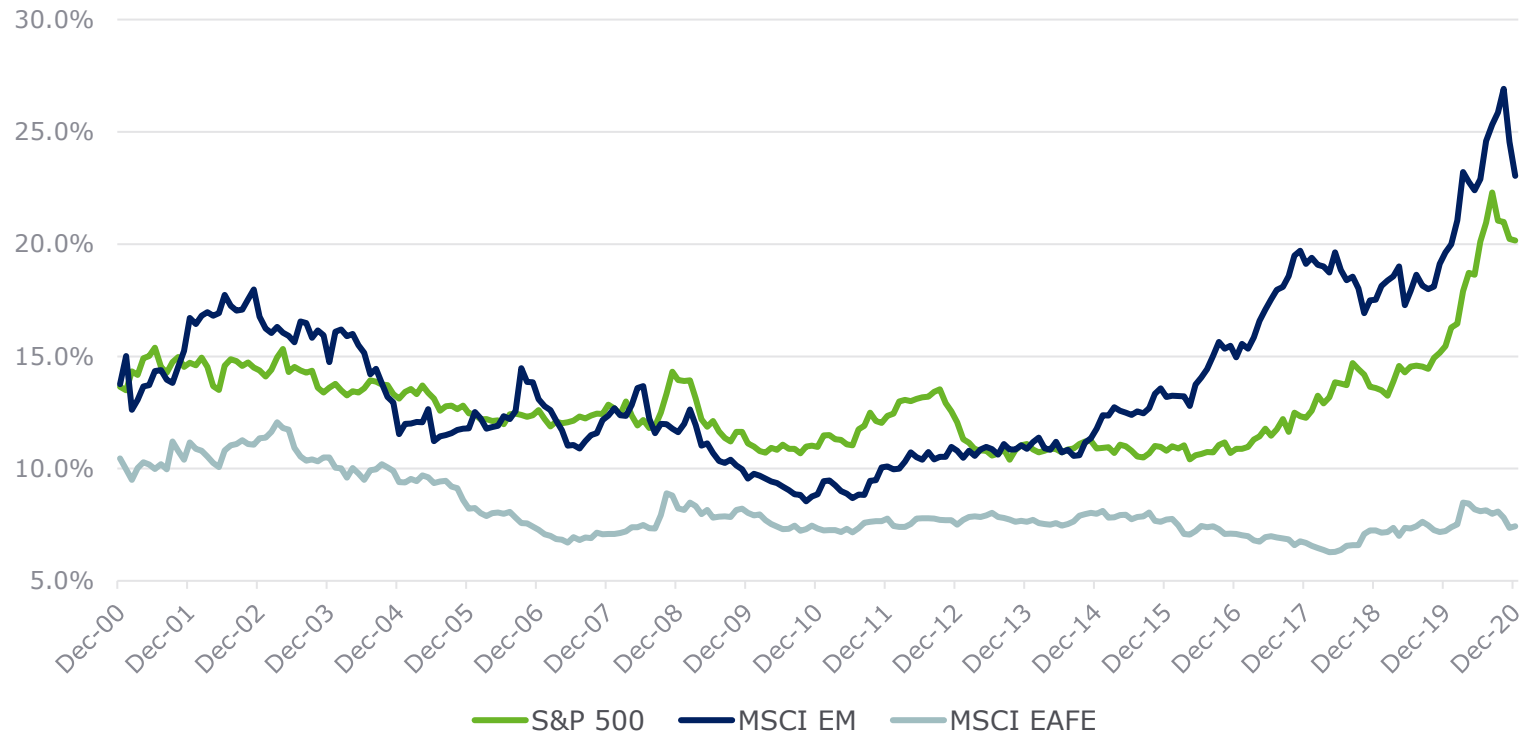


Commentary

- **S&P 500 concentration in top five names is currently higher than at any point in the last 35 years**
- **As a result, market performance and valuations are largely driven by a handful of mega-cap technology companies**

CONCENTRATION MEANINGFUL IN US AND EM

Top Five Positions as Percentage of Index

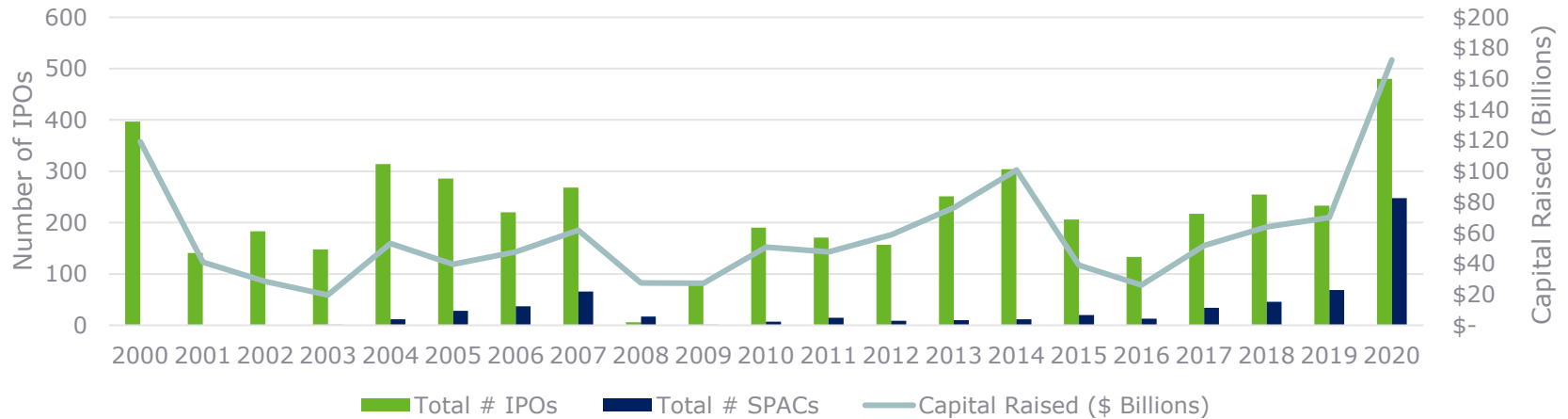


Commentary

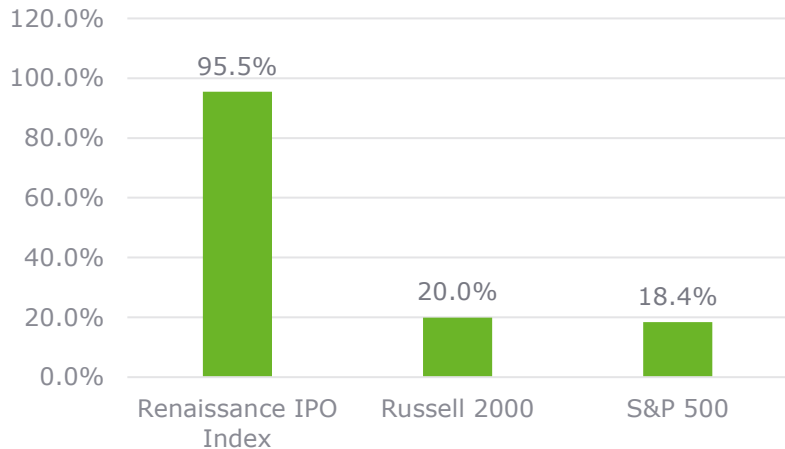
- **Increasing concentration theme in place for emerging markets, where the index has had higher concentration over the past 6 years**
- **EM index performance has been driven by a handful of technology companies, while index valuations skewed higher**
- **Concentration less of a concern in EAFE geography**

2020 WAS A BANNER YEAR FOR THE IPO MARKET

US IPO Fundraising 2000 - 2020



2020 Total Return

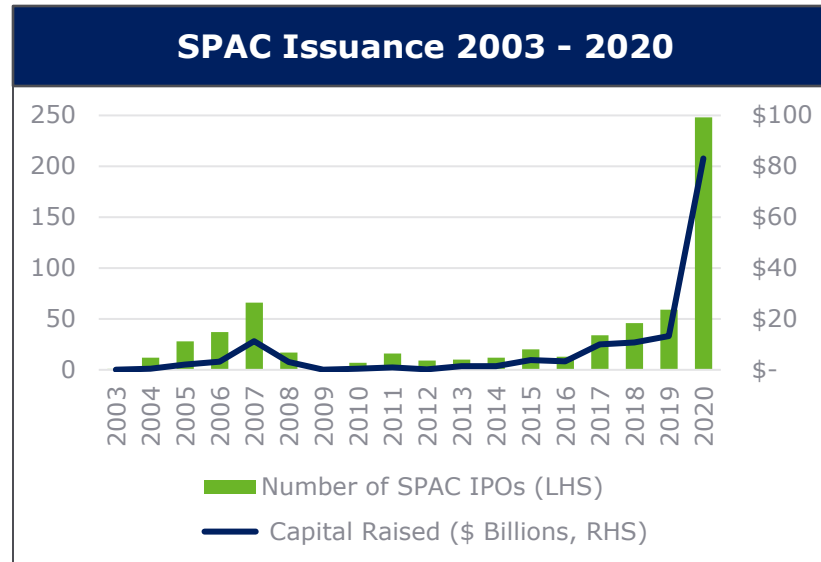


Commentary

- **2020 was the strongest year for IPOs, in both dollars raised and number of IPOs, in decades**
- **This trend was amplified by the surge in SPAC issuance**
- **IPO performance was red hot in 2020, outperforming by a significant margin**
- **Strong year for PE/VC backed IPOs, creating future liquidity for fund investors**

Source: Renaissance Capital, SPAC Insider, StockAnalysis.com, Factset

SPAC ISSUANCE BOOMED IN 2020



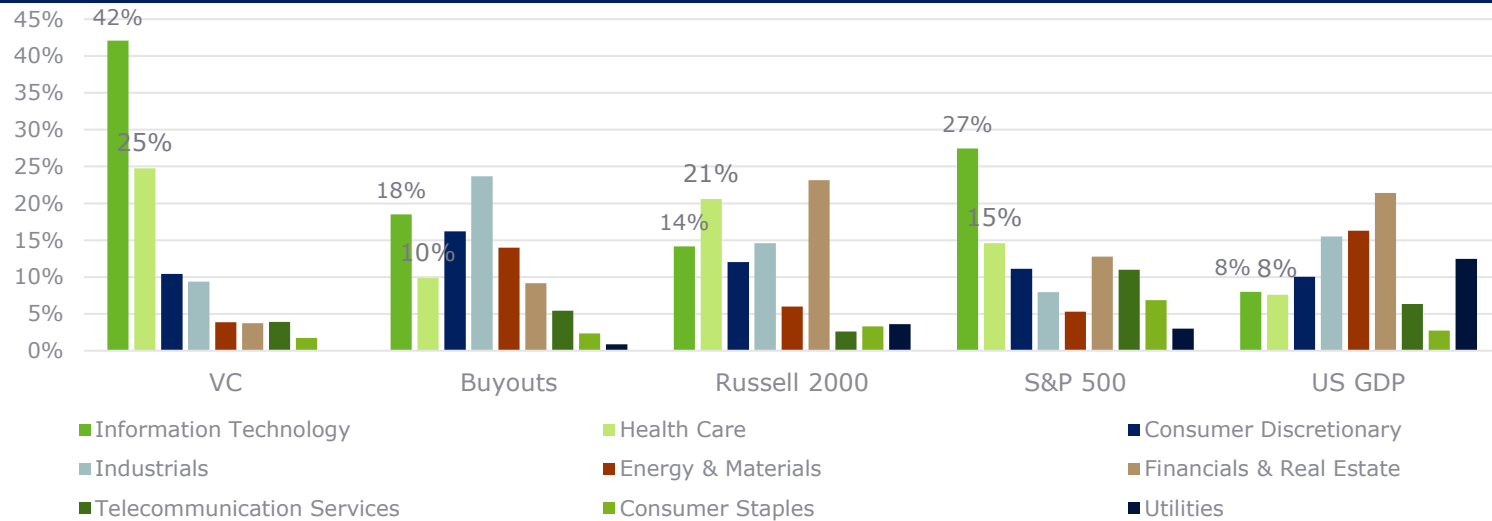
What is a SPAC?

- **SPAC = Special Purpose Acquisition Company.** Often referred to as “blank check companies”, a SPAC is a shell company into which a sponsor/investor raises capital for the purpose of acquiring an asset or company to bring to the public market. SPACs provide an alternative pathway to the traditional IPO for private companies to become public
- Once a SPAC is raised and funded, the sponsor has two years to acquire a target company. When an acquisition is announced, investors have the opportunity to redeem their shares at “par” plus interest
- SPAC sponsors include hedge fund and private equity managers, among others. SPAC targets may include PE- and-VC backed companies, providing liquidity for managers and ending up in public equity and fixed income portfolios
- SPACS have historically been maligned due to the perception of lower regulatory and investor scrutiny, conflicts of interest, rich sponsor economics, and the participation of arbitrageurs

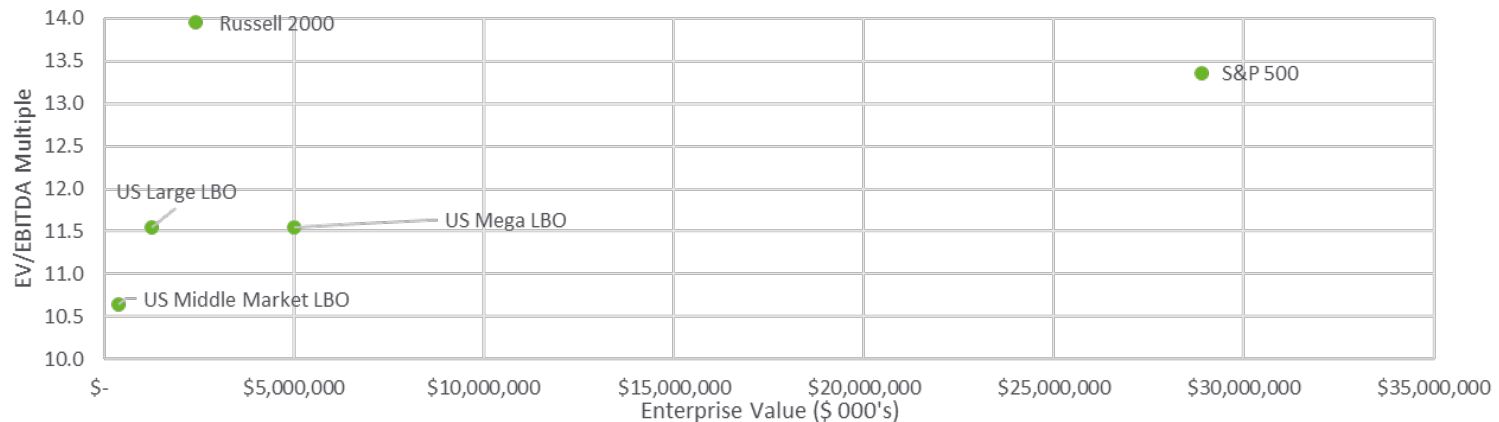
APPENDIX

COMPARING PUBLIC AND PRIVATE EQUITY

Sector Composition



Market Cap Comparison



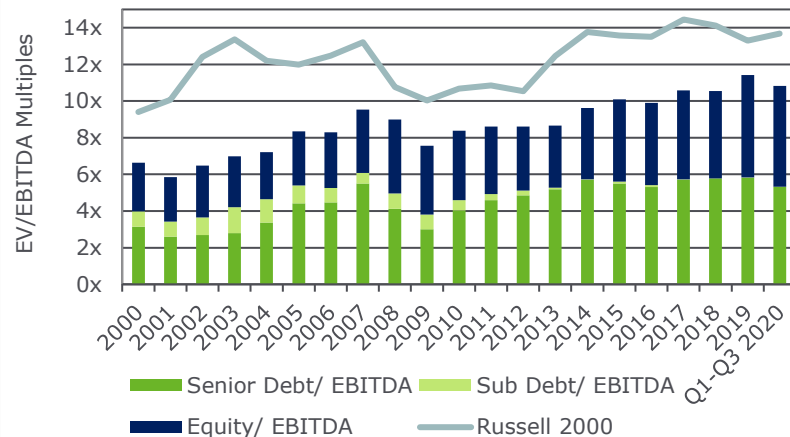
Source: S&P Global Market Intelligence, Pitchbook as of 7/14/2020, FactSet as of 4/30/2020

PUBLIC & PRIVATE EQUITY FINANCIALS

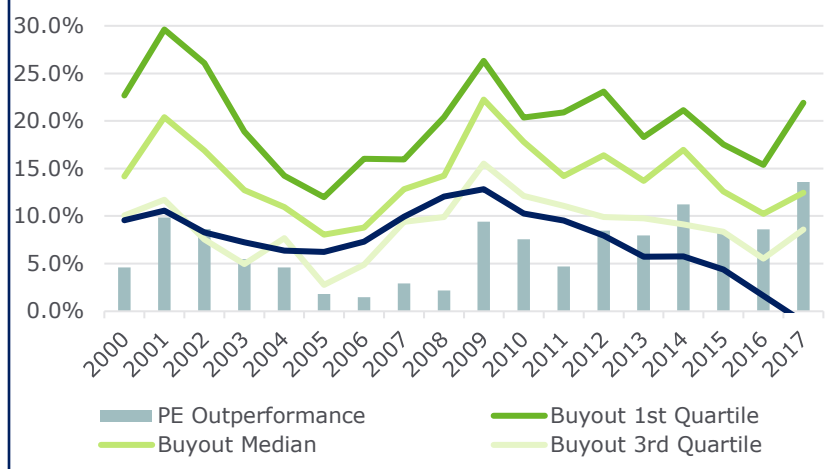
Comments

- Pre-COVID valuations were at cyclical highs across public and private companies. Valuations fell for deals done in Q2 but bounced back in Q3, albeit on a smaller number of deals than pre-COVID. Primarily large, high quality companies are trading hands at this time
- What used to be a more substantial gap between public and private valuations has narrowed over time, particularly for “large” buyout transactions
- Leveraged buyouts called such for a reason, but leverage levels are also increasing in small caps
- PE funds raised during recessions and early recoveries have higher illiquidity premia and alpha

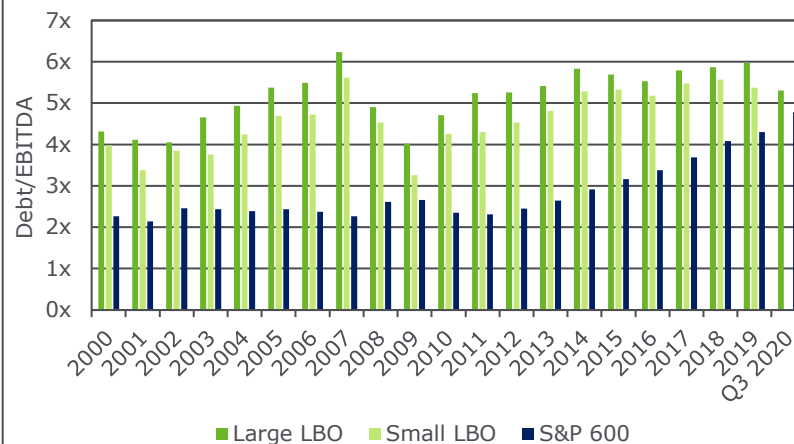
Public/Private Valuation Gap Narrowing Over Time



Illiquidity Premium Expands During Contractions



Public Companies Becoming More Highly Levered



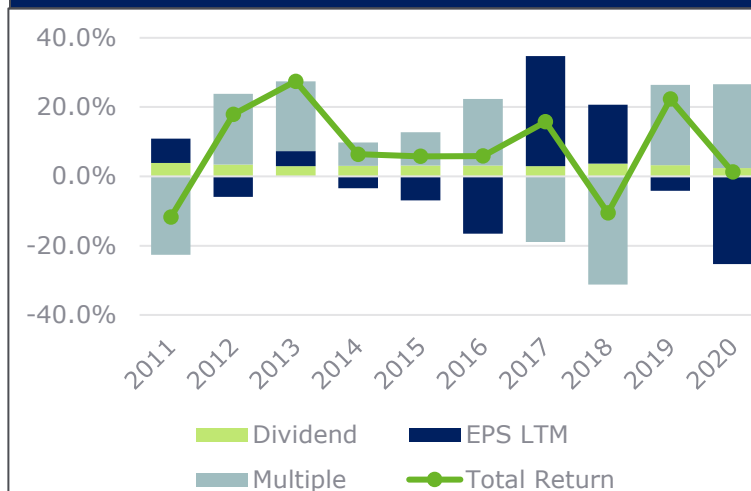
Source: S&P Global Market Intelligence as of 9/30/2020, FactSet as of 12/21/2020, Thomson One/C|A as of 6/20/2020
Large LBO EBITDA >\$50 million, Small LBO EBITDA <\$50 million. Total Debt/EBITDA for private and public companies

PUBLIC EQUITY RETURN BRIDGE

S&P 500



MSCI EAFE



MSCI Emerging Markets

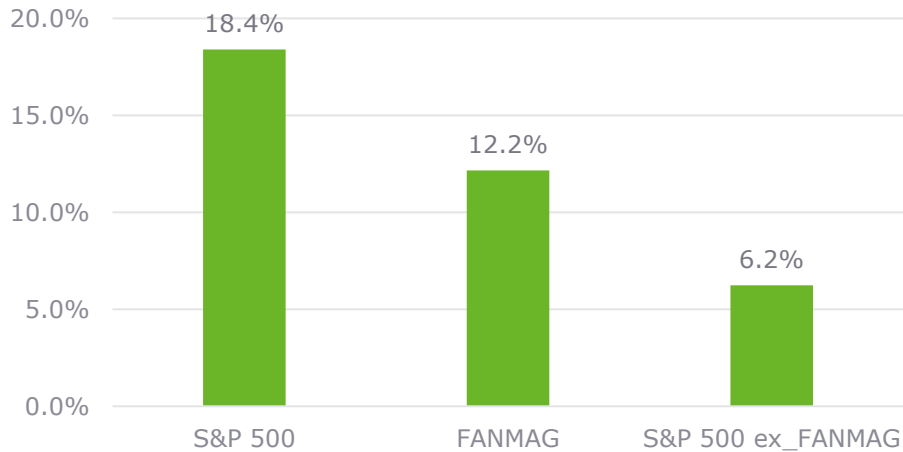


Commentary

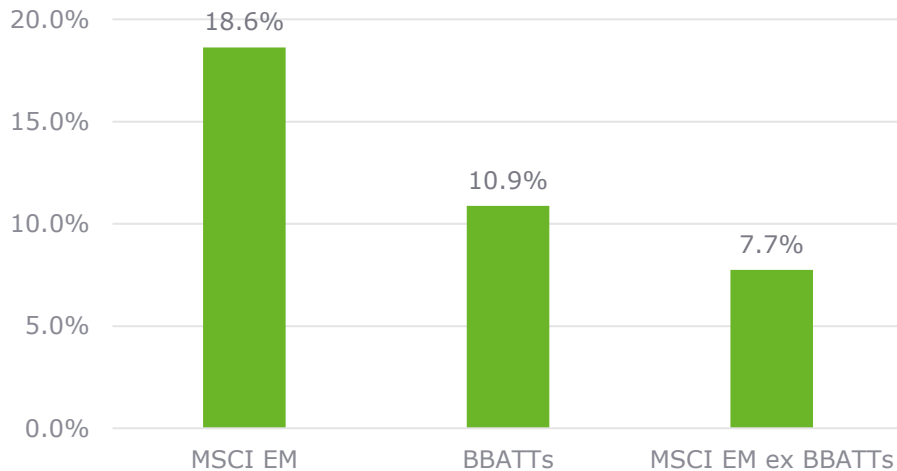
- Across the geographic spectrum, earnings per share fell 20% or more, year-over-year
- Positive returns were generated by multiple expansion for the second year in a row

INDEX RETURNS DRIVEN BY MEGA CAP TECH COMPANIES

S&P 500 Return Contribution



MSCI EM Return Contribution



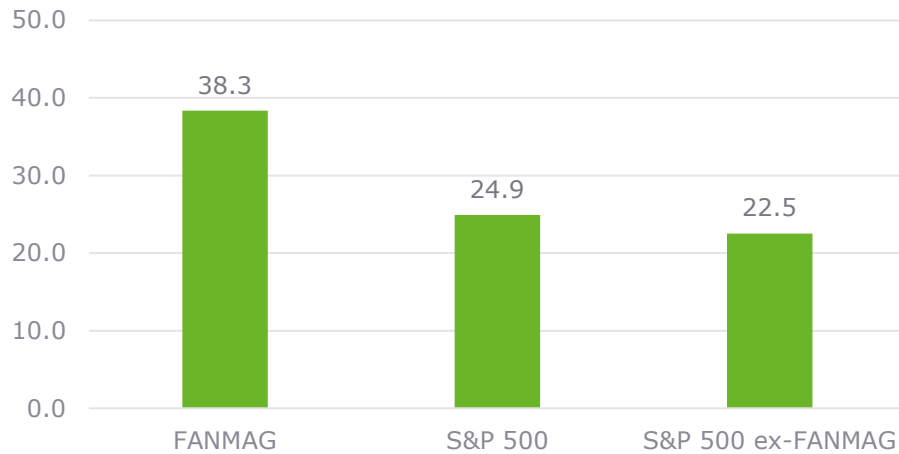
Commentary

- **A handful of mega-cap technology companies continue to drive index returns in the US and emerging markets**
- **“FANMAG” stocks, representing 22% of the S&P 500 at year end, accounted for approximately two-thirds of the index’s 2020 total return**
 - FANMAG = Facebook, Apple, Netflix, Microsoft, Amazon, Google
- **In emerging markets, BATTs generated over half of the index return**
 - BATTs = Baidu, Alibaba, Tencent, Taiwan Semiconductor, Samsung
- **Given the currently high level of index concentration – largely in technology sectors - this trend is likely to persist**

Source: Factset

VALUATIONS SKEWED HIGHER BY CONCENTRATION

S&P 500 NTM Price-to-Earnings



MSCI EM NTM Price-to-Earnings



Commentary

- **Headline index valuations skewed higher by concentration at the top of each index**
- **FANMAG trades at a 70% premium to the rest of the S&P 500**
- **BATTS trades at a 55% premium to the rest of the MSCI EM Index**

Source: Factset