



# Equities Asset Class Review

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## Executive Summary

- Quick primer on investment performance evaluation
- Recap of Equities Benchmark performance
- Review the impact of tilts within the FCERA portfolio
- Review 2020 activities within Equities
- Recap of asset allocation currently, and targets
- Sidebar on private credit investments terms
- Questions and Comments on Portfolio Management



# Performance Analysis:

***Always work from the top down, looking for explanations***

Total Portfolio, Absolute Return

1. 1 year
2. 3 years
3. 5 years

Total Portfolio, Relative to Benchmark

1. 1 year
2. 3 years
3. 5 years

Total Portfolio, Relative to Peers

1. 1 year
2. 3 years
3. 5 years



## Total Fund Executive Summary (Net of Fees)

Period Ending September 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2019	2018	2017	2016	2015
<b>Total Fund</b>	<b>5,144,042,597</b>	<b>100.0</b>	<b>4.5</b>	<b>-0.4</b>	<b>5.7</b>	<b>5.0</b>	<b>6.9</b>	<b>6.8</b>	<b>6.1</b>	<b>16.4</b>	<b>-3.3</b>	<b>14.6</b>	<b>6.7</b>	<b>-2.5</b>
Interim Policy Index			4.5	2.2	7.3	5.5	7.1	6.8	5.6	14.4	-2.6	14.0	6.5	-1.7
InvMetrics Public DB > \$1B Net Rank			71	77	54	70	82	77	44	59	35	67	80	86
<b>Total Equity</b>	<b>2,424,966,820</b>	<b>47.1</b>	<b>8.0</b>	<b>-1.0</b>	<b>8.5</b>	<b>6.4</b>	<b>9.4</b>	<b>9.0</b>	<b>--</b>	<b>26.0</b>	<b>-9.5</b>	<b>24.2</b>	<b>6.1</b>	<b>-2.6</b>
MSCI ACWI IMI NR			8.1	0.5	9.6	6.5	10.0	8.5	6.5	26.4	-10.1	23.9	8.4	-2.2
<b>Total Domestic Equity</b>	<b>1,310,520,345</b>	<b>25.5</b>	<b>8.2</b>	<b>3.1</b>	<b>13.0</b>	<b>10.0</b>	<b>11.8</b>	<b>12.7</b>	<b>--</b>	<b>28.0</b>	<b>-5.1</b>	<b>20.2</b>	<b>8.9</b>	<b>1.5</b>
Russell 3000			9.2	5.4	15.0	11.6	13.7	13.5	9.1	31.0	-5.2	21.1	12.7	0.5
<b>Total International Equity</b>	<b>1,114,446,475</b>	<b>21.7</b>	<b>7.7</b>	<b>-5.0</b>	<b>4.1</b>	<b>2.4</b>	<b>7.0</b>	<b>4.9</b>	<b>--</b>	<b>24.2</b>	<b>-13.6</b>	<b>28.5</b>	<b>3.0</b>	<b>-7.5</b>
MSCI ACWI ex USA Gross			6.4	-5.1	6.4	4.5	4.5	4.5	4.5	22.1	-13.8	27.8	5.0	-5.3
<b>Total Fixed Income</b>	<b>1,224,633,572</b>	<b>23.8</b>	<b>3.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>11.0</b>	<b>-2.9</b>	<b>8.0</b>	<b>6.7</b>	<b>-4.5</b>
Fixed Income Custom Benchmark			2.6	--	--	--	--	3.8	--	6.8	-1.2	7.4	2.1	-3.2
<b>Total Real Estate</b>	<b>239,524,274</b>	<b>4.7</b>	<b>-0.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>6.4</b>	<b>9.2</b>	<b>6.8</b>	<b>8.5</b>	<b>13.9</b>
NCREIF ODCE Net			0.3	--	--	--	--	5.7	--	4.4	7.4	6.7	7.8	13.9
<b>Total Infrastructure</b>	<b>174,493,435</b>	<b>3.4</b>	<b>1.9</b>	<b>-1.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>14.6</b>	<b>20.1</b>	<b>19.0</b>	<b>6.1</b>	<b>--</b>
NCREIF ODCE Net			0.3	-0.7	--	--	--	5.7	--	4.4	7.4	6.7	7.8	13.9
<b>Total Hedge Funds</b>	<b>34,407,568</b>	<b>0.7</b>	<b>1.5</b>	<b>-1.4</b>	<b>1.4</b>	<b>2.2</b>	<b>2.5</b>	<b>2.8</b>	<b>3.0</b>	<b>7.3</b>	<b>-0.7</b>	<b>4.6</b>	<b>3.0</b>	<b>0.0</b>
HFRF Fund of Funds Composite Index			4.3	2.6	5.7	2.9	3.1	2.9	2.6	8.4	-4.0	7.8	0.5	-0.3
<b>Total Private Equity 1 Qtr Lagged</b>	<b>263,735,513</b>	<b>5.1</b>	<b>-7.9</b>	<b>-0.1</b>	<b>3.4</b>	<b>8.9</b>	<b>9.8</b>	<b>11.0</b>	<b>10.5</b>	<b>4.7</b>	<b>19.6</b>	<b>13.9</b>	<b>10.7</b>	<b>3.8</b>
Russell 2000 1 Qtr Lagged			25.4	-4.3	-6.6	2.0	7.5	9.6	6.9	-8.9	15.2	13.7	21.3	-4.4
<b>Total Private Credit 1 Qtr Lagged</b>	<b>381,789,708</b>	<b>7.4</b>	<b>3.9</b>	<b>-0.7</b>	<b>4.6</b>	<b>4.8</b>	<b>5.5</b>	<b>6.5</b>	<b>10.7</b>	<b>5.3</b>	<b>7.6</b>	<b>8.1</b>	<b>7.4</b>	<b>-2.5</b>
BBgBarc US Corp. High Yield 1 Qtr Lagged			10.2	-1.3	0.0	3.3	5.8	6.0	6.8	6.4	3.0	7.0	17.1	-4.5
<b>Total Custodied Cash</b>	<b>113,005,627</b>	<b>2.2</b>	<b>0.1</b>	<b>0.4</b>	<b>1.1</b>	<b>1.8</b>	<b>1.3</b>	<b>0.8</b>	<b>--</b>	<b>3.0</b>	<b>1.9</b>	<b>0.1</b>	<b>0.8</b>	<b>0.0</b>
91 Day T-Bills			0.0	0.4	0.8	1.6	1.1	0.6	1.2	2.1	1.9	0.9	0.3	0.0
<b>Total County Cash</b>	<b>7,176,434</b>	<b>0.1</b>	<b>0.0</b>	<b>1.1</b>	<b>1.3</b>	<b>2.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.2</b>	<b>2.4</b>	<b>--</b>	<b>--</b>	<b>--</b>
91 Day T-Bills			0.0	0.4	0.8	1.6	1.1	0.6	1.2	2.1	1.9	0.9	0.3	0.0

Absolute

Relative to  
Benchmark

Peers  
1 is good  
100 is bad

Policy Index (Floating policy weights updated as of 9/30/2020). See Data Sources and Methodology for monthly policy breakout: 28% MSCI USA, 26% Fixed Income Custom Benchmark, 21% MSCI ACWI ex US, 0.57% Russell 2000, 0.55% BBgBarc US Corp. High Yield, 6.13% Private Equity Neutralized, 7.42% Private Credit Neutralized, 1% HFRF FoF Composite, 0% NCREIF ODCE Net and 2% 91 Day T-Bills. Composite total market values reflect manager exposures and any underlying cash balances. De-risking of the Plan commenced on April 30, 2014. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Fixed Income Custom Benchmark 9/1/2020: 35.6% BgBarc U.S. Aggregate Index, 3.8% BBgBarc US Securitized Index, 30.8% 60% BBgBarc High Yield/60% S&P LSTA U.S. Leveraged Loan Index, 15.4% FTSE WGBI TR, 11.6% JP Morgan GBI EM Global.



## Next: Drill Down Top to Bottom, Asking

- Is it above or below the total portfolio performance? (adding or subtracting?)
  - Does it seem consistent, or volatile?
  - Does it seem to be improving or deteriorating?
  - Is it above or below the rest of the asset class?
- 
- Equities
    - Absolute performance
    - Relative to Benchmark (the passive alternative)
  - Fixed Income
    - Absolute
    - Relative
  - Real Estate
    - Absolute performance
    - Relative
  - Private Credit
    - Absolute performance
    - Relative
  - Private Equity
    - Absolute performance
    - Relative



## 2020 Equities Performance Overview

- Despite the early uncertainty from Covid, all types of equities delivered strong returns in 2020. Lagging sectors were lodging, retail, travel.
- Strong equity returns were largely due to valuation expansion, rather than sharply improved fundamentals
- Certain sectors were unaffected by Covid, and performed the best
  - (meaning fundamental prospects and actuals DID improve)
- Valuation measures suggest that stocks are anticipating a strong economic recovery from here
- The FCERA passive equity portfolio benchmark returned 14.4%

# Benchmark Performance

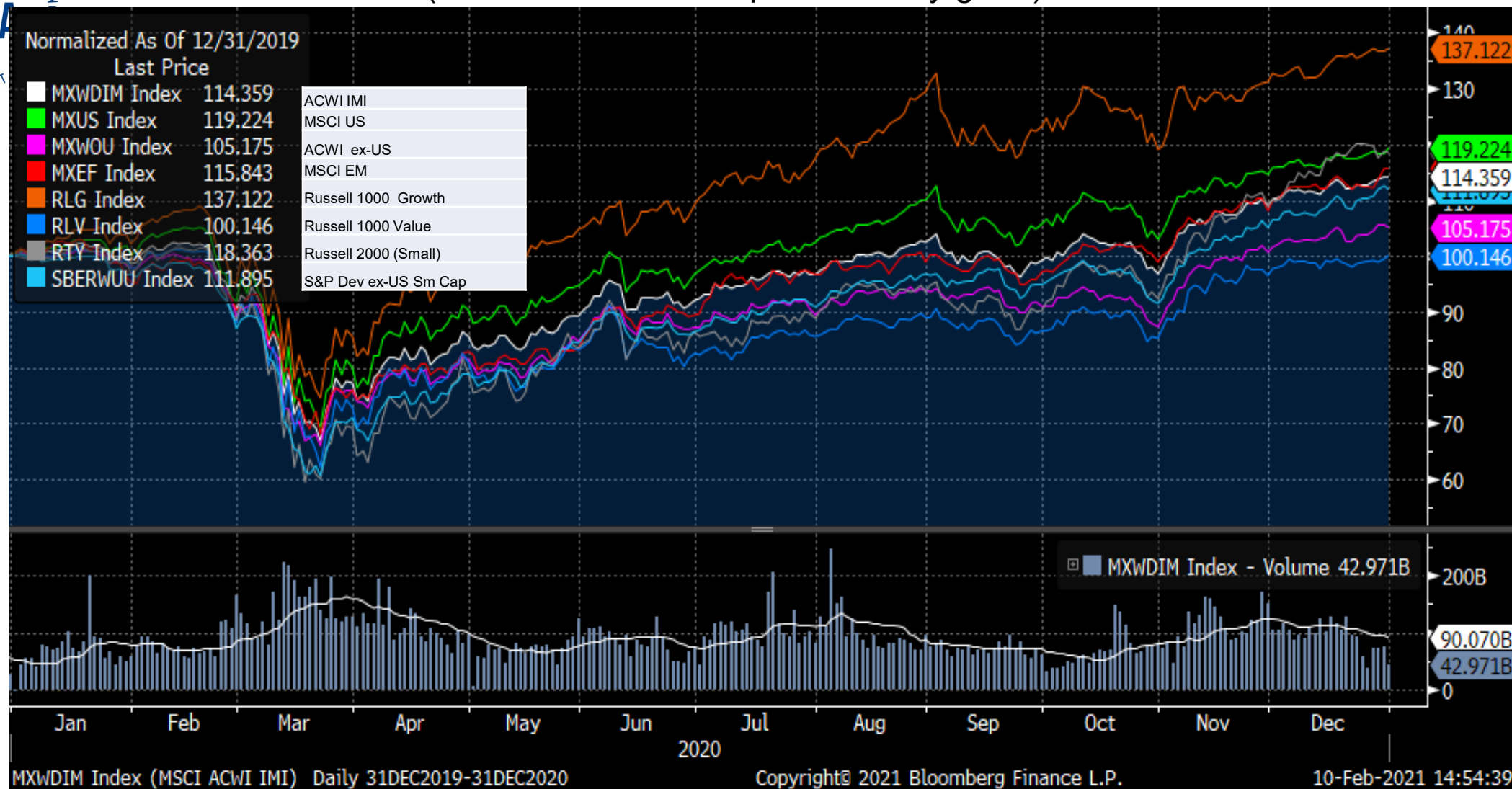
## *US outperformed international equities*

- Global Equities Benchmark  
ACWI IMI (MXWDIM) +14.4%
- US Equities Benchmark  
MSCI US (MXUS) +19.2%
- International Equities Benchmark  
MSCI World Ex-US +5.2%  
MSCI EM +15.8%



# FCERA Equity Portfolio 2020 Benchmark(s) Performance

Growth better than value, US better than non-US  
(EM and US small caps were very good)

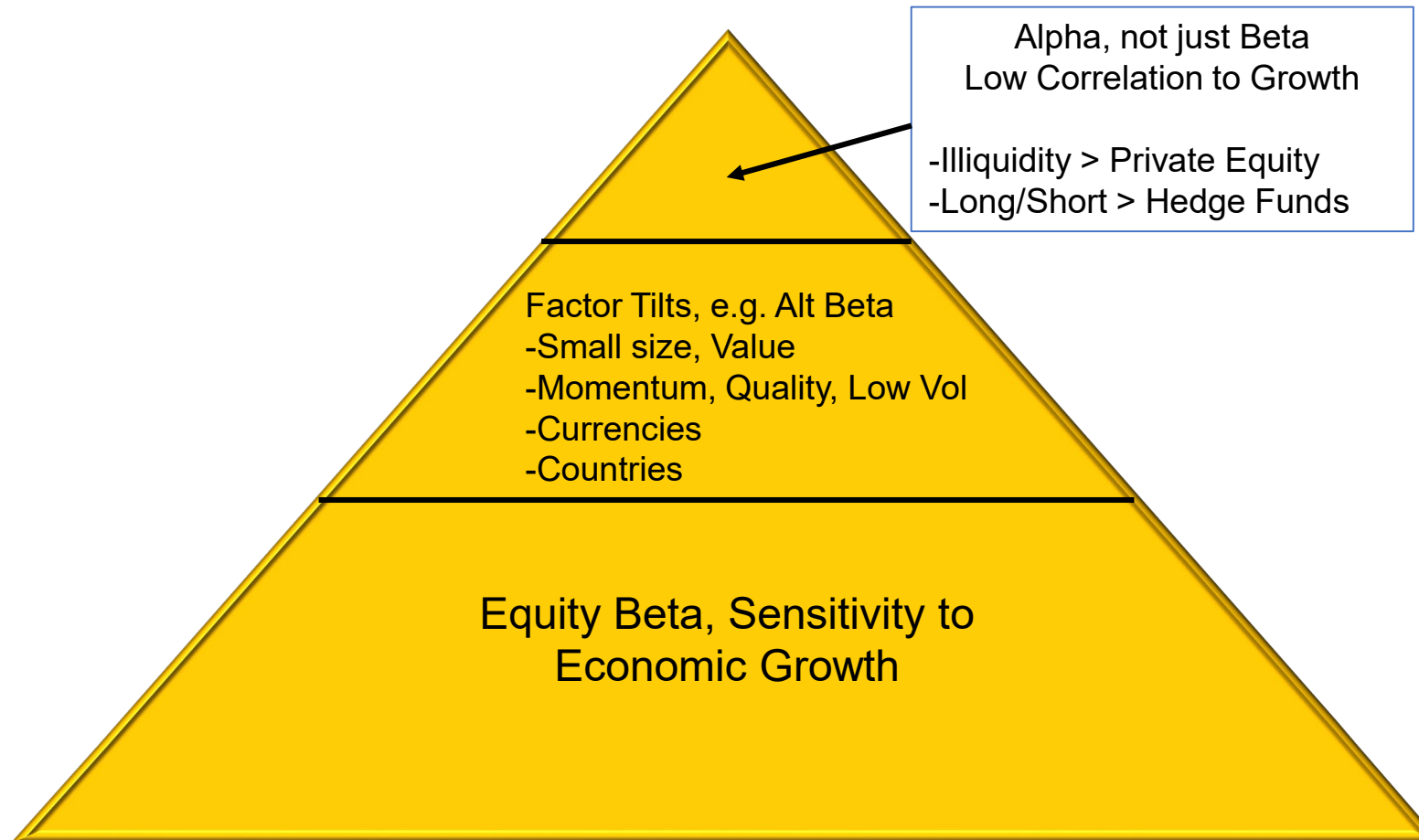






## The Equities Portfolio Risk Factor Pyramid

Beyond the Growth Factor Beta, Can We Get Paid Adequately for Taking on other “Risks” and/or find Alpha?

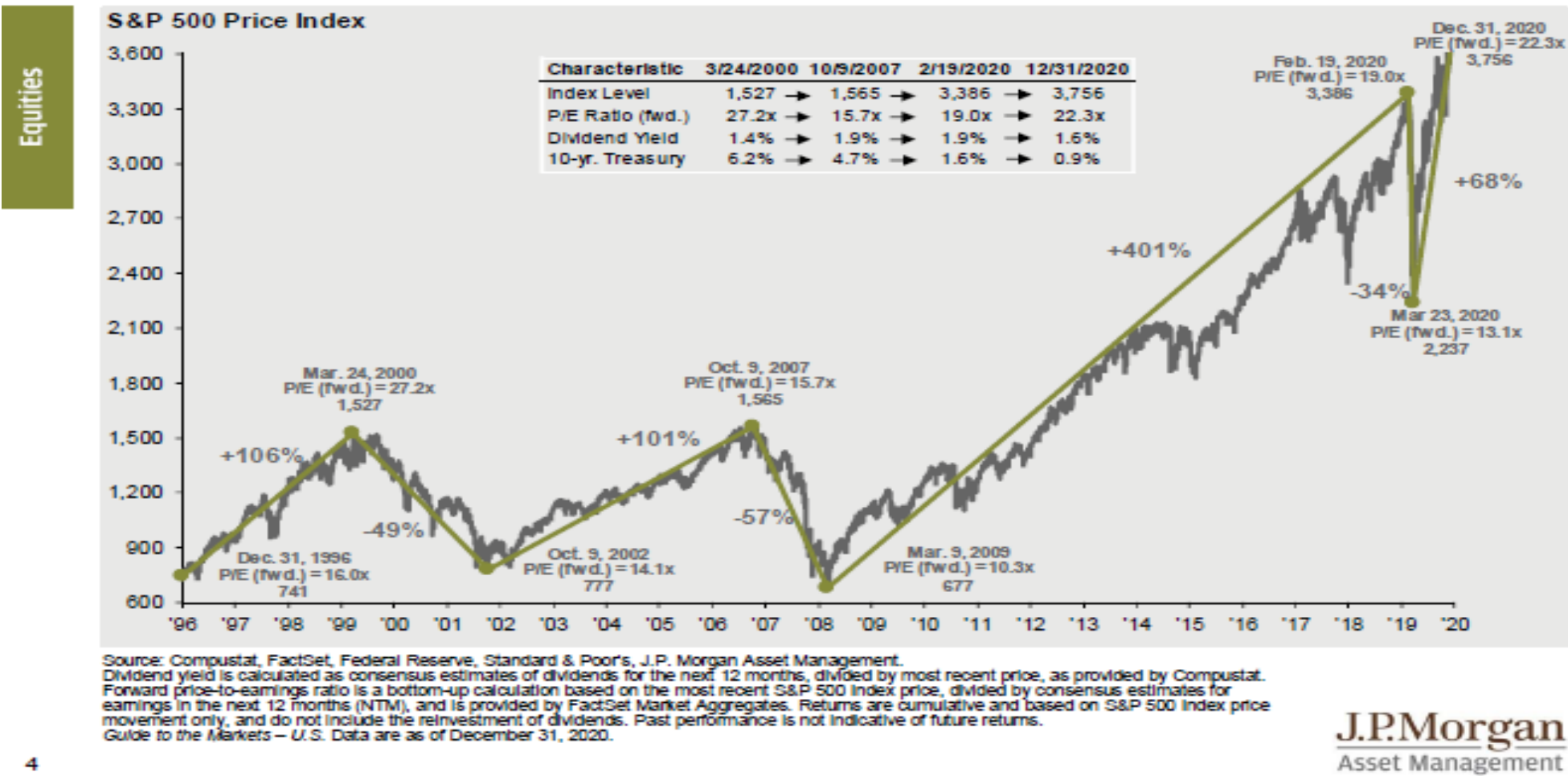




This may be the longest running bull market in history

S&P 500 Index at inflection points

GTM - U.S. | 4



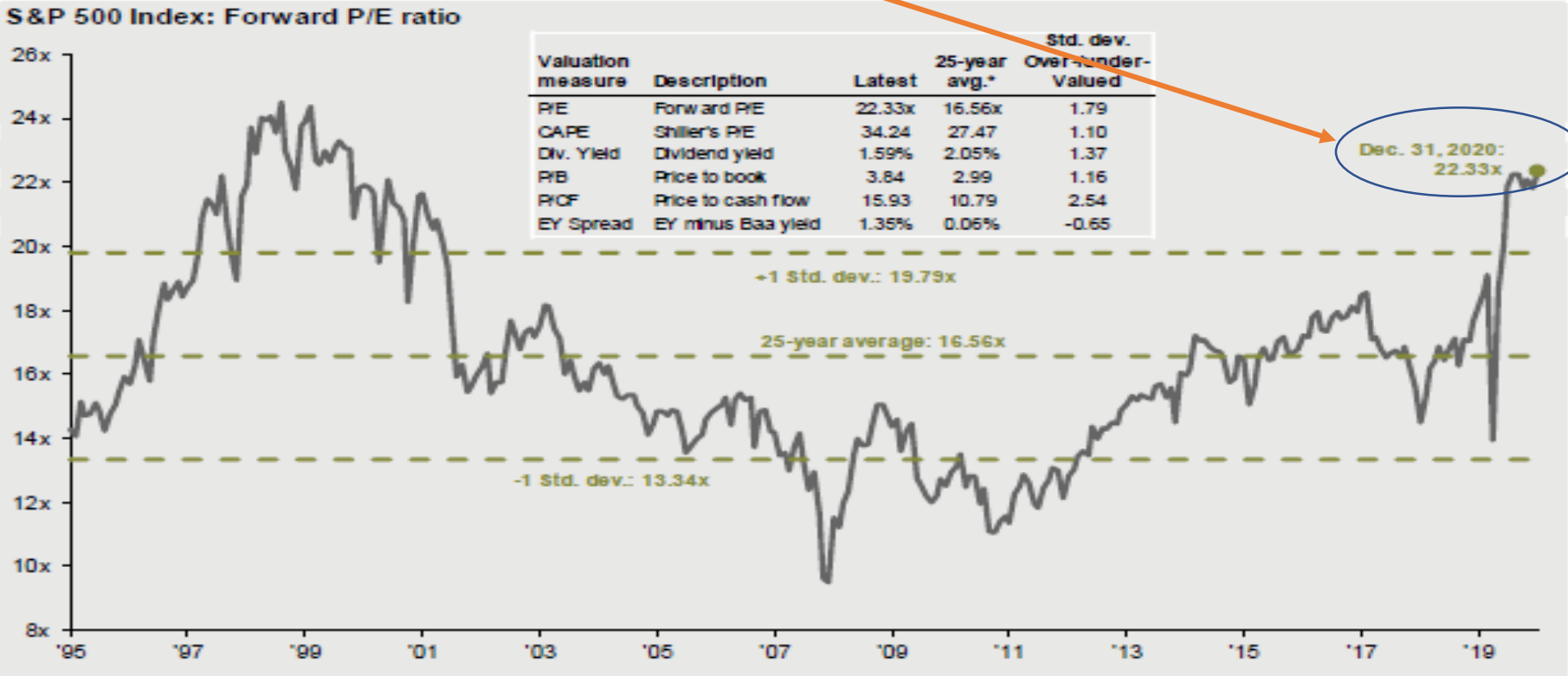


Price/Earnings is a valuation measure, now very rich

S&P 500 valuation measures

GTM - U.S. | 5

Equities



Source: FactSet, FRB, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.  
Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1995, and FactSet for December 31, 2020. Current next 12-months consensus earnings estimates are \$167. Average P/E and standard deviations are calculated using 25 years of IBES history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure.  
Guide to the Markets - U.S. Data are as of December 31, 2020.



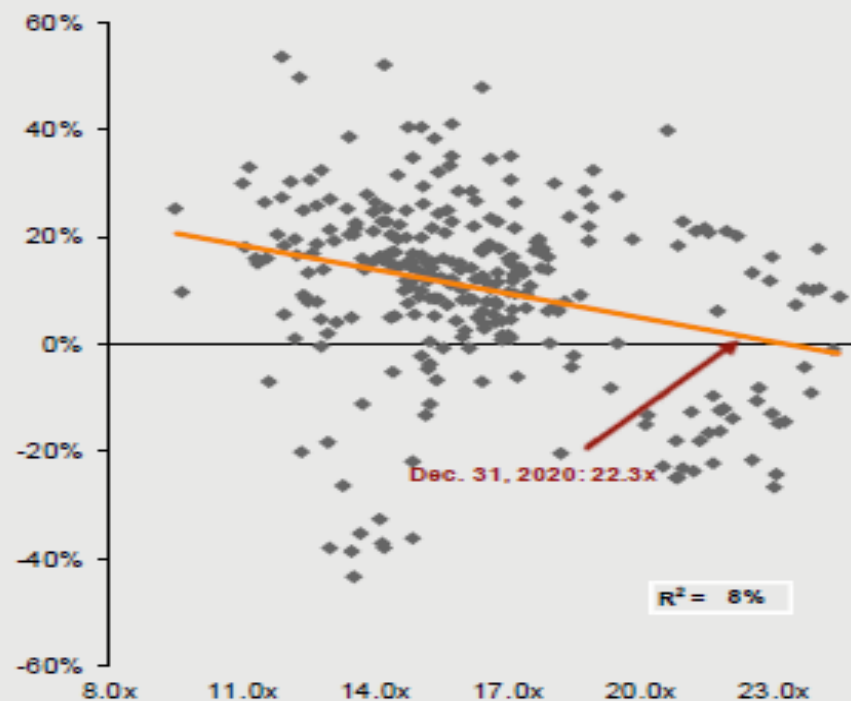
High P/E is not a sell signal, but does suggest lower returns in the future

## P/E ratios and equity returns

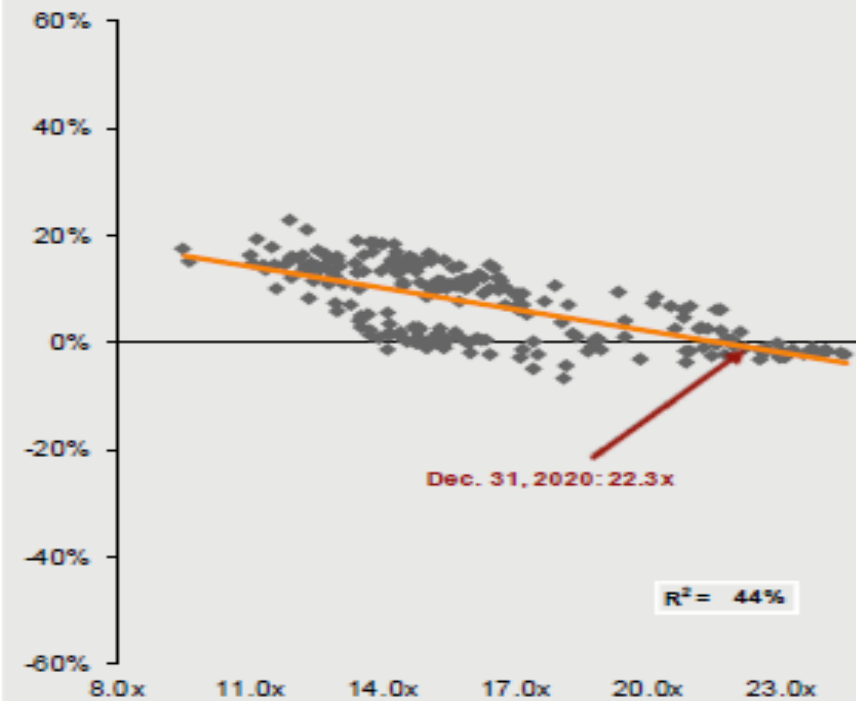
GTM - U.S. | 6

Equities

Forward P/E and subsequent 1-yr. returns  
S&P 500 Total Return Index



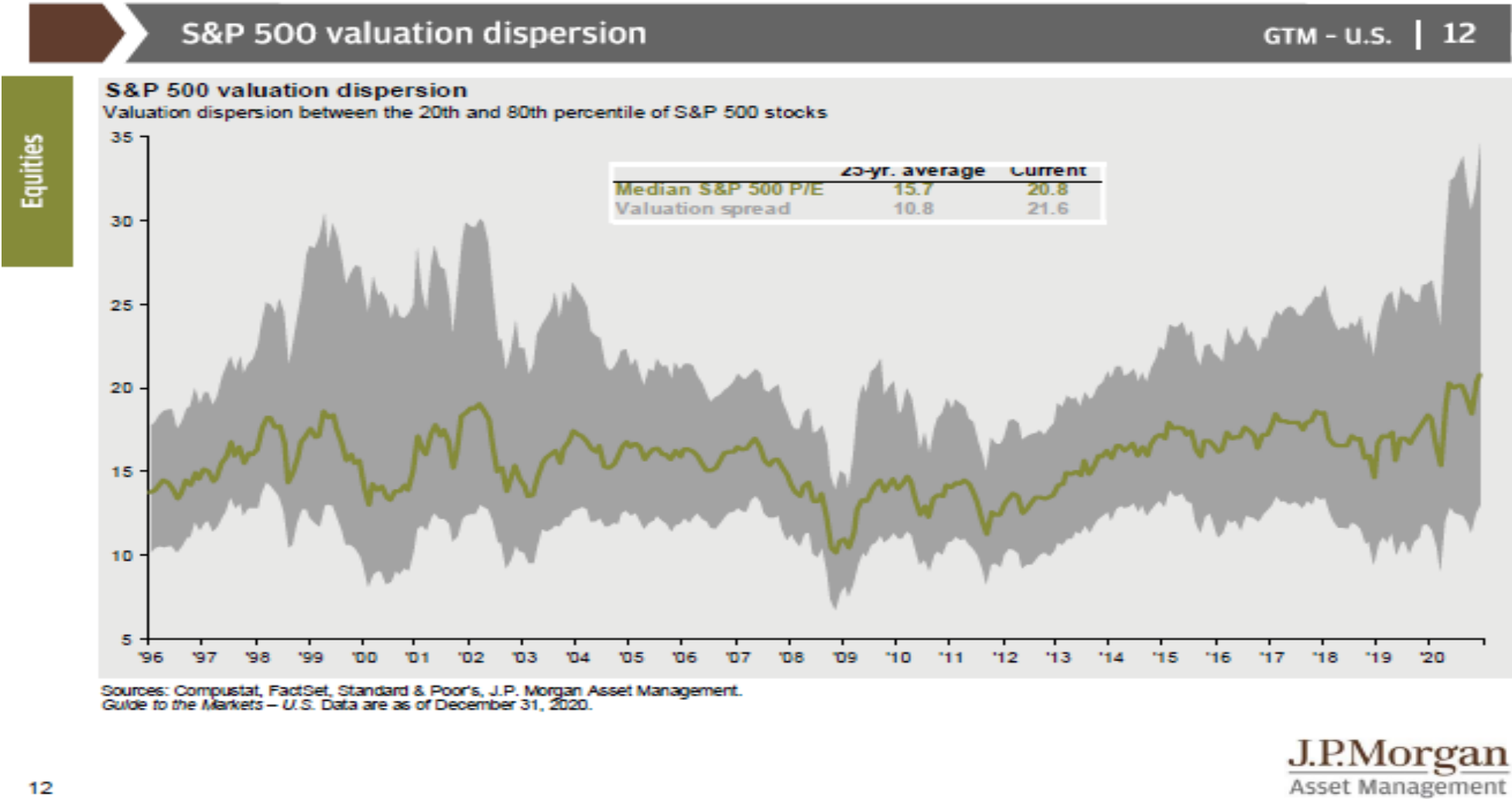
Forward P/E and subsequent 5-yr. annualized returns  
S&P 500 Total Return Index



Source: FactSet, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.  
Returns are 12-month and 60-month annualized total returns, measured monthly, beginning November 30, 1995.  $R^2$  represents the percent of total variation in total returns that can be explained by forward P/E ratios.  
Guide to the Markets - U.S. Data are as of December 31, 2020.



# The Range of Valuations is Now Historically Wide or Dispersed





The US was strong again in 2020, but EM was too

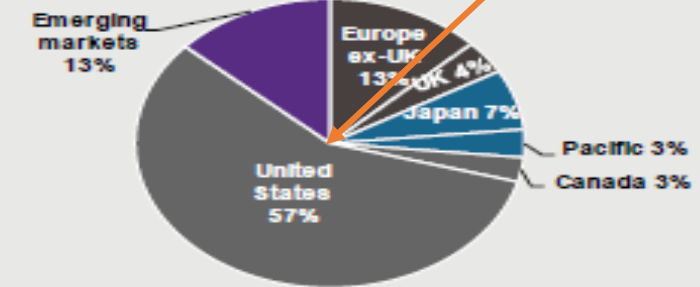
Note the weights in the ACWI benchmark

## Global equity markets

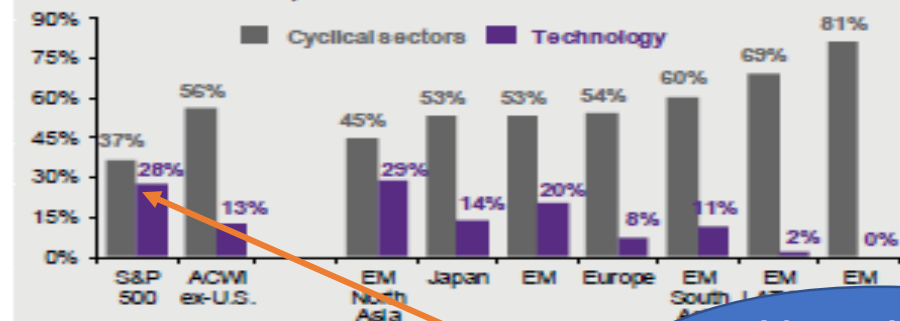
GTM - U.S. | 52

Returns	2020		2019		15-years	
	Local	USD	Local	USD	Ann.	Beta
<b>Regions</b>						
U.S. (S&P 500)	-	18.4	-	31.5	9.9	1.08
AC World ex-U.S.	6.5	11.1	21.4	22.1	5.4	0.89
EAFE	1.3	8.3	22.3	22.7	5.0	1.04
Europe ex-UK	2.1	11.6	27.5	25.9	5.9	1.18
Emerging markets	19.5	18.7	18.5	18.9	7.0	1.19
<b>Selected Countries</b>						
United Kingdom	-13.2	-10.4	16.5	21.1	2.9	1.02
France	-3.9	4.7	29.3	27.0	5.5	1.22
Germany	3.0	12.3	23.9	21.7	6.5	1.31
Japan	9.2	14.9	18.9	20.1	3.7	0.74
China	28.3	29.7	23.3	23.7	11.9	1.12
India	18.6	15.9	10.0	7.6	8.0	1.28
Brazil	4.8	-18.9	31.5	26.7	4.8	1.51
Russia	3.4	-11.6	38.8	52.7	2.7	1.51

**Weights in MSCI All Country World Index**  
% global market capitalization, float adjusted



**Representation of cyclical and technology sectors**  
% of index market capitalization



International

China overcame Covid!

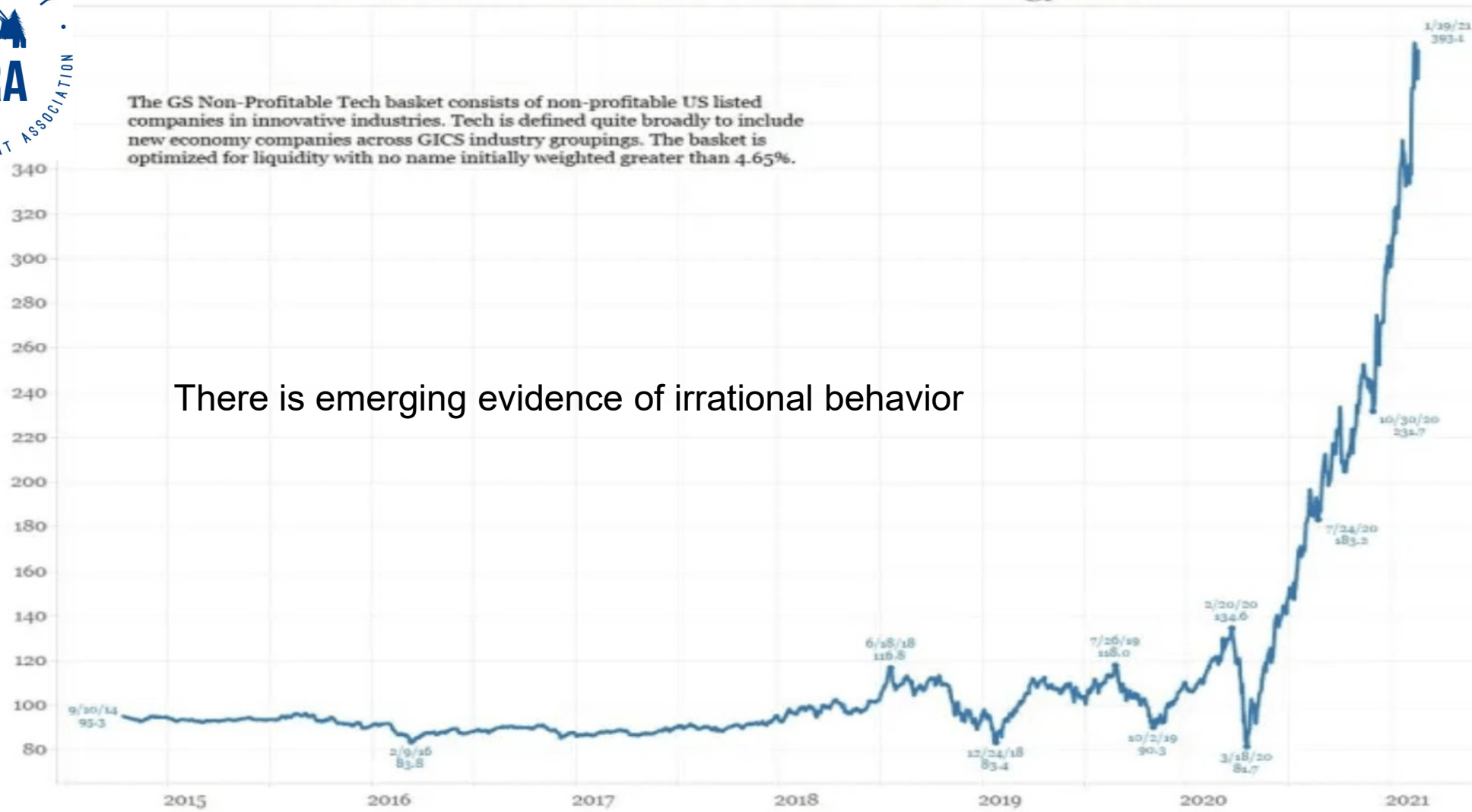
Note: US is dominated by Big Tech

Source: FactSet, Federal Reserve, MSCI, Standard & Poor's, J.P. Morgan Asset Management.  
All return values are MSCI Gross Index (official) data. 15-year history based on U.S. dollar returns. 15-year return and beta figures are calculated for the time period 12/31/05 to 12/31/20. Beta is for monthly returns relative to the MSCI AC World Index. Annualized volatility is calculated as the standard deviation of quarterly returns multiplied by the square root of 4. Chart is for illustrative purposes only. Please see disclosure page for index definitions. Past performance is not a reliable indicator of current and future results. Sector breakdown includes the following aggregates: Technology (Information Technology) and cyclicals (Consumer Discretionary, Financials, Industrials, Energy and Materials). EM North Asia includes China, Taiwan and South Korea. EM South Asia includes India, Indonesia, Malaysia, Pakistan, Philippines, Taiwan and Thailand.  
Guide to the Markets - U.S. Data are as of December 31, 2020.



## Goldman Sachs Non-Profitable Technology Index

The GS Non-Profitable Tech basket consists of non-profitable US listed companies in innovative industries. Tech is defined quite broadly to include new economy companies across GICS industry groupings. The basket is optimized for liquidity with no name initially weighted greater than 4.65%.

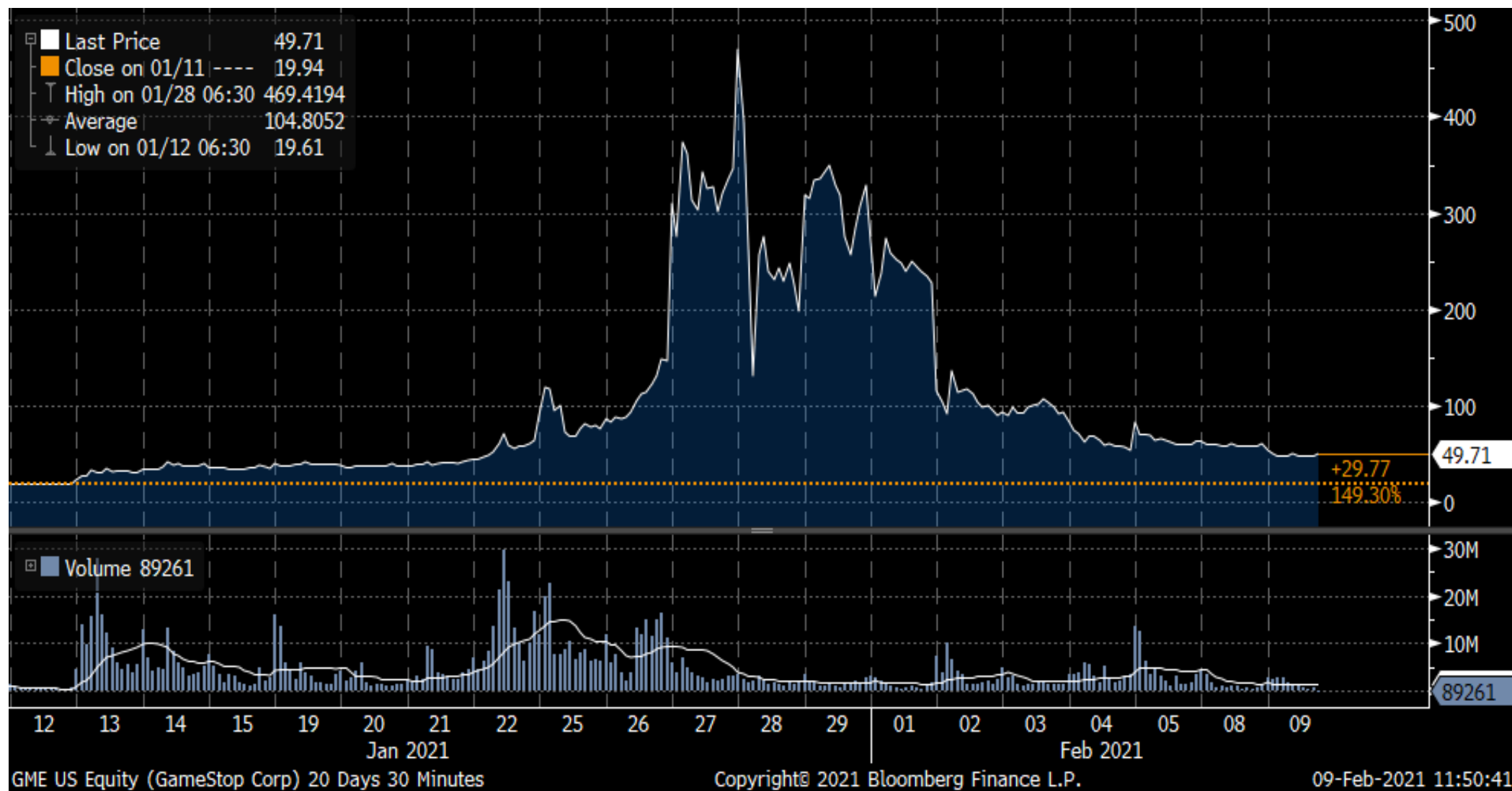


There is emerging evidence of irrational behavior

Source: Bloomberg

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<https://www.biancoresearch.com/>

# GameStop 1 Month Performance







## In 2020 FCERA Continued along Rebalancing Glidepath With Very Strong Equity Markets, Adding to Portfolio Performance

	Actual 12/2019	Actual 12/2020
Domestic Equities	23.40%	29.60%
Large Cap	16.20%	20.71%
Small Cap	5.00%	6.24%
overlay	2.20%	2.60%
International Equities	22.20%	22.86%
Large Cap	12.90%	13.06%
Small Cap	3.20%	3.29%
Emerging Mkts	6.10%	6.71%
overlay	0.00%	-0.20%
Total Equities	45.60%	52.40%
NOTE: private equity	4.80%	4.97%
overlay	1.30%	0.00%
All Equity	51.70%	57.37%



## Changes Made to Equity Portfolio 2020

- Implemented an Overall Equities benchmark, ACWI IMI
- Rebalanced in March by selling TIPS and adding to Equities
- Changed US passive benchmark from Russell 3000 to MSCI US
- Changed non-US benchmark from EAFE to ACWI ex-US
- Rebalanced the geographic equities split closer to ACWI, selling non-US and adding US Passive
- Terminated US Large Cap value manager and overlaid in passive
- Redeemed \$146mil from Artisan International Large Cap
- Redeemed \$ 125mil from Research Affiliates
- Added \$25mil to PIMCO StocksPlus



## Grading Ourselves: Portfolio Performance Attribution

- FCERA adjusted geographic weights in mid year to more evenly match benchmark: ✓
- In March the portfolio was rebalanced to trim fixed income and add to equities: ✓
- Within US, Large Cap Growth helped: ✓
- Heavy overweight in US and International to Value: —
- Within International, heavy EM overweight helped: ✓
- Within International, small cap helped: ✓
- Managers Adding Value: Artisan, Baillie Gifford, T Rowe Price, StocksPlus: ✓
- Managers Not Adding Value: Mondrian, RAFI, AJO (sold): —



## Individual Mandate Performance Attribution Can Be Separated into Factor Contribution and Active Contribution

	2020 Manager Performance	2020 Benchmark	Active Contribution (in \$mil)	Factor Contribution (in \$mil)
ACWI US (Passive)	16.3%	16.3%		
T Rowe	41.4%	37.1%	\$ 5.9	\$ 28.2
AJO	-12.3%	-10.9%	\$ (1.8)	\$ (35.6)
PIMCO StocksPlus	21.6%	18.4%	\$ 8.4	\$ 5.4
World ex-US (Passive)	5.2%	5.2%		
Artisan	9.5%	5.4%	7.8	0.5
RAFI	2.1%	5.4%	(6.4)	0.5
Mondrian Intl Small	11.6%	11.9%	(0.4)	11.3
Mondrian EM	13.4%	15.8%	(3.9)	16.8
Baillie Gifford EM	29.6%	15.8%	21.7	16.9
Total Contribution			\$ 31.3	\$ 43.9

Factor Tilts vs.  
Benchmark

← -Growth

← -Value

← -Small Size

Note: I did not  
attempt to measure  
the impact of  
geographic weights



## Sidebar: Sample Private Markets Terms and Returns

Terms: 1.25% management fee			
15% incentive fee over 7% preferred return			
Year 1 P&L			
	BDC – 0 Leverage	BDC-1X Leverage	Typical SMA
Coupon on Loans	7.75%	7.75%	7.75%
Equity Capital(\$mil)	100	100	100
Mgmt Fee	1.25%	1.25%	1.25%
Pref return	7.0%	7.0%	7.0%
Incent fee	15.0%	15.0%	15.0%
Admin Fee	0.5%	0.5%	
Borrow (\$mil)		100	100
rate	2.75%	2.75%	2.75%
Int Income (\$mil)	7.75	7.75	7.75
with lev (\$mil)	7.75	12.75	12.75
Mgmt Fee on Assets	1.25	2.50	2.50
Incent Fee **	0.11	0.86	-
other/admin *	0.50	0.50	-
Valuation Change	???	???	???
Total Net Income	5.89	8.89	11.25
Fees Paid to Mgr *	1.36	3.36	2.50
FCERA net return	5.89%	8.89%	10.25%
Mgr Return	1.36%	3.36%	2.50%
% to mgr	18.8%	27.4%	19.6%
* may or may not be paid to mgr			
** an SMA does not have incentive until principle is returned			

Leverage Adds to Income, but also to risk of Write-Down



## Potential Board Considerations For Equities

- Monitor Equity Performance vs. Benchmark and Peer Universe
- Continue to Evaluate Active vs. Passive
- Ongoing Geographic Weighting Decisions: US/Intl/EM
- Factor Tilts: Growth? Value? Quality? Size? Low Vol?
  - Monitor initial semi-active allocation to US Large Cap (with Value Tilt)
- Continual Monitoring of Active Manager Performance
- Review and Comment on Verus Watch List evolution