

# Public Equity Asset Class Review

*Kristin Qualls, Public Equity Director*

**March 28-29, 2019**



# Agenda

- I. Public Equity Program Review
- II. Allocation Review
- III. IPS Monitoring Review
- IV. Market Update & Public Equity Performance
- V. 2018 Highlights & Transition Management
- VI. 2019 Initiatives & Conclusion

# **I. PUBLIC EQUITY PROGRAM REVIEW**

# Public Equity Program Review - Staff

## Public Equity

Kristin Qualls

Vacant FTE

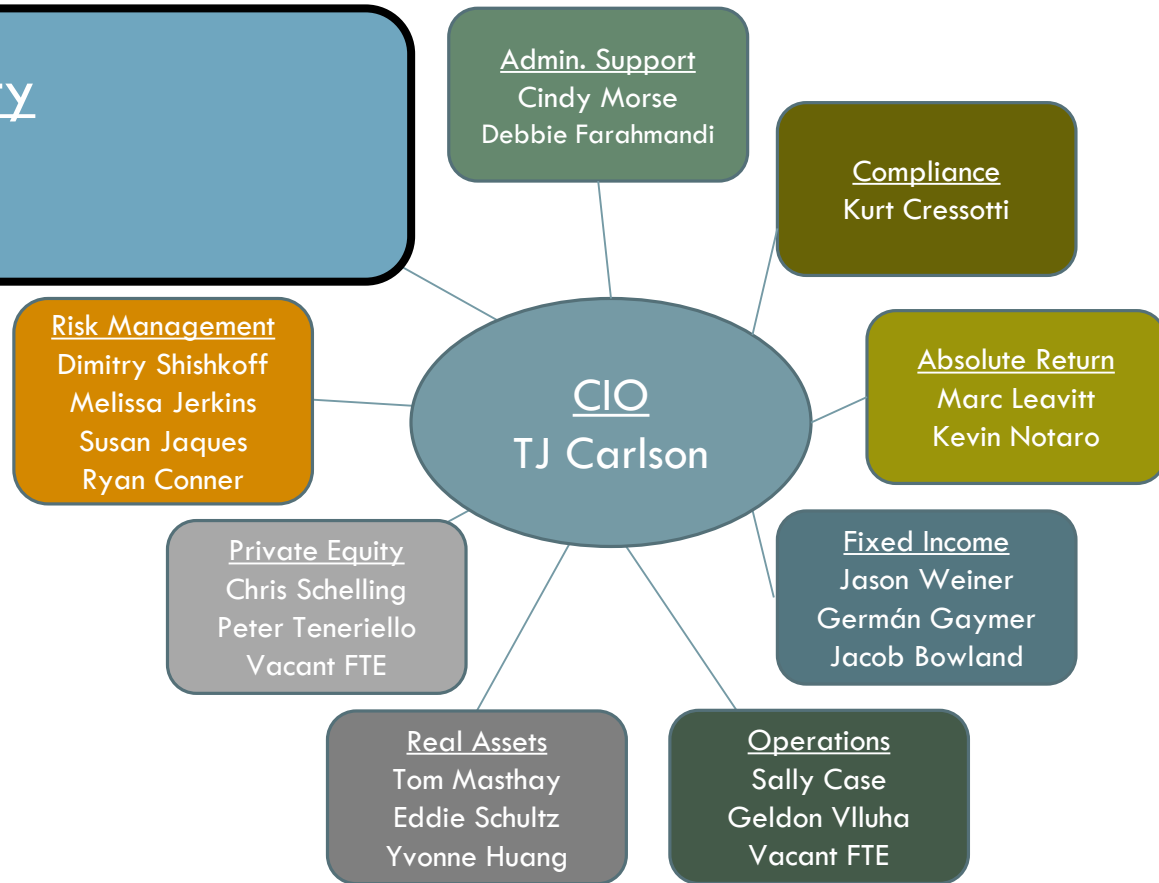
## Public Equity Team

### **Kristin Qualls**

27 years experience

Pension Fund, formerly Licensed Financial Consultant, Retail Brokerage, Operations

\*Pension fund experience of 15+ years



# Comprehensive Annual Review Process

## Why do we conduct annual reviews?

Per the TMRS IPS, comprehensive reviews are to be conducted and documented at least annually.

The Review Process Includes:

- Annual due diligence questionnaire and required deliverables;
- Includes both quantitative and qualitative factors during the review process;
- Review of firm changes, personnel, investment strategy, style, process, and philosophy;
- Review of compliance, operations, risk management, and performance;
- An onsite due diligence visit to the Manager's office or a visit by the Manager to TMRS' office;
- The results of an annual or ad hoc comprehensive review will be reported to the Board along with recommended action, if appropriate.

***The Annual Review process holds TMRS Staff accountable for its portfolio management process in order to preempt manager specific, strategic, or other potential problems.***

# Public Equity Program Review - Highlights

## **Manager Scorecard Summary:**

Nine manager relationships managing fourteen strategies are in 'Excellent,' 'Good' or 'Fair' standing. Three managers managing four different strategies were redeemed in December 2018.

## **Contractual Compliance:**

All managers' compliance with account guidelines and contracts are in satisfactory standing:

- Commingled Fund guidelines
- Separate Account guidelines

## **Monitoring and Review Summary:**

- Ad hoc, monthly, quarterly, and annual reviews
- Manager Reporting: Annual DDQ, risk reports, market commentary, quarterly reporting package, team and portfolio overviews, performance attribution and performance review, compliance certificates, regulatory reporting, quarterly review calls and/or ad hoc calls/meetings, as needed
- IPS Compliance and Monitoring of Strategy Account Guidelines: this is conducted in conjunction with TMRS Compliance Officer

# Public Equity Program Review - Highlights

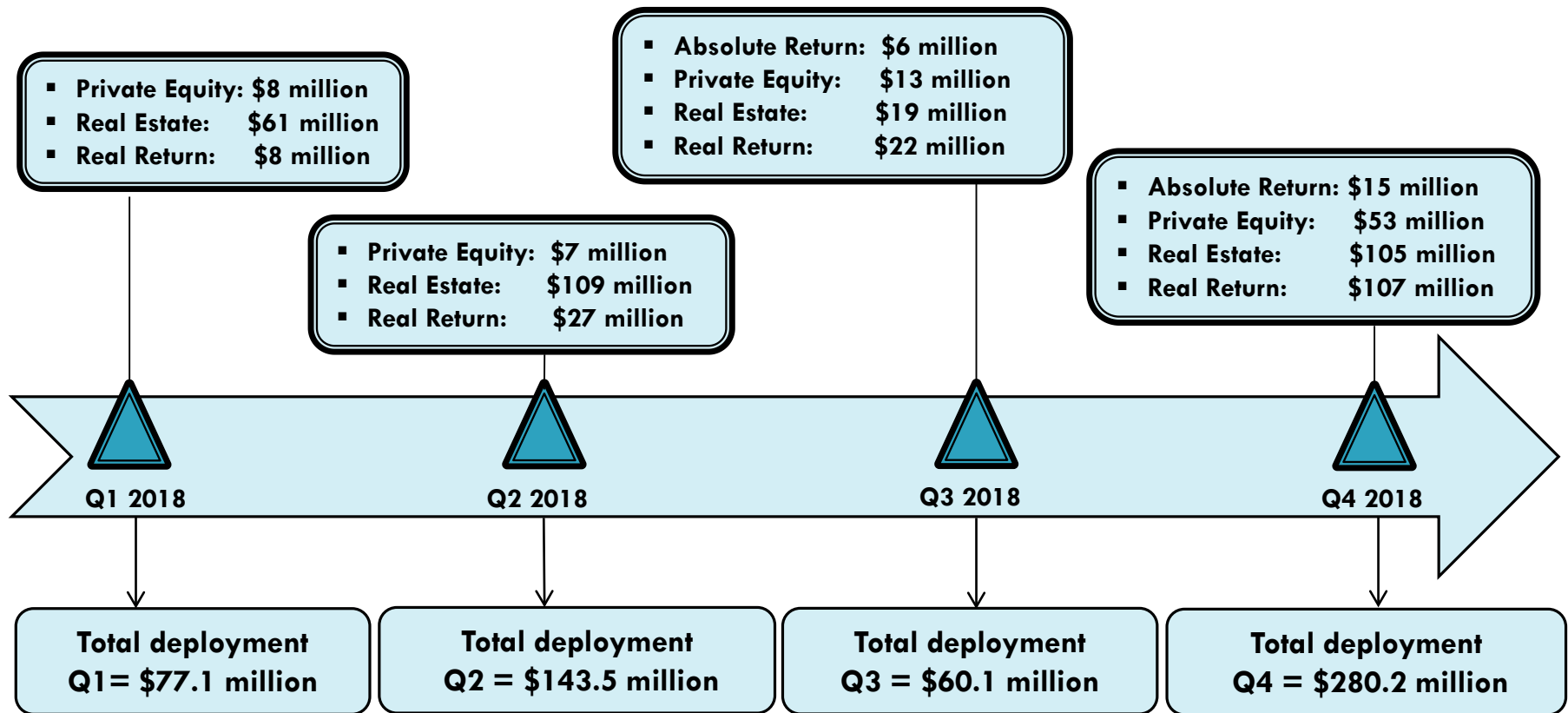
## Public Equity Initiatives: Annual Review

## Status

- **Monitor existing portfolio through due diligence, research, and oversight**  
*Reporting deliverables from managers are essential to staff's oversight, in addition to, internal sources for insight and review.*
- **Continued research and external manager meetings to seek opportunities**  
*Remain cognizant of the trends for new strategy types and identification of opportunities.*
- **Continue to fund other asset classes by drawing down the public equity passive portfolio**  
*The public equity portfolio continues to fund Private Equity, and other alternative asset classes, based on rebalancing needs.*
- **Monitor the passive/active structure as it relates to TMRS' investment objectives**  
*As the total public equity portfolio continues to mature, staff continues to evaluate the portfolio's structure and investment strategies. Evaluation includes the new global mandate.*



# Public Equity Program Review – Funds Deployed to Other Asset Classes\*



**Total Funds Deployed to Other Asset Classes YTD 2018 = \$561 million**

**Execution & portfolio management is an integral part in  
TMRS achieving its strategic allocation objectives.**



# Public Equity Program Review – Funds Deployed to Other Asset Classes\*

## Russell 3000 Fund:

2014 - \$180.7 million  
2015 - \$26.1 million  
2016 - \$637.9 million  
2017 - \$1.845 billion  
2018 - \$561 million



Total re-deployed from  
Russell 3000 Passive Portfolio:  
**\$3.3 billion**

## ACW ex. US IMI Fund:

2014 - \$630.5 million  
2015 - \$100 million  
2016 - \$0  
2017 - \$0  
2018 - \$0



Total re-deployed from  
ACWI ex. US IMI Passive Portfolio:  
**\$730.5 million**

**Total funds deployed from passive portfolios since 2014 is \$4.0 billion**

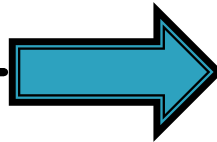
# Public Equity Program Review

## Public Equity Team Manager Research Meetings:

- 2015 Total Manager Meetings: 96
  - 2016 Total Manager Meetings: 157
  - 2017 Total Manager Meetings: 146
  - 2018 Total Manager Meetings: 188
- TOTAL MEETINGS: 587**

## Meeting Types in 2018:

- Asset Allocation: 6
- Consultant: 6
- Due Diligence: 57
- Economy: 12
- Manager Pipeline: 54
- Research: 33
- Transition: 17
- Other: 3



### The Importance of Focus:

*The Equity team focused the majority of time on current due diligence, research, and potential new manager strategies.*

## **II. ALLOCATION REVIEW**

# Public Equities: Asset Class Objectives

**Global Equity:** New asset class approved by the Board of Trustees at the December 2018 meeting.

- Intended to provide capital appreciation and is structured using a Core-Satellite Approach with the overall objective of exceeding its benchmark performance net of fees over rolling five year periods.
- Active and Rules-Based strategies with an active component are expected to add excess return within established tracking error limits and will meet quality, diversification, and liquidity guidelines as specified in the Managers' contracts.
- Eligible manager types may include managers that focus on US, non-US, emerging markets or global equity securities.
- No more than 15% of the Global Equity Asset Class may be invested in dedicated Emerging Market Separately Managed Accounts.

# Public Equities: Portfolio Management Strategies

ASSET CLASS	STRATEGY TYPE	MANAGER	PORTFOLIO BENCHMARK
<b>Domestic Equities</b> US Core/Passive	Passive Broad Market Index	Northern Trust Asset Management	Russell 3000 Index
US Rules-Based	Passive Fundamental Index	State Street Global Advisors	Russell RAFI US Index
US Rules-Based	Passive Minimum Volatility	UBS Global Asset Management	MSCI US Min Vol Index
US Satellite/Active	US Mid Cap Core	Champlain Investment Partners	Russell Mid Cap Index
US Satellite/Active	US Small Cap Opportunities	Wellington Management	Russell 2000 Index
<b>International Equities</b> Non-US Core/Passive	Passive Broad Market Index	Northern Trust Asset Management	All Country World (ACW) ex US Investable Market Index (IMI)
Non-US Rules-Based	Passive Fundamental Index	State Street Global Advisors	Russell RAFI Global ex US Index
Non-US Rules-Based	Passive Minimum Volatility	UBS Global Asset Management	MSCI World ex US Min Vol Index
Non-US Satellite/Active	Non-US Opportunistic Rel Value	Wellington Management	MSCI ACWI ex US Index
Non-US Satellite/Active	Non-US Opportunistic Core	Lazard Asset Management	MSCI ACWI ex US Index
Non-US Satellite/Active	Non-US Emerging Markets	Acadian Asset Management	MSCI Emerging Markets (EM) IMI Index
Non-US Satellite/Active	Non-US Emerging Markets	William Blair & Company	MSCI Emerging Markets (EM) Index
Non-US Satellite/Active	Non-US Small Cap	Wasatch Advisors, Inc.	MSCI All Country World (ACW) ex. US Small Cap Index
Non-US Satellite/Active	Non-US Small Cap	Wellington Management	MSCI EAFE Small Cap Index

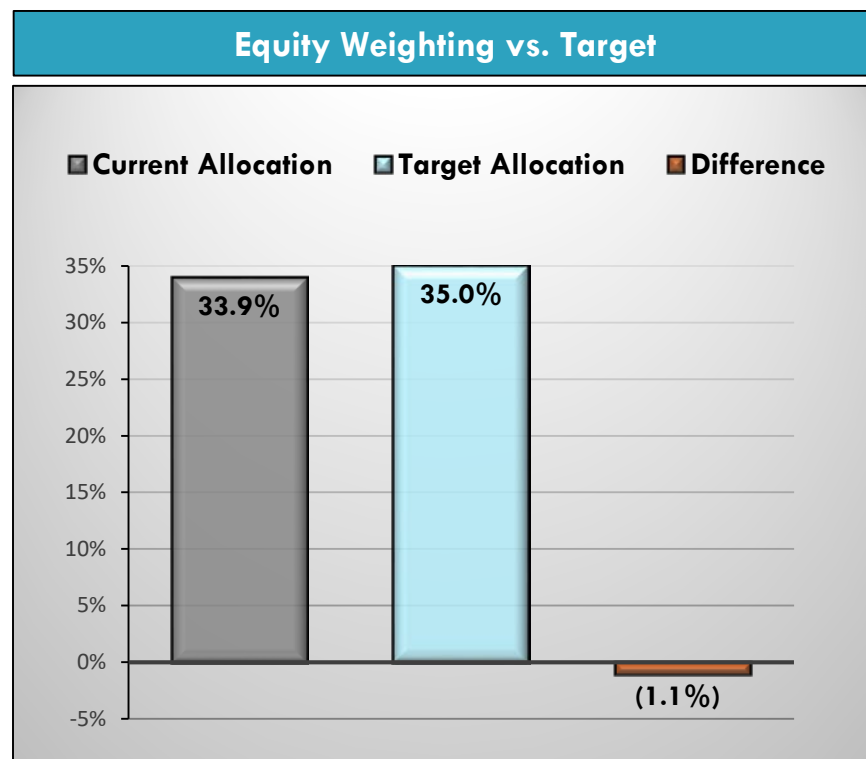
As of December 31, 2018

# Current vs. Target Total Equity Allocation

As of 12/31/2018

Mandate	Market Value	% of Total Fund
<b><u>PASSIVE EQUITY</u></b>		
NTAM RUSSELL 3000	3,167,936,735	11.5%
NTAM ACW EX. US IMI	2,441,621,707	8.8%
<b>TOTAL:</b>	<b>5,609,558,441</b>	<b>20.3%</b>
<b><u>ACTIVE EQUITY</u></b>		
US RULES-BASED EQUITY	1,253,146,336	4.5%
US ACTIVE EQUITY	611,181,849	2.2%
NON-US RULES-BASED EQUITY	545,034,222	2.0%
NON-US ACTIVE EQUITY	1,337,551,373	4.8%
<b>TOTAL:</b>	<b>3,746,913,781</b>	<b>13.6%</b>

NOTE: Percentages may not be exact due to rounding

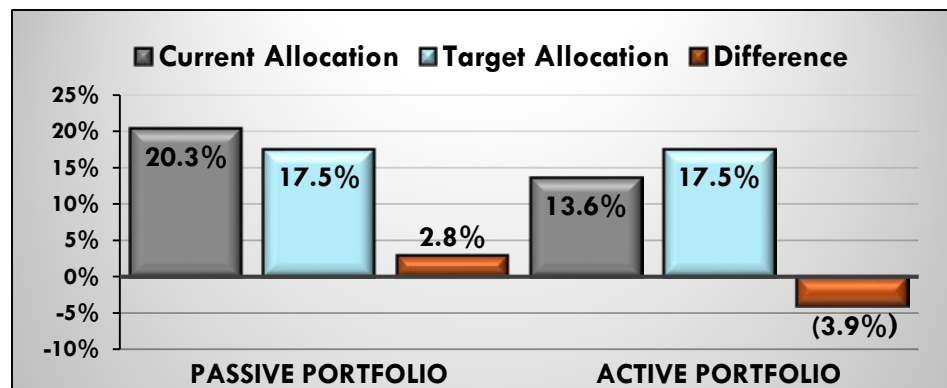


**Total Equity Portfolio is slightly underweight the target allocation**

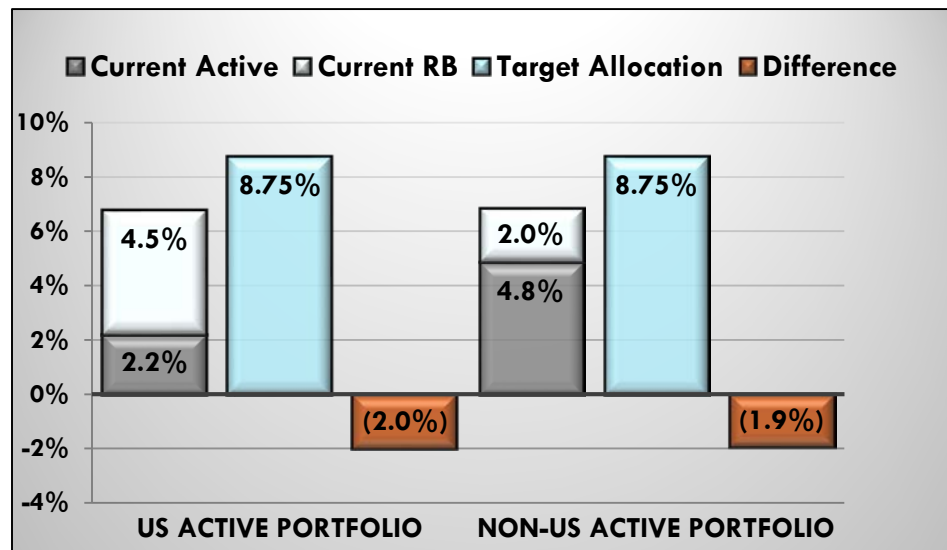
# Passive/Active Structure Allocation

% of Total Fund as of 12/31/2018

PASSIVE Portfolio Managers	Market Value	% of Total Portfolio
US CORE EQUITY: NTAM Russell 3000	3,167,936,735	11.5%
NON-US CORE EQUITY: NTAM ACW ex. US IMI	2,441,621,707	8.8%
<b>TOTAL:</b>	<b>5,609,558,441</b>	<b>20.3%</b>



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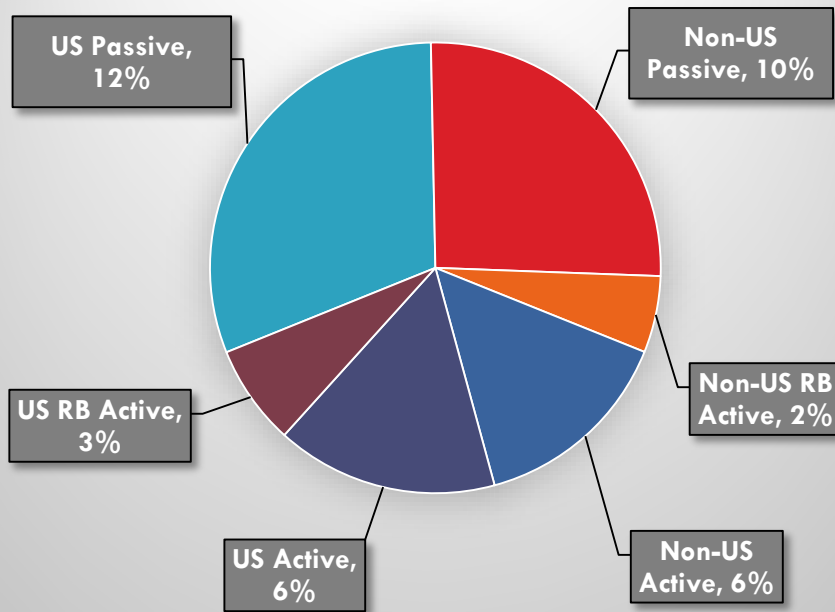


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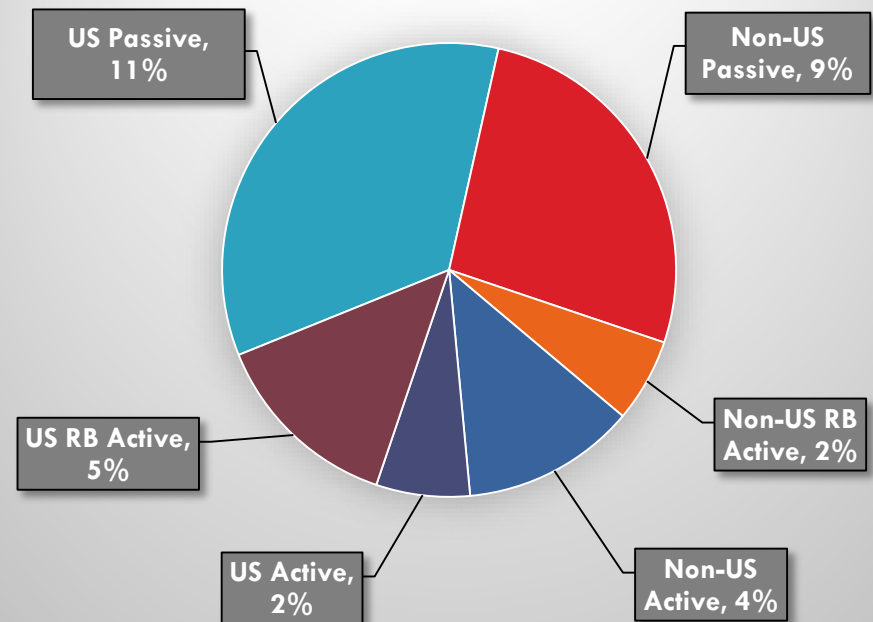
# Changes to Passive/Active Allocation

## Allocation By Asset Category vs. Total Portfolio

As of 12/31/2017



As of 12/31/2018

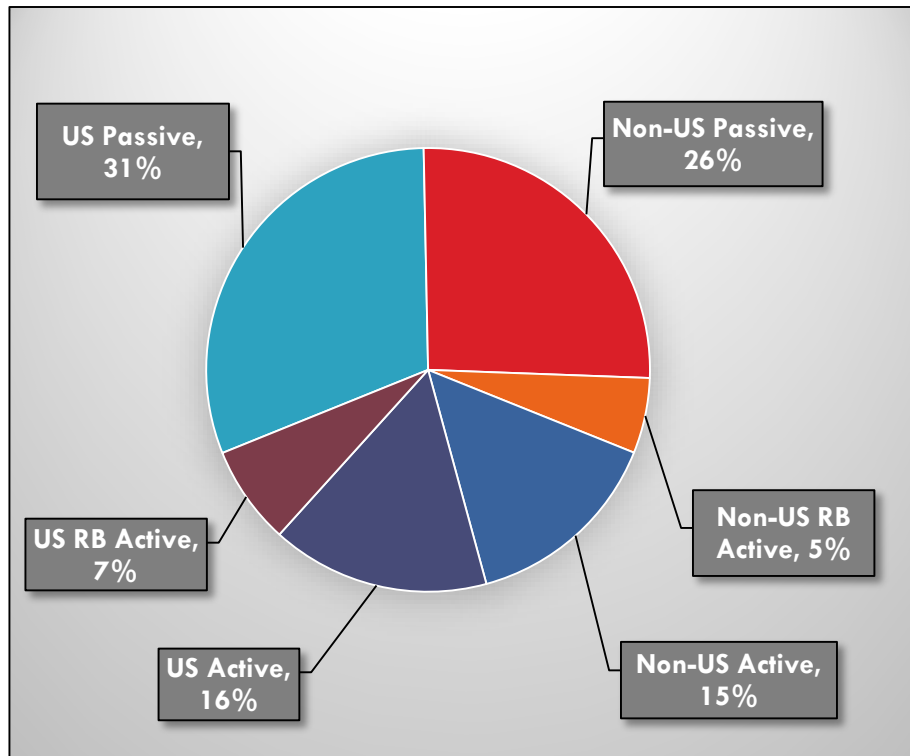




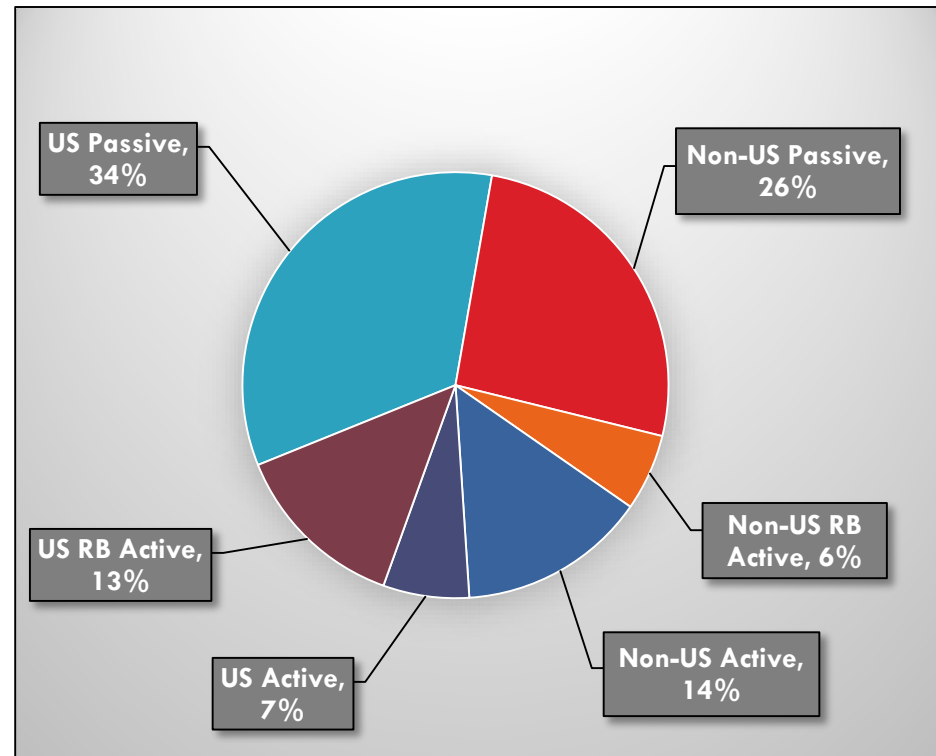
# Changes to Passive/Active Allocation

## Allocation by Asset Category vs. Total Equity Portfolio

As of 12/31/2017



As of 12/31/2018

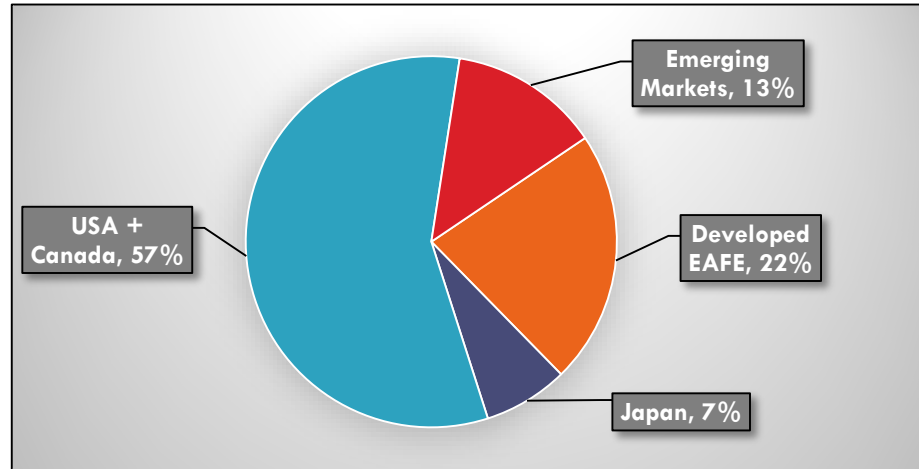




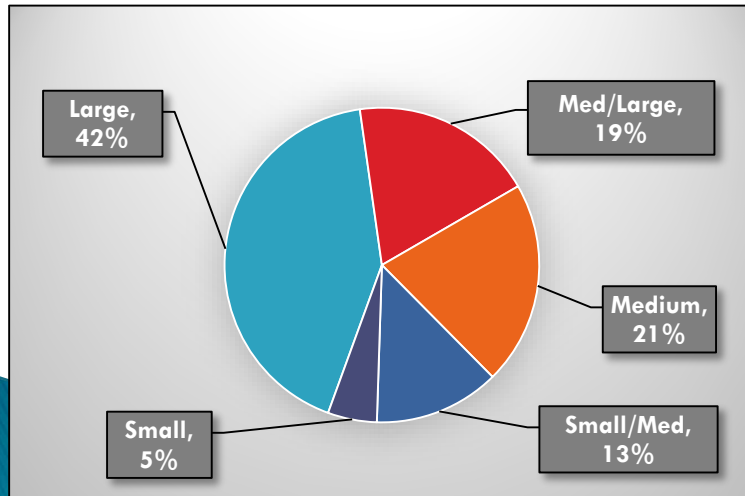
# Geographic & Market Capitalization Diversification

As of 11/30/2018

Total Equity Portfolio Regional Distribution

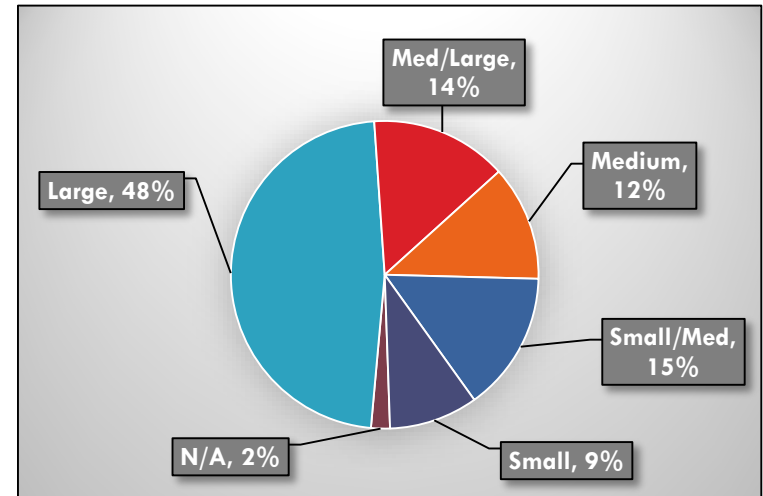


US Active Portfolio Market Cap Distribution



Large > \$35B  
Large/Med \$10B - \$35B  
Medium \$3B - \$10B  
Small/Med \$1.5B - \$3B  
Small < \$1.5B

Non-US Active Portfolio Market Cap Distribution



### **III. IPS MONITORING REVIEW**

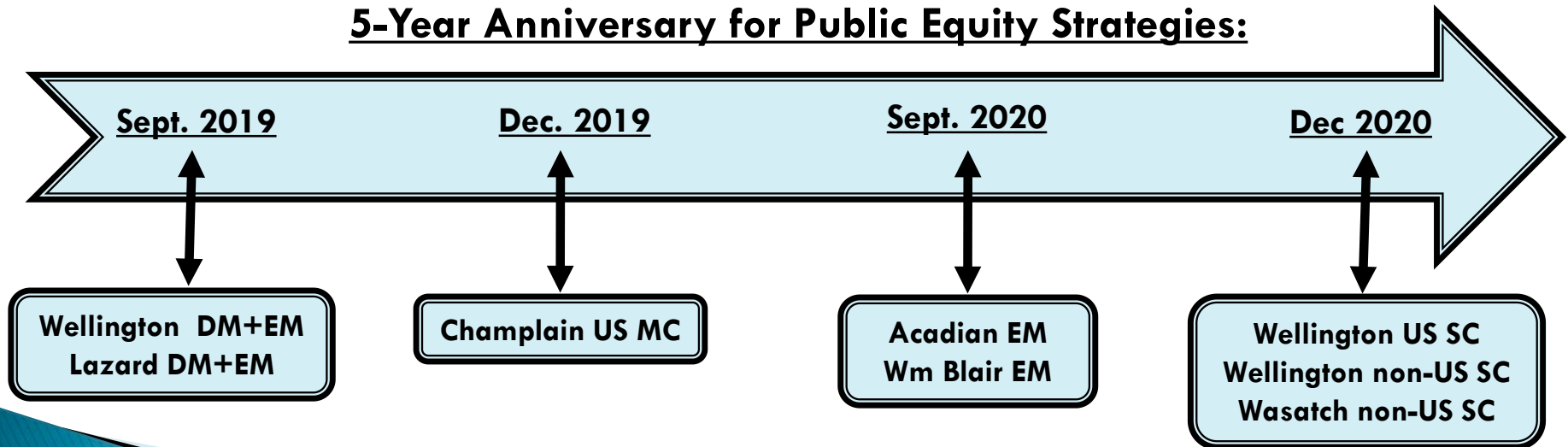
# Performance Monitoring Objectives

## IPS Stated Objective for Individual Portfolio Accounts:

*Investment staff and the Consultant, subject to review by the CIO, will determine performance expectations for each Manager. Specific performance objectives for active strategies include, but may not be limited to, the following:*

- Exceed an appropriate index or benchmark net of fees over rolling five-year periods;
- Rank above median in an appropriate universe of Managers possessing a similar style over rolling five-year periods.

### 5-Year Anniversary for Public Equity Strategies:



# Active Strategies Return/Risk Objectives

MANAGER	STRATEGY	BENCHMARK	RETURN OBJECTIVES	RISK OBJECTIVES	INCEPTION DATE
<b><u>US Equity Portfolios</u></b>					
Champlain Investment Partners	US Mid Cap Core	Russell Mid Cap Index	2-4%; mkt cycle of 5 yrs	4-6%	12/1/2014
Wellington Management	US Small Cap Opportunities	Russell 2000 Index	2-3% (gross of fees); 5 yrs mkt cycle	3-8% ex-post	12/1/2015
<b><u>Non-US Portfolios</u></b>					
Wellington Management	Non-US Opportunistic Core	MSCI ACWI ex US Index	3% (gross of fees); full mkt cycle	3-9% ex-post	9/1/2014
Lazard Asset Management	Non-US Opportunistic Relative Value	MSCI ACWI ex US Index	2-3% (gross of fees); full mkt cycle	4-6% ex-ante	9/1/2014
Acadian Asset Management	Non-US Emerging Markets	MSCI Emerging Markets (EM) Index	2% (gross of fees); mkt cycle 3-5 yrs	4-6% ex-post	9/1/2015
William Blair & Company	Non-US Emerging Markets	MSCI Emerging Markets (EM) Index	2% (gross of fees); mkt cycle 3-5 yrs	4-6% ex-post	9/1/2015
Wellington Management	Non-US Small Cap Opportunities	MSCI EAFE Small Cap Index	2.5% (gross of fees); 3-5 yrs mkt cycle	3-8% ex-post	12/1/2015
Wasatch Advisors	Non-US Small Cap Growth	MSCI AC World ex. US Small Cap Index	2% (gross of fees); mkt cycle 5-7 yrs	4-6% ex-post	12/1/2015

# Equity Strategies Reviewed in 2018

## **US and non-US Passive Strategies:**

- Northern Trust Asset Mgmt - Russell 3000 Fund: \$3.2B
- Northern Trust Asset Mgmt - All Country World Index (ACWI) ex. U.S. IMI Fund: \$2.4B

## **Rules-Based Strategies:**

- UBS Global Asset Mgmt (UBS) - Minimum Volatility - US & non-US: \$1.2B
- State Street Global Advisors (SSgA) - Russell RAFI - US & non-US: \$608 million

## **US Active Strategies:**

- Champlain Investment Partners – US Mid-Cap Core: \$304 million
- Wellington Management Co. - US Small Cap Opportunities: \$307 million

## **Non-US Active Strategies:**

- Lazard Asset Management - International Equity Plus (non-US DM and EM): \$204 million
- Wellington Management Co. - International Horizons (non-US DM and EM): \$213 million
- Acadian Asset Management – non-US Emerging Markets: \$219 million
- William Blair & Co. – non-US Emerging Markets: \$209 million
- Wasatch Advisors – non-US Small Cap Growth: \$252 million
- Wellington Management Co. – non-US SC Opportunities: \$240 million

# U.S. Equity Monitoring Summary Report

## ➤ IPS Guidelines for Individual Portfolio Accounts as it relates to active strategies:

- Exceed an appropriate benchmark net of fees over rolling five-year periods;
- Rank above median in an appropriate universe of Managers possessing a similar style over rolling five-year periods.

Manager	Portfolio Name	Asset Class	Watch List?	Qualitative Evaluation	Quantitative Performance
Northern Trust Asset Management	Russell 3000 Index Fund*	U.S. Equity	No	Within acceptance	Tracks the respective benchmark with de minimus tracking error over 5, 7, 10 years; 5 year return 7.89% vs. benchmark return of 7.91% (Inception Date: 12/1/08)
State Street Global Advisors	Russell RAFI U.S. Index Fund*	U.S. Equity	No	Within acceptance	Tracks the respective benchmark with de minimus tracking error over the 5 year period: 6.60% vs. benchmark return of 6.74% (Inception Date: 2/1/2013)
UBS Global Asset Management	U.S. Equity Minimum Volatility Index Fund*	U.S. Equity	No	Within acceptance	Tracks the respective benchmark with de minimus tracking error over the 5 year period: 10.38% vs. benchmark return of 9.76% (Inception Date: 1/1/2013)
Champlain Investment Partners	U.S. Mid Cap Core	U.S. Equity	No	Within acceptance	N/A; inception date 12/1/2014
Wellington Management Company, LLP	Small Cap Opportunities	U.S. Equity	No	Within acceptance	N/A; inception date 12/1/2015

\*The Russell 3000 Fd, US Min Vol Fd, and the RAFI US Fd is not included in the above referenced IPS Guidelines but is evaluated during the annual review process.



# Non-U.S. Equity Monitoring Summary Report

## ➤ IPS Guidelines for Individual Portfolio Accounts as it relates to active strategies:

- Exceed an appropriate benchmark net of fees over rolling five-year periods;
- Rank above median in an appropriate universe of Managers possessing a similar style over rolling five-year periods.

Manager	Fund Name	Asset Class	Watch List?	Qualitative Evaluation	Quantitative Performance
Northern Trust Asset Management	ACW ex. U.S. IMI Fund*	Non-U.S. Equity	No	Within acceptance	Tracks the respective benchmark with de minimus tracking error over 5 & 7 years; 5 year return 1.06% vs. benchmark return of 0.85% (Inception Date: 9/1/2010)
State Street Global Advisors	Russell Fundamental Global ex-U.S. Index Fd*	Non-U.S. Equity	No	Within acceptance	Tracks the respective benchmark with de minimus tracking error over the 5 year period: 1.13% vs. benchmark return of 1.39% (Inception Date: 2/1/2013)
UBS Global Asset Management	World ex U.S. Equity Minimum Volatility Index Fd*	Non-U.S. Equity	No	Within acceptance	Tracks the respective benchmark with de minimus tracking error over the 5 year period: 5.04% vs. benchmark return of 4.90% (Inception Date: 1/1/2013)
Lazard Asset Management LLC	International Equity Plus	Non-U.S. Equity	No	Within acceptance	N/A; inception date 9/1/2014
Wellington Management Company, LLP	International Horizons	Non-U.S. Equity	No	Within acceptance	N/A; inception date 9/1/2014
Acadian Asset Management LLC	Emerging Markets Equity	Non-U.S. Equity	No	Within acceptance	N/A; inception date 9/1/2015
William Blair & Company LLC	Emerging Markets Leaders	Non-U.S. Equity	No	Within acceptance	N/A; inception date 9/1/2015
Wellington Management Company, LLP	International Small Cap Opportunities	Non-U.S. Equity	No	Within acceptance	N/A; inception date 1/1/2016
Wasatch Advisors	International Small Cap Growth	Non-U.S. Equity	No	Within acceptance	N/A; inception date 1/1/2016

\*The Russell 3000 Fd, US Min Vol Fd, and the RAFI US Fd is not included in the above referenced IPS Guidelines but is evaluated during the annual review process.

# 2018 Proxy Voting Summary

Manager	Strategy	Number of Ballots Cast	Number of Issues Voted	% of Issues Voted with Management	% of Issues Voted Against Management	Number of Votes Abstaining
Acadian Asset Management	Emerging Markets Equity	548	537	78%	11%	247
The Boston Company	US Mid Cap Opportunistic Value Equity	55	611	94%	6%	0
The Boston Company	US Small Cap Opportunistic Value Equity	81	680	92%	8%	0
Champlain	Mid Cap Core	14	156	98%	2%	56
Epoch Investment Partners	US Choice	32	454	94%	6%	0
Lazard Asset Management	International Equity Plus	66	1011	90%	5%	0
Northern Trust	Russell 3000 Index Fund	3945	33517	94%	6%	1041
Northern Trust	NT ACWI ex US IMI Index Fund	7563	76801	90%	10%	1042
Sasco Capital	US Contrarian Value	4	26	100%	0%	0
State Street Global Advisors	Russell RAFI US Index Fund	1474	15159	93%	7%	64
State Street Global Advisors	Russell RAFI ex-US Index Fund	1096	15706	90%	10%	51
UBS Asset Management	US Minimum Volatility Index Fund	209	2718	85%	15%	36
UBS Asset Management	World ex-US Minimum Volatility Index Fd	252	3299	90%	10%	41
Wasatch Advisors	International Small Cap Growth	99	986	95%	3%	25
Wellington Management	International Small Cap Opportunities	111	833	99%	1%	
Wellington Management	Small Cap Opportunities	160	1767	86%	4%	185
Wellington Management	International Horizons	55	719	81%	2%	122
William Blair	Emerging Markets Leader	87	827	88%	10%	15

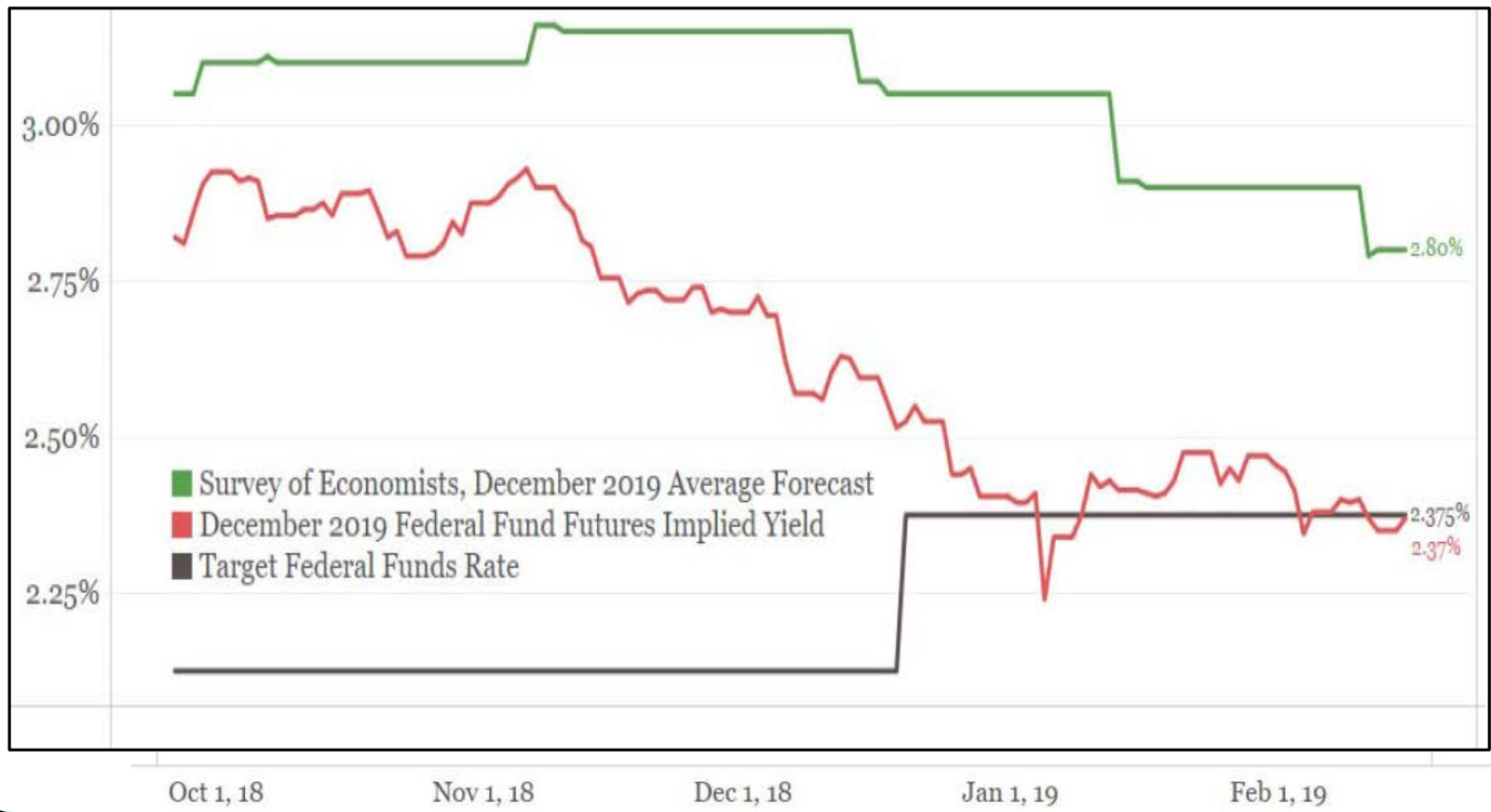
## **IV. MARKET UPDATE & PUBLIC EQUITY PERFORMANCE**

# What Happened in 2018?

- Returns fell sharply due to the escalating US-China trade war, growing concerns about monetary policy tightening, and fears of a global economic slowdown, all of which weighed on the earnings outlook.
- Volatility is widely seen as a negative for public equity markets even though it also provides active managers with opportunities to exploit mispriced securities.
- Forward-looking risks: Trade war, aggressive Fed tightening, populism, material growth slowdown.

# Interest Rates Expectation for 2019

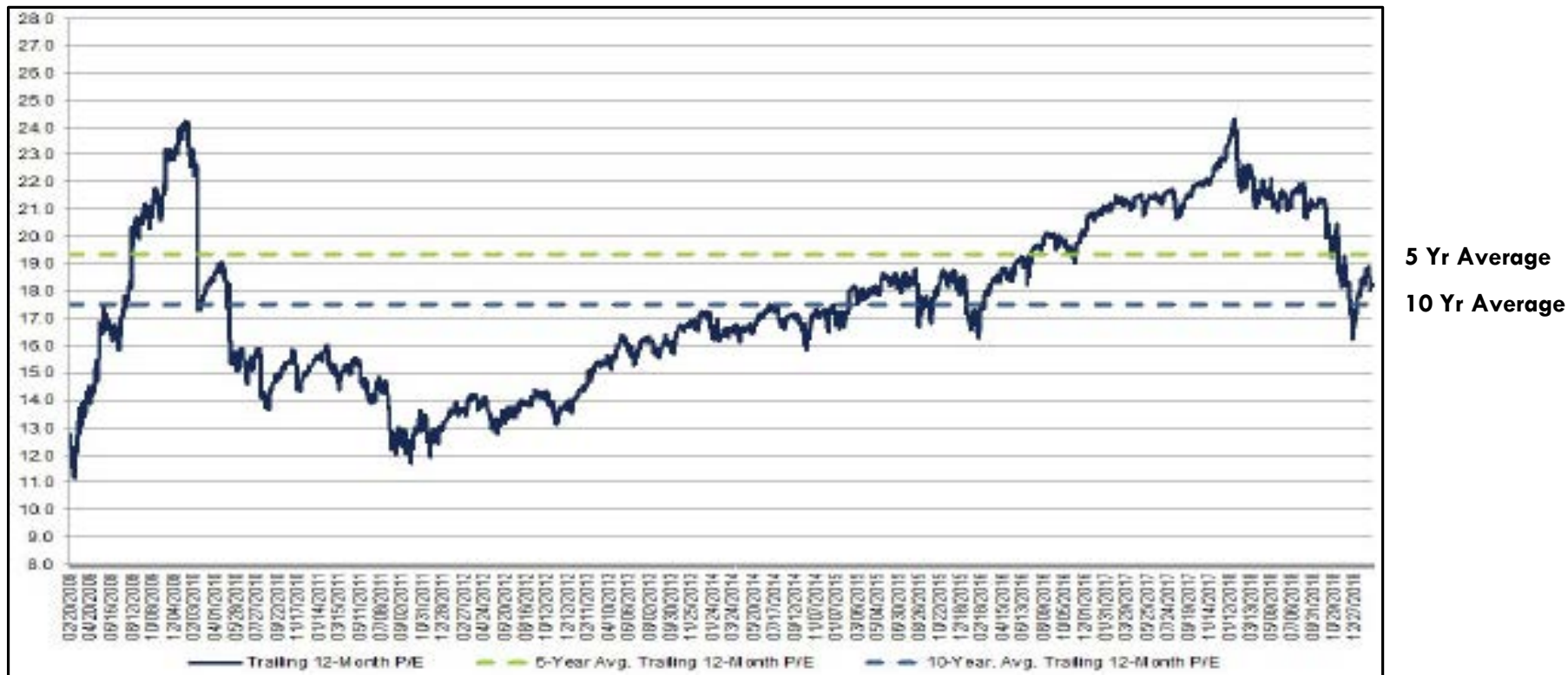
- Economists expect 2 more interest rate increases of 25bps each in 2019 (green line)
- The futures market is predicting no further interest rates hike in 2019 (red line)



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# S&P 500 Trailing 12-Month PE Ratio from 2008-18

- The correction in 2018 has brought US market valuation closer to the 5 Year and 10 Year Averages.



Source: FactSet

# Cumulative Returns of US vs. Global vs. Global ex-US Performances from 2008-18





# Russell US Growth and Value Indexes

- Growth has outperformed value in 7 of the last 11 years
- In 2018, growth fell by -2.1% while value fell by -8.6%

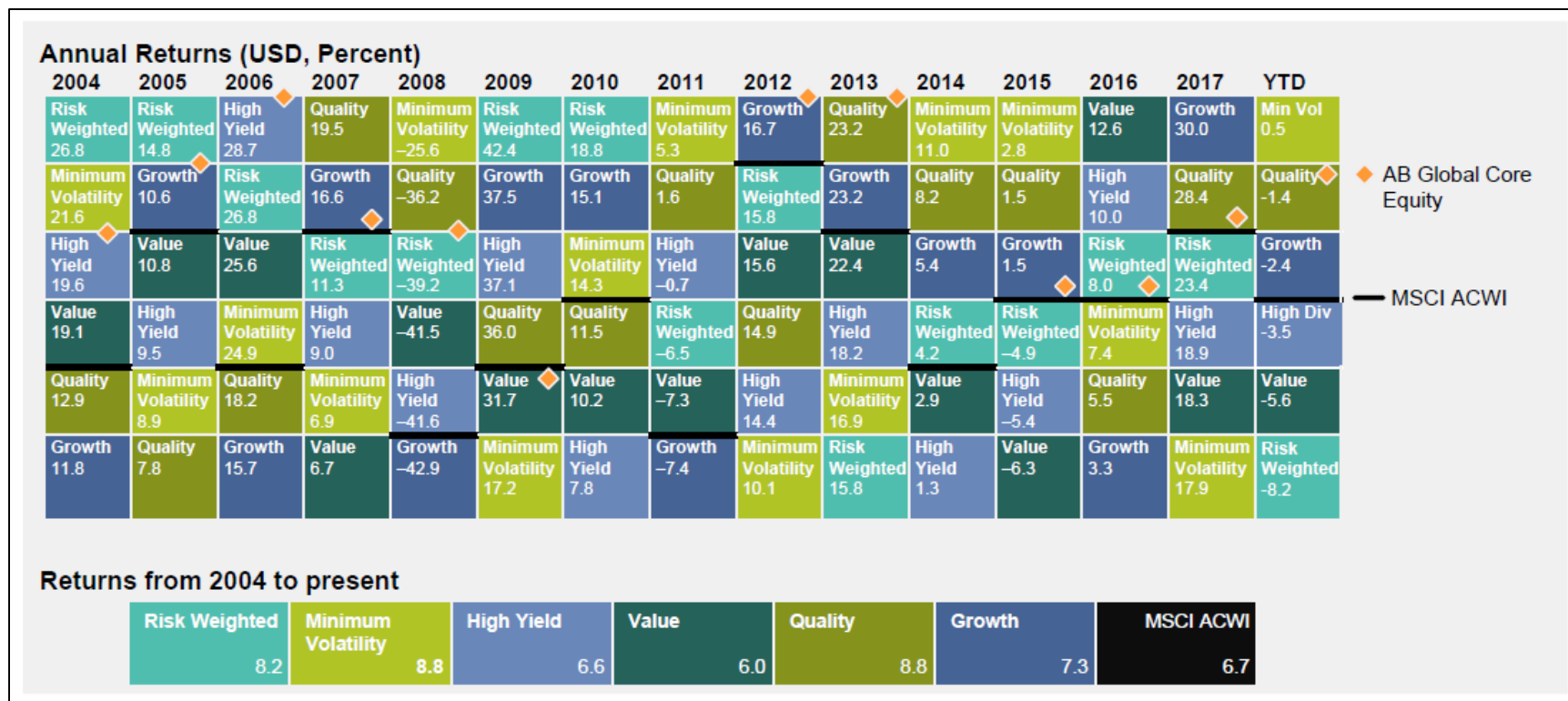
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
Highest index returns										
Russell 2000® Value Index -28.92	Russell Midcap® Growth Index 48.28	Russell 2000® Growth Index 29.09	Russell 1000® Growth Index 2.84	Russell 2500™ Value Index 19.21	Russell 2000® Growth Index 43.30	Russell Midcap® Value Index 14.75	Russell 1000® Growth Index 5.87	Russell 2000® Value Index 31.74	Russell 1000® Growth Index 30.21	Russell 1000® Growth Index -1.51
Russell 2500™ Value Index -31.99	Russell 2500™ Growth Index 41.88	Russell 2500™ Growth Index 28.88	Russell 3000® Growth Index 2.18	Russell Midcap® Value Index 18.51	Russell 2500™ Growth Index 40.85	Russell 1000® Value Index 13.45	Russell 3000® Growth Index 5.09	Russell 2500™ Value Index 25.20	Russell 3000® Growth Index 29.59	Russell 3000® Growth Index -2.12
Russell 3000® Value Index -38.25	Russell 1000® Growth Index 37.21	Russell Midcap® Growth Index 28.38	Russell 1000® Value Index 0.39	Russell 2000® Value Index 18.05	Russell Midcap® Growth Index 35.74	Russell 1000® Growth Index 13.05	Russell 2500™ Growth Index -0.19	Russell Midcap® Value Index 20.00	Russell Midcap® Growth Index 25.27	Russell Midcap® Growth Index -4.75
Russell 1000® Value Index -38.85	Russell 3000® Growth Index 37.01	Russell 2500™ Value Index 24.82	Russell 3000® Value Index -0.10	Russell 3000® Value Index 17.55	Russell 2000® Value Index 34.52	Russell 3000® Value Index 12.70	Russell Midcap® Growth Index -0.29	Russell 3000® Value Index 18.40	Russell 2500™ Growth Index 24.48	Russell 2500™ Growth Index -7.47
Russell 3000® Growth Index -35.44	Russell 2000® Growth Index 34.47	Russell Midcap® Value Index 24.75	Russell Midcap® Value Index -1.38	Russell 1000® Value Index 17.51	Russell 3000® Growth Index 34.23	Russell 3000® Growth Index 12.44	Russell 2000® Growth Index -1.35	Russell 1000® Value Index 17.34	Russell 2000® Growth Index 22.17	Russell 1000® Value Index -5.27
Russell Midcap® Value Index -38.44	Russell Midcap® Value Index 34.21	Russell 2000® Value Index 24.50	Russell 2500™ Growth Index -1.57	Russell 2500™ Growth Index 18.13	Russell 1000® Growth Index 33.48	Russell Midcap® Growth Index 11.90	Russell 1000® Value Index -3.83	Russell 2000® Growth Index 11.32	Russell 1000® Value Index 13.88	Russell 3000® Value Index -5.58
Russell 1000® Growth Index -38.44	Russell 2500™ Value Index 27.88	Russell 3000® Growth Index 17.84	Russell Midcap® Growth Index -1.85	Russell Midcap® Growth Index 15.81	Russell Midcap® Value Index 33.48	Russell 2500™ Value Index 7.11	Russell 3000® Value Index -4.13	Russell 2500™ Growth Index 9.73	Russell Midcap® Value Index 13.34	Russell 2000® Growth Index -9.31
Russell 2000® Growth Index -38.54	Russell 2000® Value Index 20.58	Russell 1000® Growth Index 18.71	Russell 2000® Growth Index -2.81	Russell 1000® Growth Index 15.28	Russell 2500™ Value Index 33.32	Russell 2500™ Growth Index 7.05	Russell Midcap® Value Index -4.78	Russell 3000® Growth Index 7.38	Russell 3000® Value Index 13.18	Russell Midcap® Value Index -12.28
Russell 2500™ Growth Index -41.50	Russell 3000® Value Index 18.78	Russell 3000® Value Index 18.23	Russell 2500™ Value Index -3.38	Russell 3000® Growth Index 15.21	Russell 3000® Value Index 32.89	Russell 2000® Growth Index 5.80	Russell 2500™ Value Index -5.49	Russell Midcap® Growth Index 7.33	Russell 2500™ Value Index 10.38	Russell 2500™ Value Index -12.38
Russell Midcap® Growth Index -44.32	Russell 1000® Value Index 18.89	Russell 1000® Value Index 15.51	Russell 2000® Value Index -5.50	Russell 2000® Growth Index 14.59	Russell 1000® Value Index 32.53	Russell 2000® Value Index 4.22	Russell 2000® Value Index -7.47	Russell 1000® Growth Index 7.08	Russell 2000® Value Index 7.84	Russell 2000® Value Index -12.88
Lowest index returns										

Source: FTSE Russell; data as of December 31, 2018



# Global Factors Over Time – MSCI ACWI

- Over the last 15 years, Minimum Volatility and Quality risk factors have shown the highest returns with annualized return of 8.8%
- Over the same period, the value factor has lagged with an annualized return of 6%



Source: BankInvest Basis, MSCI, and Alliance Bernstein; data as of October 31, 2018; black line indicates return of MSCI ACWI

# Russell 3000 vs ACWI ex-US IMI Sector and Market Cap Comparison

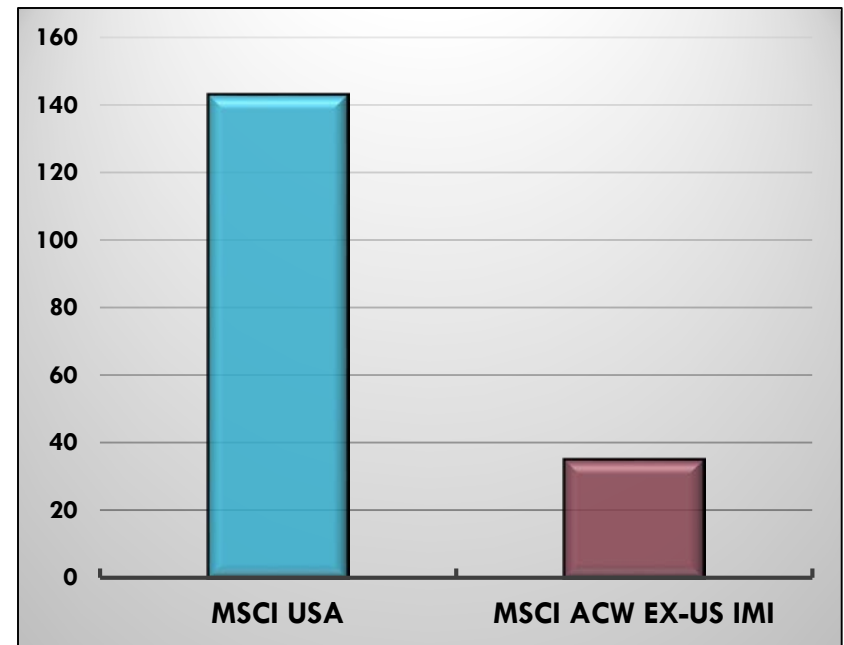
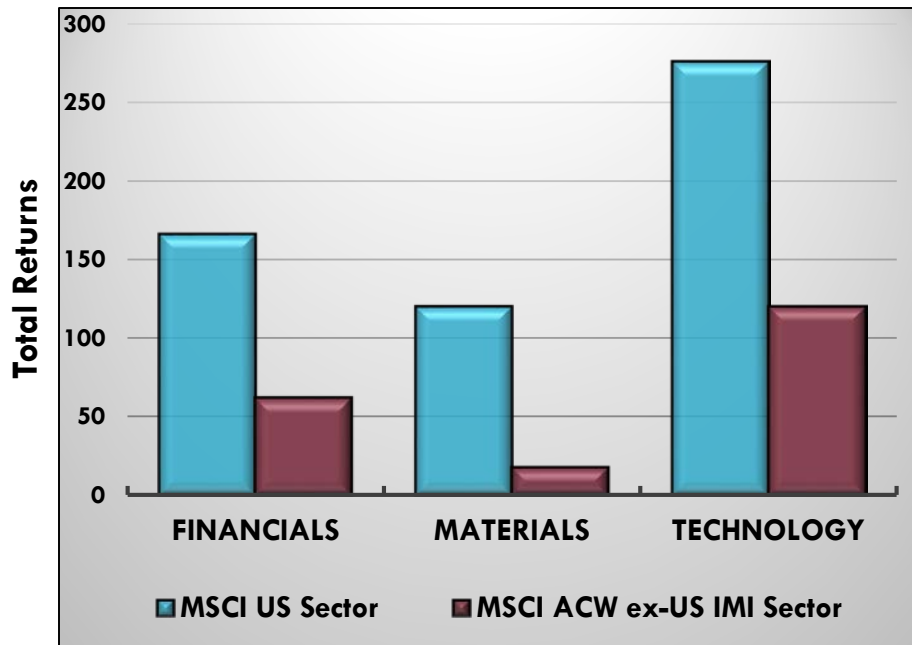
## Several reasons explain the outperformance of US over International markets:

- US has significantly larger market cap and this market cap has outperformed.
- US has a higher IT sector weight and this sector has outperformed.
- International has higher financials weight and this sector has underperformed.
- International has higher materials weight and this sector has underperformed.

<u>Market Size</u>	<u>Russell 3000 Index</u>	<u>ACWI ex-US IMI</u>
Large	69.6%	41.8%
Medium/Large	3.6%	29.7%
Medium	13.8%	17.3%
Medium/Small	5.8%	6.5%
Small	7.2%	4.8%
<u>Sector</u>		
Financials	13.3%	22.0%
Industrials	10.1%	12.5%
Consumer Discretionary	11.7%	11.7%
Consumer Staples	6.8%	9.7%
Information Technology	23.3%	8.5%
Health Care	14.9%	8.4%
Materials	3.3%	8.4%
Energy	7.8%	7.4%
Communication Services	2.2%	4.0%
Real Estate	3.8%	3.8%
Utilities	2.8%	3.6%

# Sector and Regional Performances from 2008 - 2018

- The underperformance of the financials, materials sector as well as the lower weight in the technology sector caused a drag on the international markets against the US over the last ten years.



# Public Equity Performance – U.S.

Period ending December 31, 2018

FUND NAME	MKT VAL	% of plan	1 Month	3 Months	YTD	1 Yr.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	ITD	Incept Date
<b>TOTAL EQUITY</b>	9,356,576,560	33.91	-7.58	-13.79	-10.28	-10.28	6.76	4.78	9.10	9.72	4.12	01-01-08
EQUITY ACTIVE WEIGHTED INDEX (DAILY)			-7.23	-13.2	-9.69	-9.69	7.00	4.86	9.16	9.74	4.12	01-01-08
Excess			-0.35	-0.59	-0.59	-0.59	-0.24	-0.08	-0.06	-0.02	0.00	
<b>TOTAL DOMESTIC EQUITY</b>	5,032,367,339	18.24	-9.64	-14.85	-6.39	-6.39	8.43	7.40	12.01	12.87	7.40	01-01-08
TMRS - RUSSELL 3000 (DAILY)			-9.31	-14.3	-5.24	-5.24	8.97	7.91	12.46	13.18	7.67	01-01-08
Excess			-0.33	-0.55	-1.15	-1.15	-0.54	-0.52	-0.45	-0.32	-0.27	
<b>RUSSELL 3000 INDEX FUND</b>	3,167,936,735	11.48	-9.30	-14.3	-5.27	-5.27	8.95	7.89	12.44	13.16	13.25	12-01-08
RUSSELL 3000 (DAILY)			-9.31	-14.3	-5.24	-5.24	8.97	7.91	12.46	13.18	13.28	12-01-08
Excess			0.01	0.00	-0.03	-0.03	-0.02	-0.02	-0.03	-0.02	-0.02	
<b>SSGA RUSSELL RAFI US</b>	358,645,227	1.3	-9.85	-14.34	-7.62	-7.62	8.09	6.60			9.91	02-01-13
RUSSELL RAFI U.S. INDEX			-9.84	-14.26	-7.45	-7.45	8.27	6.74			10.08	02-01-13
Excess			-0.01	-0.08	-0.16	-0.16	-0.18	-0.14			-0.17	
<b>UBS US EQUITY MIN VOL FUND</b>	894,501,109	3.24	-7.13	-7.59	1.38	1.38	10.09	10.38			12.72	01-01-13
MSCI USA MINIMUM VOLATILITY (NET)			-7.17	-7.68	0.87	0.87	9.47	9.76			12.07	01-01-13
Excess			0.04	0.09	0.52	0.52	0.62	0.61			0.65	
<b>CHAMPLAIN MID-CAP CORE</b>	303,774,385	1.1	-8.90	-11.61	3.99	3.99	14.20				10.46	12-01-14
RUSSELL MIDCAP (DAILY)			-9.92	-15.37	-9.06	-9.06	7.04				4.55	12-01-14
Excess			1.02	3.76	13.04	13.04	7.16				5.91	
<b>WELLINGTON US SMALL CAP OPP</b>	307,407,464	1.11	-11.27	-19.11	-3.75	-3.75	10.81				8.88	12-01-15
RUSSELL 2000 (DAILY)			-11.88	-20.2	-11.01	-11.01	7.36				5.38	12-01-15
Excess			0.61	1.09	7.26	7.26	3.44				3.50	

Source: State Street Investment Analytics

# Public Equity Performance – non-U.S.

Period ending December 31, 2018

FUND NAME	MKT VAL	% of plan	1 Month	3 Months	YTD	1 Yr.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	ITD	Incept Date
<b>TOTAL INTERNATIONAL EQUITY</b>	4,324,207,302	15.67	-5.01	-12.52	-14.74	-14.74	4.45	1.28	5.47	6.05	0.39	01-01-08
INTL EQ ACTIVE WEIGHTED INDEX (DAILY)			-4.65	-11.87	-14.76	-14.76	4.39	0.85	5.07	5.71	0.06	01-01-08
Excess			-0.36	-0.65	0.02	0.02	0.06	0.44	0.40	0.34	0.32	
<b>NTGI ACWI ex. US IMI</b>	2,441,621,707	8.85	-4.77	-11.78	-14.35	-14.35	4.62	1.06	5.30		4.66	09-01-10
TMRS MSCI ACWI ex-US IMI NET (DAILY)			-4.65	-11.87	-14.76	-14.76	4.39	0.85	5.07		4.45	09-01-10
Excess			-0.12	0.09	0.41	0.41	0.23	0.21	0.23		0.20	
<b>SSGA RUSSELL RAFI GLOBAL EX-US</b>	248,836,020	0.9	-4.73	-12.01	-14.08	-14.08	6.29	1.13			3.48	02-01-13
RUSSELL RAFI GLOBAL ex-US INDEX (NET)			-4.66	-11.80	-13.81	-13.81	6.67	1.39			3.68	02-01-13
Excess			-0.07	-0.21	-0.27	-0.27	-0.38	-0.26			-0.20	
<b>UBS WORLD EX US MIN VOL FD</b>	296,198,202	1.07	-3.39	-7.70	-6.18	-6.18	5.01	5.04			6.69	01-01-13
MSCI WORLD ex USA MINIMUM VOLATILITY (NET)			-3.35	-7.61	-6.23	-6.23	4.78	4.90			6.58	01-01-13
Excess			-0.04	-0.09	0.05	0.05	0.23	0.15			0.11	
<b>LAZARD INT'L EQUITY PLUS</b>	204,061,921	0.74	-4.30	-10.33	-13.46	-13.46	2.82				0.05	09-01-14
MSCI AC WORLD ex US (NET)			-4.53	-11.46	-14.2	-14.2	4.48				-0.37	09-01-14
Excess			0.23	1.13	0.73	0.73	-1.66				0.42	
<b>WELLINGTON INT'L HORIZONS</b>	213,088,674	0.77	-5.44	-13.77	-16.28	-16.28	1.23				1.06	09-01-14
MSCI AC WORLD ex US (NET)			-4.53	-11.46	-14.20	-14.20	4.48				-0.37	09-01-14
Excess			-0.91	-2.31	-2.09	-2.09	-3.25				1.43	
<b>WILLIAM BLAIR EMERGING MARKETS</b>	209,422,399	0.76	-2.61	-6.89	-16.09	-16.09	7.35				6.87	09-01-15
MSCI EMERGING MARKETS			-2.65	-7.46	-14.57	-14.57	9.25				7.51	09-01-15
Excess			0.04	0.58	-1.52	-1.52	-1.90				-0.64	
<b>ACADIAN EMERGING MARKETS</b>	219,182,875	0.79	-3.30	-10.13	-16.57	-16.57	10.4				8.13	09-01-15
MSCI EMERGING MARKETS IMI INDEX (NET)			-2.53	-7.43	-15.04	-15.04	8.51				7.11	09-01-15
Excess			-0.77	-2.70	-1.53	-1.53	1.89				1.02	
<b>WASATCH INT'L SMALL CAP GROWTH</b>	251,764,948	0.91	-7.95	-21.25	-14.73	-14.73	2.09				2.09	01-01-16
MSCI ACWI ex US SMALL CAP (DAILY)			-5.44	-14.43	-18.20	-18.20	3.82				3.82	01-01-16
Excess			-2.51	-6.83	3.47	3.47	-1.72				-1.72	
<b>WELLINGTON INT'L SMALL CAP OPP</b>	240,030,556	0.87	-10.03	-22.20	-24.46	-24.46	0.61				0.61	01-01-16
MSCI EAFE SMALL CAP (NET)			-6.45	-16.05	-17.89	-17.89	3.73				3.73	01-01-16
Excess			-3.59	-6.15	-6.57	-6.57	-3.12				-3.12	

Source: State Street Investment Analytics

# Transaction Cost Analysis

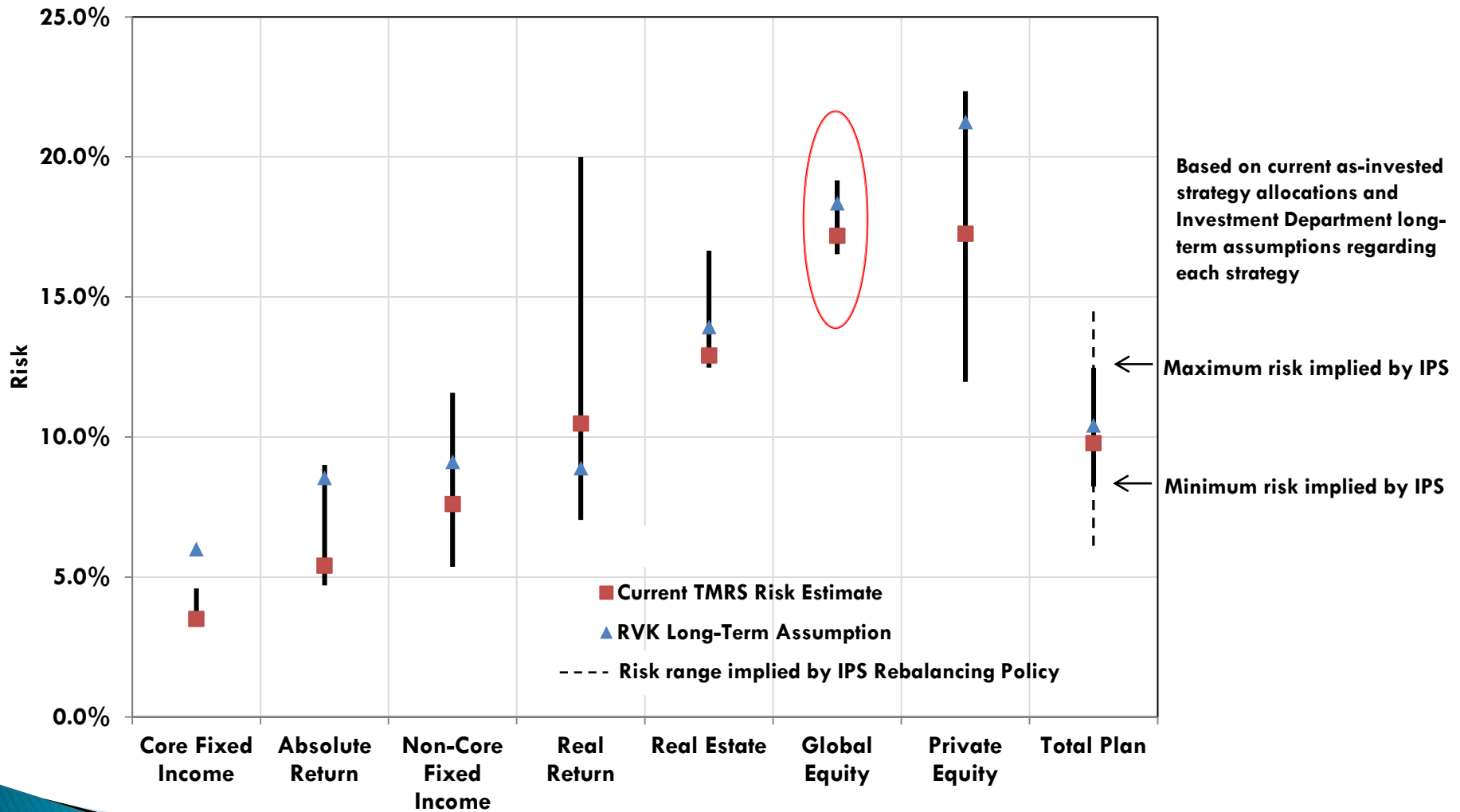
- TMRS retained a transaction cost analysis firm in May 2017;
- Staff receives quarterly reports to aid in due diligence of managers;
- Reporting shows cost/benefit results quarterly and for previous rolling four quarters;
- Staff reviews results with managers, as needed.

## **2018 Results:**

- **Total benefit, net market impact plus net commissions, vs. universe was +20 bps, which exceeded expectations.**

# Implementation Risk Ranges Implied by IPS Asset Class Guidelines

September 2018



# **V. 2018 HIGHLIGHTS & TRANSITION MANAGEMENT**



# Review of 2018 Highlights

- Completed a search and recommendation for TMRS' approved bench of transition managers; five transition managers were approved by the Board of Trustees in September 2018;
- Transitioned \$1.035 billion to US Russell 3000 and US Minimum Volatility portfolios from manager redemptions in December 2018;
- Increased number of meetings in 2018 for manager due diligence, consultant, educational and prospective managers;
- The Core Equity portfolio continues to fund Real Estate and Private Equity strategic allocations;
- The Board of Trustees approved a global mandate for the equity portfolio in December 2018;
- Completed 2018 Equity Asset Class Review & Due Diligence Package – March 2019 Board meeting.

# Transition Management

## Transition Objective:

- In December 2018, TMRS selected Citigroup Inc. (Citi) to conduct the transfer of approximately \$1 billion in assets from four active US Strategies and allocating approximately \$500 million each to the Russell 3000 and US Minimum Volatility.
- TMRS' goal was to complete the transition prior to the end of 2018 to avoid liquidity issues due to the holiday season.
- Loss of conviction in the strategies that were redeemed was also considered to be an important consideration for timing.

# Transition Management

## **Market Environment:**

- All of the legacy portfolios were largely underperforming prior to the transition.
- The broad market fell by -14.3% in Q4 2018 and -5.2% for 2018.
- US Mid Caps fell by -15.3% in Q4 2018 and -9.1% for 2018.
- US Small Caps fell by -20.2% in Q4 2018 and -11.0% for 2018.
- Negative performance and heightened volatility in the markets affected the sell legacy positions, especially the Small and Mid-cap positions.

# Transition Management

## Quantitative Results:

- Explicit Costs (commissions and taxes) represented 1.5% of the total cost and were in line with expectations.
- Implicit Costs (market impact/movement) represented 98.5% of the total cost and were outside expectations.
  - Actual costs of \$16.3 million were substantially higher than cost estimates provided prior to the transition of \$3.1 million.
  - The market volatility and negative performance in the markets were large contributors to the cost dispersion between the estimated and actual costs.
  - The positions that were sold continued to underperform into the transition and also underperformed the positions that were being purchased into the target portfolio. This contributed to the higher implicit costs.
  - TMRS would have incurred additional cost of \$13.4 million by year-end had TMRS not acted when it did.

# Transition Management

## **Qualitative Results:**

- RVK and Investment Staff concur that Citi provided excellent project management, project and trading communication, and exceeded expectations in these areas.
- Third-party vendor analysis by Basis Global Analytics found no material issues with the transition event.

## **VI. 2019 INITIATIVES & CONCLUSION**

# 2019 Initiatives

- Incorporate new global mandate and its impact on the current equity portfolio;
- Continue to evaluate potential changes to the equity passive/active structure in 2019;
- Utilize TMRS' Rebalancing Policy for adjustments between managers;
- Expand search process to better evaluate new investment opportunities;
- Continue to develop new monitoring analysis of equity managers;
- Consider merging all passively managed portfolios with one investment manager for possible fee reductions.

# Conclusion

- All current TMRS equity portfolios are performing in accordance with expectations;
- TMRS Investment Staff and RVK concur that no changes are immediately needed.



## *DISCLOSURES*

*TMRS periodically discloses public information that is not excepted from disclosure under Section 552.0225(b) of the Texas Public Information Act. Information provided by a manager, a Managing General Partner (GP), any of its Associates or other data provider to TMRS or a TMRS service provider, and contained in these materials (i) may have been independently produced or modified by TMRS or the TMRS service provider; (ii) has not been reviewed or approved by the manager, Managing GP or any of its Associates and (iii) may not reflect the historical performance or asset value reflected in the manager's, Managing GP's or any of its Associates' records and, therefore, should not be used for comparative purposes.*