# Monthly Market Commentary

#### PERSPECTIVES FROM WILSHIRE ASSOCIATES



### February 2019

## **U.S. Economy and Markets**

- Domestic equity markets were positive in February, as the Wilshire 5000 Total Market Index<sup>SM</sup> and the S&P 500 Index returned 3.47% and 3.21%, respectively.
- Market volatility continued to decrease this month, with the CBOE Volatility Index (VIX) ending February at 14.78, a decrease from its January close of 16.57.
- Performance across all GICS sectors was positive for the month and year-to-date, with the Information Technology and Industrials sectors leading the group, gaining 7.39% and 6.48%, respectively. The Real Estate and Consumer Discretionary sectors trailed in comparison, returning 0.78% and 1.09%, respectively.
- Small cap stocks outperformed their large cap counterparts in February, with the Wilshire U.S. Small Cap Index<sup>SM</sup> and the Wilshire U.S. Large Cap Index<sup>SM</sup> returning 5.01% and 3.31%, respectively.

## **International Economy and Markets**

- Developed international equity markets, as measured by the MSCI EAFE Index, returned 2.55% this month.
- Europe led developed international equity markets, with the MSCI Europe Index returning 3.36%. Japan lagged this month, with the MSCI Japan Index declining -0.03%.
- The MSCI Emerging Markets Index gained 0.23% in February.

## Fixed Income/Real Estate/Commodities

- The 10-year U.S. Treasury yield ended the month at 2.73%. This is an increase from its January 2019 close of 2.63%.
- The Bloomberg Barclays U.S. Aggregate Index posted a loss of -0.06% in February.
- The Bloomberg Barclays U.S. Corporate High Yield Index continued to be the best performer within U.S. fixed income, returning 1.66%. The Bloomberg Barclays Long Term Treasury Index lagged, declining -1.22%.
- U.S. real estate posted positive returns in February, with the Wilshire U.S. Real Estate Securities Index<sup>SM</sup> returning 0.88%. International real estate securities also delivered positive returns, with the Wilshire Global ex U.S. Real Estate Securities Index<sup>SM</sup> returning 0.11%.
- Commodities, as measured by the Bloomberg Commodity Index, gained 1.01% in February.

#### **Alternatives**

- The Wilshire Liquid Alternatives Index<sup>SM</sup> returned 0.56% in February. The Wilshire Liquid Alternative Multi-Strategy Index and the Wilshire Liquid Alternative Equity Hedge Index were the relative best performers this month, returning 0.83% and 0.76%, respectively.
- The Wilshire Liquid Alternative Global Macro Index<sup>SM</sup>, the bottom performer in January 2019, was the relative underperformer in February, returning 0.19%.

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#### **GICS SECTOR RETURNS**

Wilshire 5000 Index As Of 02/28/2019	MTD (%)	QTD (%)	YTD (%)	1 Y (%)
Consumer Discretionary	1.09	11.30	11.30	4.80
Consumer Staples	2.07	7.42	7.42	4.92
Energy	2.28	13.96	13.96	-0.44
Financials	2.81	12.15	12.15	-5.10
Health Care	1.70	7.96	7.96	11.40
Industrials	6.48	18.68	18.68	1.38
Information Technology	7.39	15.92	15.92	8.19
Materials	3.42	11.37	11.37	-5.61
Real Estate	0.78	12.54	12.54	19.12
Communications Services	1.14	11.57	11.57	2.52
Utilities	4.07	8.30	8.30	21.47

GICS Sector returns for the Wilshire 5000 Total Market Index<sup>SM</sup> Source: Wilshire Atlas<sup>SM</sup>

Millahire S000 Total Market Indox <sup>144</sup> 3.47         12.42         12.42         15.07           Slandard A Poor's S00         3.21         11.48         11.48         6.86           Slandard A Poor's S00         3.15         12.16         12.13         6.86           I.S. EQUITY SY SIZEISTYLE         15.00         11.90         11.90         11.90         4.92           Milahire U.S. Large Cap Index <sup>204</sup> 3.31         11.90         11.90         4.92           Milahire U.S. Large Cap Index <sup>204</sup> 3.83         10.92         10.52         10.54         5.41           Milahire U.S. Small Cap Index <sup>204</sup> 6.07         18.57         18.57         6.68         4.64           Milahire U.S. Small Cap Index <sup>204</sup> 6.07         18.57         18.57         15.5         6.84           Milahire U.S. Small Cap Growth Index <sup>204</sup> 6.07         18.57         18.57         18.57         6.08           Milahire U.S. Small Cap Index <sup>204</sup> 6.07         18.57         18.57         18.57         18.50         6.84           Milahire U.S. Small Cap Growth Index <sup>204</sup> 6.07         18.57         18.50         1.03         1.06         6.06         6.04         7.03         4.64         4.04					
Standard & Poor's 500   3.21   11.48   11.48   4.88     Standard & Poor's FSQ (CAD)   3.15   12.16   12.13   6.88     Standard & Poor's FSQ (CAD)   3.15   12.16   12.13   6.88     Standard & Poor's FSQ (CAD)   3.15   12.10   12.13   6.88     Standard & Poor's FSQ (CAD)   3.15   12.10   12.10   4.92     Wilshine U. S. Large Cap Forwith Index®   3.83   10.92   10.92   5.41     Wilshine U. S. Large Cap Value Index®   3.83   10.92   10.92   5.41     Wilshine U. S. Small Cap Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Index®   6.07   17.78   7.78   2.13     Wilshine U. S. Small Cap Value Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Value Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Value Index®   6.07   18.57   18.57   6.80     Wilshine U. S. Small Cap Value Index®   6.07   18.57   6.80     Wilshine U. S. Small Cap Value Index®   6.07   18.57   6.80     Wilshine U. S. Small Cap Value Index®   6.07   6.52   6.52   7.03     Wilshine U. S. Small Cap Value Index®   6.07   6.52   6.5	NORTH AMERICAN EQUITY	MTD* (%)	QTD* (%)	YTD* (%)	1 Year* (%
Standard & Poor'esTSX (CAD)   1.516   1.216   1.216   1.216   1.816	Wilshire 5000 Total Market Index <sup>sm</sup>	3.47	12.42	12.42	5.07
Mishire U. S. Large Cap Index™   3.31   11.90   11.90   4.92   Mishire U. S. Large Cap Growth Index™   2.74   13.01   13.01   4.31   Mishire U. S. Large Cap Growth Index™   3.83   10.92   10.92   5.41   Mishire U. S. Large Cap Value Index™   3.83   10.92   10.92   5.41   Mishire U. S. Maral Cap Index™   3.92   16.52   16.52   6.60   Mishire U. S. Small Cap Index™   3.92   16.52   16.52   7.73   7.73   2.13   Mishire U. S. Small Cap Value Index™   3.92   16.52   16.52   7.73   7.73   2.13   Mishire U. S. Small Cap Value Index™   3.92   7.73   7.78   2.13   Mishire U. S. Small Cap Value Index™   3.92   7.73   7.73   7.73   7.73   7.73   7.73   Mishire U. S. Small Cap Value Index™   3.95   9.66   9.66   9.66   9.60   9.6	Standard & Poor's 500	3.21	11.48	11.48	4.68
Wilshine U.S. Large Cap Indexe <sup>MA</sup>   3.31   11,90   11,90   4.92   4.31   4.	Standard & Poor's/TSX (CAD)	3.15	12.16	12.13	6.86
Wishire U.S. Large Cap Growth Index			44.00	44.00	4.00
Wilshire U.S. Large Cap Value Indexe <sup>®44</sup> 3.83         10.92         5.41           Wilshire U.S. Small Cap Indexe <sup>®4</sup> 5.01         17.56         17.56         6.84           Wilshire U.S. Small Cap Growth Indexe <sup>®4</sup> 3.92         16.52         16.52         7.03           Wilshire U.S. Micro Cap Indexe <sup>®4</sup> 3.92         16.52         16.52         7.03           Wilshire U.S. Micro Cap Indexe <sup>®4</sup> 3.92         16.52         16.52         7.03           Wilshire U.S. Micro Cap Indexe <sup>®4</sup> 3.92         16.52         7.03         7.03           Wilshire U.S. Micro Cap Indexe <sup>®4</sup> 2.25         9.29         9.29         6.04         6.06         6.07         9.09         9.09         9.09         9.09         9.09         9.09         9.09         9.09         9.09         9.09         9.					
Milshire U.S. Small Cap Indexe Milshire W.S. Small Cap Indexe Milshire U.S. Small Cap Value Indexe Milshire W.S. Small Cap Value Indexe Milshire W.S. Mall Cap Value Indexe Milshire W.S. Mall Cap Value Indexe Milshire W.S. Milshire U.S. Milshire U.S. Milshire W.S. M	<u> </u>				
Wilshire U.S. Small Cap Value Index <sup>™</sup> 3.62         18.57         18.67         7.08           Wilshire U.S. Small Cap Value Index <sup>™</sup> 3.92         18.52         16.52         7.03           Wilshire U.S. Small Cap Value Index <sup>™</sup> 6.27         17.78         17.78         2.13           NTERRATIONAL EQUITY (USD)         VINEDIA CWord or U.S.         1.95         9.68         9.66         6.46           MSCI EARTE         2.55         9.29         9.29         4.64           MSCI Earting         1.24         7.79         7.71         5.46           MSCI Pacific         1.24         7.79         7.71         7.71         MSCI Japan         6.06         6.06         10.30         9.01         9.09         9.89           MSCI Eleging Markets)         0.03         9.01         9.11         9.11         7.71         7.71         7.71         7.72         7.71         7.7	<u> </u>				
Wilshire U.S. Small Cap Value Index™         3.92         16.52         17.78         27.30           Wilshire U.S. Micro Cap Index™         6.27         17.78         17.78         2.13           Milshire U.S. Micro Cap Index™         2.60         19.66         9.66         -6.46           MSCI Europe         3.36         10.17         10.17         -6.46           MSCI Pacific         1.24         7.79         7.79         -7.17           MSCI Elapen         0.03         6.06         6.06         10.30           MSCI Elapen         0.23         9.01         9.01         -9.98           MSCI Ela (Emerging Markets)         0.23         9.01         9.01         -9.98           MSCI Ela (Emerging Markets)         2.28         9.11         9.11         -1.44           MSCI Ela (Emerging Markets)         3.28         9.48         9.12         -9.1           MSCI Elape         3.63         9.44         9.44         0.34           MSCI Elaper (Imerging Markets)         1.10         8.35         8.35         -5.07           MSCI Elaper (Imerging Markets)         1.10         8.35         8.35         -5.07           MSCI Elaper (Imerging Markets)         2.26         7.62	•				
Mishire U.S. Micro Cap Index <sup>™</sup>					
MSCI AC World ex U.S.   9.66   9.66   6.46   6.46   6.46   6.45   9.25   9.26   9.29   9.29   6.64   6.46   6.45   9.25   9.26   9.29   9.29   6.64   6.45   9.25   9.26   9.29   9.29   6.54   6.45   9.25   9.26   9.29   9.29   6.54   6.45   9.25   9.26   9.25   9.26   9.25   9.26   9.25   9.26   9.25   9.26   9.25   9.26   9.25   9.26   9.25   9.25   9.26   9.25   9.25   9.25   9.26   9.25   9.2	<u>'</u>				
MSCI AC World ex U.S.	·	6.27	17.78	17.78	2.13
MSCI EAFE	, ,				
MSCI Europe   3.36   10.17   10.17   5.46   MSCI Padific   1.24   7.79   7.79   7.17   MSCI Japan   0.03   0.60   0.60   10.03   MSCI EM (Emerging Markets)   0.23   9.01   9.01   9.89   MSCI EM (Emerging Markets)   7.44   MSCI AC World ex U.S.   7.82   9.11   9.11   1.44   MSCI AC World ex U.S.   2.82   9.11   9.11   1.44   MSCI EAFE   3.48   9.12   9.12   0.79   MSCI Europe   3.63   9.44   9.44   0.34   MSCI Padific   3.28   8.58   8.58   8.58   2.74   MSCI Padific   3.28   8.58   8.58   3.50   2.70   MSCI Europe   3.63   9.44   9.44   0.34   MSCI Padific   3.28   8.58   8.58   3.50   2.70   MSCI Europe   3.61   1.00   8.35   8.35   2.70   MSCI Europe   7.62   0.64   MSCI Emerging Markets)   1.10   8.35   8.35   3.50   3.00   MSCI Emerging Markets)   1.10   8.35   8.35   3.50   MSCI Emerging Markets   7.62   0.64   3.00   3.00   3.00   MSCI Emerging Markets   7.62   0.64   3.00   3.00   3.00   MSCI Emerging Markets   7.62   0.65   3.00   3.00   3.00   MSCI Emerging Markets   7.62   0.65   3.00   3.00   3.00   3.00   MSCI Emerging Markets   7.62   0.65   3.00   3.00   3.00   3.00   MSCI Emerging Markets   7.62   0.65   3.00   3.0	MSCI AC World ex U.S.				
MSCI Pacific 1.24 7.79 7.79 7.77 1.71 MSCI Japan 0.03 6.06 6.06 1.030 MSCI Emerging Markets) 0.23 9.01 9.01 9.89 1.89 1.80 1.80 1.80 1.80 1.80 1.80 1.80 1.80	MSCI EAFE	2.55	9.29	9.29	-6.04
MSCI Japan   0.03   0.06   0.06   0.08	MSCI Europe				
MSCI EM (Emerging Markets) 0.23 9.01 9.01 9.01 9.08 MTERNATIONAL EQUITY (LOCAL CURRENCY)  MSCI AC World ex U.S. 2.82 9.11 9.11 1.44 1.44 1.45 1.45 1.45 1.45 1.45 1	MSCI Pacific				
NETERNATIONAL EQUITY (LOCAL CURRENCY)   MSCI CAC World ex U.S.   2.82   9.11   9.11   -1.44     MSCI EAFE   3.48   9.12   9.12   0.79     MSCI EUROPE   3.63   9.44   9.44   9.44   0.34     MSCI Pacific   3.28   8.58   8.58   -2.74     MSCI Japan   2.26   7.62   7.62   -6.41     MSCI Japan   2.26   7.62   7.62   -6.41     MSCI EWINGOME   2.25   7.62   -6.41     MSCI EWINGOME   2.25   7.62   -6.41     MSCI EWINGOME   2.25   7.62   -6.41     MSCI Bracing Markets   0.10   8.35   8.35   -5.07     MSCI Bracing Markets   0.06   1.00   1.00   3.17     Bloomberg Barclays U.S. Aggregate   -0.06   1.00   1.00   3.17     Bloomberg Barclays U.S. Aggregate   -0.05   1.67   1.67   2.17     Bloomberg Barclays U.S. TIPS   -0.15   1.67   1.67   2.17     Bloomberg Barclays U.S. TIPS   -0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Tips   -0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Tips   -0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Credit   0.22   2.38   2.38   2.72     Bloomberg Barclays Global Aggregate (Unhedged)   0.16   6.26   6.26   4.31     MTERNATIONAL FIXED INCOME   1.18   1.18   3.94     JPM EMBI Plus   -0.08   5.00   5.00   2.19     REAL ESTATE/COMMODITIES/ALTERNATIVES   0.81   1.15   1.15   1.15     Milshire Global ex U.S. Real Estate Securities Index <sup>84</sup>   0.81   1.15   1.15   1.15   1.15     Bloomberg Gommodity (S&P GSCI)   3.81   13.14   13.14   2.45     Milshire Global Real Estate Securities Index <sup>84</sup>   0.61   11.56   1.56   5.50     Milshire Liquid Alternatives Equity Hedge Index <sup>84</sup>   0.65   2.59   2.59   2.59   1.17     Milshire Liquid Alternative Equity Hedge Index <sup>84</sup>   0.63   2.09   2.09   1.43     Milshire Liquid Alternative Global Macro Index <sup>84</sup>   0.63   0.91   0.91   0.91   0.91   0.91     Milshire Liquid Alternative Felative Value Index <sup>84</sup>   0.83   3.43   3.43   0.91     Milshire Liquid Alternative Global Macro Index <sup>84</sup>   0.91   0.9	MSCI Japan	-0.03	6.06	6.06	-10.30
SECIAC World ex U.S.	MSCI EM (Emerging Markets)	0.23	9.01	9.01	-9.89
SCI EAFE   3.48   9.12   9.12   0.79     MSCI Europe   3.63   9.44   9.44   0.34     MSCI Pacific   3.28   8.58   8.58   2.74     MSCI Japan   2.26   7.62   7.62   6.61     MSCI Europe   3.63   9.44   9.44   0.34     MSCI Japan   2.26   7.62   7.62   7.62   6.74     MSCI EM (Emerging Markets)   1.10   8.35   8.35   5.07     U.S. FIXED INCOME   3.10   8.35   8.35   5.07     U.S. FIXED INCOME   3.10   8.35   8.35   5.07     U.S. FIXED INCOME   3.10   1.00   1.00   3.17     Bloomberg Barclays Long Gov't/Credit   0.55   1.67   1.67   2.17     Bloomberg Barclays Long-Term Treasury   1.22   0.56   0.56   3.99     Bloomberg Barclays U.S. TIPS   0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Credit   0.22   2.38   2.38   2.72     Bloomberg Barclays U.S. Credit   0.22   2.38   2.38   2.72     Bloomberg Barclays Corporate High Yield   0.56   0.56   0.50   0.50   0.51     Bloomberg Barclays Global Aggregate (Unhedged)   0.16   0.58   0.94   0.94   0.57     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     JPM EMBI Plus   0.50   0.50   0.50   0.50     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     JPM EMBI Plus   0.50   0.50   0.50   0.50     Wilshire U.S. Real Estate Securities Index <sup>®M</sup>   0.88   12.42   20.33     Wilshire Global Real Estate Securities Index <sup>®M</sup>   0.61   1.56   1.56   1.47     Bloomberg Global Real Estate Securities Index <sup>®M</sup>   0.81   1.31   2.45     Wilshire Liquid Alternative Equity Hedge Index <sup>®M</sup>   0.57   0.57     Wilshire Liquid Alternative Equity Hedge Index <sup>®M</sup>   0.76   0.34   0.43   0.41     Wilshire Liquid Alternative Feative Value Index <sup>®M</sup>   0.76   0.34   0.41   0.41     Wilshire Liquid Alternative Global Macro Index <sup>®M</sup>   0.76   0.78   0.79   0.70   0.70     Wilshire Liquid Alternative Relative Value Index <sup>®M</sup>   0.80   0.34   0.34   0.43   0.40     Wilshire Liquid Alternative Relative Value Index <sup>®M</sup>   0.75   0.75   0.75   0.75     Wilshire Liquid Alternative Value Index <sup>®M</sup>   0.75   0.75   0.75     Wilshire Liquid Alternative	INTERNATIONAL EQUITY (LOCAL CURRENCY)				
MSCI Europe   3.63   9.44   9.44   0.34     MSCI Pacific   3.28   8.58   8.58   -2.74     MSCI Japan   2.26   7.62   7.62   -6.41     MSCI Japan   2.26   7.62   7.62   -6.41     MSCI Japan   2.26   7.62   7.62   -6.41     MSCI Europing Markets)   1.10   8.35   8.35   -5.07     MSCI Europing Markets)   1.10   1.00   3.17     Bloomberg Barclays U.S. Aggregate   -0.06   1.00   1.00   3.17     Bloomberg Barclays Long-Term Treasury   -1.22   -0.56   -0.56   3.99     Bloomberg Barclays U.S. TipS   -0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Tredit   2.2   2.38   2.38   2.38   2.38   2.38     Bloomberg Barclays U.S. Credit   2.2   2.38   2.38   2.38   2.38     Bloomberg Barclays Corporate High Yield   1.66   6.26   6.26   6.26   4.31     INTERNATIONAL FIXED INCOME     Bloomberg Barclays Global Aggregate (Unhedged)   -0.58   0.94   0.94   0.94   0.95     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.94   0.94   0.95     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.94   0.94   0.95     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.94   0.94   0.95     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.98   0.94   0.94   0.95     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.98   0.99   0.90   0.90     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.99   0.90   0.90     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.99   0.90   0.90     Bloomberg Barclays Global Aggregate (Hedged)   -0.58   0.99   0.90   0.90     Bloomberg Barclays Global Aggregate (Hedged)   0.91   0.91   0.91   0.91     Bloomberg Barclays Global Aggregate (Hedged)   0.91   0.91   0.91   0.91     Bloomberg Barclays Global Aggregate (Hedged)   0.91   0.91   0.91   0.91     Bloomberg Barclays Global Aggregate (Hedged)   0.91   0.91   0.91   0.91     Blo	MSCI AC World ex U.S.	2.82	9.11	9.11	-1.44
SECI Pacific   3.28   8.58   8.58   -2.74     MSCI Japan   2.26   7.62   7.62   -6.41     MSCI Japan   2.26   7.62   7.62   -6.41     MSCI Japan   3.28   8.58   8.58   -5.07     MSCI Japan   3.28   8.58   7.62   -6.41     MSCI Let (Emerging Markets)   3.50   5.07     U.S. FIXED INCOME   Bloomberg Barclays U.S. Aggregate   -0.06   1.00   1.00   3.17     Bloomberg Barclays U.S. Aggregate   -0.05   1.67   1.67   2.17     Bloomberg Barclays Long Gov't/Credit   -0.55   1.67   1.67   2.17     Bloomberg Barclays U.S. TIPS   -0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. TIPS   -0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Credit   0.22   2.38   2.38   2.72     Bloomberg Barclays U.S. Credit   0.22   2.38   2.38   2.72     Bloomberg Barclays Corporate High Yield   1.66   6.26   6.26   4.31     NTERNATIONAL FIXED INCOME   -0.58   0.94   0.94   0.57     Bloomberg Barclays Global Aggregate (Unhedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.10   0.50   0.50     Bloomberg Barclays Global Aggregate (Hedged)   0.11   1.00   1.00   0.50     Bloomberg Barclays Global Aggregate (Hedged)   0.11   1.00   1.00   0.50     Bloomberg Barclays Global Aggregate (Hedged)   0.11   1.00   1.00   0.50     Bloomberg Barclays Global Aggregate (Hedged)   0.58   0.94   0.94   0.94     Bloomberg Barclays Global Aggregate (Hedged)   0.58   0.94   0.94   0.94     Bloomberg Barclays Global Aggregate (Hedged)   0.58   0.94   0.94   0.94   0.94     Bloomberg Barclays Global Aggregate (Hedged)   0.50   0.50   0.50   0.50     Bloomberg Barclays Global Aggregate (Hedged)   0.50   0.50   0.50   0.50     Bloomberg Bar	MSCI EAFE	3.48	9.12	9.12	-0.79
SECI Japan   2.26   7.62   7.62   6.41     MSCI EM (Emerging Markets)   1.10   8.35   8.35   5.07     JUSTIKED INCOME   1.00   1.00   1.00   3.17     Bloomberg Barclays U.S. Aggregate   1.05   1.05   1.07   1.07   2.17     Bloomberg Barclays U.S. Aggregate   1.22   -0.56   1.00   1.00   3.17     Bloomberg Barclays U.S. Aggregate   1.22   -0.56   -0.56   3.99     Bloomberg Barclays U.S. TIPS   1.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Credit   1.22   2.38   2.38   2.72     Bloomberg Barclays U.S. Credit   1.22   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Unhedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.12   1.18   1.18   3.94     Bloomberg Barclays Global Aggregate (Hedged)   0.15   0.15   0.10     Bloomberg Barclays Global Aggregate (Hedged)   0.15   0.15   0.15     Bloomberg Barclays Global Aggregate (Hedged)   0.15	MSCI Europe	3.63	9.44	9.44	0.34
Section   Sec	MSCI Pacific	3.28	8.58	8.58	-2.74
Bloomberg Barclays U.S. Aggregate   -0.06   1.00   1.00   3.17     Bloomberg Barclays Long Gov't/Credit   -0.55   1.67   1.67   2.17     Bloomberg Barclays Long-Term Treasury   -1.22   -0.56   -0.56   3.99     Bloomberg Barclays Long-Term Treasury   -1.22   -0.56   -0.56   3.99     Bloomberg Barclays U.S. TIPS   -0.01   1.33   1.33   1.91     Bloomberg Barclays U.S. Credit   -0.22   2.38   2.38   2.78     Bloomberg Barclays U.S. Credit   -0.22   2.38   2.38   2.78     Bloomberg Barclays U.S. Credit   -0.22   2.38   2.38   2.78     Bloomberg Barclays Coprorate High Yield   1.66   6.26   6.26   6.26   4.31     INTERNATIONAL FIXED INCOME	MSCI Japan	2.26	7.62	7.62	-6.41
Seloomberg Barclays U.S. Aggregate   -0.06   1.00   1.00   3.17	MSCI EM (Emerging Markets)	1.10	8.35	8.35	-5.07
Bloomberg Barclays Long Gov't/Credit         -0.55         1.67         1.67         2.17           Bloomberg Barclays Long-Term Treasury         -1.22         -0.56         -0.56         3.99           Bloomberg Barclays U.S. TIPS         -0.01         1.33         1.33         1.91           Bloomberg Barclays U.S. Credit         0.22         2.38         2.38         2.72           Bloomberg Barclays Corporate High Yield         1.66         6.26         6.26         4.31           INTERNATIONAL FIXED INCOME         ************************************	U.S. FIXED INCOME				
Selomberg Barclays Long-Term Treasury   1.22   -0.56   -0.56   3.99	Bloomberg Barclays U.S. Aggregate	-0.06	1.00	1.00	3.17
Scientified	Bloomberg Barclays Long Gov't/Credit	-0.55	1.67	1.67	2.17
Scientified Barclays U.S. Credit   0.22   2.38   2.38   2.72	Bloomberg Barclays Long-Term Treasury	-1.22	-0.56	-0.56	3.99
Scient	Bloomberg Barclays U.S. TIPS	-0.01	1.33	1.33	1.91
Second   S	Bloomberg Barclays U.S. Credit	0.22	2.38	2.38	2.72
Selection   Sele	Bloomberg Barclays Corporate High Yield	1.66	6.26	6.26	4.31
Selection   Sele	NTERNATIONAL FIXED INCOME				
JPM EMBI Plus         -0.08         5.00         5.00         2.19           REAL ESTATE/COMMODITIES/ALTERNATIVES           Wilshire U.S. Real Estate Securities Index <sup>SM</sup> 0.88         12.42         12.42         20.33           Wilshire Global ex U.S. Real Estate Securities Index <sup>SM</sup> 0.11         10.00         10.00         5.20           Wilshire Global Real Estate Securities Index <sup>SM</sup> 0.61         11.56         11.56         14.72           Bloomberg Commodity Index         1.01         6.51         6.51         -5.67           S&P GSCI Commodity (S&P GSCI)         3.81         13.14         13.14         -2.45           Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56         2.59         2.59         -1.17           Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76         4.34         4.34         -2.17           Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.63         2.09         2.09         1.43           Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83         3.43         3.43         -1.03           Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42         2.10         2.10         0.21	Bloomberg Barclays Global Aggregate (Unhedged)	-0.58	0.94	0.94	-0.57
REAL ESTATE/COMMODITIES/ALTERNATIVES           Wilshire U.S. Real Estate Securities Index <sup>SM</sup> 0.88         12.42         12.42         20.33           Wilshire Global ex U.S. Real Estate Securities Index <sup>SM</sup> 0.11         10.00         10.00         5.20           Wilshire Global Real Estate Securities Index <sup>SM</sup> 0.61         11.56         11.56         14.72           Bloomberg Commodity Index         1.01         6.51         6.51         -5.67           S&P GSCI Commodity (S&P GSCI)         3.81         13.14         13.14         -2.45           Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56         2.59         2.59         -1.17           Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76         4.34         4.34         -2.17           Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63         2.09         2.09         1.43           Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83         3.43         3.43         -1.03           Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42         2.10         2.10         0.21	Bloomberg Barclays Global Aggregate (Hedged)	0.12	1.18	1.18	3.94
Wilshire U.S. Real Estate Securities Index <sup>SM</sup> 0.88       12.42       12.42       20.33         Wilshire Global ex U.S. Real Estate Securities Index <sup>SM</sup> 0.11       10.00       10.00       5.20         Wilshire Global Real Estate Securities Index <sup>SM</sup> 0.61       11.56       11.56       14.72         Bloomberg Commodity Index       1.01       6.51       6.51       -5.67         S&P GSCI Commodity (S&P GSCI)       3.81       13.14       13.14       13.14       -2.45         Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56       2.59       2.59       -1.17         Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21	JPM EMBI Plus	-0.08	5.00	5.00	2.19
Wilshire Global ex U.S. Real Estate Securities Index <sup>SM</sup> 0.11       10.00       10.00       5.20         Wilshire Global Real Estate Securities Index <sup>SM</sup> 0.61       11.56       11.56       14.72         Bloomberg Commodity Index       1.01       6.51       6.51       -5.67         S&P GSCI Commodity (S&P GSCI)       3.81       13.14       13.14       13.14       -2.45         Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56       2.59       2.59       -1.17         Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21	REAL ESTATE/COMMODITIES/ALTERNATIVES				
Wilshire Global Real Estate Securities Index <sup>SM</sup> 0.61       11.56       11.56       14.72         Bloomberg Commodity Index       1.01       6.51       6.51       -5.67         S&P GSCI Commodity (S&P GSCI)       3.81       13.14       13.14       13.14       -2.45         Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56       2.59       2.59       -1.17         Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21	Wilshire U.S. Real Estate Securities Index <sup>sm</sup>	0.88	12.42	12.42	20.33
Wilshire Global Real Estate Securities Index <sup>SM</sup> 0.61       11.56       11.56       14.72         Bloomberg Commodity Index       1.01       6.51       6.51       -5.67         S&P GSCI Commodity (S&P GSCI)       3.81       13.14       13.14       13.14       -2.45         Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56       2.59       2.59       -1.17         Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21	Wilshire Global ex U.S. Real Estate Securities Index <sup>SM</sup>	0.11	10.00	10.00	5.20
Bloomberg Commodity Index       1.01       6.51       6.51       -5.67         S&P GSCI Commodity (S&P GSCI)       3.81       13.14       13.14       -2.45         Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56       2.59       2.59       -1.17         Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21		0.61			
S&P GSCI Commodity (S&P GSCI)       3.81       13.14       13.14       -2.45         Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56       2.59       2.59       -1.17         Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21					
Wilshire Liquid Alternatives Index <sup>SM</sup> 0.56       2.59       2.59       -1.17         Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21					
Wilshire Liquid Alternative Equity Hedge Index <sup>SM</sup> 0.76       4.34       4.34       -2.17         Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21					
Wilshire Liquid Alternative Event Driven Index <sup>SM</sup> 0.63       2.09       2.09       1.43         Wilshire Liquid Alternative Global Macro Index <sup>SM</sup> 0.19       -0.11       -0.11       -4.59         Wilshire Liquid Alternative Multi-strategy Index <sup>SM</sup> 0.83       3.43       3.43       -1.03         Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42       2.10       2.10       0.21	·				
Wilshire Liquid Alternative Global Macro Index0.19-0.11-0.11-4.59Wilshire Liquid Alternative Multi-strategy Index0.833.433.43-1.03Wilshire Liquid Alternative Relative Value Index0.422.102.100.21					
Wilshire Liquid Alternative Multi-strategy Index $0.83$ $3.43$ $3.43$ $-1.03$ Wilshire Liquid Alternative Relative Value Index $0.42$ $2.10$ $2.10$ $0.21$	•				
Wilshire Liquid Alternative Relative Value Index <sup>SM</sup> 0.42 2.10 2.10 0.21	•				
·					
	Wilshire Focused Liquid Alternative Index <sup>sM</sup>	0.69	2.41	2.41	-0.44

<sup>\*</sup>As of February 28, 2019. Source: Wilshire Compass  $^{\mbox{\scriptsize SM}}$ 

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