



# Red Wing Public Schools ISD# 256

# Investment Review

THE PRIVATE BANK

May 10, 2023

#### Your Team:

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### **Red Wing Public Schools – OPEB Trust**

Date of Trust: September 2009

Type of Trust: Irrevocable

Governing Law: Minnesota State Statue 356A

Date of Actuarial Report: Fiscal Year Ending June 30, 2022

Current OPEB Obligation: \$4,651,631

Investment Objective: Moderate Growth & Income

Portfolio Life: Greater than 10 years

### **Agenda**

Portfolio Review

**Economic and Market Overview** 



# Portfolio Review

### THE PRIVATE BANK





# Strategic Allocation Review Summary

As of May 8, 2023



	MARKET VALUE	CURRENT ALLOCATION	TARGET ALLOCATION	DEVIATION (%)	DEVIATION (\$)
Investable Total	\$8,535,994	100%	100%		
Cash Alternatives	45,607	0.53	0.00	0.53	45,607
Fixed Income	3,887,900	45.55	46.00	(0.45)	(38,649)
Equities	3,851,779	45.12	48.00	(2.88)	(245,506)
Real Assets	750,707	8.79	6.00	2.79	238,548
Miscellaneous Total	\$10,560				
Miscellaneous	10,560				
Total Portfolio	\$8,546,554				

May 9, 2023
Trade Date Basis
Red Wing Opeb Trust
84021
Investment Objective Is
Moderate Growth & Income



## Strategic Allocation Review Summary

As of May 8, 2023

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# Strategic Allocation Review

As of May 8, 2023

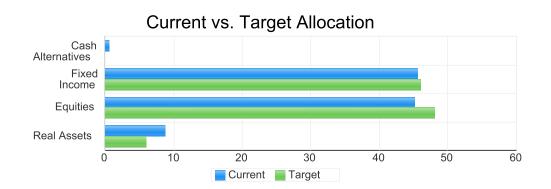
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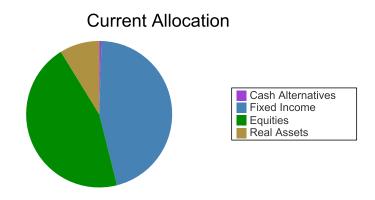
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# Strategic Allocation Review

As of May 8, 2023

May 9, 2023

Trade Date Basis

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	MARKET VALUE	TOTAL COST	UNREALIZED G/L	EST ANNUAL INCOME	EST ANNUAL YIELD	CURRENT ALLOC.	TARGET ALLOC.	DEVIATION (%)	DEVIATION (\$)
Investable Total	\$8,535,994	\$7,256,330	\$1,279,664	\$220,822	2.59%	100.00%	100.00%		
Cash Alternatives	45,607	45,607	0	2,075	4.55	0.53	0.00	0.53	45,607
Cash Alternatives	45,607	45,607	0	2,075	4.55	0.53	0.00	0.53	45,607
Fixed Income	3,887,900	4,195,171	(307,271)	141,106	3.63	45.55	46.00	(0.45)	(38,649)
U.S. Taxable Investment Grade Fixed Income	3,887,900	4,195,171	(307,271)	141,106	3.63	45.55	46.00	(0.45)	(38,649)
Equities	3,851,779	2,498,266	1,353,513	65,400	1.70	45.12	48.00	(2.88)	(245,506)
U.S. Large Cap	2,123,984	1,047,758	1,076,225	33,018	1.55	24.88	25.00	(0.12)	(10,006)
U.S. Mid Cap	685,671	460,737	224,934	9,498	1.39	8.03	8.00	0.03	2,783
U.S. Small Cap	262,976	261,125	1,851	4,019	1.53	3.08	5.00	(1.92)	(163,832)
Developed Market Ex U.S. Equities	584,776	557,682	27,094	15,321	2.62	6.85	6.00	0.85	72,616
Emerging Market Equities	194,373	170,964	23,410	3,544	1.82	2.28	4.00	(1.72)	(147,067)
Real Assets	750,707	517,286	233,421	12,241	1.63	8.79	6.00	2.79	238,548
Private Real Estate	750,707	517,286	233,421	12,241	1.63	8.79	6.00	2.79	238,548
Miscellaneous Total	\$10,560	\$10,560	\$0	\$448	4.24%				
Miscellaneous	10,560	10,560	0	448	4.24				
P3	10,560	10,560	0	448	4.24				
Total Portfolio	\$8,546,554	\$7,266,890	\$1,279,664	\$221,269	2.59%				



### Strategic Allocation Review

As of May 8, 2023

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# **Holdings Summary**

As of May 8, 2023

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Trade Date Basis

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Investment Objective Is Moderate Growth & Income

						EST	EST	
			MARKET	TOTAL	UNREALIZED	ANNUAL	ANNUAL	
	UNITS	PRICE	VALUE	COST	G/L	INCOME	YIELD	ALLOCATION
Investable Total			\$8,535,994	\$7,256,330	\$1,279,663	\$220,822	2.59%	99.9%
Cash Alternatives			45,607	45,607	0	2,075	4.55	0.5
Cash Alternatives			45,607	45,607	0	2,075	4.55	0.5
Cash Equivalents			45,607	45,607	0	2,075	4.55	0.5
CASH	0	1.00	0	0	0	0		0.0
SECURED MARKET DEPOSIT ACCOUNT	45,607	1.00	45,607	45,607	0	2,075	4.55	0.5
Fixed Income			3,887,900	4,195,171	(307,271)	141,106	3.63	45.5
U.S. Taxable Investment Grade Fixed Income			3,887,900	4,195,171	(307,271)	141,106	3.63	45.5
Separately Managed Account			3,887,900	4,195,171	(307,271)	141,106	3.63	45.5
FI TAXABLE CORE-WF-FIST			3,887,900	4,195,171	(307,271)	141,106	3.63	45.5
Equities			3,851,779	2,498,266	1,353,513	65,400	1.70	45.1
U.S. Large Cap			2,123,984	1,047,758	1,076,225	33,018	1.55	24.9
Funds			1,067,804	455,281	612,523	16,899	1.58	12.5
ISHARES CORE S & P 500 ETF	2,576	414.52	1,067,804	455,281	612,523	16,899	1.58	12.5
Separately Managed Account			1,056,180	592,478	463,702	16,119	1.53	12.4
LARGE CAP VALUE - MFS			515,375	319,449	195,926	12,541	2.43	6.0
LARGE GROWTH - JENNISON			540,805	273,028	267,777	3,578	0.66	6.3
U.S. Mid Cap			685,671	460,737	224,934	9,498	1.39	8.0
Funds			343,548	233,545	110,003	2,580	0.75	4.0
ISHARES RUSSELL MID-CAP GROWTH	3,851	89.21	343,548	233,545	110,003	2,580	0.75	4.0
Separately Managed Account			342,123	227,192	114,931	6,918	2.02	4.0
MID CAP VALUE - ANCHOR			342,123	227,192	114,931	6,918	2.02	4.0
U.S. Small Cap			262,976	261,125	1,851	4,019	1.53	3.1
Funds			130,324	147,412	(17,089)	3,092	2.37	1.5
ISHARES RUSSELL 2000 VALUE ETF	990	131.64	130,324	147,412	(17,089)	3,092	2.37	1.5
Separately Managed Account			132,652	113,713	18,939	927	0.70	1.6
SMALL CAP SUSTAINABL GRO-KAYNE			132,652	113,713	18,939	927	0.70	1.6
Developed Market ExU.S. Equities			584,776	557,682	27,094	15,321	2.62	6.8
Funds			294,435	290,105	4,330	7,103	2.41	3.4
ISHARES CORE MSCI EAFE ETF	4,261	69.10	294,435	290,105	4,330	7,103	2.41	3.4



# **Holdings Summary**

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			MARKET	TOTAL	UNREALIZED	EST ANNUAL	EST ANNUAL	
	UNITS	PRICE	VALUE	COST	G/L	INCOME	YIELD	ALLOCATION
Separately Managed Account			290,341	267,577	22,764	8,218	2.83	3.4
MONDRIAN INTL EQ ADR-DELAWARE			145,712	145,342	370	4,963	3.41	1.7
NON-US GRWTH ADR-MCKINLEY			144,629	122,234	22,394	3,255	2.25	1.7
Emerging Market Equities			194,373	170,964	23,410	3,544	1.82	2.3
Funds			194,373	170,964	23,410	3,544	1.82	2.3
INV OPP DEVELOP MRKTS-R6 #7038	2,449	39.25	96,113	73,948	22,165	1,006	1.05	1.1
ISHARES CORE MSCI EMERGING ETF	2,009	48.91	98,260	97,015	1,245	2,537	2.58	1.1
Real Assets			750,707	517,286	233,421	12,241	1.63	8.8
Private Real Estate			750,707	517,286	233,421	12,241	1.63	8.8
Funds			750,707	517,286	233,421	12,241	1.63	8.8
PRINCIPAL ENHANCED PRPRTY ASP R/I1-2	243	2,055.59	498,980	292,286	206,694	0	0.00	5.8
STARWOOD REIT	9,856	25.54	251,727	225,000	26,727	12,241	4.86	2.9
Miscellaneous Total			\$10,560	\$10,560	\$0	\$448	4.24%	0.1%
Miscellaneous			10,560	10,560	0	448	4.24	0.1
P3			10,560	10,560	0	448	4.24	0.1
Cash Equivalents			257	257	0	12	4.55	0.0
CASH	0	1.00	0	0	0	0		0.0
SECURED MARKET DEPOSIT ACCOUNT	257	1.00	257	257	0	12	4.55	0.0
Separately Managed Account			10,303	10,303	0	436	4.23	0.1
FI TAXABLE CORE-WF-FIST			8,314	8,314	0	345	4.15	0.1
LARGE CAP VALUE - MFS			620	620	0	28	4.55	0.0
LARGE GROWTH - JENNISON			117	117	0	5	4.55	0.0
MID CAP VALUE - ANCHOR			313	313	0	14	4.55	0.0
MONDRIAN INTL EQ ADR-DELAWARE			668	668	0	30	4.55	0.0
NON-US GRWTH ADR-MCKINLEY			241	241	0	11	4.55	0.0
SMALL CAP SUSTAINABL GRO-KAYNE			29	29	0	1	4.55	0.0
Total Portfolio			\$8,546,554	\$7,266,890	\$1,279,663	\$221,269	2.59%	100.0%



## **Holdings Summary**

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# Red Wing Public Schools | Receipt/Disbursement History

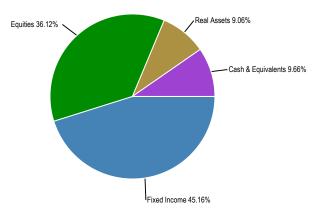


Contributions	10/22/2009 10/22/2009	Initial Funding of OPEB Trust Capitalized Interest		\$12,556,457 \$201,858
		<b>Total Contributions</b>		\$12,758,315
Disbursements				
	7/6/2010	OPEB Distribution	(\$675,043)	
	12/9/2010	Capitalized Interest	(\$201,858)	
	7/20/2011	OPEB Distribution	(\$838,575)	
	6/28/2012	OPEB Distribution	(\$794,380)	
	6/28/2013	OPEB Distribution	(\$789,735)	
	7/1/2014	OPER Distribution	(\$669,665)	
	10/6/2015 11/8/2016	OPEB Distribution OPEB Distribution	(\$617,787) (\$688,504)	
	11/3/2017	OPEB Distribution	(\$587,040)	
	11/5/2017	OPEB Distribution	(\$615,656)	
	11/7/2019	OPEB Distribution	(\$818,878)	
	11/18/2020	OPEB Distribution	(\$889,233)	
	12/15/2021	OPEB Distribution	(\$912,831)	
	12/19/2022	OPEB Distribution	(\$912,488)	
	Total Disbursen	nents	-	(\$10,011,673)
	Adjusted Balan	ce	-	\$2,746,640
	Current Market	t Value (5.8.2023)		\$8,546,554
	Net Increase in	Market Value		\$5,799,914

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#### PORTFOLIO RETURNS ALLOCATION (BY CLASS)





PORTFOLIO SUMMARY	LAST 3	YEAR TO	LAST 12	LAST 3	LAST 5	SINCE
	MONTHS	DATE	MONTHS	YEARS	YEARS	INCEPTION
Beginning Value <sup>1</sup>	8,732,756	8,418,204	9,648,082	10,082,256	10,996,449	8,736,904
Net Contributions & Withdrawals <sup>2</sup>	15	15	-912,467	-2,714,423	-4,140,297	-5,976,625
Investment Gain or Loss <sup>1</sup>	5,750	320,302	2,906	1,370,688	1,882,369	5,978,242
Ending Value <sup>1</sup>	8,738,521	8,738,521	8,738,521	8,738,521	8,738,521	8,738,521

PERFORMANCE SUMMARY								
TOTAL PORTFOLIO (Net of fees)	ENDING MARKET VALUE <sup>1</sup> 8,738,521	CURRENT PORTFOLIO ALLOCATION 100.00%	LAST 3 MONTHS 0.07%	YEAR TO DATE 3.80%	LAST 12 MONTHS 0.28%	LAST 3 YEARS <sup>3</sup> 4.22%	LAST 5 YEARS <sup>3</sup> 3.45%	SINCE INCEPTION <sup>3</sup> 4.08%
FIXED INCOME	3.945.930	45.16%	1.04%	3.05%	0.95%	-0.83%	1.57% <sup>4</sup>	1.61%⁴
Bloomberg 1-5 Year Govt/Credit	5,5 15,555	10.1070	1.08%	2.32%	1.17%	-0.91%	1.47%	1.61%
Bloomberg Aggregate Bond Index			0.49%	3.59%	-0.43%	-3.15%	1.18%	2.43%
Bloomberg 1-15 Yr Muni Blend (1-17)			-0.26%	1.99%	3.50%	0.85%	2.08%	2.83%
Bloomberg Multiverse Index			0.15%	3.47%	-2.17%	-3.58%	-0.84%	1.25%
Bloomberg High Yield Corporate Index			0.77%	4.60%	1.22%	4.71%	3.28%	5.99%
Bloomberg High Yield Municipal Index			-1.07%	3.33%	-0.40%	4.10%	3.10%	5.44%
JP Morgan GBI x US			-0.09%	3.11%	-6.13%	-7.03%	-3.94%	-0.49%
JP Morgan EMBI Global Index			-0.34%	2.76%	0.10%	-0.24%	0.19%	4.02%

<sup>&</sup>lt;sup>1</sup> Values include Accrued Income.

<sup>&</sup>lt;sup>2</sup> As accounts are added to/removed from the composite they are displayed as a contribution/withdrawal.

<sup>&</sup>lt;sup>3</sup> Annualized Return

<sup>&</sup>lt;sup>4</sup> Historical classification changes exist.

PERFORMANCE SUMMARY								
	ENDING Market Value <sup>2</sup>	CURRENT PORTFOLIO ALLOCATION	LAST 3 MONTHS	YEAR TO DATE	LAST 12 MONTHS	LAST 3 YEARS <sup>1</sup>	LAST 5 YEARS <sup>1</sup>	SINCE INCEPTION <sup>1</sup>
EQUITIES	3,156,552	36.12%	0.09%	7.03%	2.99%	12.12%	7.98% <sup>3</sup>	9.96% <sup>3</sup>
S&P 500 Index			2.72%	9.17%	2.66%	14.52%	11.45%	12.58%
MSCI EAFE Net Index			3.17%	11.53%	8.42%	11.68%	3.63%	5.16%
MSCI All Country World Index			1.72%	9.04%	2.59%	12.56%	7.56%	8.71%
MSCI Emerging Mkts Index-Net			-4.74%	2.78%	-6.51%	4.33%	-1.05%	2.33%
Russell Midcap Index			-4.43%	3.51%	-1.69%	13.78%	7.97%	11.45%
Russell 2000 Index			-8.07%	0.89%	-3.65%	11.90%	4.15%	9.57%
REAL ASSETS FTSE EPRA/NAREIT Developed Index	791,679	9.06%	<b>-0.68%</b> -5.52%	-0.90% 3.00%	<b>-3.24%</b> -14.43%	<b>9.29%</b> 5.81%	<b>7.85%</b> 1.77%	<b>6.35%</b> 6.10%
Bloomberg Commodity Total Return Index			-5.61%	-6.07%	-16.60%	21.14%	4.67%	-1.41%
ALTERNATIVE INVESTMENTS		-	-	-	-	-	-	-
HFRI Fund Weighted Composite Index (update Wilshire Liquid Alternative Index			- -	-	-	-	-	-
OTHER	-		-	-	-	-	-	-
CASH & EQUIVALENTS Lipper Money Market Index	844,359	9.66%	<b>0.98%</b> 1.10%	<b>1.30%</b> <i>1.46%</i>	<b>2.69%</b> 2.97%	<b>0.91%</b> 1.01%	<b>1.18%</b> 1.32%	<b>0.71%</b> 0.59%

<sup>&</sup>lt;sup>1</sup> Annualized Return

<sup>&</sup>lt;sup>2</sup> Values include Accrued Income.

<sup>&</sup>lt;sup>3</sup> Historical classification changes exist.

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Due to the unique characteristics of private equity assets (PE), including irregular cash flows and lack of reinvestment options, performance measurement is better assessed through different methods than those typically used for more liquid asset classes (which use

time weighted metrics) as such methods may not provide representative PE performance. In practice, PE funds are typically long-lived and interim estimates of returns must be based on implicit assessments of expected future cash flows. In order to more effectively gauge performance, PE generally uses two principal cash flow based performance indicators where capital calls, capital reimbursement and profit distributions are the basis for calculation: the internal rate of return "IRR" and the presentation of investment "multiples". IRR is the estimated rate needed to convert (or discount or reduce) the sum of the future uneven cash flow to equal initial investment or down payment. Multiples are calculated as the ratio of cash paid out (distributions) to total funds supplied (drawdowns or capital calls), but do not take into account the timing of the cash flows.

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# **Economic and Market Overview**

### THE PRIVATE BANK



### **WELLS FARGO**

#### **Investment Institute**

### Wells Fargo Investment Institute (WFII) forecasts and guidance

#### Global economic forecast

Economic Targets	Latest	2023 YE target	2024 YE target
U.S. GDP Growth	1.6%	1.1%	1.5%
U.S. Inflation	5.0%	2.9%	2.8%
U.S. Unemployment Rate	3.4%	4.4%	4.9%
Eurozone GDP Growth	1.3%	0.4%	0.6%
Eurozone Inflation	7.0%	2.1%	2.0%
Other Economic Targets	Latest	2023 YE target	2024 YE target
Global GDP Growth	2.2%	2.3%	2.4%
Global Inflation	6.6%	4.4%	3.3%
Developed-Market GDP Growth	1.9%	1.2%	1.2%
Developed-Market Inflation	7.1%	3.7%	2.5%
Emerging-Market GDP Growth	2.4%	2.6%	3.3%
Emerging-Market Inflation	6.3%	4.8%	4.0%
Global Equities	Latest	2023 YE target	2024 YE target
S&P 500 Index	4138	4000 - 4200	4600 - 4800
S&P 500 earnings per share	\$222	\$205	\$220
Russell Midcap Index	2747	2700 - 2900	3200 - 3400
Russell Midcap earnings per share	\$151	\$145	\$160
Russell 2000 Index	1754	1650 - 1850	2000 - 2200
Russell 2000 earnings per share	\$74	\$70	\$80
MSCI EAFE	2152	2000 - 2200	2300 - 2500
MSCI EAFE earnings per share	\$153	\$145	\$160
MSCI EM	989	850 - 1050	1000 - 1200
MSCI EM earnings per share	\$90	\$75	\$80
Global Fixed Income	Latest	2023 YE target	2024 YE target
10-Year Treasury	3.51%	3.50-4.00%	3.75-4.25%
30-Year Treasury	3.82%	3.50-4.00%	4.00-4.50%
Fed Funds Rate	5.25%	5.25-5.50%	3.75-4.00%
Global Real Assets	Latest	2023 YE target	2024 YE target
West Texas Crude	\$73	\$85-\$95	\$100-\$120
Brent Crude	\$77	\$90-\$100	\$105-\$125
Gold Price	\$2,021	\$2100 - \$2200	\$2400 - \$2500
Bloomberg Commodity Index (TR)	230	250-270	275-295
Currency Guidance	Latest	2023 YE target	2024 YE target
Dollar/Euro Exchange Rate	\$1.10	\$1.03-\$1.11	\$1.12-\$1.20
Yen/Dollar Exchange Rate	¥135	¥130-¥140	¥120-¥130

Fixed Income	Guidance		
Cash Alternatives	Neutral		
U.S. Taxable Investment Grade Fixed Income	Favorable		
U.S. Short Term Taxable Fixed Income	Most Favorable		
U.S. Intermediate Term Taxable Fixed Income	Unfavorable		
U.S. Long Term Taxable Fixed Income	Most Favorable		
High Yield Taxable Fixed Income	Unfavorable		
U.S. Municipal Bonds	Favorable		
Developed Market Ex-U.S. Fixed Income	Neutral		
Emerging Market Fixed Income	Neutral		
Equities	Guidance		
U.S. Large Cap Equities	Favorable		
U.S. Mid Cap Equities	Neutral		
U.S. Small Cap Equities	Most Unfavorable		
Developed Market Ex-U.S. Equities	Neutral		
Emerging Market Equities	Unfavorable		
Alternative Investments	Guidance		
Commodities	Favorable		
Private Real Estate	Neutral		
Alternative Investments	Guidance		
Hedge Funds—Relative Value	Favorable		
Hedge Funds—Macro	Favorable		
Hedge Funds—Event Driven	Neutral		
Hedge Funds—Equity Hedge	Neutral		
Private Equity	Neutral		
Private Debt	Neutral		

WFII guidance

Equity Sectors	Guidance
Communication Services	Neutral
Consumer Discretionary	Unfavorable
Consumer Staples	Neutral
Energy	Favorable
Financials	Neutral
Health Care	Favorable
Industrials	Neutral
Information Technology	Favorable
Materials	Neutral
Real Estate	Unfavorable
Utilities	Neutral

Sources: Bureau of Statistics, Wells Fargo Investment Institute, Wells Fargo Securities' Economic Group, as of May 8, 2023. Please see page 5 for important definitions regarding quidance.

#### **Recent WFII Reports**

Capital market summary - 05/08/23
Highlighting updated guidance - Focus on the storm ahead - 05/08/23
Technical strategy briefing - 05/08/23
Economic and market commentary - 05/08/23
FOMC meeting key takeaways - 05/03/23
The calm before the storm - 05/03/23

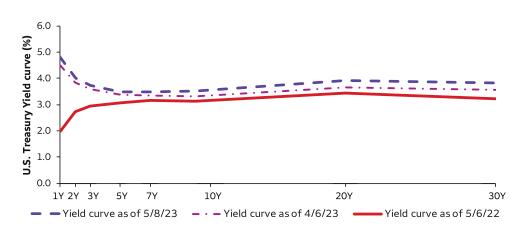
Sources: Bureau of Statistics, Wells Fargo Investment Institute, Bloomberg, as of May 8, 2023. Forecasts are not guaranteed and based on certain assumptions and on views of market and economic conditions which are subject to change. Latest economic numbers are year-over-year and as of most recent quarter-end unless noted otherwise. The unemployment rate is a level, not a year-over-year change figure. Latest economic data as of December 31, 2022. U.S. inflation, U.S. unemployment rate, and eurozone inflation are as of February 28, 2023. Earnings per share are as of December 31, 2022. Year-end (YE) targets are based on forecasts by Wells Fargo Investment Institute as of May 9, 2023.

### Economic calendar

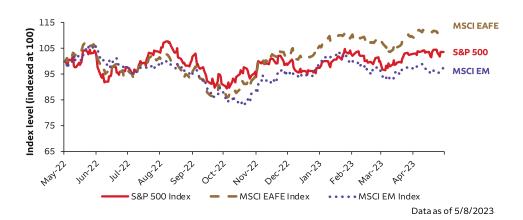
Date	Index	Actual/Consensus	Last
8-May	U.S. Wholesale Inventories (MoM)	Actual: 0.0%	Last: 0.0%
8-May	Wholesale Trade Sales (MoM)	Actual: -2.1%	Last: 0.4%
8-May	Germany Industrial Production (MoM)	Actual: -3.4%	Last: 2.1%
9-May	U.S. Small Business Optimism	Actual: 89.0	Last: 90.1
9-May			
9-May	Mexico CPI (YoY)	Consensus: 6.2%	Last: 6.9%
10-May	CPI Urban Consumers (YoY)	Consensus: 5.0%	Last: 5.0%
10-May	U.S. MBA Mortgage Apps.	Consensus: -%	Last: -1.2%
10-May	China CPI (YoY)	Consensus: 0.3%	Last: 0.7%
11-May	U.S. Initial Jobless Claims	Consensus: 245.0k	Last: 242.0k
11-May	U.S. PPI (MoM)	Consensus: 0.3%	Last: -0.5%
11-May	Bank of England Bank Rate	Consensus: 4.5%	Last: 4.3%
12-May	U. of Mich. Consumer Sentiment	Consensus: 63.0	Last: 63.5
12-May	U.S. Import Price Index (MoM)	Consensus: 0.3%	Last: -0.6%
12-May	U.K. Manufacturing Production (MoM)	Consensus: 0.0%	Last: 0.0%

YoY = year over year. MoM = month over month.

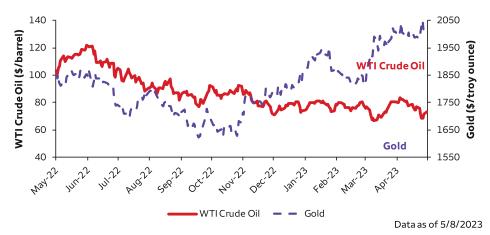
#### U.S. Treasury yields



#### **Global equities**



#### West Texas Intermediate (WTI) Crude Oil and gold price



Source: Bloomberg; Index returns do not reflect the deduction of fees, expenses or taxes. An index is unmanaged and not available for direct investment. **Past performance is no guarantee of future results.** 

### Market Performance

#### **Index Returns**

Fixed Income	Prior Close	1 Week	YTD	1 Year
Bloomberg Multiverse	213	0.6	3.4	-1.0
Bloomberg US Aggregate	2110	0.4	3.0	0.1
Bloomberg US Treasury	2257	0.5	3.1	-0.1
Bloomberg US Corporate	3059	0.0	3.1	0.8
Bloomberg US High Yield	2276	-0.3	4.1	2.0
Bloomberg Municipal Bond	1279	0.4	2.9	4.0
Bloomberg Municipal Bond High Yield	408	0.4	3.5	1.0
JP Morgan GBI Global Ex US	396	0.9	3.3	-4.6
JP Morgan EMBI Global	789	-0.1	2.4	1.2

Equity	Prior Close	1 Week	YTD	1 Year
MSCI AC World (USD)	654	0.0	9.0	4.0
S&P 500	4138	-0.7	8.4	2.1
NASDAQ Composite Index	12257	0.4	17.4	1.8
DJ Industrial Average	33619	-1.3	2.1	4.4
Russell 1000 Growth	2491	0.3	15.8	4.3
Russell 1000 Value	1497	-1.7	0.8	-1.2
Russell Mid Cap	2747	-1.2	2.2	-1.9
Russell 2000	1754	-0.8	0.1	-3.2
MSCI EAFE (USD)	2152	0.8	12.5	12.8
MSCI EAFE (Local)	1339	-0.1	10.4	11.0
MSCI EM (Emerging Markets) (USD)	989	1.4	4.2	-0.8
MSCI EM (Emerging Markets) (Local)	59436	1.0	4.2	1.1
MSCI FM Frontier Markets (USD)	2151	-0.5	3.1	-13.7
MSCI FM Frontier Markets (Local)	3033	-0.6	2.3	-11.3
CBOE Market Volatility Index	17	5.6	-21.6	-43.8

Real Assets	Prior Close	1 Week	YTD	1 Year
FTSE EPRA Nareit Developed	1950	0.6	3.1	-10.5
Alerian MLP Index	216	-2.3	3.2	8.6
S&P Global Infrastructure	2800	-0.8	4.5	-1.6
Bloomberg Commodities	104	0.1	-6.5	-17.5

Alternative Strategies	Prior Close	1 Month	YTD	1 Year
HFRI Fund Weighted Composite	17749	0.4	1.6	-1.7
HFRI Relative Value	14232	0.2	1.6	0.2
HFRI Macro	18573	0.7	-1.8	0.3
HFRI Event Driven	20152	0.2	1.6	-2.0
HFRI Equity Hedge	27341	0.4	2.9	-3.3

Alternative Strategies are as of 4/30/2023.

#### **MSCI Country Returns**

Developed	Prior Close	1 Week	YTD	1 Year
MSCI Australia	872	1.1	5.0	1.6
MSCI Canada	2099	1.2	9.1	-0.3
MSCI France	2459	-0.1	19.4	26.0
MSCI Germany	2116	0.8	19.1	20.1
MSCI Italy	310	1.8	21.8	29.5
MSCI Japan	3363	1.9	8.8	7.4
MSCI Netherlands	4406	-0.1	15.1	15.4
MSCI Spain	432	-0.1	18.5	21.1
MSCI Sweden	8866	0.4	14.7	12.5
MSCI Switzerland	7345	2.1	16.0	11.8
MSCI United Kingdom	1176	-0.2	11.1	11.7

Emerging	Prior Close	1 Week	YTD	1 Year
MSCI Brazil	1453	2.0	2.6	4.5
MSCI Chile	1163	4.9	8.3	13.5
MSCI China	64	0.7	0.0	-2.4
MSCI India	763	1.7	-0.7	0.0
MSCI Korea	463	1.7	10.5	-4.7
MSCI Mexico	6417	0.5	24.9	29.6
MSCI South Africa	414	-1.7	-1.0	-4.2
MSCI Taiwan	557	1.0	11.0	-4.7
MSCI Turkey	247	-3.6	-16.9	31.3

#### **Sector Returns**

S&P Sector Returns	Prior Close	1 Week	YTD	1 Year
S&P 500 Communications Services	196	-1.0	23.7	-1.0
S&P 500 Consumer Discretionary	1152	1.0	15.0	-5.3
S&P 500 Consumer Staples	802	-0.7	3.8	3.0
S&P 500 Energy	618	-4.5	-7.2	2.0
S&P 500 Financial	538	-2.1	-4.9	-4.7
S&P 500 Healthcare	1553	-0.7	-1.5	4.5
S&P 500 Industrials	839	-1.4	1.4	5.8
S&P 500 Information Technology	2665	0.4	23.1	9.4
S&P 500 Material	500	-1.4	2.7	-3.8
S&P 500 Real Estate	233	-0.6	1.4	-14.0
S&P 500 Utilities	349	-0.4	-1.6	-1.7

#### **Commodity & Currency Returns**

Commodities & Currencies	encies Prior 1 Weel Close		YTD	1 Year
CRB Total Return	264	-0.9	-4.9	-15.2
Baltic Dry Index Freight	1558	-1.1	2.8	-41.1
Gold (\$/oz)	2021	1.9	10.8	7.3
Copper (\$/lb)	3.92	0.0	2.8	-8.1
WTI Crude Oil (\$/bbl)	73	-3.3	-8.8	-18.9
Brent Crude Oil (\$/bbl)	77	-2.9	-10.4	-31.5
Natural Gas (\$/btu)	2.24	-3.5	-50.0	-72.2
Gasoline (\$/gal)	2.46	-3.5	0.1	-34.5
U.S. Dollar per Euro	1.10	0.3	2.8	4.3
U.S. Dollar per British Pound	1.26	1.0	4.4	2.2
Japanese Yen per U.S. Dollar	135	-1.7	3.0	3.5
United States Dollar Index	101	-0.8	-2.1	-2.2

#### **Strategic Asset Allocation Performance**

Liquid (no rebalance)	MTD	QTD	YTD	1 Year
Conservative Income	-0.56	0.13	3.60	0.33
Moderate Income	-0.56	0.12	3.88	0.55
Aggressive Income	-0.53	0.22	4.32	1.02
Conservative Growth & Income	-0.47	0.17	4.21	0.56
Moderate Growth & Income	-0.46	0.17	4.49	0.69
Aggressive Growth & Income	-0.45	0.21	4.80	0.87
Conservative Growth	-0.39	0.20	4.95	0.77
Moderate Growth	-0.34	0.17	5.06	0.80
Aggressive Growth	-0.25	0.16	5.19	1.02

Sources: Bloomberg, Wells Fargo Investment Institute; as of May 8, 2023. See pages 5-6 for Investment Objectives Definition and Composition. For illustrative purposes only. Returns do not the results of actual trading. Index returns reflect general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses, or taxes applicable to an actual investment.

**Strategic Asset Allocation:** An investor's return objectives, risk tolerances, and investment constraints are integrated with long-term return assumptions to establish exposure to permissible asset classes. Performance results for the strategic asset allocations are calculated using blended index returns. An index is unmanaged and not available for direct investment. Index returns do not reflect the deduction of fees, expenses, or taxes. Returns are U.S. dollar based unless indicated otherwise. Performance reflects total returns. Source: Bloomberg; as of May 8, 2023. **Past performance is no guarantee of future results.** HFRI data is monthly at the sixth business day; all other indexes are daily.

### **Bond Market Data**

#### **Cross-Sector Yield Curves**

Maturity	Treasury	Agency	Corporate A	Municipal AAA	Taxable Equivalent Yield, 37% Tax Rate <sup>2</sup>	Taxable Equivalent Yield, 35% Tax Rate <sup>2</sup>	Taxable Equivalent Yield, 32% Tax Rate <sup>2</sup>
1-Yr	4.78	4.80	4.90	2.82	4.47	4.33	4.14
2-Yr	4.00	4.20	4.62	2.68	4.26	4.13	3.94
3-Yr	3.72	3.87	4.45	2.50	3.97	3.85	3.68
4-Yr	3.59	3.71	4.39	2.40	3.80	3.69	3.52
5-Yr	3.49	3.65	4.41	2.33	3.70	3.59	3.43
7-Yr	3.49	3.69	4.55	2.28	3.62	3.50	3.35
10-Yr	3.51	3.83	4.78	2.31	3.67	3.56	3.40
15-Yr	3.59	4.08	5.09	2.97	4.72	4.57	4.37
20-Yr	3.91	4.25	5.25	3.16	5.01	4.86	4.64
30-Yr	3.82	NA	5.20	3.45	5.47	5.30	5.07

#### **Corporate Bond Yield Curves and Spreads**

		AA		Α		BBB		ВВ
Maturity	AA**	Spread	A**	Spread	BBB**	Spread	BB**	Spread <sup>1</sup>
1-Yr	4.71	-7	4.90	12	5.38	60	6.12	134
2-Yr	4.37	37	4.62	62	5.14	114	6.28	228
3-Yr	4.15	43	4.45	73	5.00	128	6.30	258
4-Yr	4.06	48	4.39	81	4.96	138	6.38	279
5-Yr	4.07	57	4.41	92	5.00	151	6.48	299
7-Yr	4.18	69	4.55	106	5.18	169	6.70	321
10-Yr	4.38	87	4.78	128	5.41	190	7.03	352
15-Yr	4.73	114	5.09	150	5.69	210	7.41	382
20-Yr	4.92	101	5.25	134	5.80	188	7.52	361
30-Yr	4.94	112	5.20	138	5.67	184	7.19	336

#### **Short-Term Yield Curves**

Maturity	Treasury Bills	Agency Discount Notes	Commercial Paper	Libor	SOFR
1-month	5.20	NA	5.08	5.10	5.05
3-month	5.04	5.19	5.16	5.34	5.08
6-month	4.86	5.07	5.21	5.35	5.03
1-Year	4.52	4.80	NA	5.20	4.70

#### **International Yield Curves**

Maturity	Canada	France	Germany	Japan	United Kingdom
2-Year	3.77	2.76	2.59	-0.05	3.76
5-Year	3.09	2.62	2.26	0.11	3.58
10-Year	2.98	2.90	2.32	0.41	3.77
30-Year	3.11	3.33	2.48	1.26	4.17

#### **Mortgage Backed Securities**

Term	Yield
MBS Conventional -3YR	4.5
GNMA - Aggregate Term	4.6

#### **Municipal Yield Curves**

Maturity	AAA	AA	А	BBB	Insured	Pre- Refunded
1-Yr	2.82	3.07	3.04	4.11	0.94	3.11
2-Yr	2.68	2.90	2.91	3.98	0.98	2.89
3-Yr	2.50	2.70	2.74	3.80	1.03	2.62
4-Yr	2.40	2.58	2.64	3.69	1.09	2.42
5-Yr	2.33	2.51	2.60	3.63	1.10	2.36
7-Yr	2.28	2.48	2.58	3.59	1.23	2.30
10-Yr	2.31	2.58	2.68	3.68	1.48	2.34
15-Yr	2.97	3.32	3.41	4.39	1.78	NA
20-Yr	3.16	3.56	3.64	4.61	1.97	NA
30-Yr	3.45	3.88	3.93	4.93	2.16	NA

#### **Constant Maturity Swap Rates**

Maturity	Swaps
2-Year	4.25
5-Year	3.59
10-Year	3.52
30-Year	3.40

#### **Short-Term Yield Curves**

Government Repo	
Overnight	5.13
1-week	5.13
1-month	5.13
3-month	5.13

#### **Other Rates**

Money Rates	
U.S. Secured Overnight Financing Rate	5.06
Fed Funds Target Rates	5.25
Prime Rate	8.25

<sup>1</sup> Spread is the difference between the yield on a bond and that of a comparable U.S. Treasury security.

<sup>2</sup> Taxable Equivalent yield (TEY) assumes the tax bracket shown. Income may be subject to state and/or local taxes and/or the alternative minimum tax (AMT).

NA: Not Available

\*\*Standard & Poor's (S&P) Corporate Bond Ratings: AA means high quality and subject to very low credit risk. A means upper-medium grade and subject to low credit risk. BBB means subject to moderate credit risk; these obligations are considered medium-grade and as such may possess certain speculative characteristics. BB is judged to have speculative elements, subject to substantial credit risk.

GNMA yields are bond equivalent yields based on generic issues for varying coupons. They do not represent Consensus GNMA issues. Average life is a means to measure the time until all principal is returned for securities that return principal over time vs. in one lump sum. The yield and average life are calculated using a prepayment assumption that may or may not be met. The assumption used for the calculations is the median of 12 mortgage brokers' estimated prepayment speeds. Spread represents the implied risk premium an investor will receive over an equivalent investment in a U.S. Treasury security. For GNMAs, this spread is an optionadjusted spread as it factors in the series of embedded options inherent in mortgage-backed securities. Pre-refunded municipal bond is a bond that the issuer decided to redeem from the bondholder before its maturity date. After the issuer distributes the new bonds, it will then often purchase Treasury securities that mature around the same time as the original bonds. The interest accumulated from the Treasury securities pays off the interest from the pre-refunded bond. Insured municipal bonds are insured by policies written by commercial insurance companies. The insurance policy is intended to provide for the insurer to pay principal and interest payments to bondholders in the event the issuer defaults.

For municipal yield curves, there is no "constant Treasury" in the 4-, 15-, or 20-year maturity segment to facilitate this calculation.

Notes on Index Returns: Index Returns reflect previous business day's closing value, with the exception of Hedge Fund Index returns which have a one-day lag. Three-year returns are annualized.

Source: Bloomberg; as of May 8, 2023.

#### WFII guidance legend

**Most favorable:** WFII's highest conviction guidance that indicates a strong desire to overweight an asset class (or sector) within a portfolio. It also communicates that, over a tactical time frame, WFII views the asset class (or sector) as offering investors a very attractive risk/reward opportunity.

**Favorable:** Guidance that indicates a desire to overweight an asset class within a portfolio. It also communicates that, over a tactical time frame, WFII views the asset class (or sector) as providing investors with an attractive risk/reward opportunity.

**Neutral:** Guidance that indicates a desire to maintain an asset class near the long-term (strategic) allocation guidance within a portfolio. It also communicates that, over a tactical time frame, WFII views the asset class (or sector) as providing investors with an acceptable risk/reward opportunity.

**Unfavorable:** This WFII guidance level indicates a desire to underweight an asset class (or sector) within a portfolio. It also communicates that, over a tactical time frame, WFII does not view the asset class (or sector) as providing investors with an attractive risk/reward opportunity.

**Most unfavorable:** WFII's highest conviction guidance indicating a strong belief in underweighting an asset class within a portfolio. This also communicates that, over a tactical time frame, WFII views the asset class (or sector) as offering investors a very unattractive risk/reward opportunity.

#### Investment objectives definitions

#### Income

Income investment objectives emphasize current income with minimal consideration for capital appreciation and usually have less exposure to more volatile growth assets but can still experience losses.

Conservative Income investors generally assume lower risk but may still experience losses or have lower expected income returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 72% Bloomberg U.S. Aggregate Bond Index, 3% Bloomberg U.S. Corporate High Yield Bond Index, 3% JPM EMBI Global Index, 12% S&P 500 Index, 4% Russell Midcap Index, 2% MSCI EAFE Index, 2% Bloomberg Commodity Index.

Moderate Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest income returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 58% Bloomberg U.S. Corporate High Yield Bond Index, 5% JPM EMBI Global Index, 16% S&P 500 Index, 5% Russell Midcap Index, 4% Russell 2000 Index, 4% MSCI EAFE Index, 2% Bloomberg Commodity Index.

Aggressive Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 45% Bloomberg U.S. Aggregate Bond Index, 6% Bloomberg U.S. Corporate High Yield Bond Index, 8% JPM EMBI Global Index, 19% S&P 500 Index, 7% Russell Midcap Index, 4% Russell 2000 Index, 7% MSCI EAFE Index, 2% Bloomberg Commodity Index.

#### Growth & income

Growth & Income investment objectives emphasize a blend of current income and capital appreciation and usually have some exposure to more volatile growth assets.

Conservative Growth & Income investors generally assume a lower amount of risk but may still experience losses or have lower expected returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 39% Bloomberg U.S. Aggregate Bond Index, 6% Bloomberg U.S. Corporate High Yield Bond Index, 5% JPM EMBI Global Index, 20% S&P 500 Index, 8% Russell Midcap Index, 5% Russell 2000 Index, 7% MSCI EAFE Index, 4% MSCI Emerging Markets Index, 4% Bloomberg Commodity Index.

Moderate Growth & Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 30% Bloomberg U.S. Aggregate Bond Index, 6% Bloomberg U.S. Corporate High Yield Bond Index, 5% JPM EMBI Global Index, 24% S&P 500 Index, 10% Russell Midcap Index, 6% Russell 2000 Index, 8% MSCI EAFE Index, 5% MSCI Emerging Markets Index, 4% Bloomberg Commodity Index.

Aggressive Growth & Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 20% Bloomberg U.S. Aggregate Bond Index, 7% Bloomberg U.S. Corporate High Yield Bond Index, 6% JPM EMBI Global Index, 28% S&P 500 Index, 12% Russell Midcap Index, 6% Russell 2000 Index, 9% MSCI EAFE Index, 6% MSCI Emerging Markets Index, 4% Bloomberg Commodity Index.

#### Growth

Growth investment objectives emphasize capital appreciation with minimal consideration for current income and usually have significant exposure to more volatile growth assets.

Conservative Growth investors generally assume a lower amount of risk but may still experience increased losses or have lower expected growth returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 16% Bloomberg U.S. Aggregate Bond Index, 3% Bloomberg U.S. Corporate High Yield Bond Index, 3% JPM EMBI Global Index, 30% S&P 500 Index, 13% Russell Midcap Index, 8% Russell 2000 Index, 11% MSCI EAFE Index, 9% MSCI Emerging Markets Index, 5% Bloomberg Commodity Index.

Moderate Growth investors are willing to accept a modest level of risk that may result in significant losses in exchange for the potential to receive higher returns. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 8% Bloomberg U.S. Aggregate Bond Index, 3% Bloomberg U.S. Corporate High Yield Bond Index, 3% JPM EMBI Global Index, 31% S&P 500 Index, 14% Russell Midcap Index, 10% Russell 2000 Index, 12% MSCI EAFE Index, 12% MSCI Emerging Markets Index, 5% Bloomberg Commodity Index.

Aggressive Growth investors seek a higher level of returns and are willing to accept a higher level of risk that may result in more significant losses. Composition: 2% Bloomberg U.S. Treasury Bills (1–3 Month) Index, 3% Bloomberg U.S. Aggregate Bond Index, 2% JPM EMBI Global Index, 28% S&P 500 Index, 16% Russell Midcap Index, 18% Russell 2000 Index, 16% MSCI EMERGING MARKETS Index, 5% Bloomberg Commodity Index.

#### Asset class risks

Asset allocation and diversification are investment methods used to help manage risk. They do not ensure a profit or protect against a loss. All investing involves risks, including the possible loss of principal. There can be no assurance that any investment strategy will be successful. Investments fluctuate with changes in market and economic conditions and in different environments due to numerous factors some of which may be unpredictable. Each asset class has its own risk and return characteristics. The risks associated with the representative index asset classes include:

Alternative Investments, such as hedge funds, are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Hedge funds trade in diverse complex strategies that are affected in different ways and at different times by changing market conditions. They employ aggressive investment techniques, including short sales, leverage, swaps, futures contracts, options, forward contracts, and other derivatives. Strategies may, at times, be out of market favor for considerable periods which can result in adverse consequences for the investor.

Commodities: The commodities markets are considered speculative, carry substantial risks, and have experienced periods of extreme volatility. Commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or other factors affecting a particular industry or commodity.

Equity Securities: Stocks are subject to market risk which means their value may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors. The prices of small/mid-company stocks are generally more volatile than large company stocks. They often involve higher risks because of smaller and mid-sized companies may lack the management expertise, financial resources, product diversification and competitive strengths to endure adverse economic conditions.

Technology and internet-related stocks, especially of smaller, less-seasoned companies, tend to be more volatile than the overall market.

Fixed Income: Investments in fixed-income securities are subject to interest rate and credit risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rate can result in the decline in the bond's price.

Credit risk is the risk that an issuer will default on payments of interest and principal. High yield fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities. All fixed income investments may be worth less than their original cost upon redemption or maturity. U.S. government securities are backed by the full faith and credit of the federal government as to payment of principal and interest if held to maturity. Although free from credit risk, they are subject to interest rate risk.

Foreign/Emerging Markets: Investing in foreign securities presents certain risks not associated with domestic investments, such as currency fluctuation, political and economic instability, and different accounting standards. This may result in greater share price volatility. These risks are heightened in emerging markets.

Real Estate: Investing in real estate investment trusts (REITs) have special risks, including possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions.

#### **Definitions**

Ifo Business Climate Index is a closely followed leading indicator for economic activity in Germany.

The personal consumption expenditure (PCE) measure is the component statistic for consumption in gross domestic product (GDP). It is essentially a measure of goods and services targeted towards individuals and consumed by individuals.

Bloomberg Multiverse Index provides a broad-based measure of the global fixed-income bond market. The index represents the union of the Global Aggregate Index and the Global High Yield Index and captures investment grade and high yield securities in all eligible currencies. Standalone indexes such as the Euro Floating-Rate ABS Index and the Chinese Aggregate Index are excluded. The Multiverse Index family includes a wide range of standard and customized sub-indexes by sector, quality, maturity, and country.

Bloomberg Municipal Bond Index (from Lehman Brothers Municipal Bond Index) represents municipal bonds with a minimum credit rating of at least Baa, an outstanding par value of at least \$3 million, and a remaining maturity of at least one year. The Index excludes taxable municipal bonds, bonds with floating rates, derivatives, and certificates of participation. The Bloomberg 10-Year Municipal Index is the 10 Year (8-12) component of the Municipal Bond Index.

Bloomberg Municipal High Yield Bond Index is composed of non-investment grade U.S. municipal securities with a remaining maturity of one year or more.

Bloomberg U.S. Aggregate Bond Index is composed of the Bloomberg Capital U.S. Government/Credit Index and the Bloomberg Capital U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities.

Bloomberg U.S. Aggregate 1-3 Year Bond Index is composed of the Bloomberg U.S. Government/Credit Index and the Bloomberg U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 1-3 years.

Bloomberg U.S. Aggregate 5-7 Year Bond Index is composed of the Bloomberg U.S. Government/Credit Index and the Bloomberg U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 5-7 years.

Bloomberg U.S. Aggregate 10+ Year Bond Index is composed of the Bloomberg U.S. Government/Credit Index and the Bloomberg U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 10 years or more.

Bloomberg US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

Bloomberg U.S. Corporate High Yield Index covers the universe of fixed-rate, noninvestment-grade debt.

Bloomberg 1-3 Month U.S. Treasury Bill Index includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non-convertible.

Bloomberg US Treasury Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index. STRIPS are excluded from the index because their inclusion would result in double-counting. The US Treasury Index was launched on January 1, 1973.

Bloomberg Commodity Index is designed to be a highly liquid and diversified benchmark for commodities as an asset class. The index is composed of futures contracts on physical commodities. No related group of commodities (e.g., energy, precious metals, livestock, and grains) may constitute more than 33% of the index as of the annual re-weightings of the components. No single commodity may constitute less than 2% of the index.

CBOE Market Volatility Index (VIX) is a key measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices.

Chicago Fed National Activity Index (CFNAI) is a monthly index designed to gauge overall economic activity and related inflationary pressure.

Conference Board Consumer Confidence Index (CCI) is a barometer of the health of the U.S. economy from the perspective of the consumer. The index is based on consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income.

DAX German Stock Index represents 30 of the largest and most liquid German companies traded on the Frankfurt Stock Exchange.

Dow Jones Industrial Average is an unweighted index of 30 "blue-chip" industrial U.S. stocks.

FTSE EPRA/NAREIT Developed Index is designed to track the performance of listed real-estate companies and REITs in developed countries worldwide.

FTSE NAREIT Global Real Estate Index measures the performance of listed real estate companies and REITs worldwide, the series acts as a performance measure of the overall market.

Import Price Index is created by compiling the prices of goods purchased in the U.S. but produced out of country (imports).

JP Morgan Emerging Markets Bond Index Global (EMBI Global), which currently covers 27 emerging market countries. Included in the EMBI.

JP Morgan Global Ex United States Bond Index is a total return, market capitalization weighted index, rebalanced monthly consisting of the following countries: Australia, Germany, Spain, Belgium, Italy, Sweden, Canada, Japan, United Kingdom, Denmark, Netherlands, and France.

JP Morgan Government Bond Index (GBI) Global Ex-United States, which is a total return, market capitalization weighted index, rebalanced monthly consisting of the following countries: Australia, Germany, Spain, Belgium, Italy, Sweden, Canada, Japan, United Kingdom, Denmark, Netherlands, and France.

MSCI China Index captures large and mid-cap representation across China H shares, B shares, Red Chips and P Chips. With 140 constituents, the index covers about 85% of the China equity universe.

MSCI Developed and Emerging Market Country Indexes are designed to measure the performance of the large and mid-cap segments of the individual country markets and cover approximately 85% of the free-float-adjusted or equity universe in each country.

MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada. The Index consists of the following 21 developed market country indexes: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The index consists of approximately 23 emerging markets.

MSCI Frontier Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of frontier markets. The MSCI Frontier Markets Index consists of the following 24 frontier market country indexes: Argentina, Bahrain, Bangladesh, Bulgaria, Croatia, Estonia, Jordan, Kenya, Kuwait, Lebanon, Lithuania, Morocco, Kazakhstan, Mauritius, Nigeria, Oman, Pakistan, Romania, Serbia, Slovenia, Sri Lanka, Tunisia, Ukraine, and Vietnam.

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NASDAQ Composite Index measures the market value of all domestic and foreign common stocks, representing a wide array of more than 5,000 companies, listed on the NASDAQ Stock Market.

Purchasing Managers Indexes (PMI) are indicators of the economic health of the manufacturing sector of the countries or regions noted. The PMI index is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. A PMI of more than 50 represents expansion when compared to the previous month. A PMI reading under 50 represents a contraction, and a reading at 50 indicates no change.

Russell 1000® Growth Index represents the large-cap growth segment of the U.S. equity universe.

Russell 1000® Value index represents the large cap value segment of the U.S. equity universe.

Russell Midcap Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000 Index.

Russell 2000® Index measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000®.

Russell 3000® Index measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market

S&P 500 Index is a capitalization-weighted index calculated on a total-return basis with dividends reinvested. The index includes 500 widely held U.S. market industrial, utility, transportation, and financial companies.

S&P CoreLogic Case-Shiller Home Price Indexes measures U.S. residential real estate prices, tracking changes in the value of residential real estate across the U.S. as well as in 20 metropolitan areas.

S&P Global Infrastructure Index provides liquid and tradable exposure to 75 companies from around the world that represent the listed infrastructure universe. To create diversified exposure cross the global listed infrastructure market, the index has balanced weights a cross three distinct infrastructure clusters: Utilities, Transportation, and Energy.

U.S. Dollar Index (DXY) measures the value of the U.S. dollar relative to majority of its most significant trading partners. This index is similar to other trade-weighted indexes, which also use the exchange rates from the same major currencies.

The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net-of-all-fees performance in U.S. dollars and have a minimum of \$50 million under management or a 12-month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

The HFRI Relative Value Index: maintains positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

The HFRI Macro Index: Macro: Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposes to EH, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

HFRI Event Driven Index: Event-Driven: Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional

derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

Equity Hedge: Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50 percent exposure to, and may in some cases be entirely invested in, equities, both long and short.

Note: The HFRI Indexes are based on information self-reported by hedge fund managers that decide, on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. ("HFR").

Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indexes may not be complete or accurate representations of the hedge fund universe and may be biased in several ways.

#### **Disclosures**

For additional information please contact your Financial Advisor or Relationship Manager.

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