November 30, 2023

GLOBAL MARKETS PERFORMANCE REPORT

FT Wilshire 5000 - Sector, Style, Factors

FT Wilshire Global Equity Markets and Sectors

Fixed Income and FX

Alternatives

November Performance Report Synopsis

Sections

Key Market Events

FT Wilshire Indexes (pages 4-15)

+9.3%

November FT Wilshire 5000 return (TR)

+19.7%

FT Wilshire 5000 2023 YTD return (TR)

Global Equities (pages 16-31)

+11.0%

November return of Europe ex UK equities (USD,TR)

-7.9%

Return of Chinese equities Index YTD (USD, TR)

Fixed Income, FX (pages 32-36)

-51bps

Fall in US 10-year yield in November

-3.0%

Decline in the DXY dollar index in November

Alternatives (pages 37-42)

+2.1%

Rise in gold price in November

+108.8%

FT Wilshire Digital Assets Index return YTD

1 Risk appetite returns as peak rate optimism drives market rebound (**page 3**)

2 FT Wilshire 5000 sees strongest monthly return in November (9.3%) since July 2022 (**page 5**)

3 Technology comes roaring back to drive US large cap and growth outperformance (**page 8**)

4 Europe ex UK reverses trend to outperform in November. China continues to lag (**page 18**)

5 US 10-year yield falls 51 bps in November on growing 2024 US rate cut expectations (**page 32**)
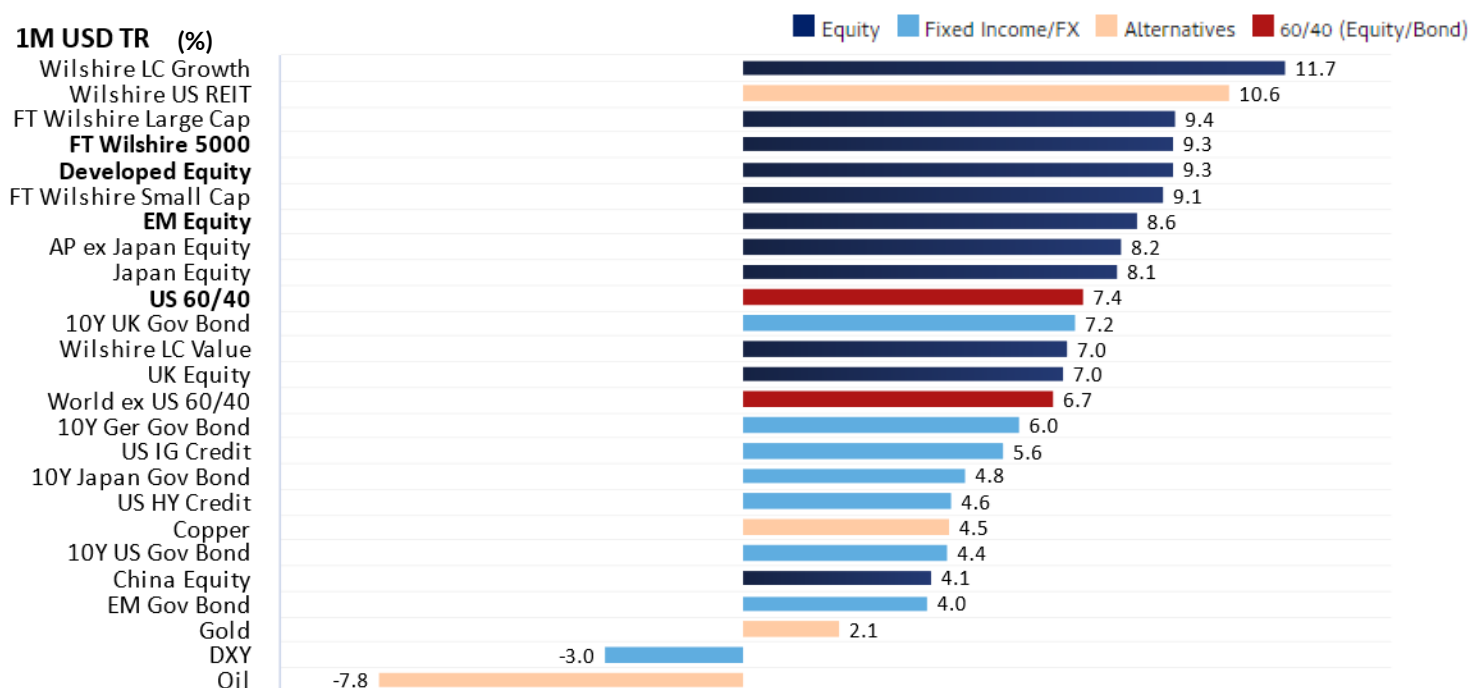
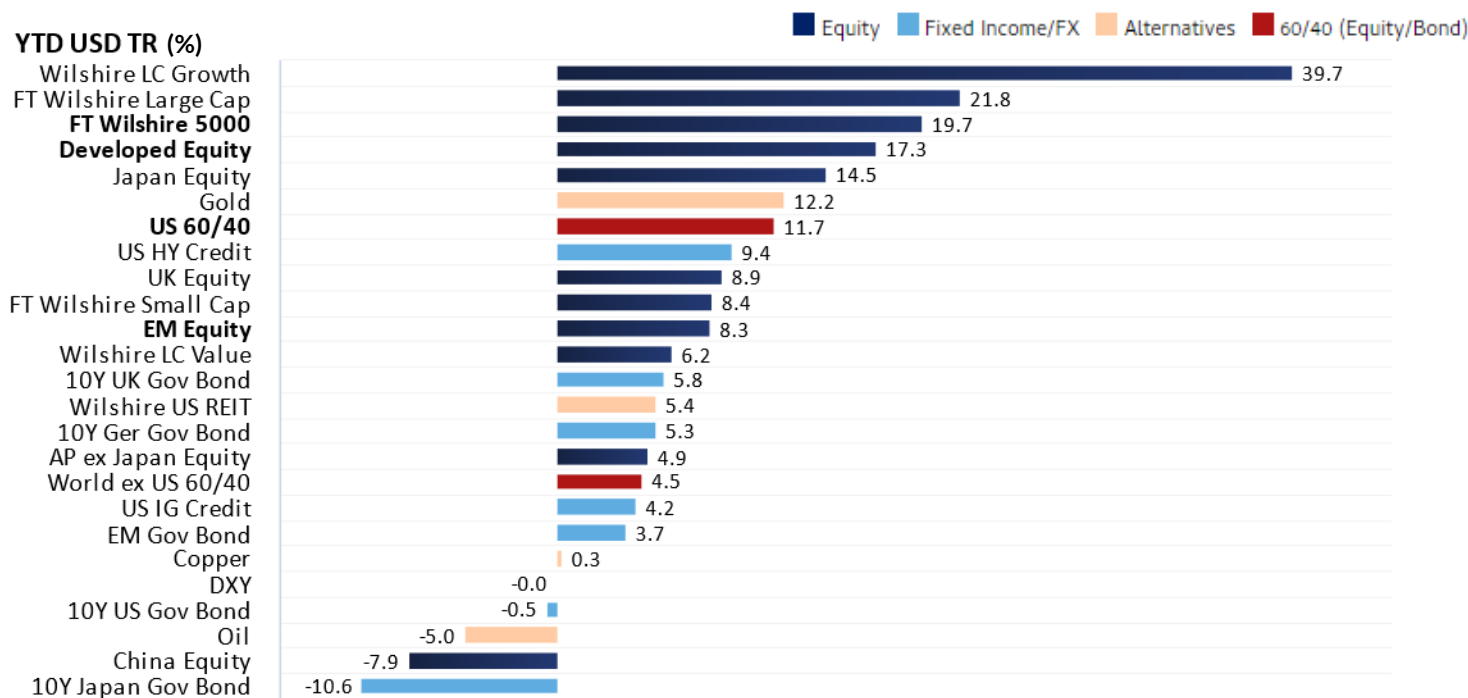**6** The dollar weakens further in November on dovish Fed comments (**page 35**)

7 Gold just 0.9% below all-time high boosted by weaker dollar and fall in real yields (**page 38**)

Multi-Asset Class returns: Rapid rotation in sentiment as growing optimism over US rate cuts in 2024 drives strong rebound in markets in November

Chart 1: A rebound in US equities (notably Growth Style) and a sharp fall in bond yields saw US 60/40 deliver strong returns in November. Oil and the dollar (DXY) retreated from their recent highs.

1M USD TR (%)

■ Equity ■ Fixed Income/FX ■ Alternatives ■ 60/40 (Equity/Bond)

Asset	Return
Wilshire LC Growth	11.7
Wilshire US REIT	10.6
FT Wilshire Large Cap	9.4
FT Wilshire 5000	9.3
Developed Equity	9.3
FT Wilshire Small Cap	9.1
EM Equity	8.6
AP ex Japan Equity	8.2
Japan Equity	8.1
US 60/40	7.4
10Y UK Gov Bond	7.2
Wilshire LC Value	7.0
UK Equity	7.0
World ex US 60/40	6.7
10Y Ger Gov Bond	6.0
US IG Credit	5.6
10Y Japan Gov Bond	4.8
US HY Credit	4.6
Copper	4.5
10Y US Gov Bond	4.4
China Equity	4.1
EM Gov Bond	4.0
Gold	2.1
DXY	-3.0
Oil	-7.8

Chart 2: Strong US equity and negative Chinese equity returns have seen developed markets significantly outperform emerging YTD. Japanese bonds (in USD terms) have been a notable YTD laggard.

YTD USD TR (%)

■ Equity ■ Fixed Income/FX ■ Alternatives ■ 60/40 (Equity/Bond)

Asset	Return
Wilshire LC Growth	39.7
FT Wilshire Large Cap	21.8
FT Wilshire 5000	19.7
Developed Equity	17.3
Japan Equity	14.5
Gold	12.2
US 60/40	11.7
US HY Credit	9.4
UK Equity	8.9
FT Wilshire Small Cap	8.4
EM Equity	8.3
Wilshire LC Value	6.2
10Y UK Gov Bond	5.8
Wilshire US REIT	5.4
10Y Ger Gov Bond	5.3
AP ex Japan Equity	4.9
World ex US 60/40	4.5
US IG Credit	4.2
EM Gov Bond	3.7
Copper	0.3
DXY	-0.0
10Y US Gov Bond	-0.5
Oil	-5.0
China Equity	-7.9
10Y Japan Gov Bond	-10.6

Source: Wilshire Indexes, FactSet and Refinitiv. Data as of November 30, 2023

FT Wilshire US Indexes Insights

| **1**	**2**	**3**	**4**
+9.3%	**+19.7%**	**+33.5%**	**+53.0%**
November 2023 return of the FT Wilshire 5000	2023 YTD return of the FT Wilshire 5000	Outperformance of Growth style versus Value YTD	Performance of the Technology sector YTD

The **FT Wilshire 5000** has delivered a 19.7% YTD return (16.4% real) in 2023 and seen annualized returns of 12.0% and 11.4% over 5 and 10 years, respectively. Despite the recovery in 2023, the 2 year annualized real return is still −4.5%.

Return (%)	YTD	1Y	2Y		5Y		10Y		20Y	
			Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann
Nominal TR	19.7	12.7	0.7	0.4	76.4	12.0	194.1	11.4	544.8	9.8
Real TR	16.4	9.4	-8.7	-4.5	44.8	7.7	123.8	8.4	287.8	7.0
Price	18.0	10.9	-2.5	-1.3	62.0	10.1	144.1	9.3	343.3	7.7

FT Wilshire 5000 20 Year Returns

Legend: ── FT Wilshire 5000 (Nominal TR) ── FT Wilshire 5000 (Real TR) ── FT Wilshire 5000 (Price)
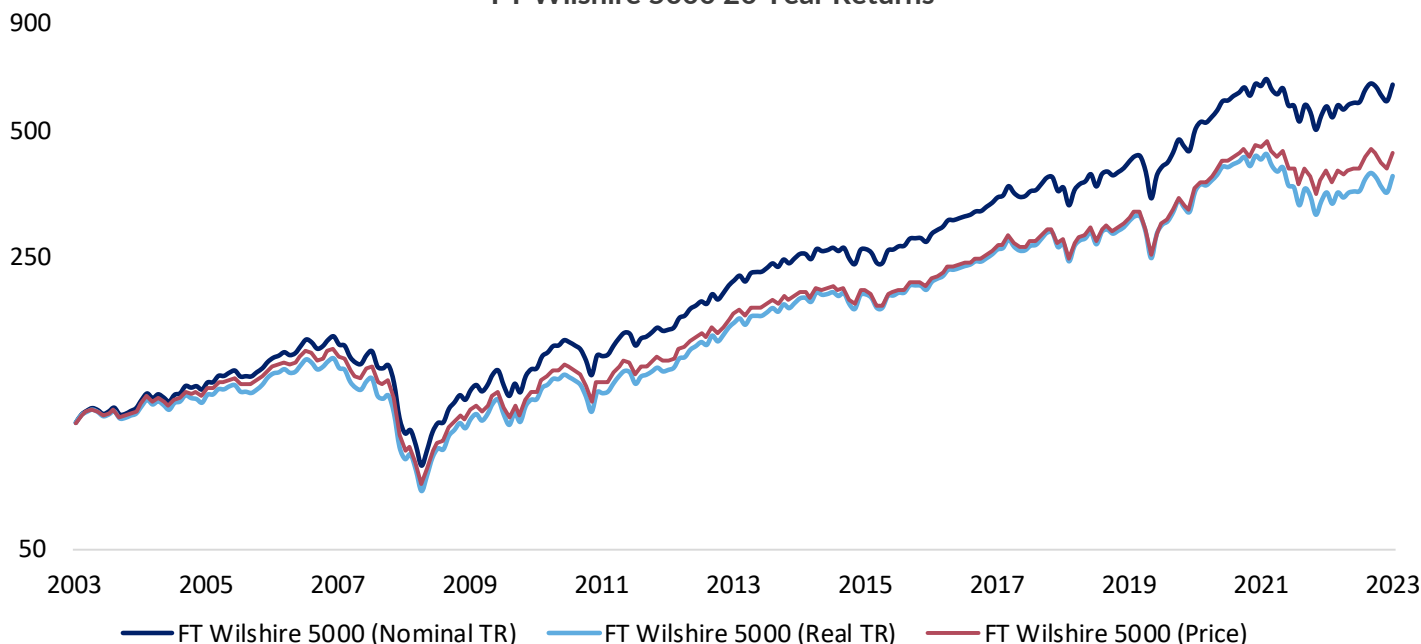
*Ann = Annualized

Source: Wilshire Indexes, FactSet. Data as of November 30, 2023
Wilshire Indexes - Performance Report (November 2023)

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# FT Wilshire 5000: Key Inflection Points in 2023

1 **'Goldilocks'**

Risk appetite buoyed by hopes of soft landing and expectations of peak US rates

2 **Spike in Interest Rate Expectations**

Strong US economic data sees spike in interest rate expectations - markets retreat

3 **Silicon Valley Collapses**

Bank contagion fears, markets slash US interest rate expectations

4 **AI Theme**

AI theme turbo charges US market as 'Magnificent 7' stocks drive returns

5 **Debt Ceiling Resolution**

Markets buoyed by the debt ceiling resolution, US disinflation and strong tech sector earnings

6 **Rising US Bond Yields**

FT Wilshire 5000 peaks on 31 July, risk appetite wanes on rising bond yields

7 **Higher for Longer**

Markets reassess trajectory of US 2024 interest rates

8 **Geopolitical Concerns**

Rising bond yields and geopolitical concerns rattle US markets. US 10yr yield briefly hits 5%

9 **Optimism Over 2024 US Rate Cuts**

Market rebounds strongly on optimism over US interest rate cuts in 2024

Chart 1: FT Wilshire 5000 YTD (Total Return) and key inflection points

Returns (USD, TR, %)			
MTD	3M	YTD	12M
9.3	1.3	19.7	12.7

Source: Wilshire Indexes, FactSet and Refinitiv. Data as of November 30, 2023

Sector returns and contributions: Continued bifurcation between the winners and losers in November and YTD

November and YTD sector returns: Technology, digital info and transport were again amongst the strongest returns in November and YTD. By contrast, Health care, food and beverage and energy have been the weakest performers over both periods .

Legend: ■ 1M: 9.3% ■ YTD: 19.7%
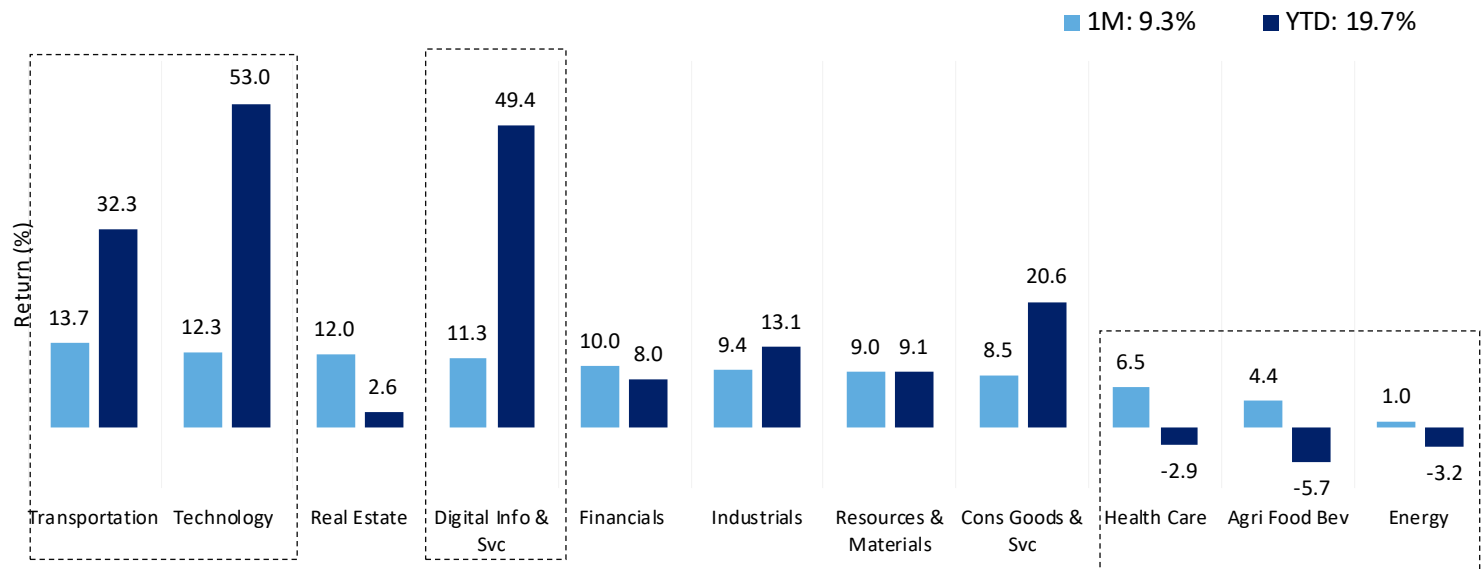
Sector weighted contributions-blending performance with sector weighting: Despite transport delivering amongst the strongest YTD returns it has only contributed 1.3% of the 19.7% YTD return. Contributions dominated by digital info and tech sectors.

FT Wilshire 5000: Contribution to returns 1M vs YTD (USD, TR, %)

Legend: ■ MTD: 9.3% ■ YTD: 19.7%
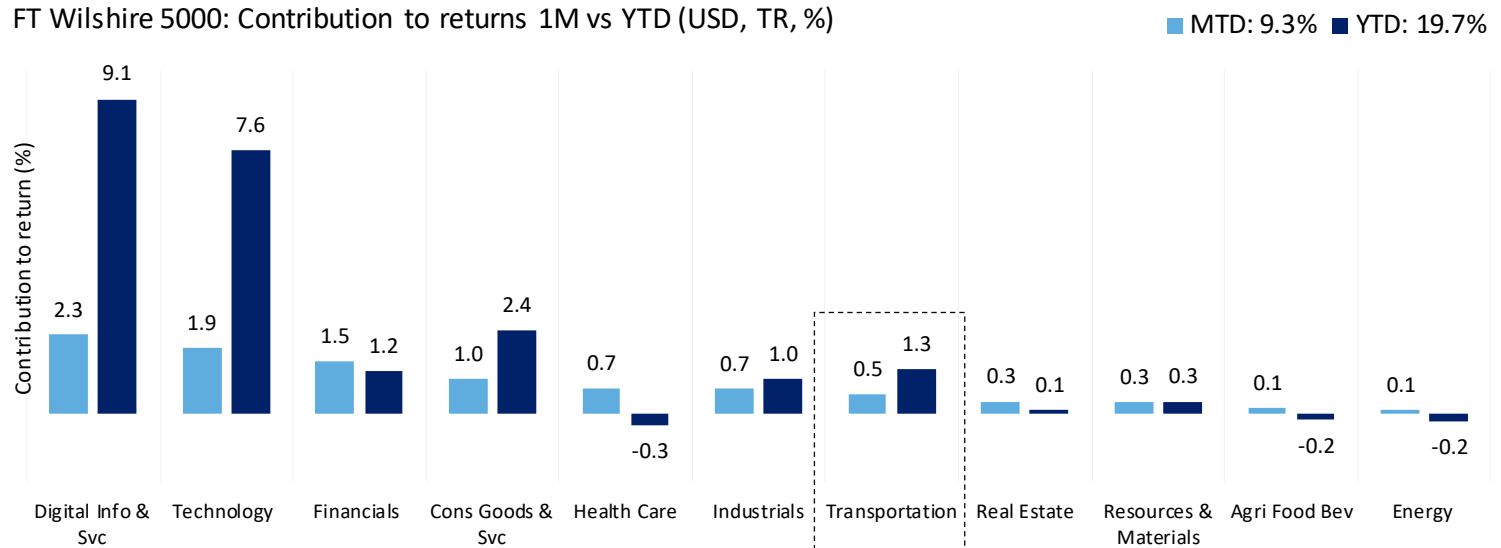
Sector returns and weights across the FT Wilshire indexes: November sees rotation back to technology and digital information sectors as energy underperforms

November sector returns and average weights across the FT Wilshire indexes: We highlight the significant differences in sector weighting between large and small cap, and growth and value

1M	FTW 5000		Large Cap		Small Cap		Micro Cap		Growth		Value	
	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts
Transportation	13.7	3.9	14.8	3.8	6.8	4.4	8.3	4.4	19.5	4.2	9.5	3.5
Technology	12.3	15.3	12.5	16.7	9.4	6.0	11.2	6.0	13.1	23.5	10.9	9.5
Real Estate	12.0	2.8	12.8	2.2	10.1	7.1	10.0	7.1	14.6	2.4	10.8	2.1
Digital Info & Svc	11.3	20.0	11.5	21.3	10.1	11.1	8.1	11.1	12.1	34.1	8.7	7.9
Financials	10.0	15.0	9.8	14.8	11.8	16.0	8.6	16.0	11.8	6.9	9.1	23.0
Industrials	9.4	7.4	9.5	6.6	9.0	13.1	6.9	13.1	13.5	3.3	8.3	10.1
Resources & Materials	9.0	3.5	8.1	2.8	11.7	8.8	5.4	8.8	9.7	1.7	7.4	4.1
Cons Goods & Svc	8.5	11.7	8.0	11.6	11.9	12.9	9.2	12.9	9.4	12.1	6.4	11.1
Health Care	6.5	10.8	6.2	10.8	8.1	9.7	10.1	9.7	7.8	10.7	4.6	10.9
Agri Food Bev	4.4	2.9	4.3	3.0	5.0	2.2	4.3	2.2	5.1	0.5	4.2	5.7
Energy	1.0	6.7	1.2	6.4	-0.2	8.7	1.3	8.7	3.6	0.8	1.0	12.3
Index Return (TR)	**9.3**		**9.4**		**9.1**		**8.1**		**11.7**		**7.0**	

YTD 2023 Sector returns and average weights across the FT Wilshire indexes: Strong technology and digital info returns for large cap and growth relative to their small cap and value equivalents

YTD	FTW 5000		Large Cap		Small Cap		Micro Cap		Growth		Value	
	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts
Technology	53.0	14.4	55.8	15.6	12.1	6.2	-5.4	5.1	67.7	21.6	33.5	9.5
Digital Info & Svc	49.4	18.5	52.4	19.7	8.9	10.7	-5.7	7.2	58.5	31.3	28.3	8.0
Transportation	32.3	4.0	37.2	3.9	7.0	4.5	-0.6	3.5	88.9	3.9	5.1	3.8
Cons Goods & Svc	20.6	11.7	21.9	11.5	9.1	12.9	10.8	9.9	35.9	12.5	5.0	10.8
Industrials	13.1	7.4	12.5	6.7	13.1	12.6	13.8	11.3	24.4	4.0	8.3	9.1
Resources & Materials	9.1	3.6	6.7	2.9	14.3	8.9	1.1	6.3	9.9	1.7	5.7	4.2
Financials	8.0	15.3	8.5	15.2	5.2	15.2	-9.2	20.8	12.1	8.7	6.8	21.8
Real Estate	2.6	3.0	2.5	2.4	0.1	7.5	-5.5	4.8	4.3	2.7	0.5	2.1
Health Care	-2.9	11.8	-1.9	11.8	-9.0	10.5	-14.0	23.3	3.9	11.8	-7.1	11.5
Energy	-3.2	7.2	-3.9	7.0	-1.6	8.8	-1.0	6.5	4.7	1.3	-4.4	12.9
Agri Food Bev	-5.7	3.2	-6.6	3.4	4.8	2.3	0.2	1.4	2.1	0.7	-7.5	6.2
Index Return (TR)	**19.7**		**21.8**		**8.4**		**-4.2**		**39.7**		**6.2**	

Source: Wilshire Indexes. Data as of November 30, 2023
Wilshire Indexes - Performance Report (November 2023)

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Sector-weighted contributions across the FT Wilshire indexes: Tech sector comes roaring back to drive large cap and growth outperformance in November

November sector-weighted performance contributions-blending performance with sector weighting:
Digital information and technology the largest contributors to large cap and growth returns

1M	FTW 5000	Large Cap	Small Cap	Micro Cap	Growth	Value
	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	2.3	2.4	1.1	0.6	4.1	0.7
Technology	1.9	2.1	0.6	0.6	3.1	1.0
Financials	1.5	1.4	1.9	1.9	0.8	2.1
Cons Goods & Svc	1.0	0.9	1.5	0.9	1.1	0.7
Health Care	0.7	0.7	0.8	2.1	0.8	0.5
Industrials	0.7	0.6	1.2	0.8	0.4	0.8
Transportation	0.5	0.6	0.3	0.3	0.8	0.3
Real Estate	0.3	0.3	0.7	0.5	0.3	0.2
Resources & Materials	0.3	0.2	1.0	0.3	0.2	0.3
Agri Food Bev	0.1	0.1	0.1	0.1	0.0	0.2
Energy	0.1	0.1	0.0	0.1	0.0	0.1
Index Return (TR)	**9.3**	**9.4**	**9.1**	**8.1**	**11.7**	**7.0**

YTD sector-weighted performance contributions: Superior positive contributions from the digital info and technology sectors have driven the significant outperformance of large cap and growth YTD.

YTD	FTW 5000	Large Cap	Small Cap	Micro Cap	Growth	Value
	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	9.1	6.3	-0.1	-0.4	18.3	2.3
Technology	7.6	5.1	0.1	-0.3	14.6	3.2
Cons Goods & Svc	2.4	1.2	-0.2	1.1	4.5	0.5
Transportation	1.3	0.8	0.0	0.0	3.5	0.2
Financials	1.2	0.2	0.6	-1.9	1.1	1.5
Industrials	1.0	0.0	0.4	1.6	1.0	0.8
Resources & Materials	0.3	-0.2	-0.6	0.1	0.2	0.2
Real Estate	0.1	-0.2	-0.6	-0.3	0.1	0.0
Agri Food Bev	-0.2	-0.4	-0.1	0.0	0.0	-0.5
Energy	-0.2	-0.4	0.0	-0.1	0.1	-0.6
Health Care	-0.3	-0.9	-0.8	-3.3	0.5	-0.8
Index Return (TR)	**19.7**	**21.8**	**8.4**	**-4.2**	**39.7**	**6.2**

Source: Wilshire Indexes. Data as of November 30, 2023

Wilshire Indexes - Performance Report (November 2023)

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Wilshire

FT Wilshire Size and Style Indexes: Double-digit returns for Growth in November widens YTD outperformance relative to Value

Short-term size and style returns: Strong growth performance in November sees YTD outperformance vs value widen further. Large cap remains comfortably ahead of small cap in 2023.

USD, TR %	Size			Style	
	Large Cap	Small Cap	Micro Cap	LC Growth	LC Value
1M	9.4	**9.1**	8.1	**11.7**	**7.0**
3M	1.8	**-2.4**	-6.3	**3.7**	**0.1**
YTD	**21.7**	**8.4**	-4.2	**39.7**	**6.2**
2022	-19.2	-17.5	-21.4	-31.1	-6.0
2021	27.8	19.1	21.7	27.7	27.4

Long-term size and style returns: Growth sees a 5yr annualized return of 16.1% vs 9.0% for value

USD, TR %	Large Cap		Small Cap		Micro Cap		LC Growth		LC Value	
	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann
2Y	2.3	1.1	-7.2	-3.7	-23.5	-12.5	-2.2	-1.1	6.2	3.0
3Y	30.8	9.4	14.1	4.5	0.1	0.0	28.0	8.6	32.1	9.7
5Y	82.1	12.7	42.4	7.3	20.0	3.7	111.2	**16.1**	53.7	**9.0**
10Y	209.7	12.0	112.6	7.8	67.6	5.3				
20Y	546.8	9.8	479.2	9.2	256.6	6.6				

Chart 1: Size and style index returns - 2023 YTD (USD, TR %)
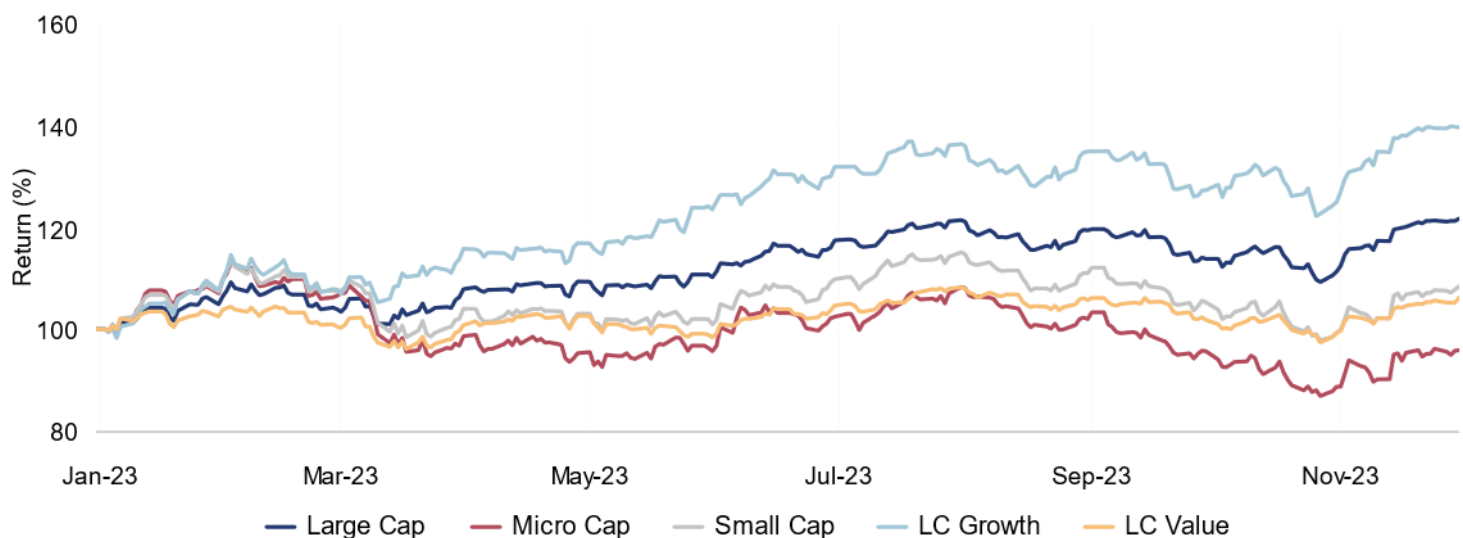
Style and Size Indexes: Growth regains momentum relative to Value. Large cap outperformance vs small cap continues.

Chart 1: Growth vs Value relative performance (USD, TR, %).

Relative Returns

1M	YTD
4.7	33.5

— Wilshire US LC Growth vs Wilshire US LC Value
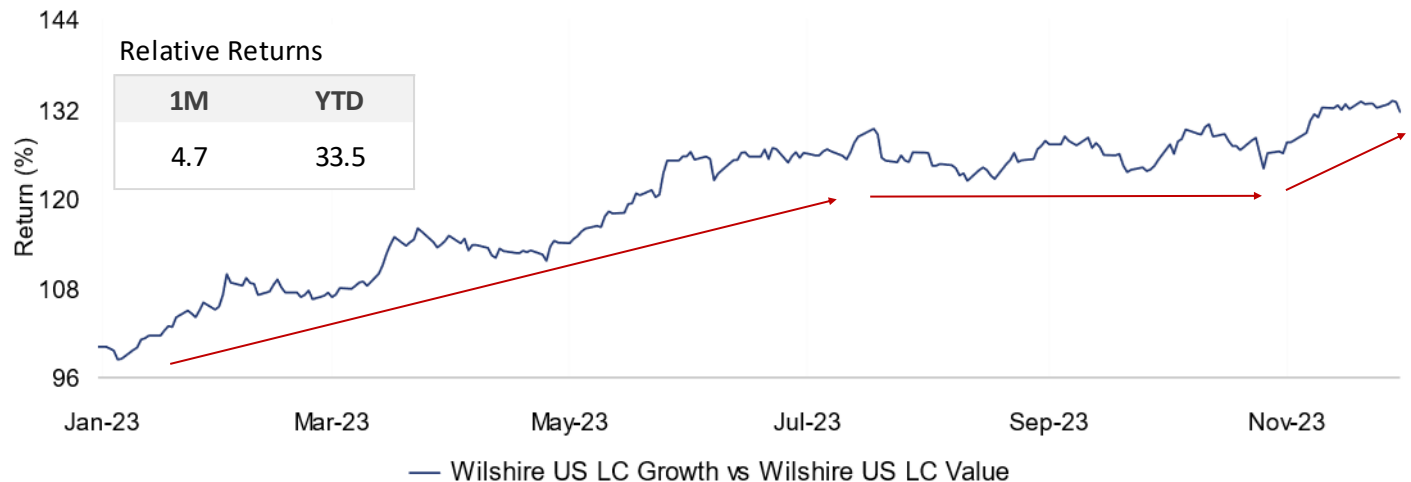
Chart 2: Large vs Small Cap relative performance (USD, TR, %).

Relative Returns

1M	YTD
0.3	13.3

— Wilshire US Large vs Small Cap
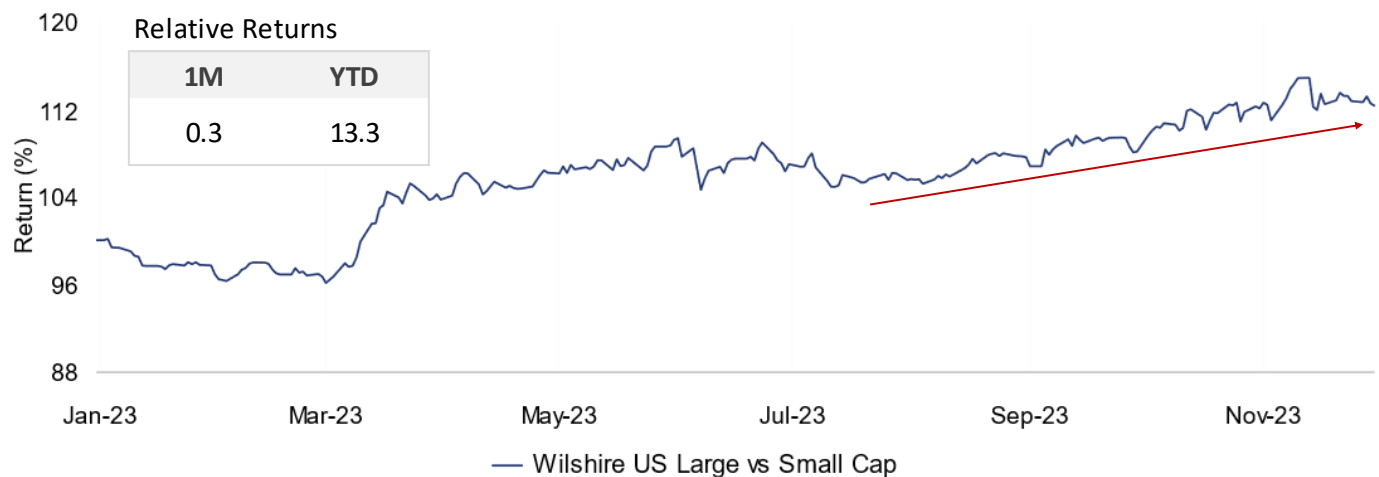
Chart 3: Large vs Micro Cap relative performance (USD, TR, %).

Relative Returns

1M	YTD
1.3	25.9

— Wilshire US Large vs Micro Cap

Source: Wilshire Indexes. Data as of November 30, 2023
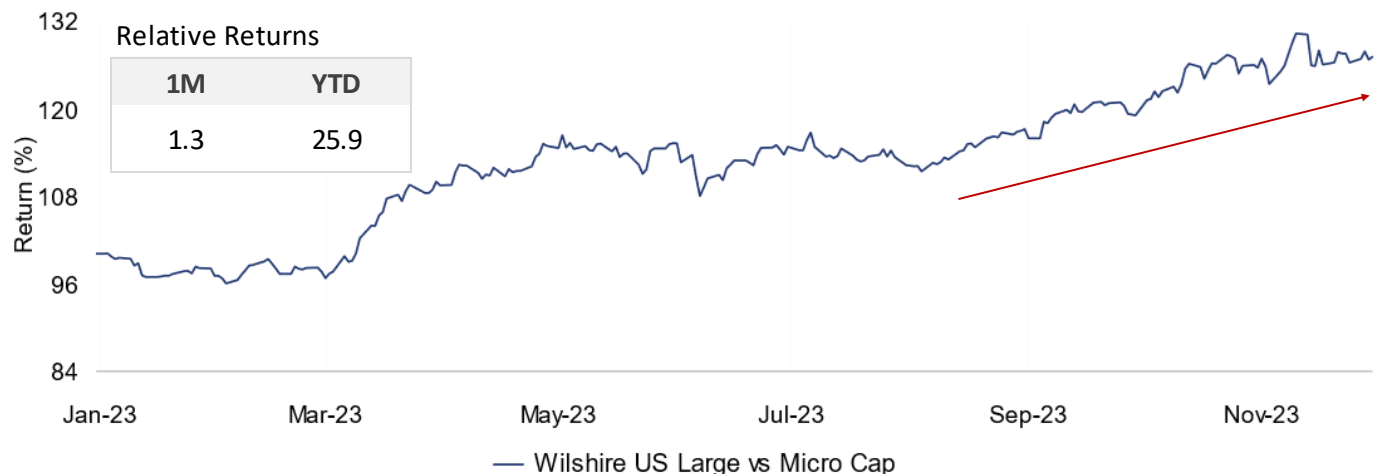
Pure Factor Indexes: Size outperforms in November with value and momentum outperforming YTD.

Our "Pure Factors" are designed to eliminate the unintended sector and factor exposures incorporated into most conventional factor methodologies. In this regard they are designed to deliver "pure" factor premia.

1M - Pure Size outperforms in November with Beta the laggard

Pure Factor Absolute Performance (%, TR, USD)
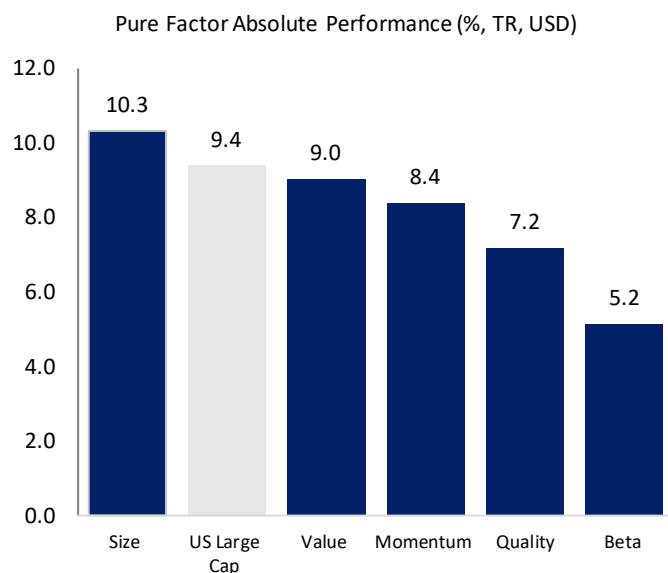
3M –Pure Momentum has outperformed with Quality delivering a negative return

Pure Factor Absolute Performance (%, TR, USD)
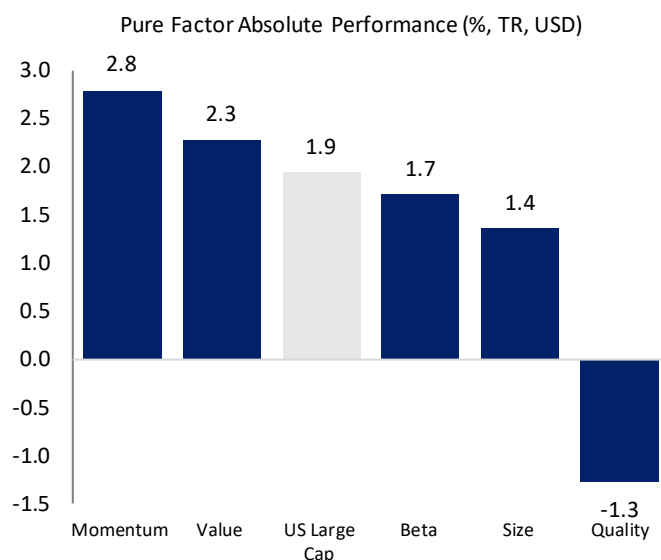
YTD-Pure Value and Quality have delivered similar returns so far in 2023. Beta has underperformed

Pure Factor Absolute Perormance (%, TR, USD)
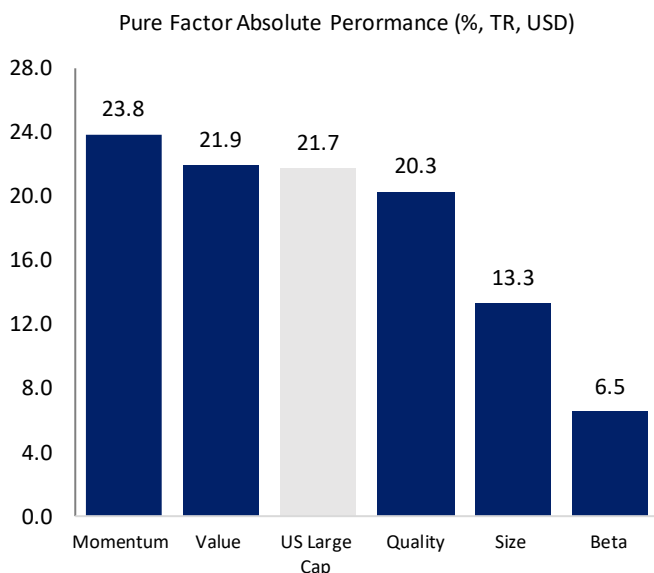
Pure Factor Indexes Relative to FT Wilshire US Large Cap Index over 12 months (Rebased, TR, USD)
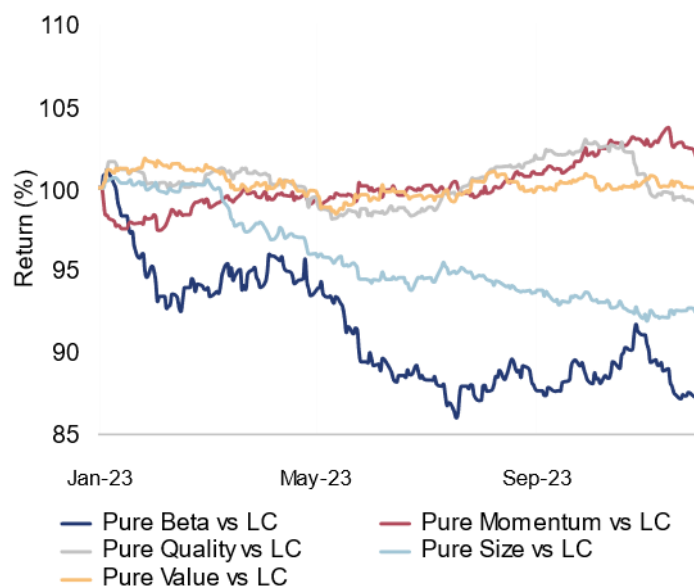
Comparing Factor vs Style returns: Reversal in Pure Quality/Growth style and Pure Value/Value style return profile in 2023 vs last year

Pure Factor and Style Absolute
Performance - 1M, YTD, 2022 and 3YR

Returns (USD, TR %)	1M	YTD	2022	3Y
Pure Factor Quality	7.2	20.3	-13.7	41.4
Style Growth	11.7	39.7	-31.1	28.0
Pure Factor Value	9.0	21.9	-16.2	36.6
Style Value	7.0	6.2	-6.0	32.1
Pure Factor Size	10.3	13.3	-17.5	21.4
Style Small Cap	9.1	8.4	-17.5	14.1

Pure Quality has lagged Growth (blue) in 2023, Pure Value has outperformed Value style (red)

— Pure Quality vs Large Cap Growth
— Pure Value vs Large Cap Value

Less volatility in Pure Quality vs Pure Value (blue) than Growth style vs Value style (red) since start of 2022

— Pure Qual vs Pure Val   — LC Growth vs LC Value

Pure Factor Size has marginally outperformed US Small Cap style since the start of 2022

— Pure Size vs Small Cap

Source: Wilshire Indexes. Data as of November 30, 2023
Wilshire Indexes - Performance Report (November 2023)

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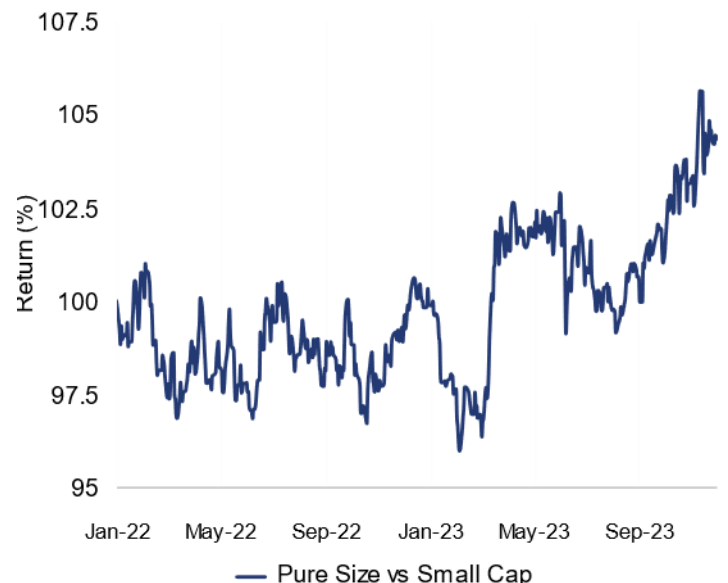
Market Perspectives and Technical Analysis: FT Wilshire 5000 Equal-Weighted index up just 2% YTD. Weighting of top 2 largest stocks at highest level ever.

Strong performance of 'Magnificent 7' stocks has driven FT Wilshire 5000 YTD returns but equal-weighted index up just 2% in 2023.

- FT Wilshire 5000 Index (TR) 19.7%
- FT Wilshire 5000 Equal Weighted Index (TR) 2.0%
- Aggregate 'Magnificent 7' Stocks (Market Cap Weighted) 82.6%
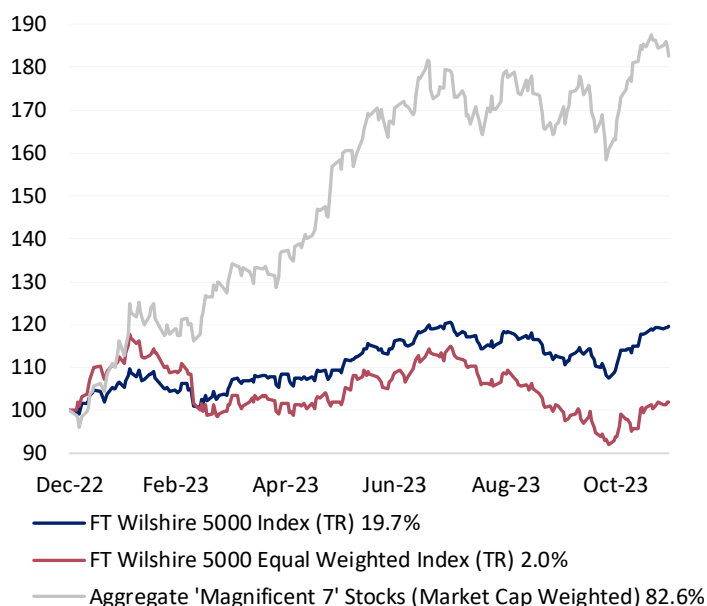
The weighting of the top 2 largest stocks in the FT Wilshire 5000 has risen to the highest in over 40 years

% Weight of Top 2 Largest Stocks in FT Wilshire 5000 Index
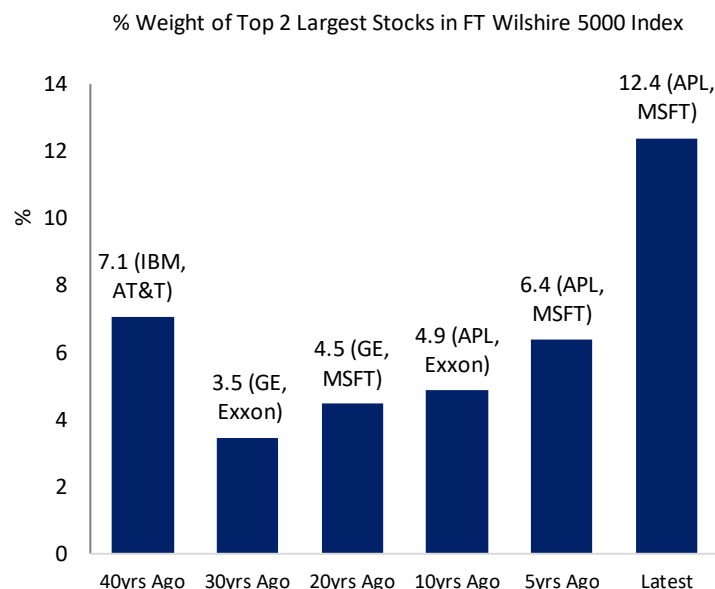
Rapid rotation from an oversold RSI in late October to the FT Wilshire 5000 now registering an over-bought signal

FT Wilshire Index Relative Strength Indexes (RSIs)

- Latest
- Recent October Low
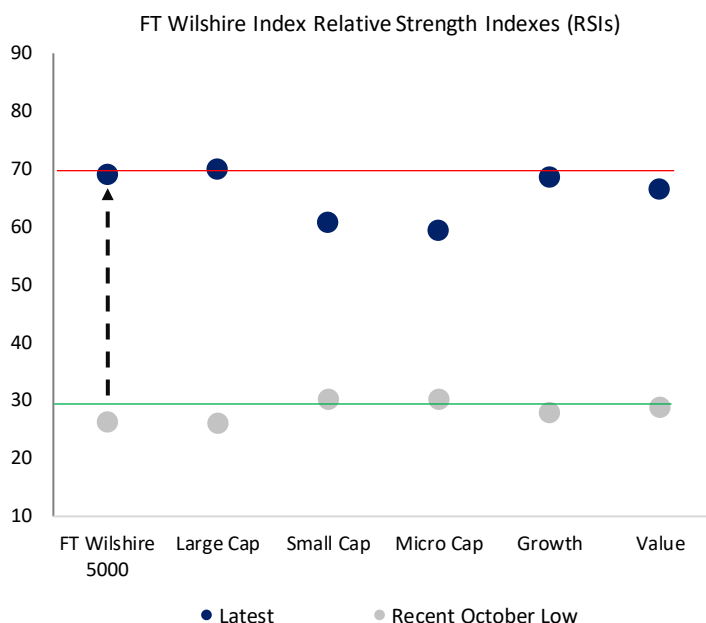
FT Wilshire 5000 sector Relative Strength Indexes (RSI) vs October low-largest 3 sectors now registering an overbought RSI signal

FT Wilshire 5000 Sector Relative Strength Indexes (RSI)

- Latest
- Recent October Low

FT Wilshire 5000 Stock Level Contribution Analysis: Two stocks have contributed almost 30% of returns so far in 2023

The contribution from the 'Magnificent 7' has declined since May but they have still contributed almost 2/3rds of the YTD FT Wilshire 5000 return

Contribution to FT Wilshire 5000 Return from 'Magnificent 7' Stocks (as a % of Total Return)

Microsoft and Apple alone have contributed almost 30% of the FT Wilshire 5000 return so far in 2023

'Magnificent 7' Stock Contribution to YTD FT Wilshire 5000 Return (% of Total)
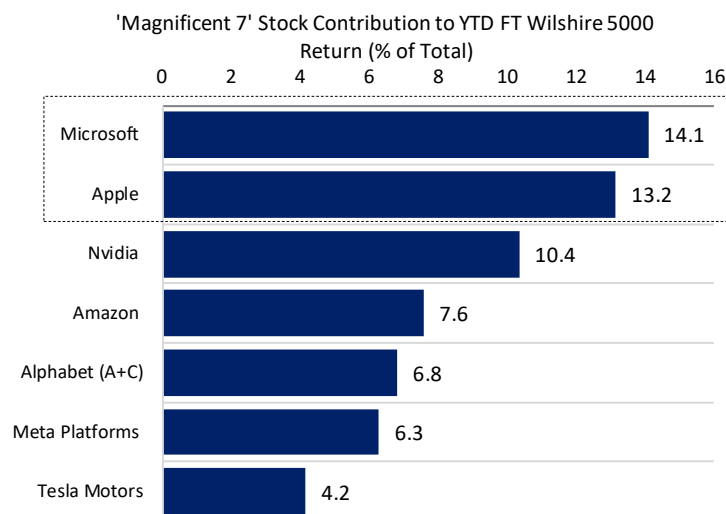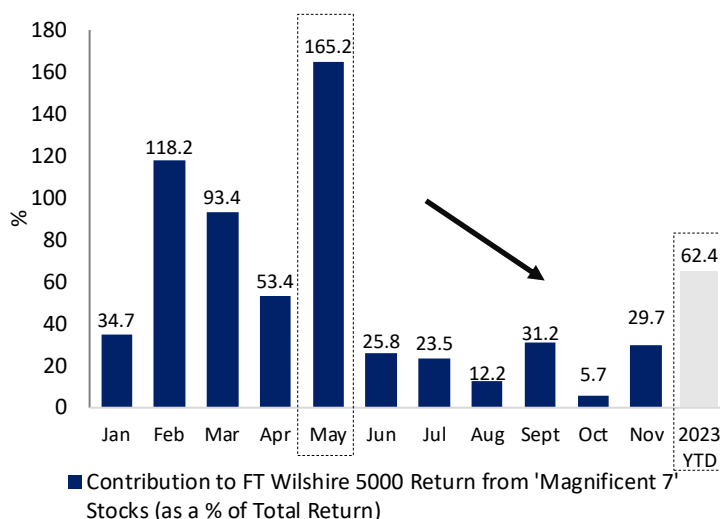
FT Wilshire 5000 - Top/Bottom 10 contributors to return

1M USD: 9.3% (TR)

Name	Wght	Return (%)	Contrib (%)
Apple Inc	6.7	11.4	0.75
Microsoft Corp	6.2	12.3	0.75
Nvidia Corp	2.5	14.7	0.35
Amazon Com Inc	3.0	9.8	0.29
Tesla Mtrs Inc	1.5	19.5	0.27
Meta Platforms Inc	1.6	8.6	0.14
Alphabet Inc	1.8	6.8	0.12
J P Morgan Chase & C	1.0	12.2	0.12
Salesforce Inc	0.5	25.4	0.12
Alphabet Inc	1.5	6.9	0.11
Conocophillips	1.5	6.9	0.11
Paycom Softwareinc	0.0	0.0	0.00
Bristol Myers Squibb	0.3	-2.2	-0.01
Humana Inc	0.0	-25.7	-0.01
Becton Dickinson	0.2	-4.2	-0.01
Schlumberger Ltd	0.1	-7.4	-0.01
Exxon Mobil Corp	0.2	-6.6	-0.01
Wal Mart Stores Inc	0.2	-6.5	-0.01
The Cigna Group	0.9	-2.1	-0.02
Cisco Sys Inc	0.5	-4.7	-0.03

YTD USD: 19.7% (TR)

Name	Wght	Return (%)	Contrib (%)
Microsoft Corp	6.2	59.4	2.78
Apple Inc	6.7	47.0	2.59
Nvidia Corp	2.5	220.2	2.04
Amazon Com Inc	3.0	73.9	1.49
Meta Platforms Inc	1.6	171.9	1.24
Tesla Mtrs Inc	1.5	94.9	0.82
Alphabet Inc	1.8	50.2	0.71
Alphabet Inc	1.5	50.9	0.64
Eli Lilly & Co	1.1	63.1	0.52
Broadcom Inc	0.9	68.6	0.41
Dollar Gen Corp New	0.1	-46.1	-0.07
Estee Lauder Co. Inc.	0.1	-47.7	-0.07
Cvs Corp	0.2	-24.7	-0.08
Moderna Inc	0.1	-56.7	-0.09
Schwab Charles Cp Ne	0.2	-25.1	-0.10
Johnson & Johnson	0.8	-9.2	-0.11
Bristol Myers Squibb	0.2	-28.9	-0.12
Nextera Energy Inc	0.3	-28.0	-0.13
Chevron Corp New	0.6	-16.8	-0.16
Pfizer Inc	0.4	-37.8	-0.29

Source: Wilshire Indexes. Data as of November 30, 2023

FT Wilshire Index Risk vs Return: 1 year and 5 year perspectives

FT Wilshire Indexes: Risk vs Return Over 1 Year

FT Wilshire Indices-1 Year
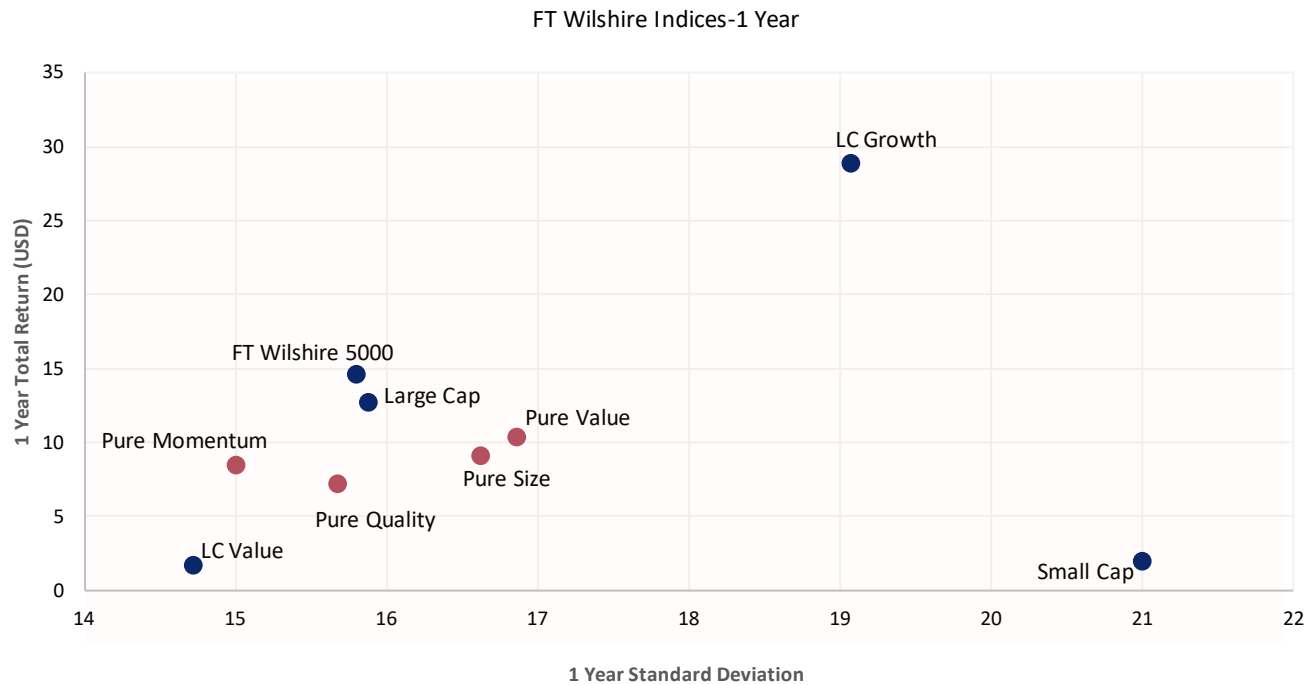
FT Wilshire Indexes: Risk vs Return Over 5 Years

Pure Factor ■   Style ■

FT Wilshire Indices-5 Year

Source: Wilshire Indexes. Data as of November 30, 2023

Wilshire Indexes - Performance Report (November 2023)

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Wilshire

FT Wilshire Global Equity Market Series (GEMS)

1

+11.0%

November return of Europe ex UK equities (USD, TR)

2

-7.9%

Decline in Chinese equities YTD (USD, TR)

3

+20.2%

YTD return of US equities (TR)

4

+8.0%

10-year annualized return for the global Equity Index (USD, TR)

Strong rebound in global markets in November with Europe ex UK outperforming. US remains the outperformer YTD (in USD terms) with China seeing negative returns.

Regional Returns in Global Index (USD, TR, %) - 1M vs YTD

	US	UK	EUexUK	Japan	AP ex Japan	EM ex China	China	EM
Returns	9.3	7.0	11.0	8.1	7.2	10.1	4.1	8.5
YTD	20.2	8.8	15.8	14.5	-2.7	14.7	-7.9	8.3

■ Returns ■ YTD
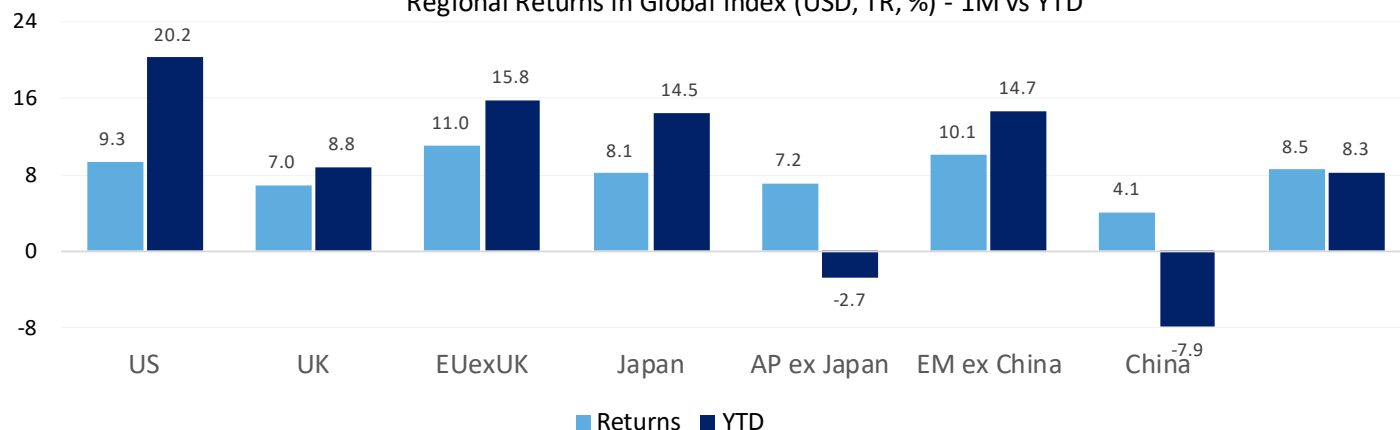
Regional Weights in Global Index

US	UK	EUexUK	Japan	AP ex Japan	EM ex China	China	EM
60.7	3.7	12.5	5.8	2.9	8.5	3.0	11.4

Source: Wilshire Indexes. Data as of November 30, 2023
Wilshire Indexes - Performance Report (November 2023)

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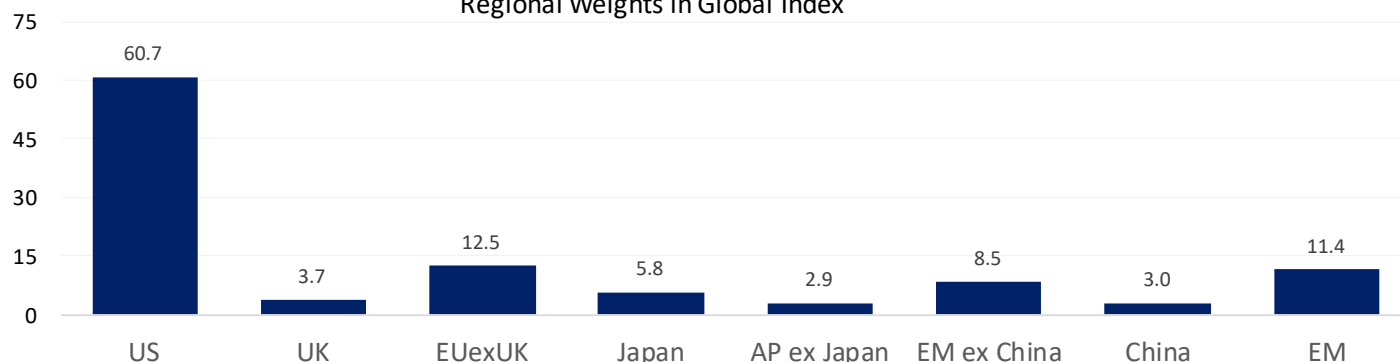
Chronology of Key Global news flow in 2023

1 China Optimism

China sees strong economic rebound following relaxation of Covid restrictions. Chinese equities continue to surge

2 US Rate Expectations Spike

Reassessment of US interest rate expectations see global bond yields rise

3 Silicon Valley Collapse

Silicon Valley Bank (SVB) collapses, bank contagion fears ripple though global markets agree to takeover of Credit Swisse

4 Bank Contagion Fears Ease

AI trade drives US outperformance, bank contagion fears ease. JPY weakens sharply on dovish BoJ

5 China Cuts Rates

Chinese central bank cuts rates in attempt to boost flagging economy

6 BoJ Tweaks Yield Curve Control

Japanese bond yields spike to the highest level in 9 years on BoJ policy change

7 Chinese Real Estate Concerns

Chinese equities plunge on heightened concerns over real estate sector

8 Israel-Hamas Conflict

Rising US bond yields and geopolitical concerns ripple through global equity

9 Optimism Over Peak Rates

Strong rebound in global markets on optimism over peak interest rates

FT Wilshire US vs Global ex US Index

Returns (USD, TR %)	MTD	3M	YTD	12M
US	9.3	1.5	20.2	13.2
Global ex US	**9.2**	**1.2**	**10.4**	**9.6**

Source: Wilshire Indexes. Data as of November 30, 2023
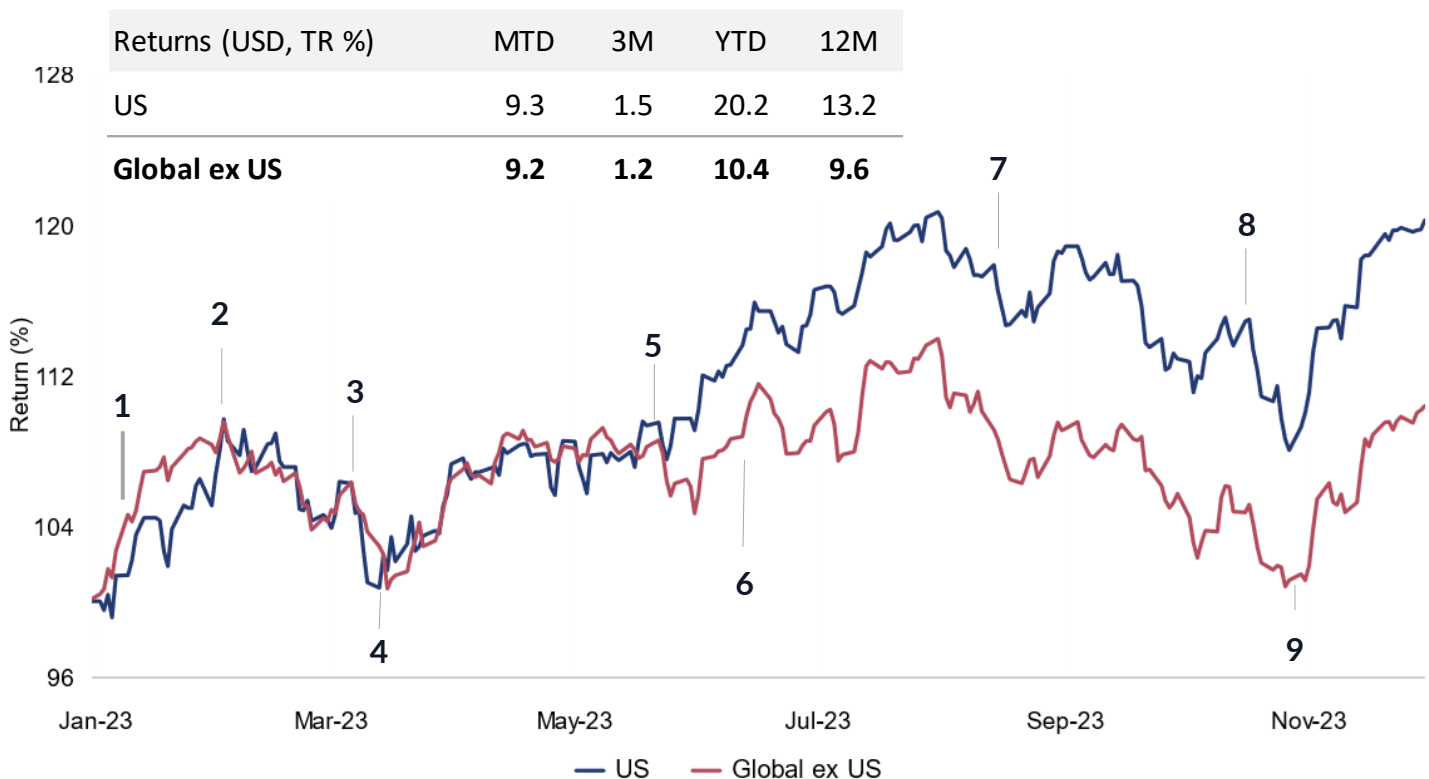
Regional Market Observations

NOVEMBER

01 Strong rebound in global markets with Europe ex UK reversing the recent trend to outperform in November. China continues to lag **(see below)**

02 In USD terms US equities have outperformed YTD. When we look at returns in local currency, Japanese equities have been the strongest performer (**page 19**)

03 Global ex US keeps pace with US in November as larger contribution from industrials and resources offset smaller tech contribution (**page 23**)

04 Largest positive contribution from financials and industrial sector drive strong rebound in Europe ex UK equities (**page 26**)

05 Emerging large cap relative to small cap returns have displayed significantly different profile to Developed markets so far in 2023 (**page 29**)

Regional Returns - Short Term (USD, TR, %)		1M	3M	YTD	12M	2022	MTD
Europe ex UK		11.0	1.6	15.8	16.1	-19.1	11.0
Emerging ex China		10.1	3.6	14.7	10.5	-15.4	10.1
USA		9.3	1.5	20.2	13.2	-19.3	9.3
Global		9.2	1.4	16.2	11.8	-17.9	9.2
Global ex US		9.2	1.2	10.4	9.6	-15.8	9.2
Emerging		8.5	1.9	8.3	6.9	-17.3	8.5
Asia Pacific ex Japan		8.2	1.1	4.9	4.4	-17.3	8.2
Japan		8.1	1.3	14.5	15.4	-15.4	8.1
United Kingdom		7.0	0.4	8.8	8.5	-10.8	7.0
China		4.1	-3.0	-7.9	-3.0	-21.8	4.1

Source: Wilshire Indexes. Data as of November 30, 2023

Wilshire Indexes - Performance Report (November 2023)   18

Comparing USD and Local Currency (LCY) YTD Returns

In USD terms the US has outperformed YTD (top chart). However, when we look at returns in LCY (lower chart) we can see Japanese equities have been the strongest performer so far in 2023.

YTD 2023 Returns (USD)

US 20.2%   UK (USD) 8.8%   Europe ex UK (USD) 15.8%   Japan (USD) 14.5%

YTD 2023 Returns (LCY)

US 20.2%   UK (GBP) 3.1%   Europe ex UK (EUR) 12.7%   Japan (JPY) 27.7%
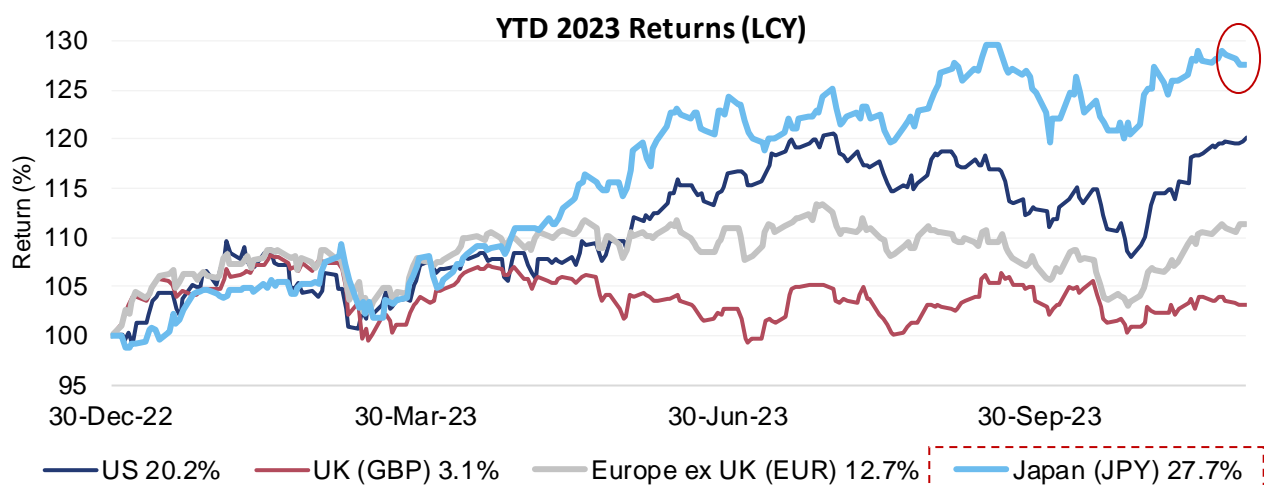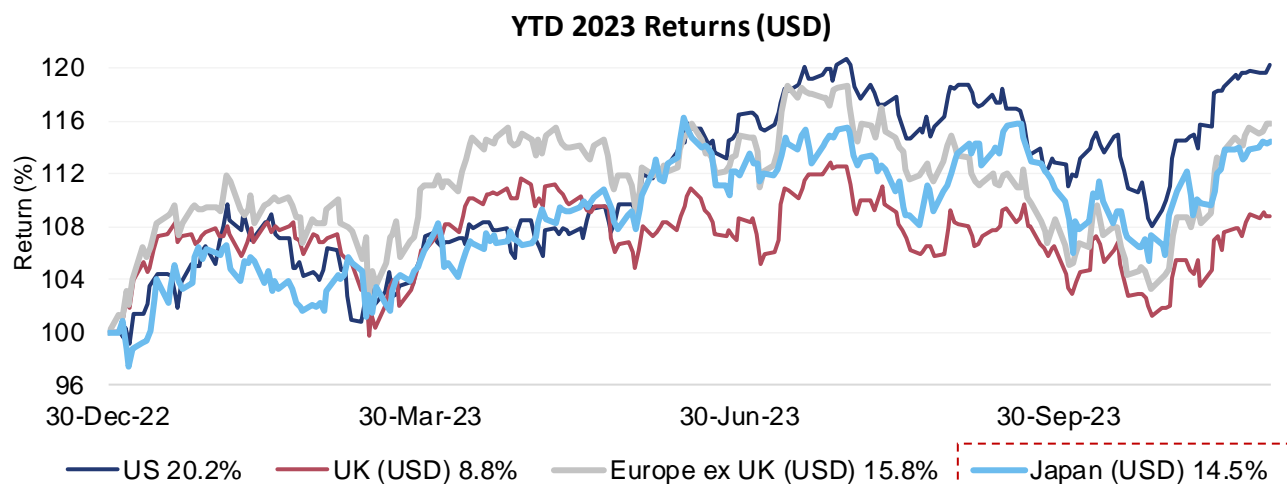
Long Term Returns (USD, TR, %)	3Y		5Y		10Y		20Y	
	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann
USA	28.0	8.6	76.5	12.0	191.6	11.3	562.4	9.9
United Kingdom	19.6	6.2	24.1	4.4	22.5	2.1	176.3	5.2
Japan	2.7	0.9	25.2	4.6	66.7	5.2	177.0	5.2
Asia Pacific ex Japan	-8.1	-2.8	22.7	4.2	54.4	4.4	388.4	8.3
Europe ex UK	15.1	4.8	48.0	8.2	66.3	5.2	310.1	7.3
Emerging	-4.7	-1.6	22.2	4.1	46.6	3.9	412.9	8.5
Emerging ex China	20.4	6.4	42.9	7.4	63.9	5.1	447.1	8.9
China	-43.4	-17.3	-15.1	-3.2	17.4	1.6	390.8	8.3
Global ex US	6.9	2.2	32.8	5.8	53.0	4.3	274.0	6.8
Global	18.8	5.9	56.3	9.3	116.8	8.0	408.4	8.5

Source: Wilshire Indexes. Data as of November 30, 2023

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Wilshire

FX adjusted market returns: YTD Global equity index return almost twice as large for a Japanese Yen based investor vs the return based in USD

FX swings result in a sizeable impact on unhedged regional equity returns depending on the location of investors. This has been most notable for JPY returns for a Japanese based investor (a result of Yen weakness). YTD global equities have returned 29.3% (in JPY terms), versus a 16.2% return in USD, 12.6% in EUR and just 9.7% for a GBP-based investor.

Table 1: Regional returns in various FX - 1M
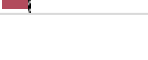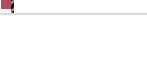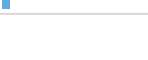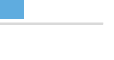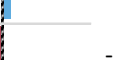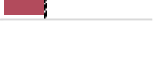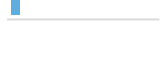
1M Return (TR, %)	USD	GBP	EUR	JPY
Europe ex UK	11.0	6.1	6.9	8.0
Developed	9.3	4.2	5.0	6.1
USA	9.3	4.0	4.8	5.9
Global	9.2	4.1	4.9	6.0
Emerging	8.5	3.3	4.1	5.2
Asia Pacific ex Japan	8.2	2.9	3.7	4.8
Japan	8.1	3.1	3.9	5.0
United Kingdom	7.0	2.2	3.0	4.0
China	4.1	-1.4	-0.6	0.4

Table 2: Regional returns in various FX - YTD

YTD Return (TR, %)	USD	GBP	EUR	JPY
USA	20.2	13.4	16.4	33.7
Developed	17.3	10.7	13.7	30.6
Global	16.2	9.7	12.6	29.3
Europe ex UK	15.8	9.8	12.7	29.4
Japan	14.5	8.3	11.1	27.7
United Kingdom	8.8	3.1	5.8	21.5
Emerging	8.3	2.1	4.9	20.4
Asia Pacific ex Japan	4.9	-1.1	1.6	16.7
China	-7.9	-13.5	-11.3	1.9

Source: Wilshire Indexes. Data as of November 30, 2023

Wilshire

Global Equity Relative Returns: Europe ex UK relative performance reverses the recent trend. China continues to underperform.

Chart 1 : US vs Global ex US (USD, TR, %)
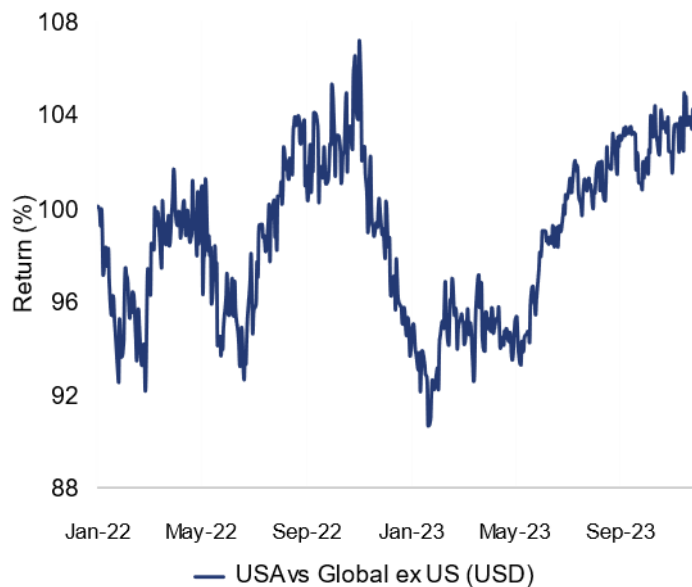
Chart 2: Emerging Markets vs Developed (USD, TR, %)

Chart 3: Europe ex UK vs Global ex Dev Europe (USD, TR, %)
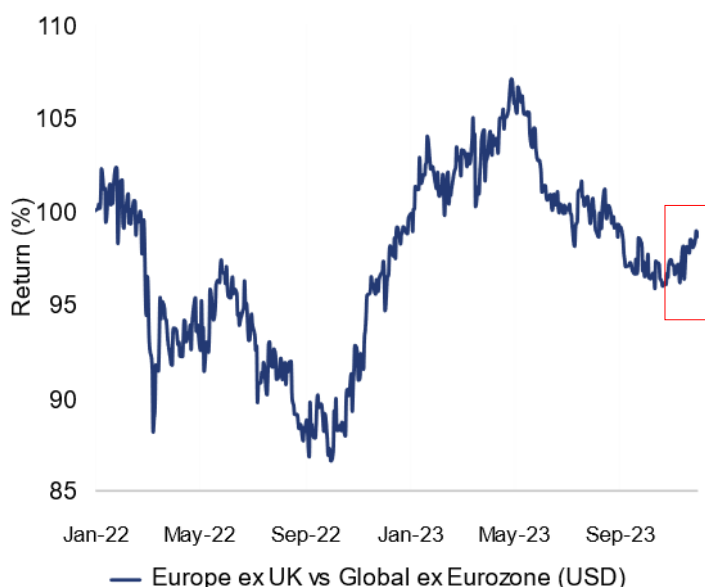
Chart 4: China vs Global ex China (USD, TR, %)

Source: Wilshire Indexes. Data as of November 30, 2023

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Wilshire
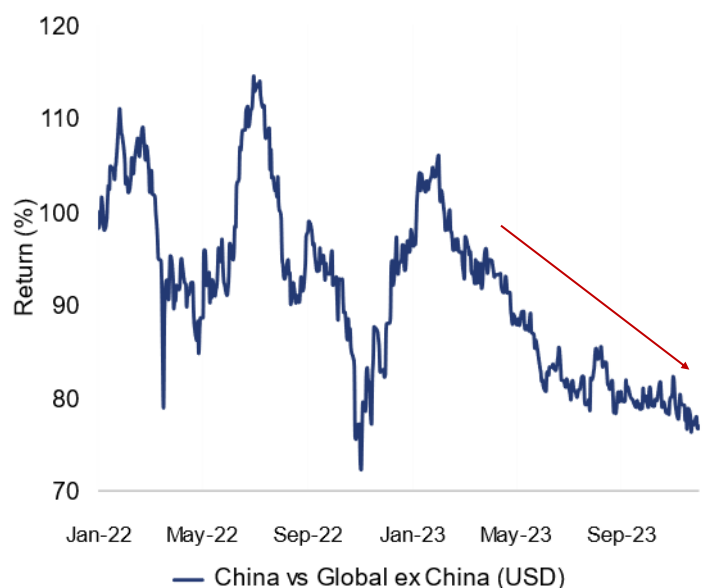
Developed and Emerging market country level performance: Strong recovery across most countries with European markets outperforming the US

Chart 1: 1M - Double-digit returns across many European markets in November, outpacing the US. Korea, Brazil and Taiwan all outperform within Emerging markets with China remaining amongst the laggards.

1M USD (%)

■ Developed ■ Emerging Markets

Country	Value
Sweden	16.7
Korea	16.3
Spain	14.6
Brazil	14.3
Netherlands	13.9
Taiwan	13.5
Germany	12.6
Italy	10.8
Canada	9.9
Australia	9.9
Switzerland	9.6
Developed	9.3
USA	9.3
France	9.1
Emerging	8.6
Denmark	8.2
Japan	8.1
South Africa	7.3
India	7.3
United Kingdom	7.0
Saudi Arabia	4.6
China	4.1
Malaysia	3.2
Hong Kong	0.8
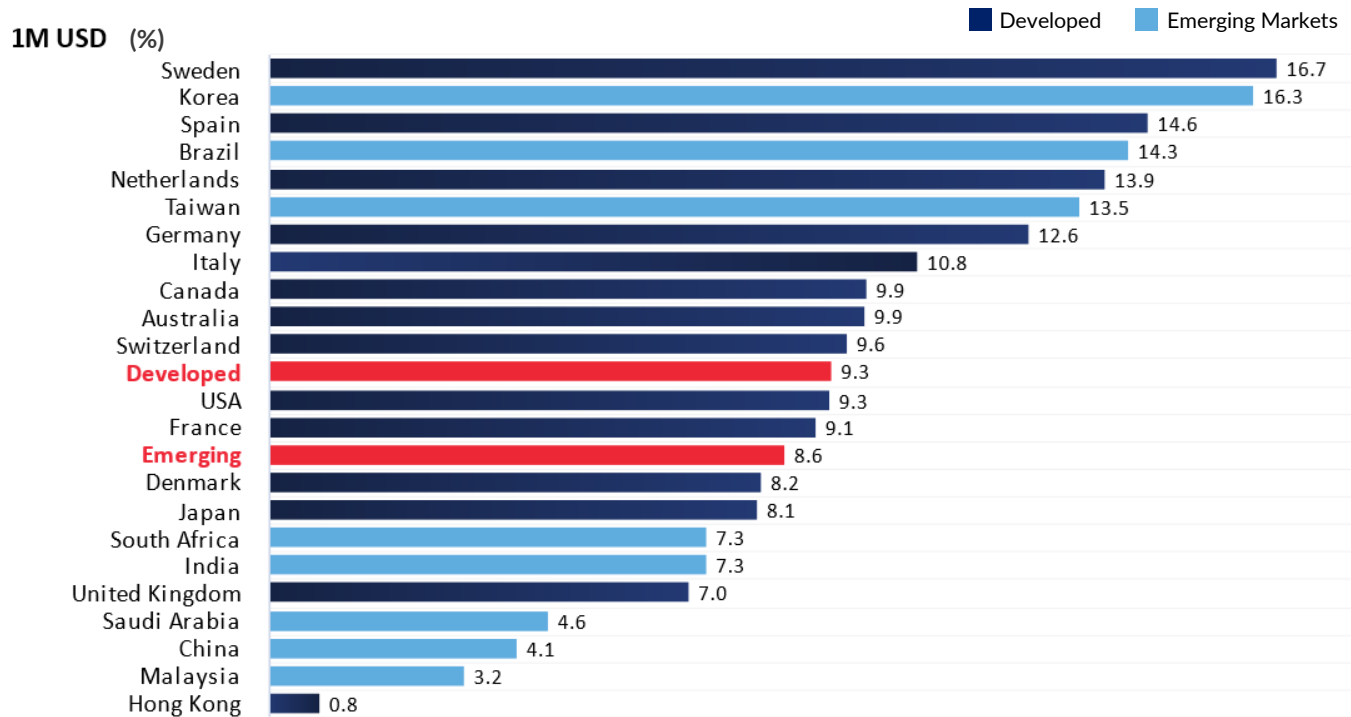
Chart 2: YTD - Strong returns for the US and many European markets have helped Developed markets deliver returns of over twice those of Emerging YTD, with negative China returns the main drag on the latter.

YTD USD (%)

Country	Value
Italy	33.9
Spain	28.3
Taiwan	26.8
Denmark	24.3
Brazil	24.3
USA	20.2
Netherlands	19.0
Developed	17.3
Korea	17.2
Germany	17.0
France	16.4
India	16.1
Japan	14.5
Switzerland	10.5
Sweden	9.3
United Kingdom	8.9
Emerging	8.3
Canada	7.2
Saudi Arabia	6.9
Australia	2.3
Malaysia	-1.1
South Africa	-5.2
China	-7.9
Hong Kong	-17.3

Source: Wilshire Indexes. Data as of November 30, 2023

Wilshire
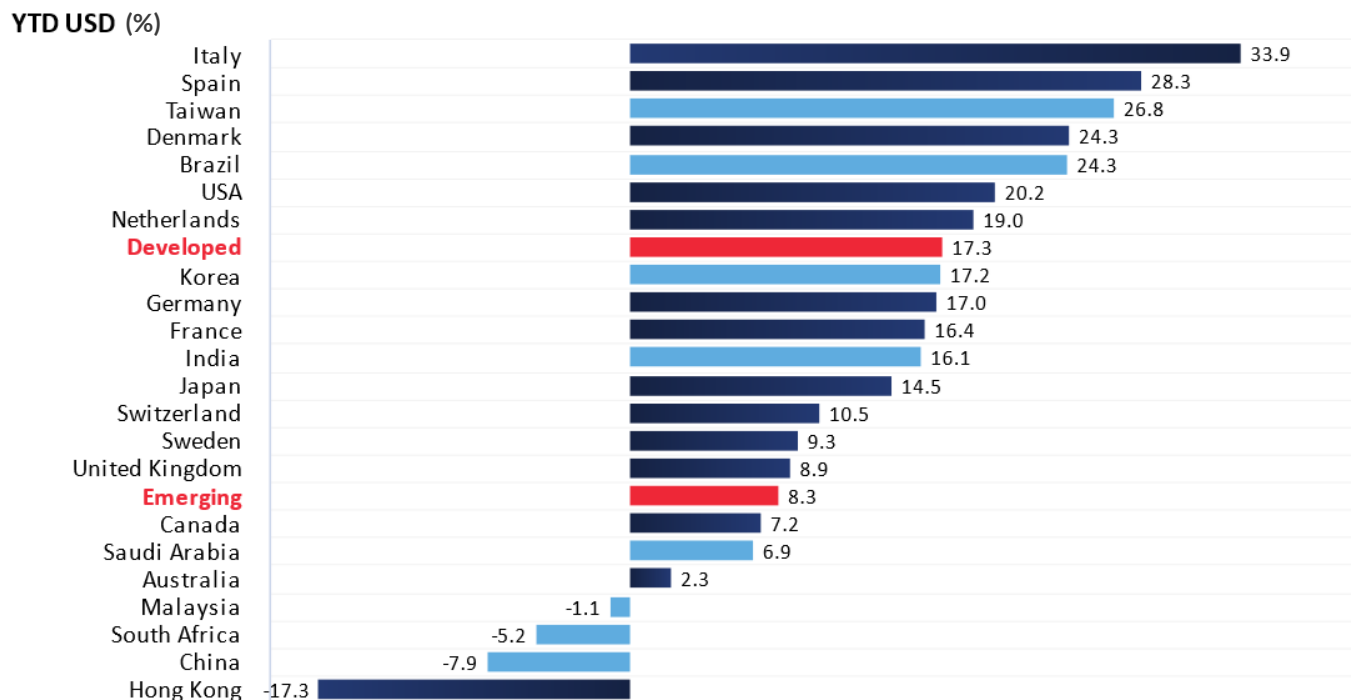
1M-US vs Global ex US sector returns and sector-weighted contribution analysis: Double-digit returns across many sectors in November

1M US vs Global ex US Sector Returns. US (light blue) transportation, digital information, financials and real estate sectors outperformed Global ex US (dark blue) in November, with Energy the main laggard.

Sector Returns 1M (USD, TR, %)

■ US: 9.3 ■ Global ex US: 9.2
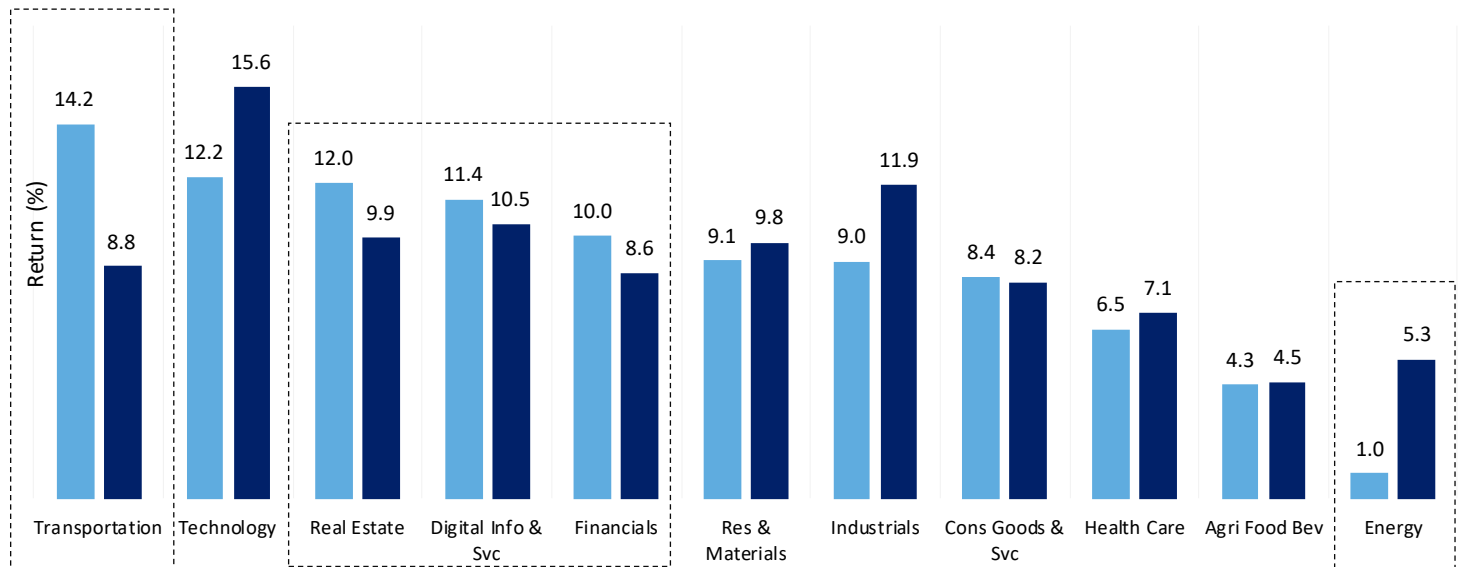
1M US vs Global ex US Sector weighted regional contribution analysis. Larger positive US tech and digital info contributions offset by smaller contributions from industrials, resources and energy vs global peers

Contributions to Returns 1M (USD, TR, %)

■ US: 9.3 ■ Global ex US: 9.2

Wilshire
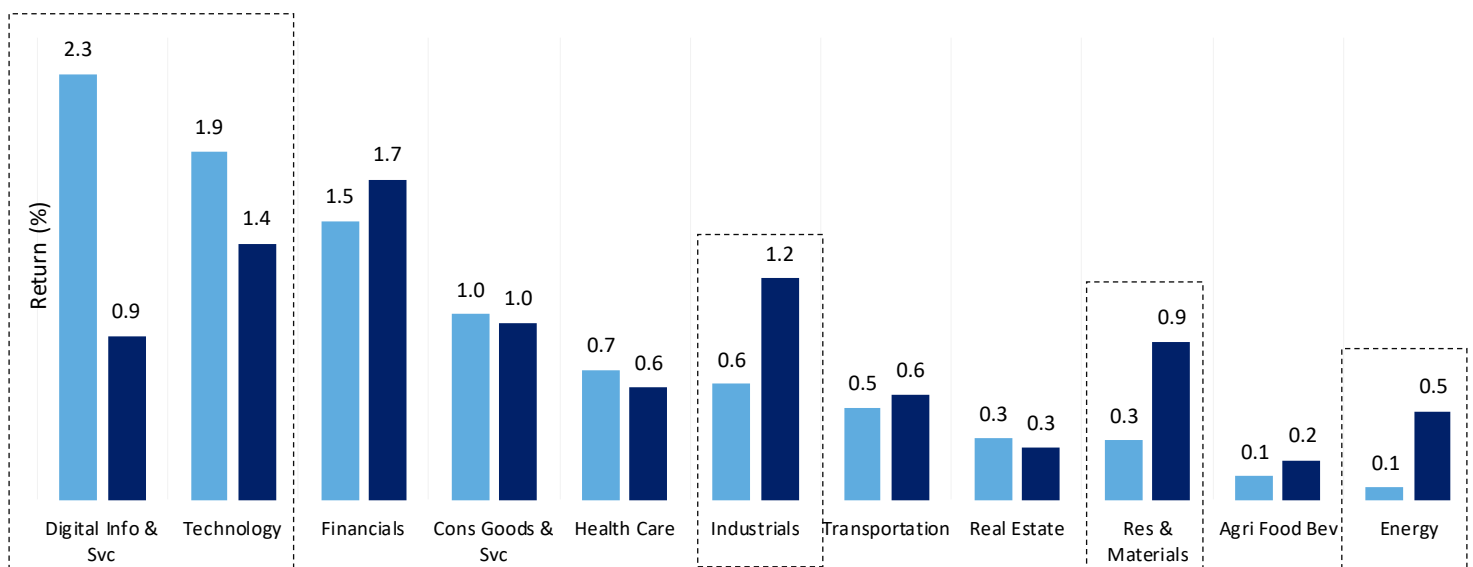
YTD-US vs Global ex US sector returns and sector-weighted contributions: Technology and digital info the key drivers of US YTD outperformance

US vs Global ex US YTD Sector Returns: US (dark blue) technology, transportation, digital information and consumer goods sectors have significantly outperformed Global ex US (light blue) YTD.

Sector Returns YTD (USD, TR, %)

■ US: 20.2 ■ Global ex US: 10.4
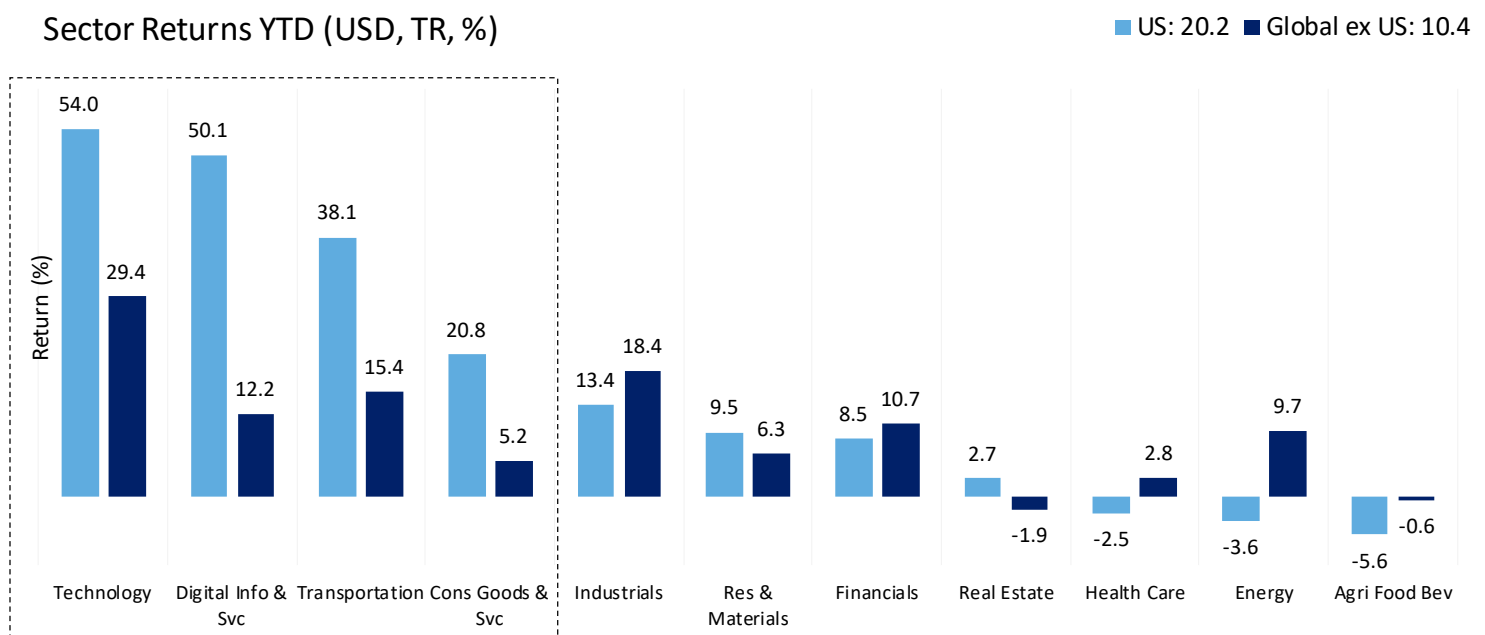
YTD US vs Global ex US Sector Weighted regional contribution analysis: The superior positive contribution from technology and digital information remain the key drivers of US YTD outperformance.
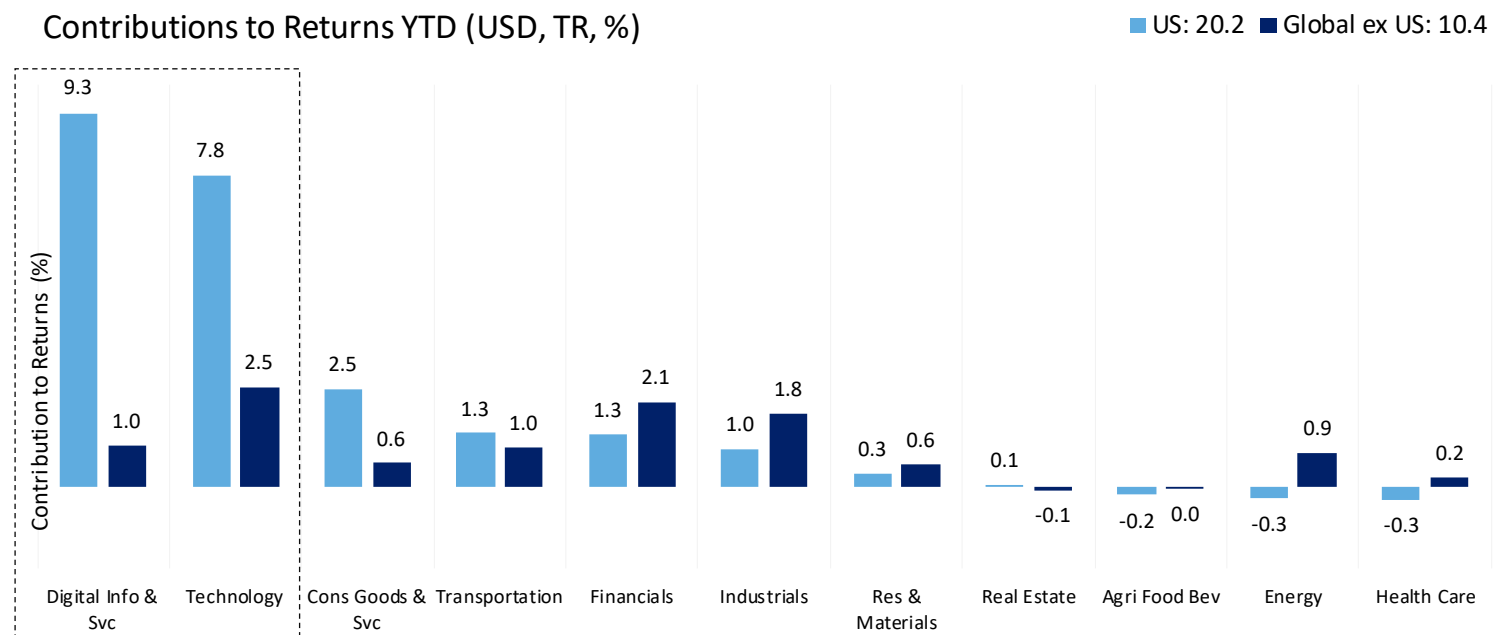
Contributions to Returns YTD (USD, TR, %)

■ US: 20.2 ■ Global ex US: 10.4

Source: Wilshire Indexes and Refinitiv. Data as of November 30, 2023

Regional level sector weights and returns: 1M and YTD 2023-Significant outperformance amongst US overweight sectors YTD

1M regional sector average weights and returns– The US is significantly overweight in technology and digital info vs Global ex US but underweight financials and resources and materials.

1 Month	US		Global ex US		UK		EU ex UK		Japan		EM		China	
	Return	Wght	Return	Wght	Return	Wght	Return	Wght	Return	Wght	Return	Wght	Return	Wght
Transportation	14.2	3.5	8.8	6.5	7.1	1.1	11.4	5.7	8.2	12.8	7.6	6.0	1.6	7.6
Technology	12.2	**15.4**	15.6	8.9	18.6	0.5	17.2	6.4	18.0	11.7	14.2	16.9	7.3	3.8
Real Estate	12.0	2.8	9.9	2.9	17.3	2.4	16.4	1.2	5.8	4.3	8.2	2.2	3.8	3.1
Digital Info & Svc	11.4	**20.2**	10.5	8.5	9.6	4.5	13.7	6.1	7.5	13.0	9.6	11.1	10.8	19.9
Financials	10.0	15.1	8.6	**20.2**	10.8	19.4	11.6	18.0	2.8	11.9	6.3	21.2	-1.0	15.6
Res & Materials	9.1	3.6	9.8	**8.8**	8.0	7.5	11.8	8.1	9.9	6.4	8.8	8.4	-2.8	3.2
Industrials	9.0	6.9	11.9	10.0	10.4	12.2	15.2	13.1	9.0	18.3	10.4	4.8	2.0	2.4
Cons Goods & Svc	8.4	11.9	8.2	11.7	6.0	15.8	9.9	11.9	5.0	9.1	7.3	12.3	5.8	28.4
Health Care	6.5	10.9	7.1	8.6	3.3	12.1	6.8	14.6	7.7	6.8	7.4	4.3	0.6	6.2
Agri Food Bev	4.3	3.0	4.5	4.9	2.0	7.8	6.4	6.5	4.3	3.5	3.6	4.5	-0.6	4.4
Energy	1.0	6.8	5.3	9.1	3.3	16.8	7.1	8.2	3.8	2.3	6.5	8.4	1.2	5.4
Index Return (TR)	**9.3**		**9.2**		**7.0**		**11.0**		**8.1**		**8.5**		**4.1**	

YTD 2023 regional sector average weights and returns: US has outperformed in tech, digital info, transport and consumer goods but lagged Global ex US financials and energy.

YTD	US		Global ex US		UK		EU ex UK		Japan		EM		China	
	Return	Wght	Return	Wght	Return	Wght	Return	Wght	Return	Wght	Return	Wght	Return	Wght
Technology	**54.0**	14.4	29.4	8.5	0.9	0.6	23.7	6.4	29.7	11.6	32.7	16.2	3.2	3.4
Digital Info & Svc	**50.1**	18.6	12.2	8.5	10.3	4.7	29.1	5.9	8.3	13.4	5.0	11.6	1.8	20.7
Transportation	38.1	3.5	15.4	6.4	10.8	1.0	18.5	6.0	25.3	12.1	13.1	5.9	2.0	7.5
Cons Goods & Svc	20.8	11.8	5.2	11.6	8.7	15.8	14.6	12.2	1.9	9.6	-6.6	11.7	-14.1	25.2
Industrials	13.4	7.1	18.4	10.0	28.5	11.5	19.3	13.2	17.9	18.5	13.1	4.7	-10.6	2.7
Res & Materials	9.5	3.6	6.3	9.1	-5.4	7.7	14.5	8.3	19.6	6.4	0.3	9.0	-19.3	3.8
Financials	8.5	15.4	**10.7**	20.0	14.1	19.4	21.9	17.4	19.3	11.1	8.0	21.5	-5.6	16.5
Real Estate	2.7	3.0	-1.9	3.0	5.9	2.5	6.8	1.2	1.6	4.4	-2.0	2.3	-24.1	3.6
Health Care	-2.5	11.9	2.8	8.8	-1.7	12.5	8.6	14.6	-6.6	7.4	-0.6	4.3	-16.4	6.3
Energy	-3.6	7.3	**9.7**	8.9	17.6	16.0	11.0	8.1	21.8	2.1	11.1	8.2	0.6	5.6
Agri Food Bev	-5.6	3.3	-0.6	5.1	-9.9	8.2	3.3	6.8	13.0	3.4	-1.7	4.7	-18.5	4.7
Index Return (TR)	**20.2**		**10.4**		**8.8**		**15.8**		**14.5**		**8.3**		**-7.9**	

Source: Wilshire Indexes. Data as of November 30, 2023

1M & YTD Regional sector sector-weighted performance contribution comparisons: Technology and digital info contribute 85% of US YTD return

Regional sector-weighted contributions to 1M returns: Digital information the largest contributor to US return vs financials for Global ex US in November.

1M	US	Global ex US	UK	EU ex UK	Japan	EM	China
	Contr	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	2.3	0.9	0.4	0.8	1.0	1.1	2.2
Technology	1.9	1.4	0.1	1.1	2.1	2.4	0.3
Financials	1.5	1.7	2.1	2.1	0.3	1.3	-0.2
Cons Goods & Svc	1.0	1.0	0.9	1.2	0.5	0.9	1.6
Health Care	0.7	0.6	0.4	1.0	0.5	0.3	0.0
Industrials	0.6	1.2	1.3	2.0	1.6	0.5	0.0
Transportation	0.5	0.6	0.1	0.7	1.0	0.5	0.1
Real Estate	0.3	0.3	0.4	0.2	0.2	0.2	0.1
Res & Materials	0.3	0.9	0.6	1.0	0.6	0.7	-0.1
Agri Food Bev	0.1	0.2	0.2	0.4	0.2	0.2	0.0
Energy	0.1	0.5	0.6	0.6	0.1	0.5	0.1
Index Return (TR)	**9.3**	**9.2**	**7.0**	**11.0**	**8.1**	**8.5**	**4.1**

Regional sector-weighted contributions to YTD returns: Digital info and technology largest contributors in the US compared with financials and technology for Global ex US

YTD	US	Global ex US	UK	EU ex UK	Japan	EM	China
	Contr	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	9.3	1.0	0.5	1.7	1.1	0.6	0.4
Technology	7.8	2.5	0.0	1.5	3.4	5.3	0.1
Cons Goods & Svc	2.5	0.6	1.4	1.8	0.2	-0.8	-3.5
Transportation	1.3	1.0	0.1	1.1	3.1	0.8	0.1
Financials	1.3	2.1	2.7	3.8	2.1	1.7	-0.9
Industrials	1.0	1.8	3.3	2.5	3.3	0.6	-0.3
Res & Materials	0.3	0.6	-0.4	1.2	1.3	0.0	-0.7
Real Estate	0.1	-0.1	0.1	0.1	0.1	0.0	-0.9
Agri Food Bev	-0.2	0.0	-0.8	0.2	0.4	-0.1	-0.9
Energy	-0.3	0.9	2.8	0.9	0.5	0.9	0.0
Health Care	-0.3	0.2	-0.2	1.3	-0.5	0.0	-1.0
Index Return (TR)	**20.2**	**10.4**	**8.8**	**15.8**	**14.5**	**8.3**	**-7.9**

Source: Wilshire Indexes. Data as of November 30, 2023

Dispersion analysis: The contribution to returns from top the 10 largest stocks and comparing the spread between best and worst sector performance

Sizeable contribution from top 10 largest stocks to returns in November in China relative to other regions

Contribution to November Market Return from Top 10 Stocks by Market Cap
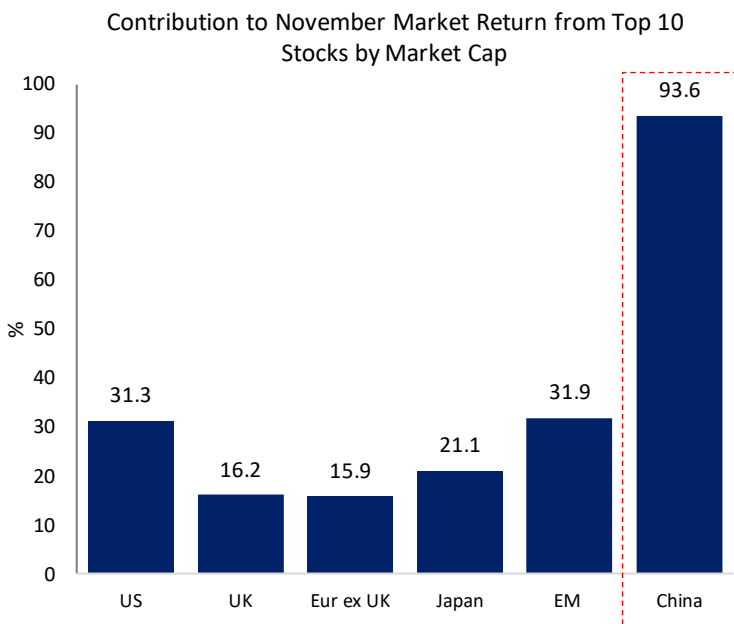
YTD the top 10 stocks have dominated YTD returns in the US relative to other regions

Contribution to YTD Market Return from Top 10 Stocks by Market Cap
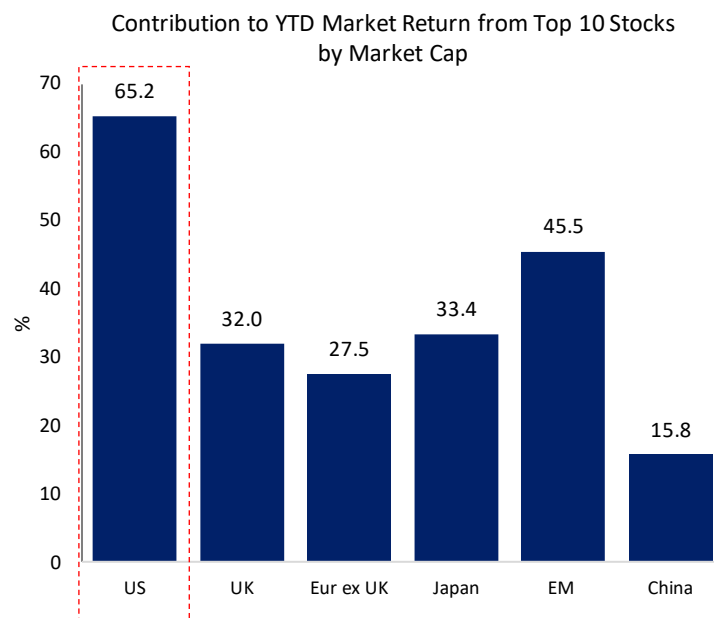
1M vs YTD FT Wilshire regional index sector dispersion-US, UK, Europe ex UK and Japan

● Top Performing Sector   ● Bottom Performing Sector
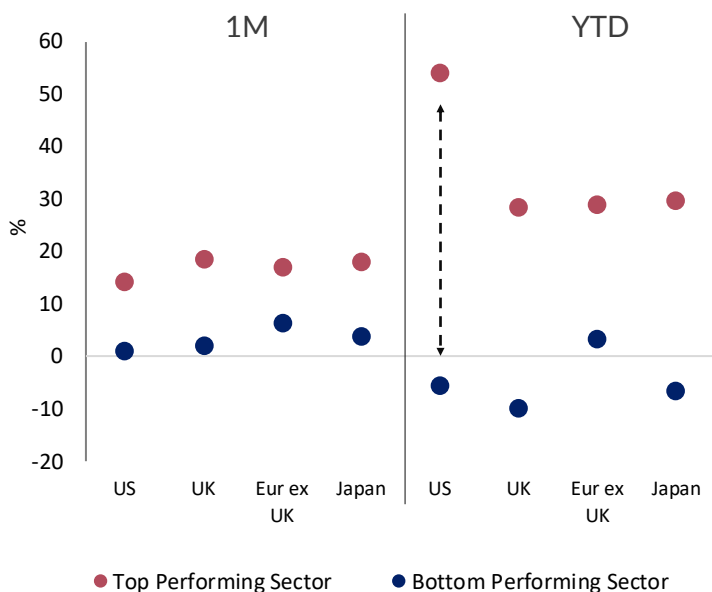
Chart 4: 1M vs YTD FT Wilshire regional index sector dispersion-Emerging markets, China and Global ex US

● Top Performing Sector   ● Bottom Performing Sector
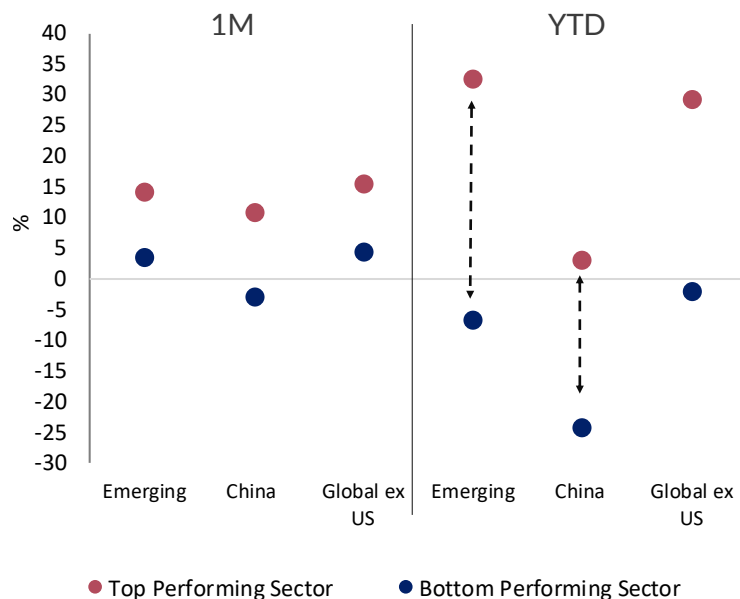
Sentiment and Technical analysis: Rotation from pessimism to exuberance in November as US RSI registers an overbought signal

Chart 1: FT Wilshire regional Relative Strength Indexes (RSI)-US registering oversold signal after hitting oversold during the October market low

FT Wilshire Index Regional Relative Strength Indexes (RSI)
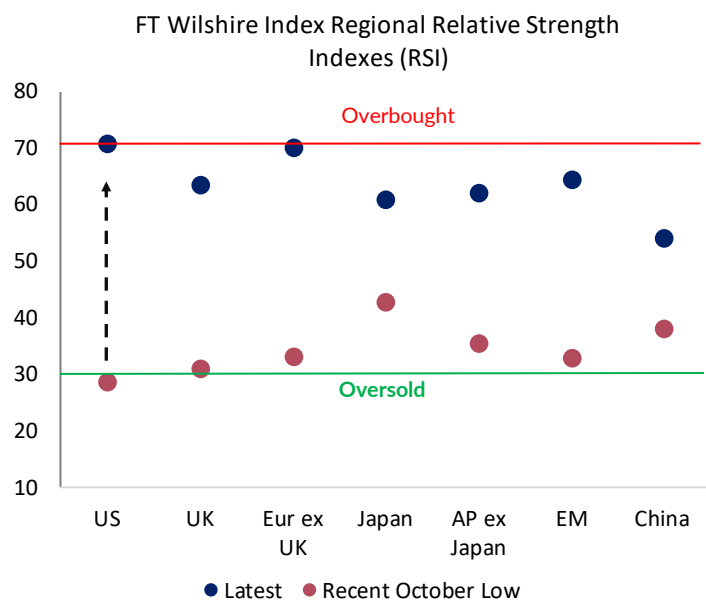
Chart 2: Despite November's rebound, 50 DMAs remain well below respective 200 DMAs across most regions

FT Wilshire Regional Spread Between 50DMA vs 200DMA Positioning (%)
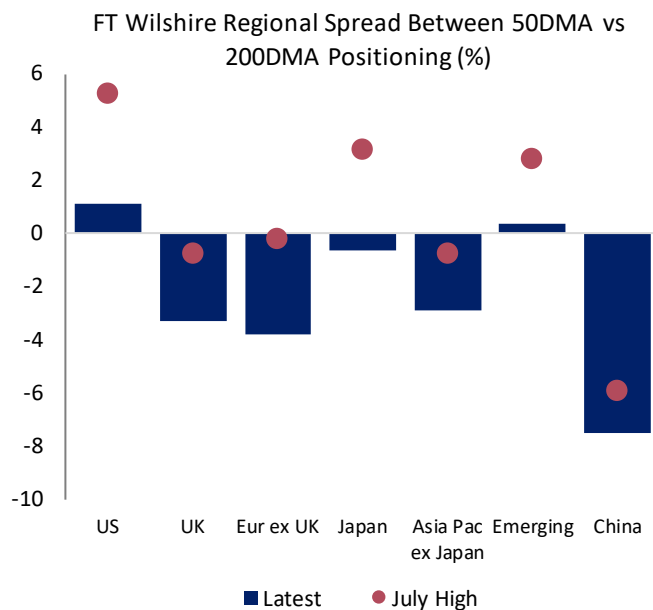
Chart 3: The percentage of stocks above their respective 200DMA has spiked higher from the lows witnessed in late October

— US % of Stocks Above 200DMA-50.0%
— Europe ex UK % of Stocks Above 200DMA-45.2%
— Emerging Markets % of Stocks Above 200DMA-54.2%
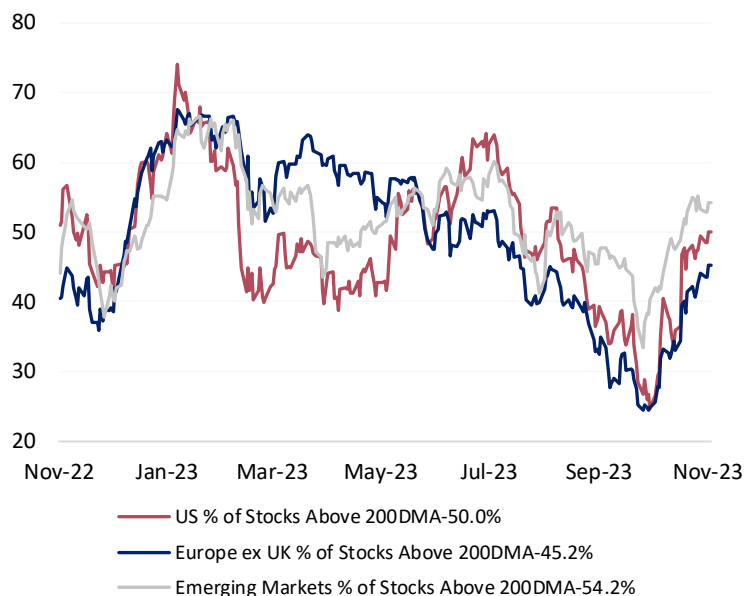
Chart 4: Volatility levels in the US, Europe ex UK and Emerging markets have picked up in recent months but are well below the highs at the start of 2023

— FT Wilshire US Rolling 6m Annualised Volatility (St Dev)
— FT Wilshire Eur ex UK Rolling 6m Annualised Volatility (St Dev)
— FT Wilshire Emerging Rolling 6m Annualised Volatility (St Dev)

Source: Wilshire Indexes. Data as of November 30, 2023

Wilshire
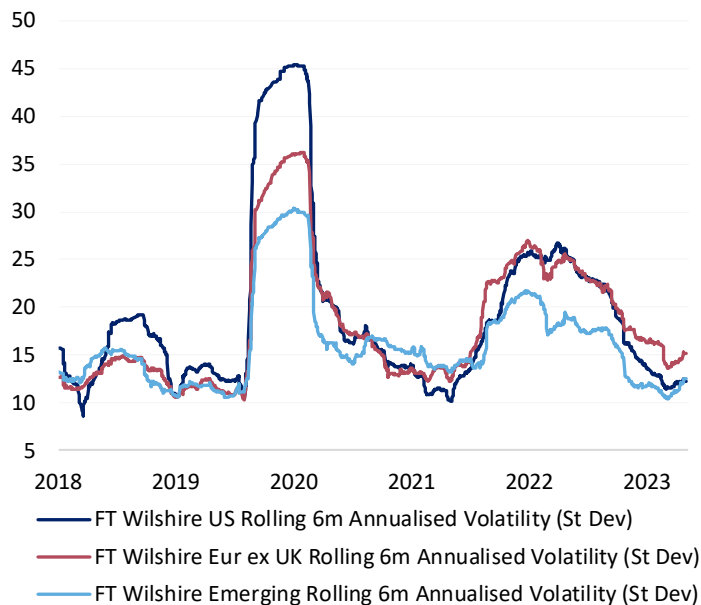
Perspectives: Regional YTD total return decomposition, shifting regional index weights, regional large/small cap returns and developed/emerging dynamics

PE re-rating drives YTD returns (USD) in the US, UK and Japan. EPS the largest contributor to return in Europe ex UK

2023 YTD Total Return Decomp

■ Dividend ■ EPS ■ PE ● Total Return

*Based on Factset data

US weighting in FT Wilshire global index has risen from 40.6% in 2007 to 61.1%, largely due to the decline in Europe ex UK from 22.2% to 12.6%

Regional Weighting in FT Wilshire Global Index (%)

■ Latest ● 2007 (Pre-GFC)
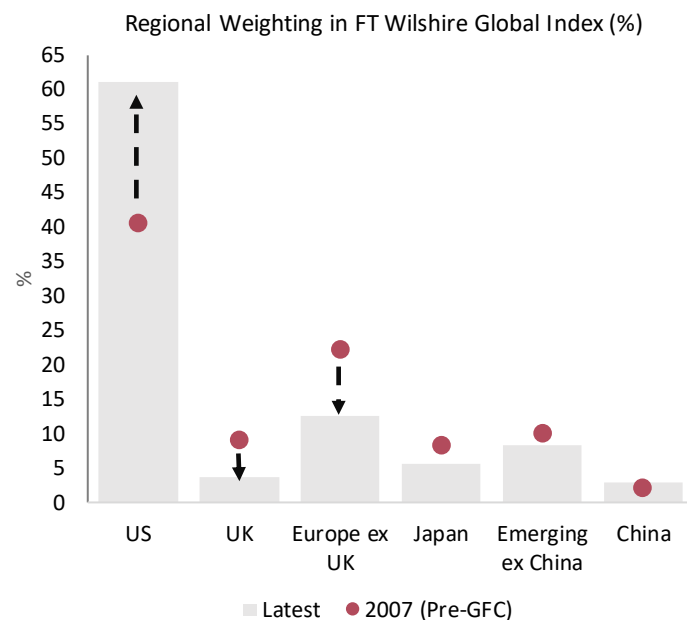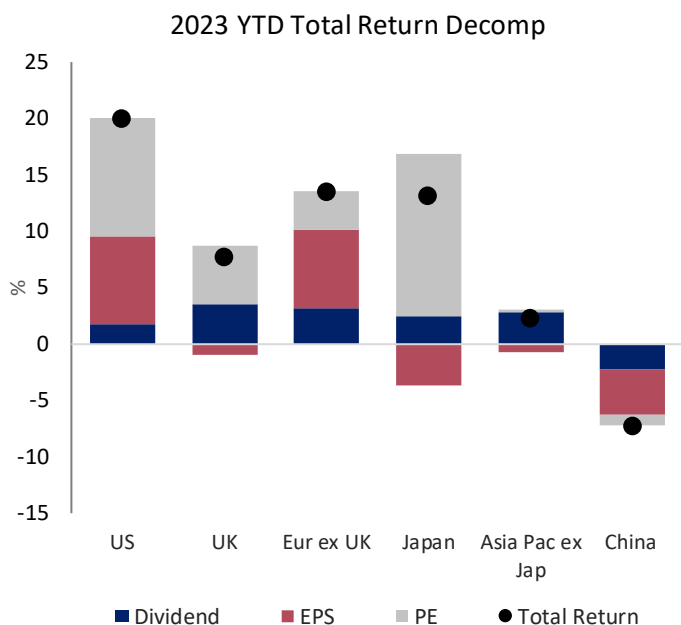
Asia Pacific ex Japan and Emerging large cap relative to small cap returns have displayed significantly different profile to US, Europe and Japan so far in 2023

Regional FT Wilshire Large Cap/Small Cap (Rebased, TR, USD)

— US 13.4% — UK 5.2%
— Europe ex UK 7.5% — Japan 8.0%
— Asia Pac ex Japan -8.4% — Emerging -9.1%

When we exclude the US and China Developed markets have actually underperformed Emerging since the middle of May

FT Wilshire Developed/Emerging vs Developed ex US/Emerging ex China (Rebased, TR, USD)

— Developed/Emerging 8.2%
— Developed ex US/Emerging ex China -2.8%
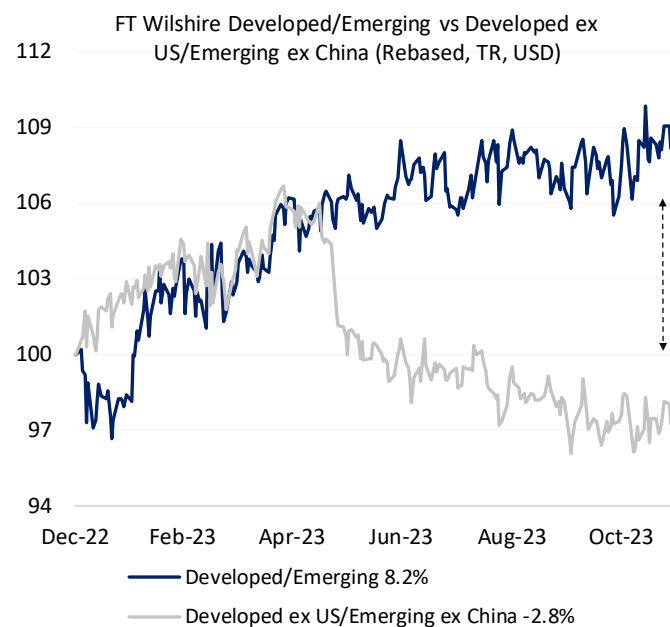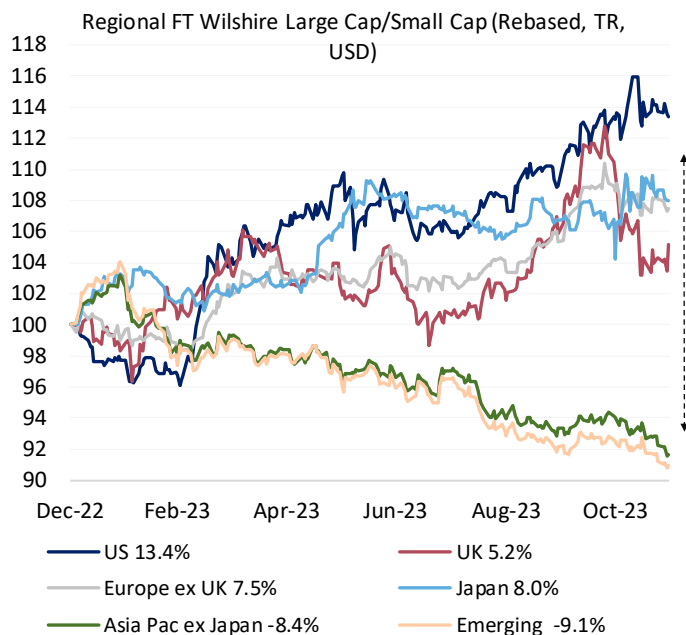
Source: Wilshire Indexes and FactSet. Data as of November 30, 2023

Market Capitalization of major markets and Regional sector weighting comparisons

Country (top 12) Market Cap (USD) and Weight in FT Global Index

	Latest	% Global Index	10Y Ago	% Global Index
USA	43,186	62.1	19,618	49.1
Japan	4,070	5.9	2,953	7.4
UK	2,557	3.7	3,104	7.8
Canada	2,093	3.0	1,552	3.9
China	2,048	2.9	941	2.4
Switzerland	1,864	2.7	1,359	3.4
France	1,806	2.6	1,347	3.4
India	1,510	2.2	411	1.0
Taiwan	1,350	1.9	528	1.3
Germany	1,334	1.9	1,316	3.3
Australia	1,315	1.9	1,160	2.9
Korea	982	1.4	681	1.7
Global	69,567		39,995	

Regional Market Cap (USD) and Weight in FT Wilshire Global index

	Latest	% Global Index	10Y Ago	% Global Index
Developed	62,920	90.4	35,889	89.7
USA	43,186	62.1	19,618	49.1
Europe ex UK	9,032	13.0	7,101	17.8
Asia Pacific ex Japan	8,372	12.0	4,965	12.4
Emerging	8,136	11.7	4,594	11.5
Japan	4,070	5.9	2,953	7.4
UK	2,557	3.7	3,104	7.8
China	2,048	2.9	941	2.4
Global	69,567		39,995	

Country weights within FT Wilshire Developed and Emerging indexes

Developed	Latest	% Developed	10Y Ago	% Developed
USA	43,186	68.4	19,618	54.4
Japan	4,070	6.4	2,953	8.2
UK	2,557	4.0	3,104	8.6
Canada	2,093	3.3	1,552	4.3
Switzerland	1,864	3.0	1,359	3.8
Developed	63,164		36,030	

Emerging	Latest	% Emerging	10Y Ago	% Emerging
China	2,048	25.2	941	21.6
India	1,510	18.6	411	9.4
Taiwan	1,350	16.6	528	12.1
Korea	982	12.1	681	15.6
Brazil	448	5.5	527	12.1
Emerging	8,136		4,358	

Sector Weights-US vs Global ex US

	US		Global ex US	
	Latest	%	Latest	%
Sector				
Digital Info	8,752	20.3	2,378	8.6
Technology	6,622	15.3	2,506	9.0
Financials	6,604	15.3	5,597	20.1
Consumer Good	5,109	11.8	3,236	11.6
Healthcare	4,679	10.8	2,369	8.5
Industrials	2,993	6.9	2,828	10.2
Energy	2,847	6.6	2,495	9.0
Res & Materials	1,543	3.6	2,460	8.9
Transportation	1,539	3.6	1,785	6.4
Agriculture	1,265	2.9	1,330	4.8
Real Estate	1,233	2.9	797	2.9
	43,186		26,983	

Risk vs Return: Regional equities 1 year and 10 years

Risk vs Return-1 Year

Risk vs Return-10 Year
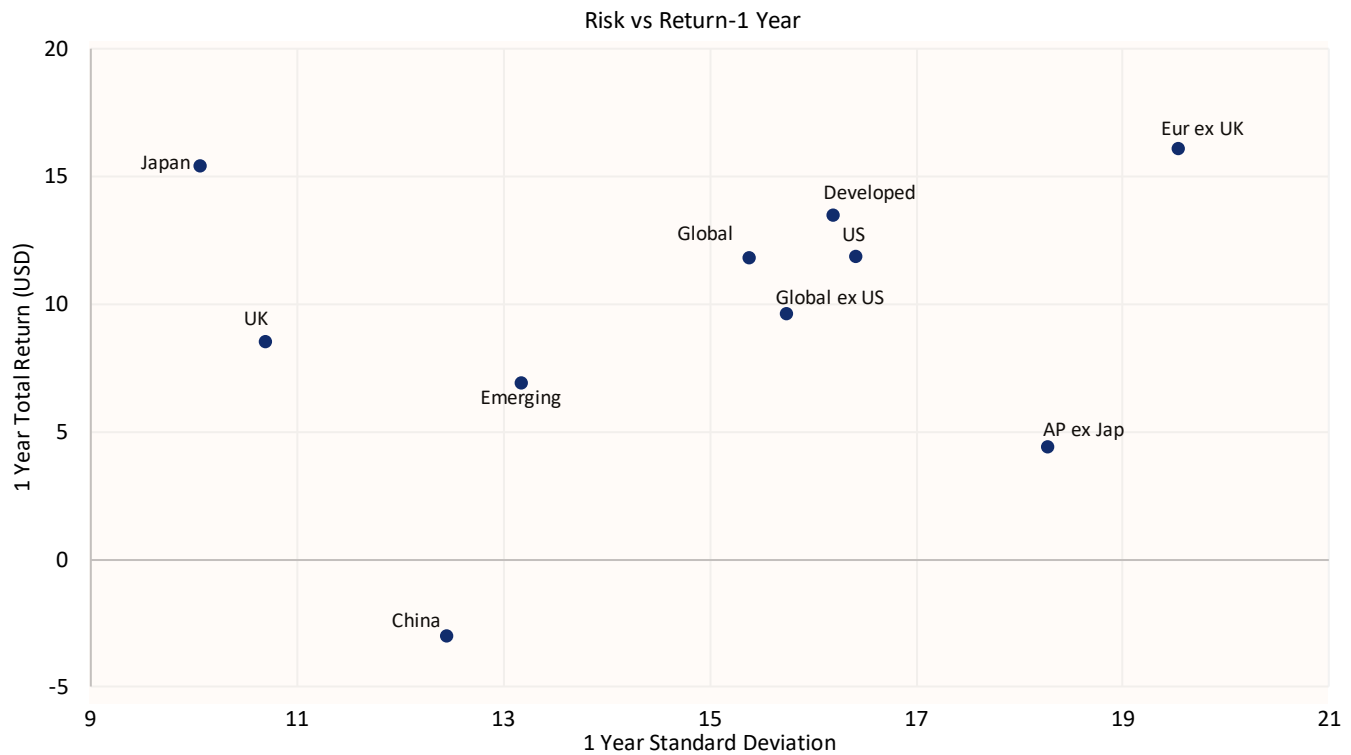
Source: Wilshire Indexes. Data as of November 30, 2023

Wilshire

Fixed Income and FX

1	**2**	**3**	**4**
-51bps	**+126bps**	**-3.0%**	**-10.5%**
Decline in US 10-year yield in November	May low to October peak rise US 10-year real yield	Decline in DXY dollar index November	Decline in JPY vs USD YTD

The DXY dollar and US 10-year yield have largely moved in tandem so far in 2023

— DXY Dollar Index   — US 10yr Govt Yield (RHS, %)
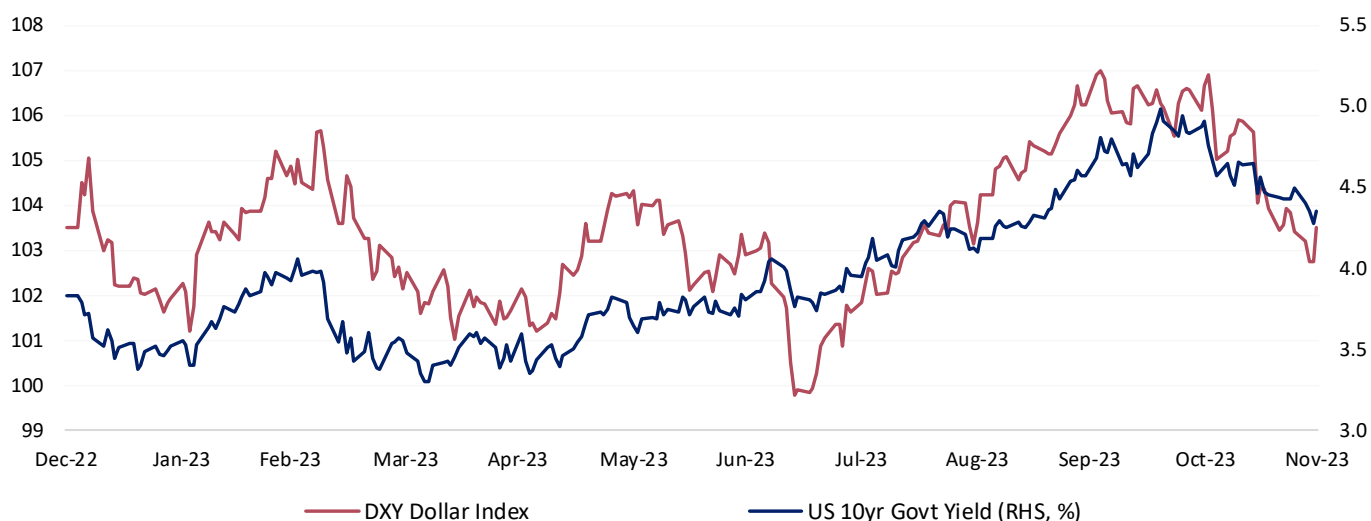
November witnessed declines in the dollar vs other major FX and US nominal and real yields

1M Moves in Key Fixed Income and FX Markets (Bps)

	Value
GBP vs USD	390
EUR vs USD	290
JPY vs USD	160
CNY vs USD	110
US IG Spread	-15
US 10yr Breakeven	-19
Jap 10yr Yield	-24
US HY-IG Spread	-25
UK 10yr Yield	-26
US 10yr Real Yield	-32
Ger 10yr Yield	-35
US HY Spread	-38
US 2yr Yield	-39
US 10yr Yield	-51
DXY (Dollar)	-300
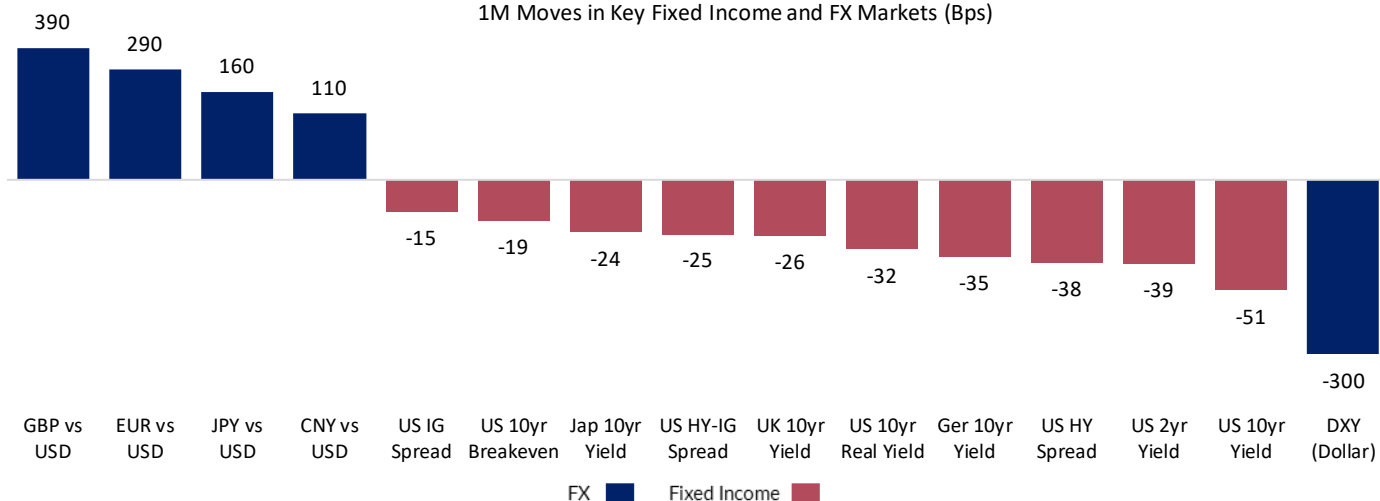
FX ■   Fixed Income ■

Regional fixed income performance and yield summary: Government bonds, Inflation linked and Corporates

Chart 1: 1-3 year government bond returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	1M	YTD
Aus (1-3yr)	4.2	4.3	3.3	5.8	-0.5
UK (1-3yr)	4.5	4.7	3.6	5.0	7.3
Italy (1-3yr)	3.6	3.9	3.2	4.3	5.4
EURO* (1-3yr)	3.0	3.2	2.4	3.8	4.0
Can (1-3yr)	4.4	4.8	3.9	3.6	2.9
China (1-3yr)	2.3	2.3	2.3	2.7	-0.4
Japan (1-3yr)	0.0	0.0	0.0	2.7	-10.7
US (1-3yr)	5.0	5.1	4.4	1.0	3.1

Chart 2: 7-10 year government bond returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	1M	YTD
Aus (7-10yr)	4.4	4.7	3.8	9.1	-1.2
Italy (7-10yr)	4.1	4.6	4.3	7.4	9.9
UK (7-10yr)	4.1	4.5	3.6	7.2	5.8
Can (7-10yr)	3.7	4.1	3.2	6.4	0.6
EURO* (7-10yr)	2.5	2.8	2.4	6.0	5.3
Japan (7-10yr)	0.6	0.7	0.4	4.8	-10.6
US (7-10yr)	4.4	4.8	3.7	4.4	-0.5
China (7-10yr)	2.7	2.7	2.8	3.0	1.4

Chart 3: Inflation Linked bond returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	1M	YTD
Can IL (All)	1.9	2.3	1.3	9.5	-2.8
Aus IL (All)	1.5	1.9	0.6	7.5	2.0
Italy IL (All)	2.0	2.3	1.9	6.9	8.4
UK IL (5-10yr)	0.6	1.0	0.2	6.7	7.5
EURO* IL (5-10yr)	1.2	1.3	0.8	5.7	4.9
Japan* IL (5-10yr)	-1.0	-0.7	-0.6	4.3	-6.1
US IL (5-10yr)	2.2	2.5	1.6	2.9	0.9

Chart 4: Investment grade & high yield returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	1M	YTD
UK HY (All)	9.9	10.9	10.3	8.2	18.5
UK IG (All)	5.9	6.5	5.7	8.1	10.2
EURO HY (All)	7.4	8.1	7.6	6.2	11.3
US IG (All)	5.8	6.4	5.4	5.6	4.2
EURO IG (All)	4.3	4.6	4.1	5.6	7.5
US HY (All)	8.7	9.5	8.7	4.6	9.4
Japan IG (All)	0.9	1.0	0.9	3.4	-9.8
Japan BBB (All)	1.4	1.5	1.6	3.2	-8.8

Fixed Income key observations: US 10-year yields declines further from the 5% October highs on growing US market rate cut expectations in 2024

10-year yields across the major regions have eased back from their highs in October. The US has seen a 62 bps decline from the 5% peak on 19th October
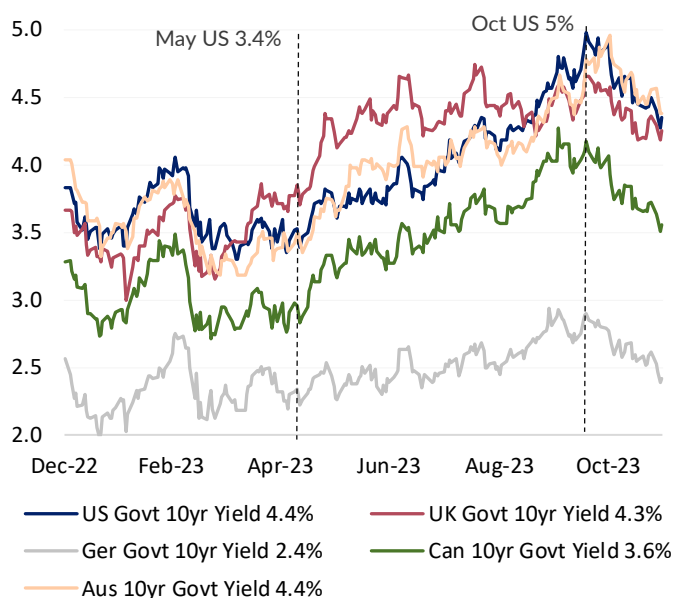
The rise in the US 10yr yield from May to Oct was driven by a rise in real yields. The decline since has been a split between declining real yields and breakevens

10yr Bond Yield Decomp
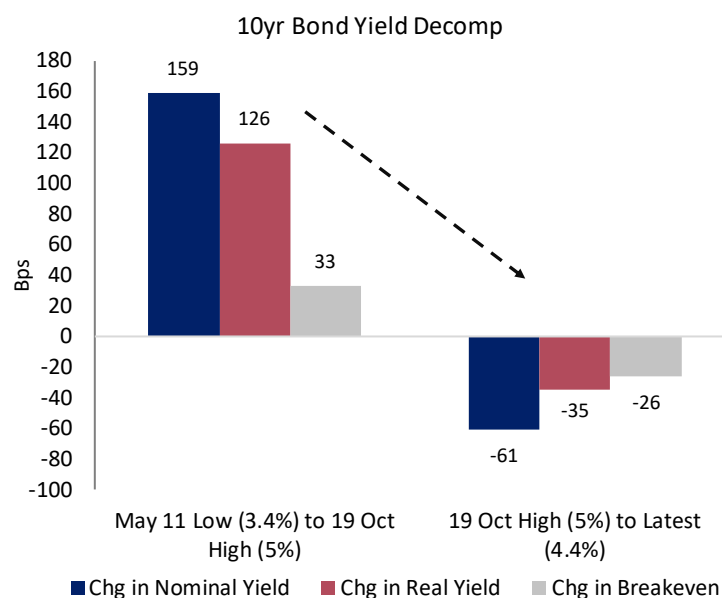
10-2 year yield curves have steepened from the lows in June but remain inverted (negative) in the US, UK and Germany
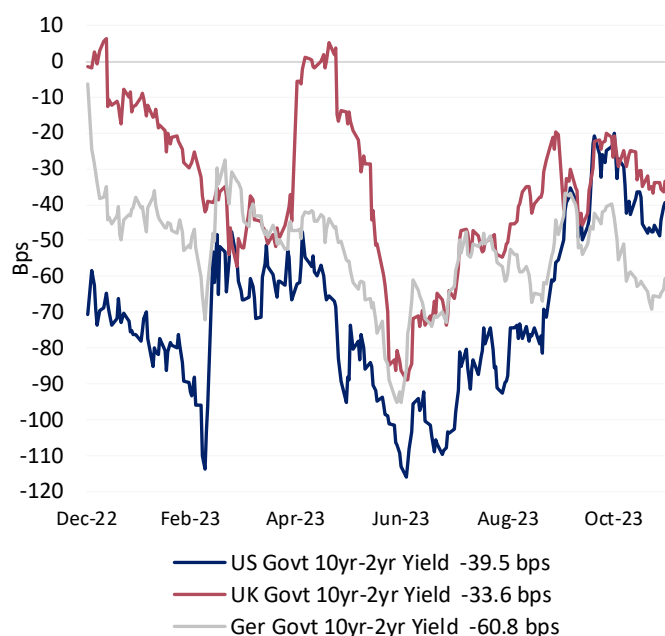
US high yield corporate spreads have seen the largest decline (narrowing) against the US 10-year yield YTD. Only UK bonds have seen an increase (widening) YTD

YTD Shift in Spreads Over US 10-Year Bond (Bps)			
	Latest (Bps)	31 Dec 22 (Bps)	YTD Shift (Bps)
UK 10-Year - US 10-Year	-9.8	-16.3	6.5
Japan 10-Year - US 10-Year	-367.6	-342.0	-25.6
US Investment Grade Corp - US 10-Year	135.0	168.0	-33.0
German 10-Year - US 10-Year	-194.1	-126.9	-67.2
US High Yield Corp - US 10-Year	421.0	514.0	-93.0

FX return perspectives: Dollar (DXY) continues to decline from the early October high on declining US interest rate expectations

Chart 1: The DXY dollar has declined around 4% from its recent high on the 3rd October

DXY Returns (%)		
1M	3M	YTD
-3.0	-0.1	-0.0

DXY Dollar Index (Rebased)
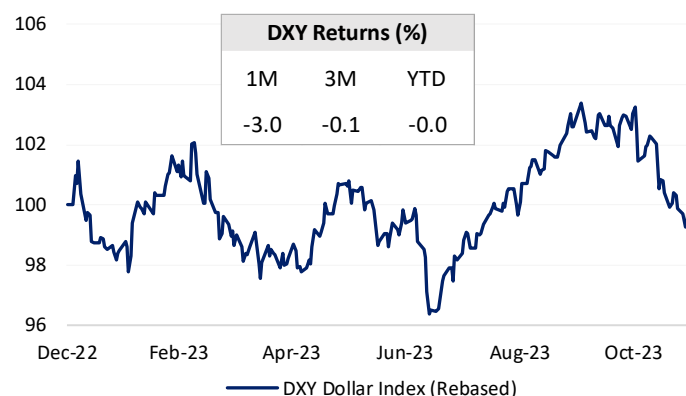
Chart 2: Although below its peak, the DXY dollar has still seen a 44.4% rise from the March 2008 lows

DXY Returns (%)		
3YR	5YR	From Mar 08
12.7	6.4	44.4

DXY Dollar Index
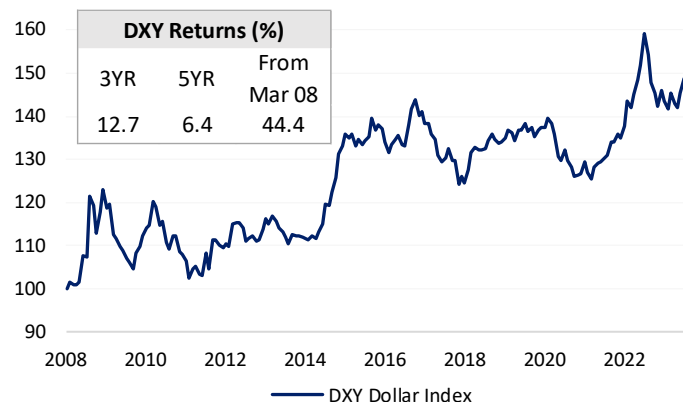
Chart 3: Regional trade-weighted FX returns-YTD (rebased)

USD (DXY) -0.0%   GBP 5.6%   EUR 3.9%
JPY -9.6%   CNY -1.6%
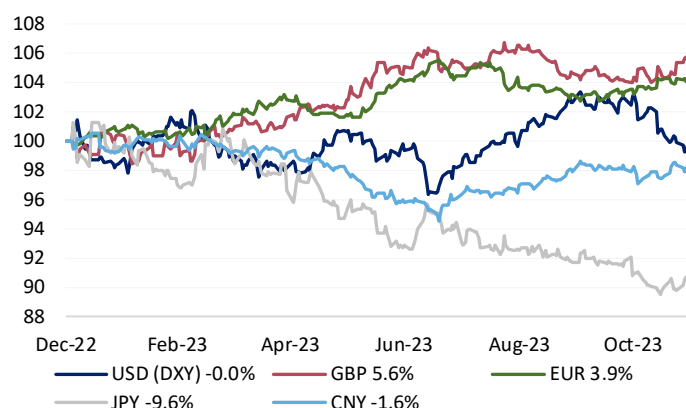
Chart 4: Regional trade-weighted FX returns over 5 years (rebased)

USD (DXY) 6.9%   GBP 7.9%   EUR 7.1%
JPY -20.3%   CNY 8.1%
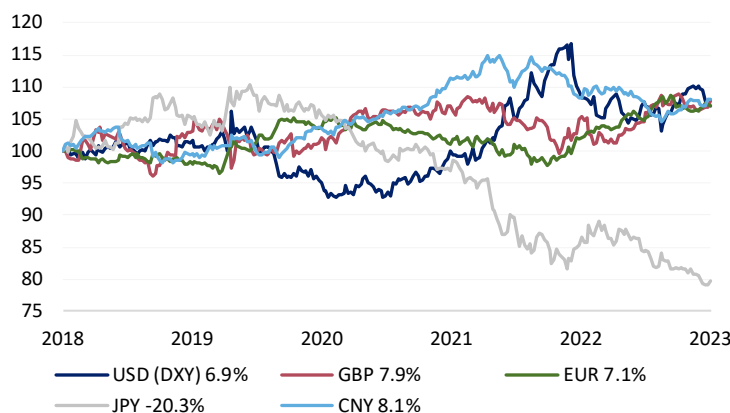
Chart 5: USD returns vs JPY, Euro, GBP and Renminbi spot rate-YTD (rebased)

USD/GBP -4.2%   USD/EUR -1.7%
USD/JPY 13.0%   USD/CNY 3.4%
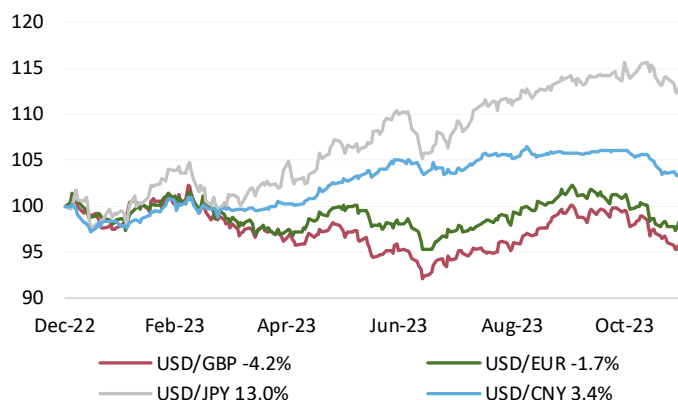
Chart 6: USD returns vs JPY, Euro, GBP and Renminbi spot rate returns over 5 years (rebased)

USD/GBP 1.4%   USD/EUR 4.6%
USD/JPY 30.6%   USD/CNY 2.8%

Source: Refinitiv. Data as of November 30, 2023
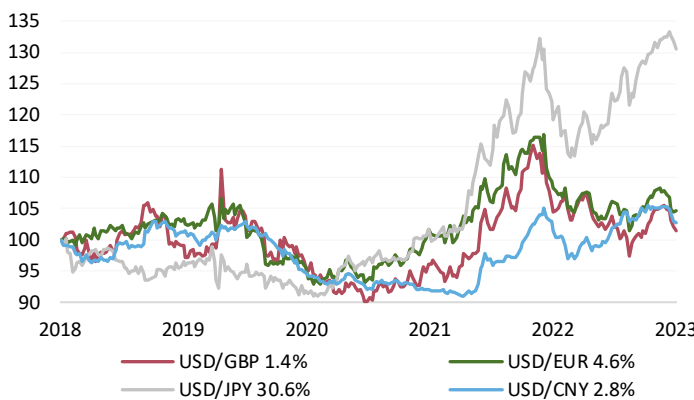
FX spot rate returns from a regional perspective

The dollar lost ground against all major currencies in November, most notably the Australian dollar, sterling and the Euro. The DXY dollar index declined −3.0% over the month falling further in late November on perceived dovish comments from Federal Reserve officials.

Moves vs USD (TR, %)	1M	3M	YTD
AUD	4.2	1.9	-3.1
CHF	4.0	0.9	5.6
GBP	3.9	-0.5	4.3
EUR	2.9	0.4	1.7
CAD	2.3	-0.4	-0.1
JPY	1.6	-0.6	-9.8
CNY	1.1	1.1	-1.9

Moves vs GBP (TR, %)	1M	3M	YTD
AUD	0.4	2.5	-7.1
CHF	0.3	1.7	1.1
EUR	-1.1	0.6	-2.9
CAD	-1.5	0.0	-4.2
JPY	-2.7	-0.6	-14.4
CNY	-2.9	2.2	-7.0
USD	-3.9	0.5	-4.3

Moves vs EUR (TR, %)	1M	3M	YTD
AUD	1.5	1.8	-4.4
CHF	1.4	1.0	4.1
GBP	1.1	-0.6	3.0
CAD	-0.6	-0.8	-1.8
CNY	-0.6	1.1	-5.4
JPY	-1.6	-1.6	-12.7
USD	-2.9	-0.4	-1.7

Moves vs JPY (TR, %)	1M	3M	YTD
GBP	2.7	0.6	14.4
AUD	2.4	2.8	8.8
CHF	1.7	1.3	17.3
EUR	1.6	1.6	12.7
CNY	0.2	3.6	9.3
CAD	0.0	1.4	13.0
USD	-1.6	0.6	9.8

Moves vs CNY (TR, %)	1M	3M	YTD
GBP	3.0	-2.1	7.6
AUD	2.2	0.8	1.2
CHF	1.7	-0.3	9.8
EUR	0.6	-1.1	5.7
CAD	0.2	2.1	-3.3
JPY	-0.2	-3.6	-9.3
USD	-1.1	-1.1	1.9

Moves vs CHF (TR, %)	1M	3M	YTD
GBP	-0.3	-1.7	-1.1
EUR	-1.4	-1.0	-4.1
CAD	-1.6	-1.3	-5.4
JPY	-1.7	-1.3	-17.3
CNY	-1.7	0.3	-9.8
USD	-4.0	-0.9	-5.6

Moves vs AUD (TR, %)	1M	3M	YTD
GBP	-0.4	-2.5	7.1
EUR	-1.5	-1.8	4.4
CAD	-1.8	-2.2	3.1
CNY	-2.2	-0.8	-1.2
JPY	-2.4	-2.8	-8.8
USD	-4.2	-1.9	3.1

Trade Weighted (TR, %)	1M	3M	YTD
AUD	1.8	1.4	-0.9
GBP	1.2	-1.1	5.3
EUR	0.8	0.4	2.0
CNY	-0.1	1.6	-1.9
JPY	-0.7	-2.8	-10.1
DXY	-3.0	-0.1	0.0

Source: Refinitiv. Data as of November 30, 2023

Alternatives: Commodity, digital asset, REITS and absolute return asset categories

(1)	(2)	(3)	(4)
+2.1%	**-7.8%**	**+10.6%**	**+108.8%**
Rise in gold price in November	Decline in oil price (Brent Crude) in November	Return of the Wilshire US REITs in November	Rise in the FT Wilshire Digital assets index in YTD

Commodity prices YTD (rebased): While oil has declined from its September peak, gold is just 0.9% below its all-time high reached in March 2022. Agricultural commodities have declined −15% in 2023.

— Gold (USD) 12.2%   — Brent Crude Oil (USD) -5.0%
— Copper (USD) 0.3%   — Agricultural Commodities (Composite, USD) -15.0%

Source: Wilshire Indexes and Refinitiv. Data as of November 30, 2023

Wilshire Indexes - Performance Report (November 2023)

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Wilshire
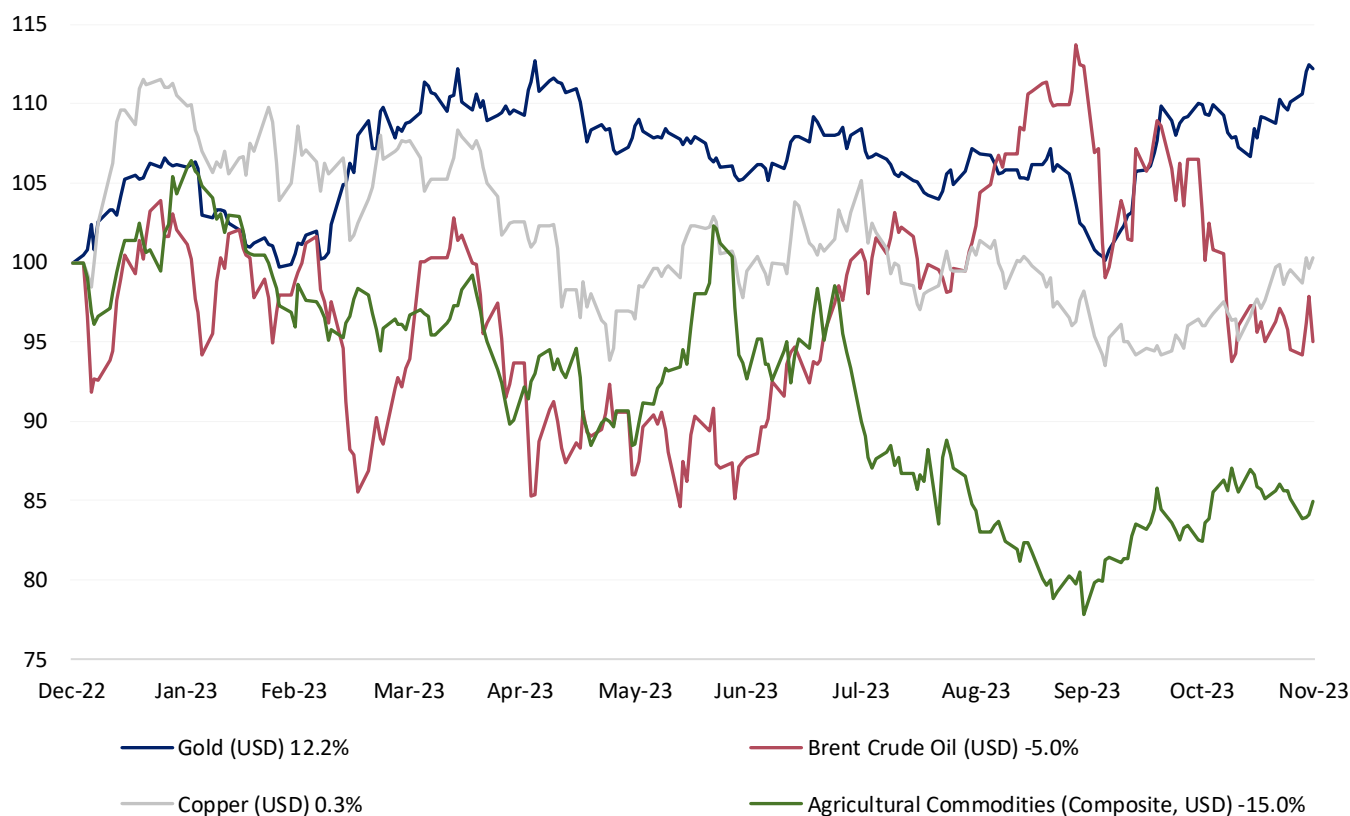
Commodities: Weaker dollar, declining US real yields and central bank purchases help send gold back towards all-time high. Oil continues to retreat

After initially spiking higher following the heightened tensions between Israel and Hamas, the gold price has remained supported by a weaker dollar, the recent decline in real yields and strong demand from central bank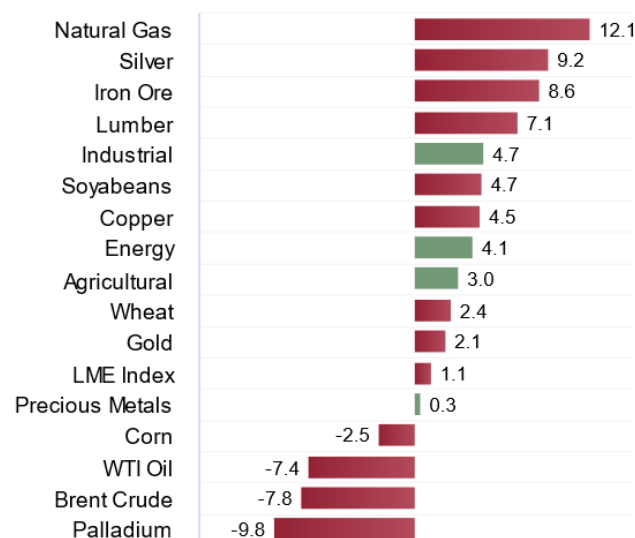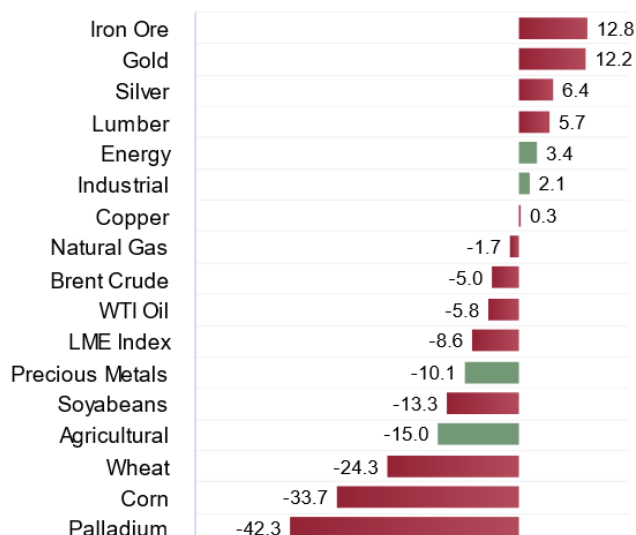s. Gold is just 0.9% below its all-time high. Oil has fallen further on a surprise delay to a key OPEC meeting in November. Brent is down around −16.5% from the September highs.
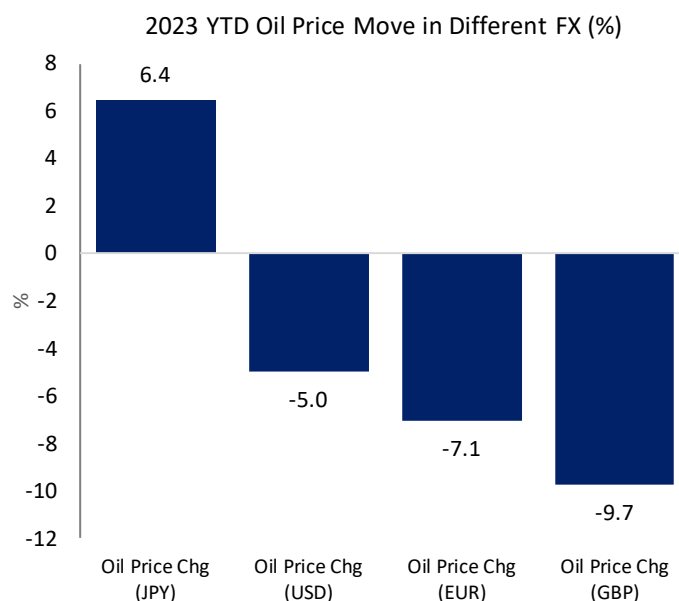
1M USD (TR, %)

Commodity	Value
Natural Gas	12.1
Silver	9.2
Iron Ore	8.6
Lumber	7.1
Industrial	4.7
Soyabeans	4.7
Copper	4.5
Energy	4.1
Agricultural	3.0
Wheat	2.4
Gold	2.1
LME Index	1.1
Precious Metals	0.3
Corn	-2.5
WTI Oil	-7.4
Brent Crude	-7.8
Palladium	-9.8

YTD USD (TR, %)

Commodity	Value
Iron Ore	12.8
Gold	12.2
Silver	6.4
Lumber	5.7
Energy	3.4
Industrial	2.1
Copper	0.3
Natural Gas	-1.7
Brent Crude	-5.0
WTI Oil	-5.8
LME Index	-8.6
Precious Metals	-10.1
Soyabeans	-13.3
Agricultural	-15.0
Wheat	-24.3
Corn	-33.7
Palladium	-42.3

The recent rise in gold means the price is just 0.9% below the all-time high of $2056 reached in March 2022

Gold Price $2037.8 — Mar 22 all-time high
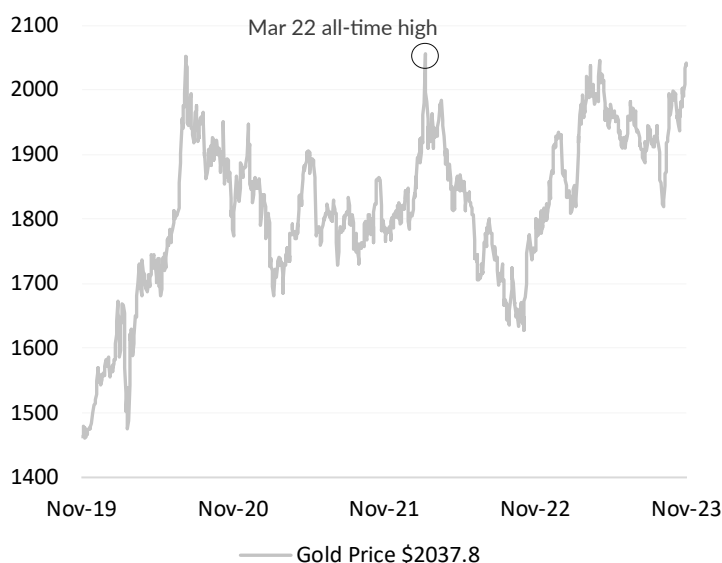
YTD Oil price move adjusted for different FX impact −over a 16% difference between 2023 oil price move in JPY and GBP

2023 YTD Oil Price Move in Different FX (%)

	Value
Oil Price Chg (JPY)	6.4
Oil Price Chg (USD)	-5.0
Oil Price Chg (EUR)	-7.1
Oil Price Chg (GBP)	-9.7

Source: Wilshire Indexes, FactSet, Refinitiv. Data as of November 30, 2023

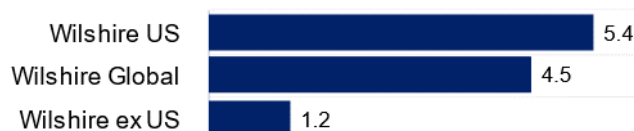**Wilshire Indexes** - Performance Report (November 2023) 38

Property (Wilshire REIT indexes): Decline in bond yields drives strong rebound in REITS in November

Both US and non-US REITs saw a strong rebound in November supported by declining bond yields. Within the US, self-storage, office and industrials sectors saw double-digit returns with apartments underperforming. The US office sector has still significantly underperformed YTD.
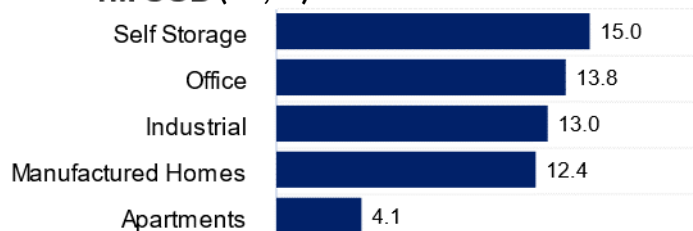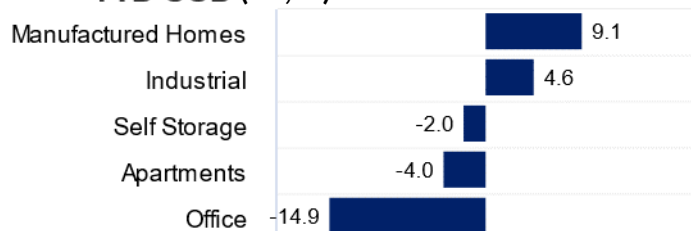
1M USD (TR, %)

Wilshire ex US	12.1
Wilshire Global	10.9
Wilshire US	10.6

YTD USD (TR, %)

Wilshire US	5.4
Wilshire Global	4.5
Wilshire ex US	1.2

1M USD (TR, %)

Self Storage	15.0
Office	13.8
Industrial	13.0
Manufactured Homes	12.4
Apartments	4.1

YTD USD (TR, %)

Manufactured Homes	9.1
Industrial	4.6
Self Storage	-2.0
Apartments	-4.0
Office	-14.9

Wilshire US REIT vs Global ex US REIT - 12M (Rebased, TR)

— Wilshire US REIT — Wishire Global ex US REIT

Wilshire US REIT sector performance - 12M (Rebased, TR)

— Industrial — Office — Retail
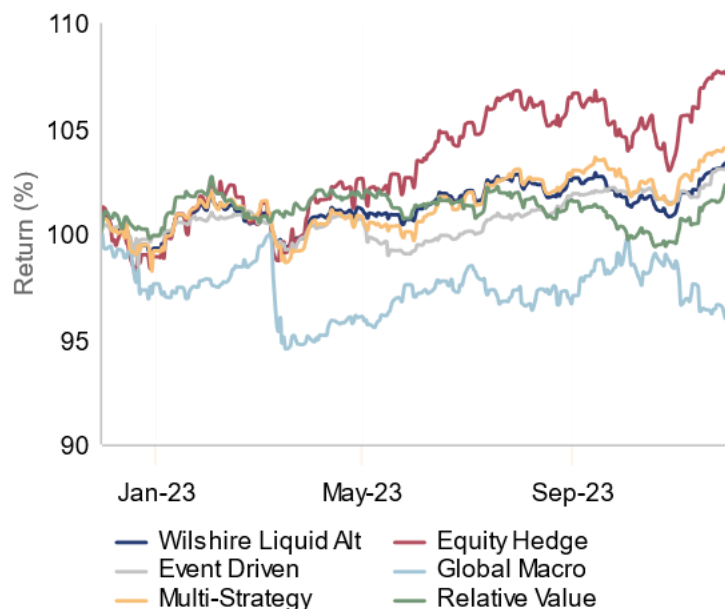— Manu Homes — Apartments
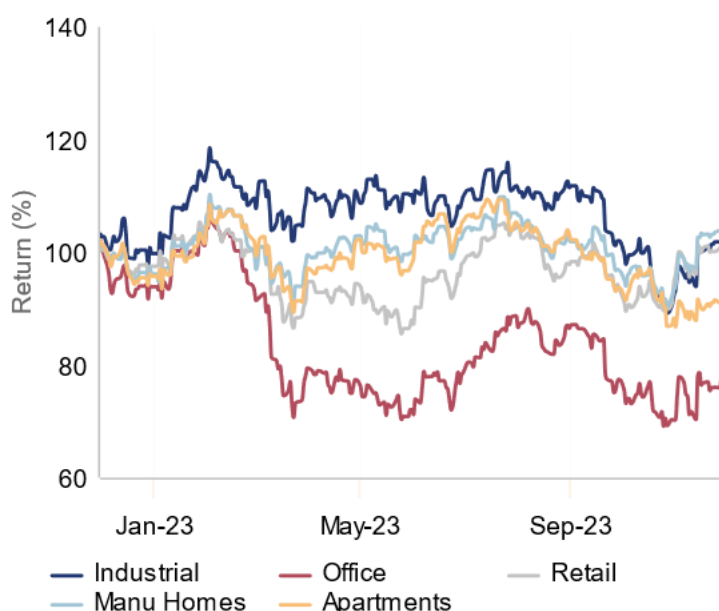
Wilshire Liquid Alternative Indexes (Absolute Return): Small gains in November as Equity Hedge continues to outperform

Wilshire Liquid Alternative indexes posted small gains in November relative to more substantial gains in equity markets. Equity Hedge outperformed in November with Global Macro seeing negative returns. Equity Hedge remains the standout performer YTD.

1M USD (TR, %)

Liquid Alt Equity Hedge	3.8
Liquid Alt Relative Value	2.6
Liquid Multi-strategy	2.4
Liquid Alt	2.3
Liquid Event Driven	1.5
Liquid Alt Global Macro	-2.7

YTD USD (TR, %)

Liquid Alt Equity Hedge	9.0
Liquid Multi-strategy	5.0
Liquid Alt	4.1
Liquid Event Driven	3.2
Liquid Alt Relative Value	2.2
Liquid Alt Global Macro	-1.6
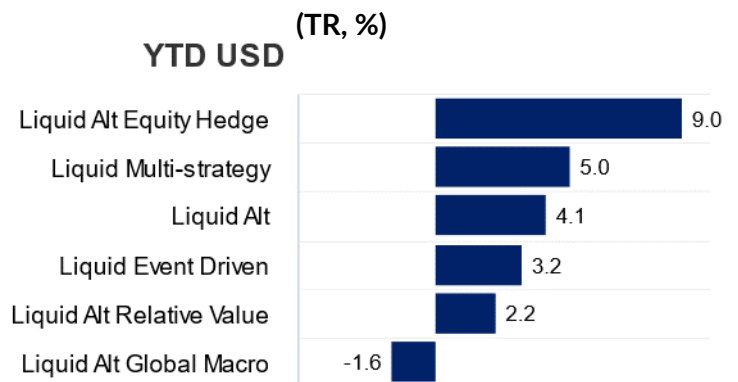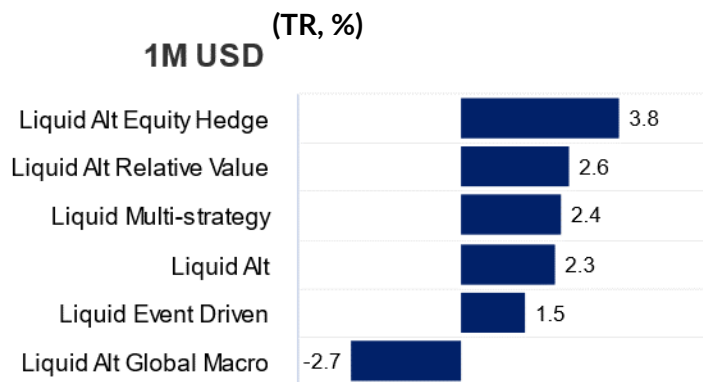
Wilshire Liquid Alternative Index performance - total returns (rebased)

Wilshire Liquid Alternative Index relative performance vs FT Wilshire 5000 Index - total returns (rebased)
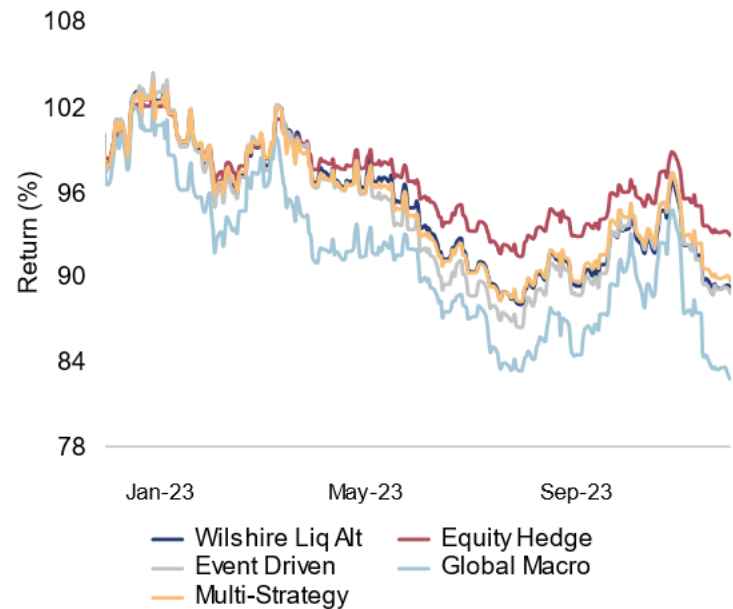
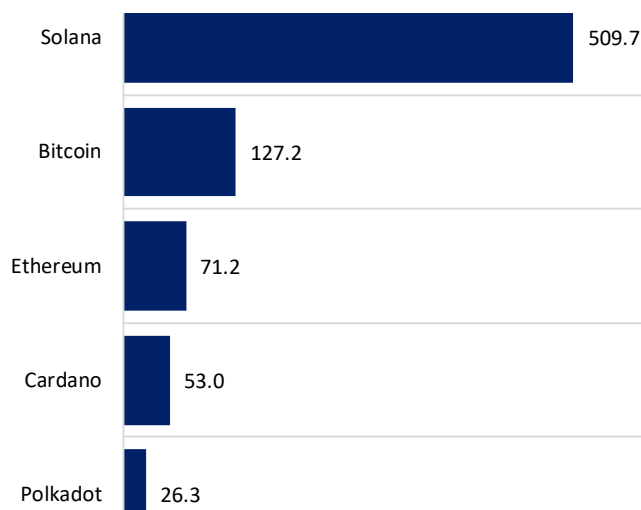# Digital Assets Index: Strong returns continue in November

The FT Wilshire Digital Assets Index saw further gains, rising 11.2% in November and delivering a YTD return of 108.8%. Despite the recovery the 2 year return is still −43.3%.

Returns (USD, TR, %)

1M	YTD	1Y	2Y
11.2	108.8	95.2	-43.3

— FT Wilshire Digital Assets Index

FT Wilshire Digital Assets Index selected constituent performance - 1M (%, USD)

Solana	55.9
Cardano	28.1
Polkadot	22.7
Ethereum	13.1
Bitcoin	8.8
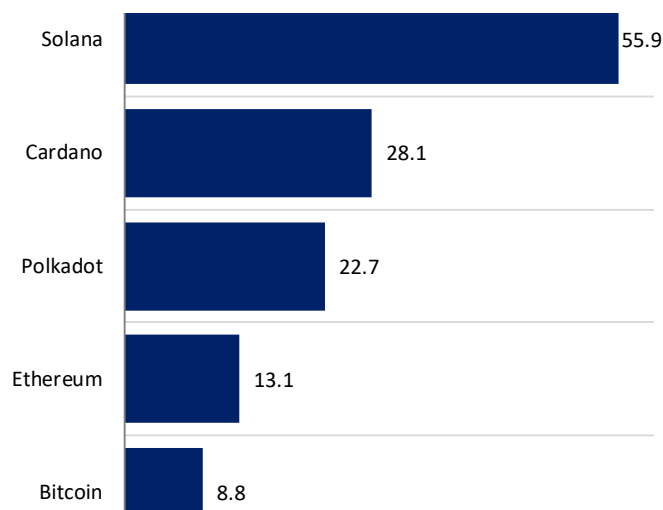
FT Wilshire Digital Assets Index selected constituent performance - YTD 2023 (%, USD)

Solana	509.7
Bitcoin	127.2
Ethereum	71.2
Cardano	53.0
Polkadot	26.3

Source: Wilshire Indexes, FactSet, CryptoCompare. Data as of November 30, 2023

Wilshire

Multi Asset Class: Risk vs Return

Risk vs Return over 1 Year

Risk vs Return-1 Year
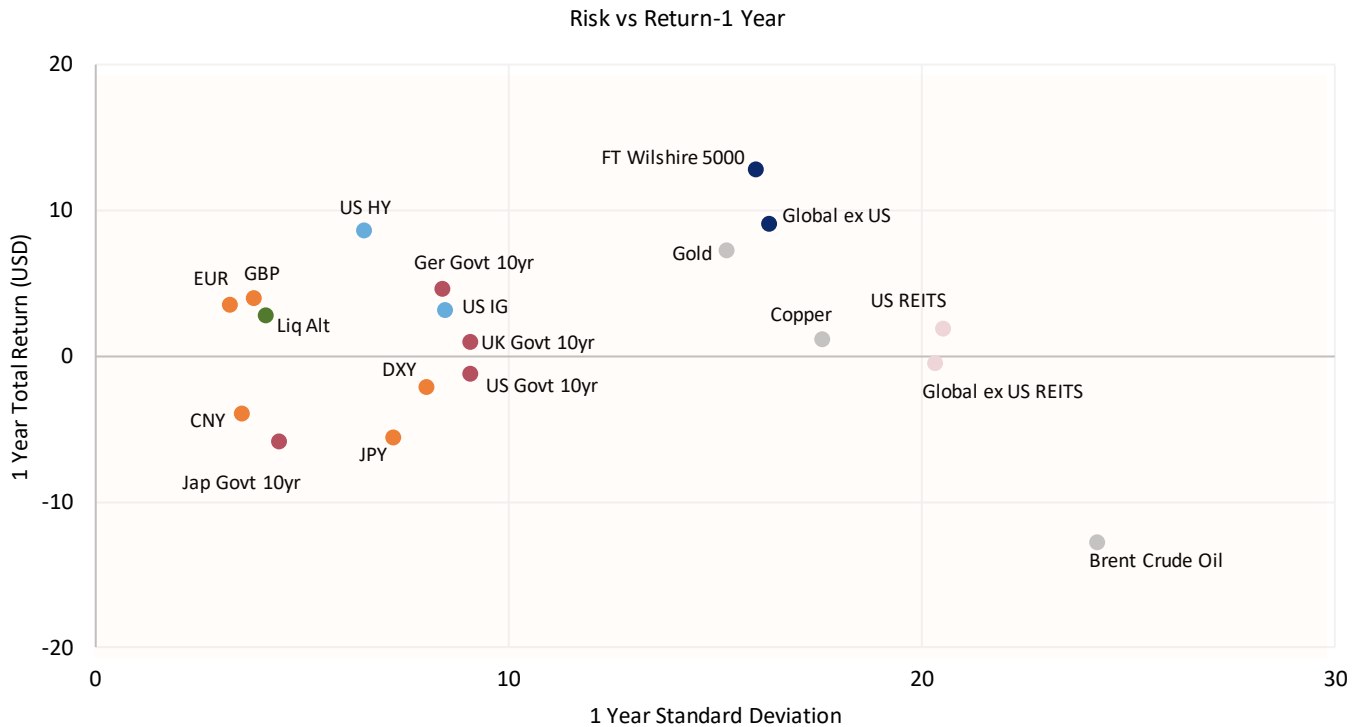
Risk vs Return over 10 Years
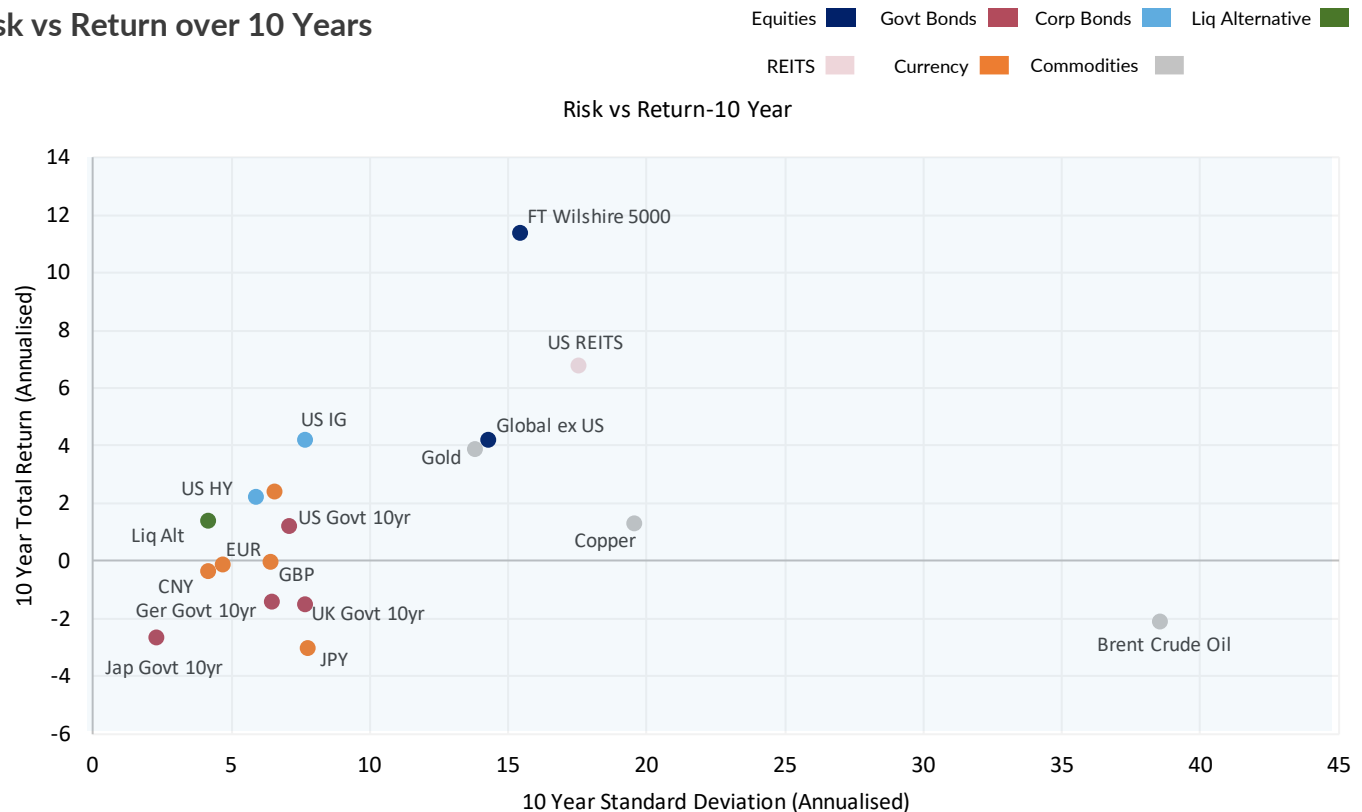
Risk vs Return-10 Year

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