

October 31, 2023

GLOBAL MARKETS PERFORMANCE REPORT

FT Wilshire 5000 - Sector, Style, Factors

FT Wilshire Global Equity Markets and Sectors

Fixed Income and FX

Alternatives



IN THIS REPORT

FT Wilshire Indexes Insights

- FT Wilshire 5000 has declined -9.1% from the July 31st recent peak on higher for longer concerns and heightening geopolitical tensions
- Significant underperformance of the FT Wilshire US Small Caps in recent months
- October sees lowest monthly contribution from 'Magnificent 7' in 2023.

-2.7%

October 2023 FT
Wilshire 5000
return (TR)

-9.1%

FT Wilshire 5000
3 month return
(TR)

See [PAGE 4](#)

Global Equities

- Risk aversion has led to significant declines across all major regions in October
- Europe ex UK and China continue to lose further ground on a relative basis
- Smaller negative drag from resources and industrials help drive US outperformance vs Global ex US over 3 months

-12.1%

3 month return of
Europe ex UK
equities (USD,TR)

+6.3%

Return of the Global
Equity Index YTD
(USD, TR)

See [PAGE 16](#)

Fixed Income, Foreign Exchange

- The US 10-year bond yield briefly hits 5% for the first time since 2007 on higher for longer concerns
- The 91 bps rise in the US 10-year yield over 3 months has been driven by a 86 bps rise in real yields
- The dollar gained further ground, rising 5.6% over three months against JPY

+91bps

3 month rise in US
10-year bond yield

+4.7%

3 month rise in the
DXY dollar index

See [PAGE 28](#)

Alternatives

- Gold and oil spike higher in October on geopolitical concerns
- US REITs have declined -13.3% over 3 months with the office sector falling -20.7%
- The Wilshire Liquid Alternative Global Macro index saw positive returns rising 1.4% over 3 months

+7.5%

Rise in gold price in
October

87.9%

FT Wilshire Digital
Assets Index return
YTD

See [PAGE 33](#)

Multi-Asset Class returns: Risk aversion comes to the fore as rising bond yields and geopolitical concerns drive declines across global equity markets

Chart 1: Concerns over higher for longer US interest rates and geopolitical concerns saw markets retreat further in October. Gold spiked higher as investors sought safe haven assets.

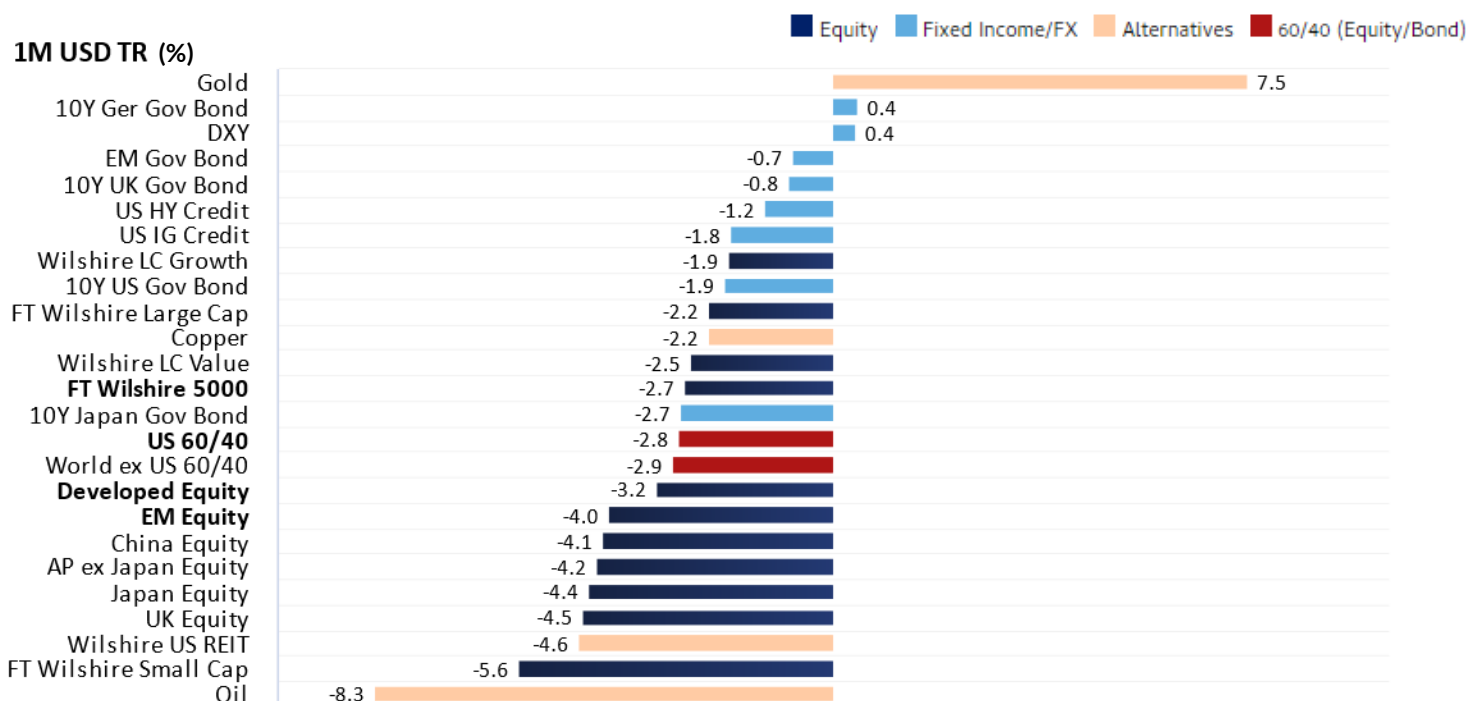
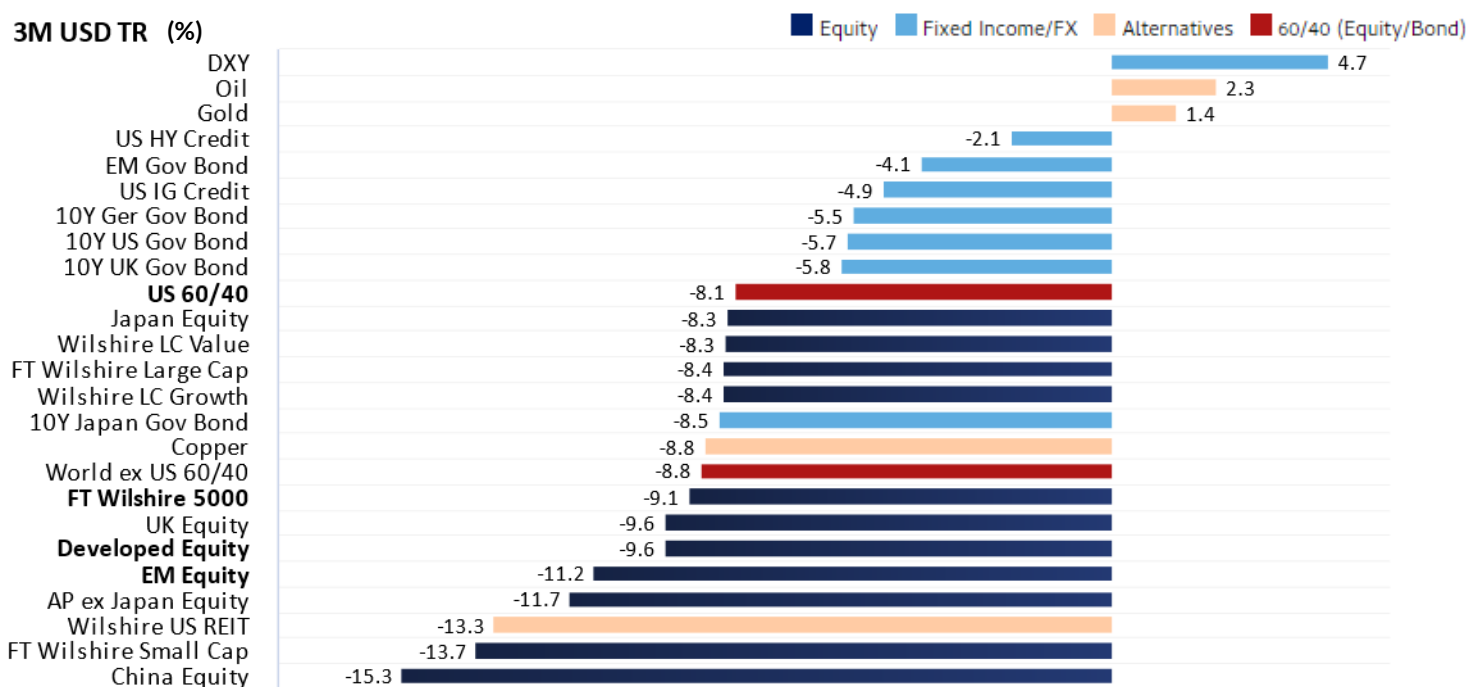


Chart 2: Oil saw further gains, initially spiking higher on geopolitical concerns. Rising bond yields have continued unnerved equity markets, leading to negative US 60/40 returns.



Source: Wilshire Indexes, FactSet and Refinitiv. Data as of October 31, 2023

FT Wilshire 5000 Index Insights

1

-2.7%

October 2023 return of the FT Wilshire 5000

2

-9.1%

3 month return of the FT Wilshire 5000

3

+25.8%

Outperformance of Growth style versus Value YTD

4

+36.3%

Performance of the Technology sector YTD

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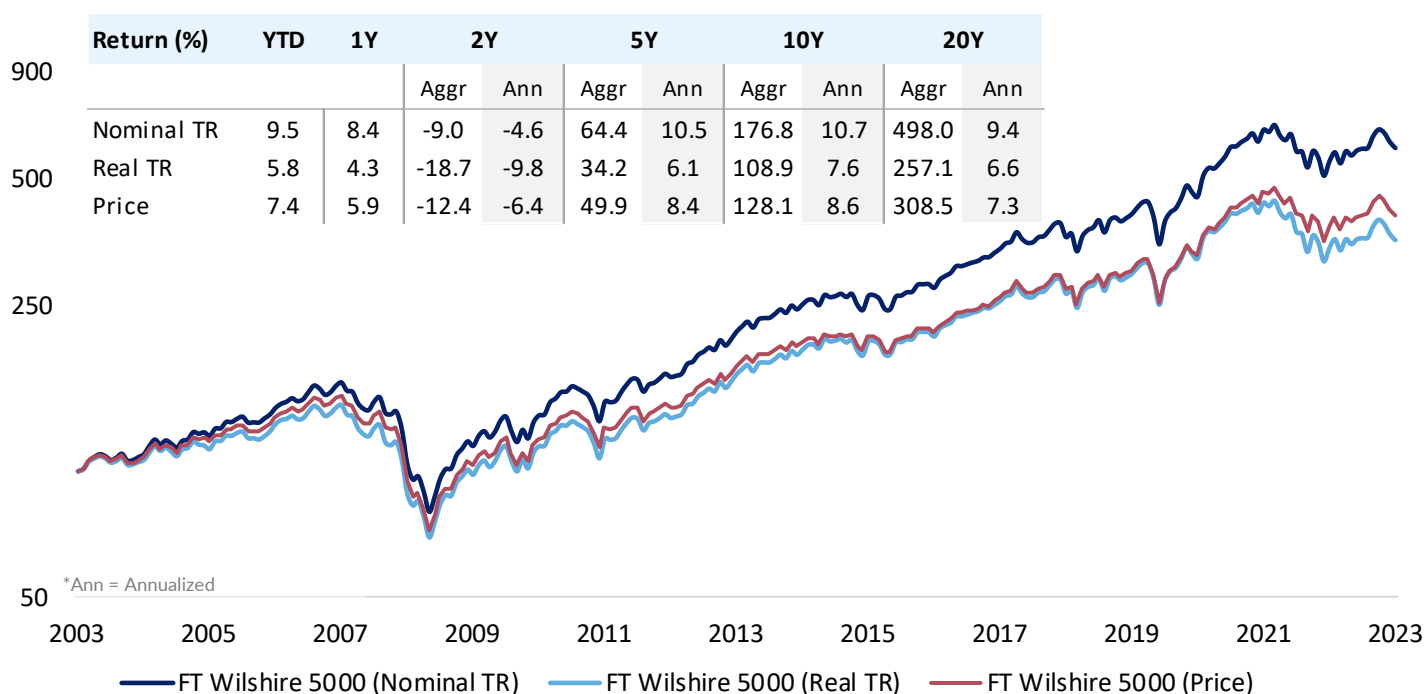
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Chart 1: FT Wilshire 5000-real and nominal total returns and capital return over 20 years



Source: Wilshire Indexes, FactSet. Data as of October 31, 2023

Wilshire Indexes - Performance Report (October 2023)

FT Wilshire 5000 Key Observations: US market sees largest drawdown of 2023 on higher for longer concerns and heightening geopolitical tensions

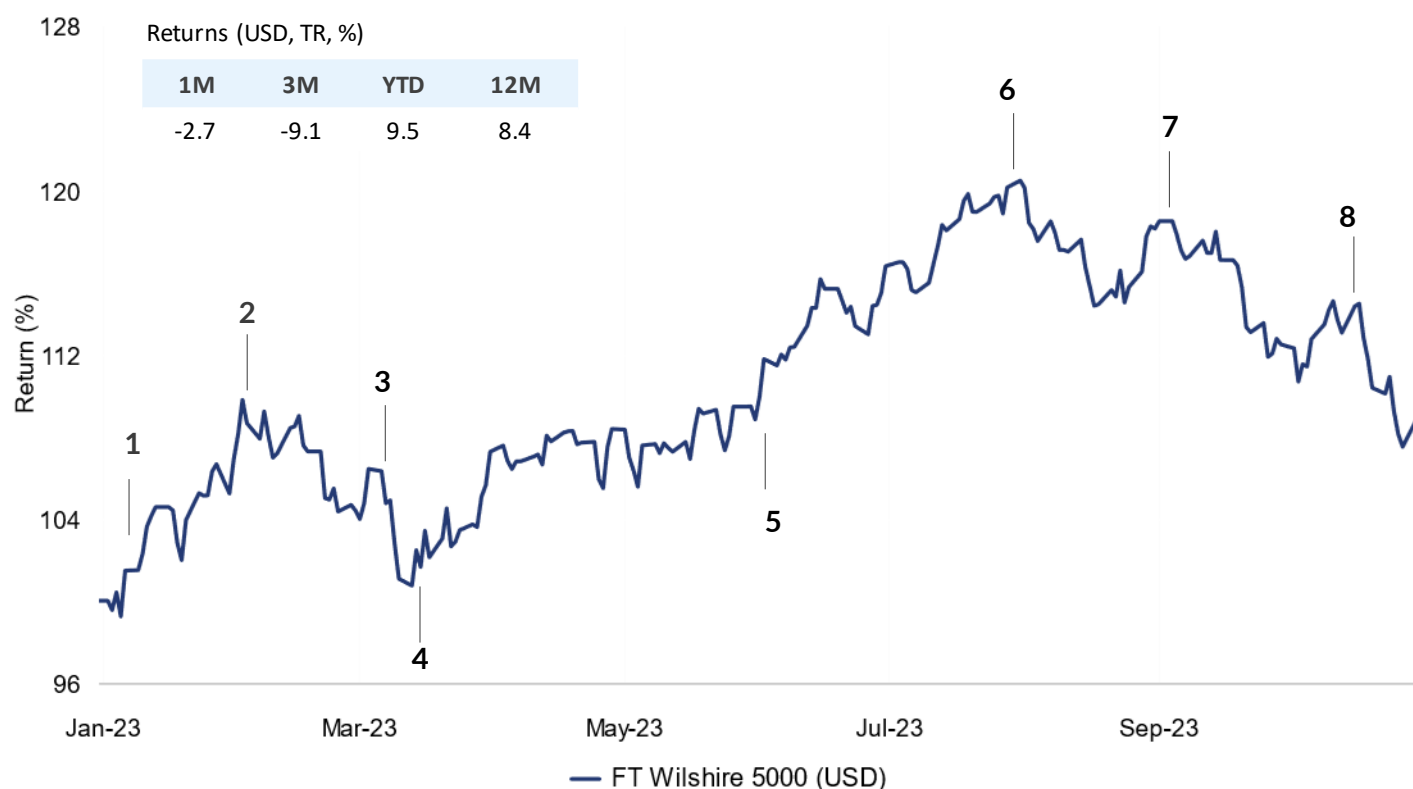
3 Month Market Snapshot

- ◆ The FT Wilshire 5000 has witnessed the largest drawdown of 2023 after declining -9.1% from the 31 July high ([page 4](#))
- ◆ FT Wilshire US Small Cap has lagged hit by large declines in health care, industrials and resources. Value has matched growth returns ([page 9](#))
- ◆ Technology has continued to lose momentum on rising bond yields. The sector has been the biggest drag on 3 month returns for the FT Wilshire 5000 index ([page 8](#))
- ◆ Within the Pure factor space risk aversion sees (low) Beta outperform over three months. Momentum and Quality outperform YTD ([page 12](#))
- ◆ The contribution to returns from the 'Magnificent 7' stocks has fallen significantly from the highs in May ([page 14](#))

Chronology of Key Market Events in 2023

1. January-Risk appetite buoyed by 'Goldilocks'- hopes of soft landing
2. Early Feb-Strong US economic data sees spike in interest rate expectations - markets retreat
3. 10 March-Silicon Valley Bank (SVB) collapses, markets slash US interest rate expectations
4. March-April-AI theme turbo charges US market as 'Magnificent 7' stocks drive returns
5. Early June-Markets buoyed by the debt ceiling resolution, US disinflation and strong tech sector earnings
6. FT Wilshire 5000 peaks on 31 July, risk appetite wanes on rising bond yields
7. September-Markets reassess trajectory of US 2024 interest rates
8. October-Rising bond yields and geopolitical concerns rattle US markets. US 10yr yield briefly hits 5%

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

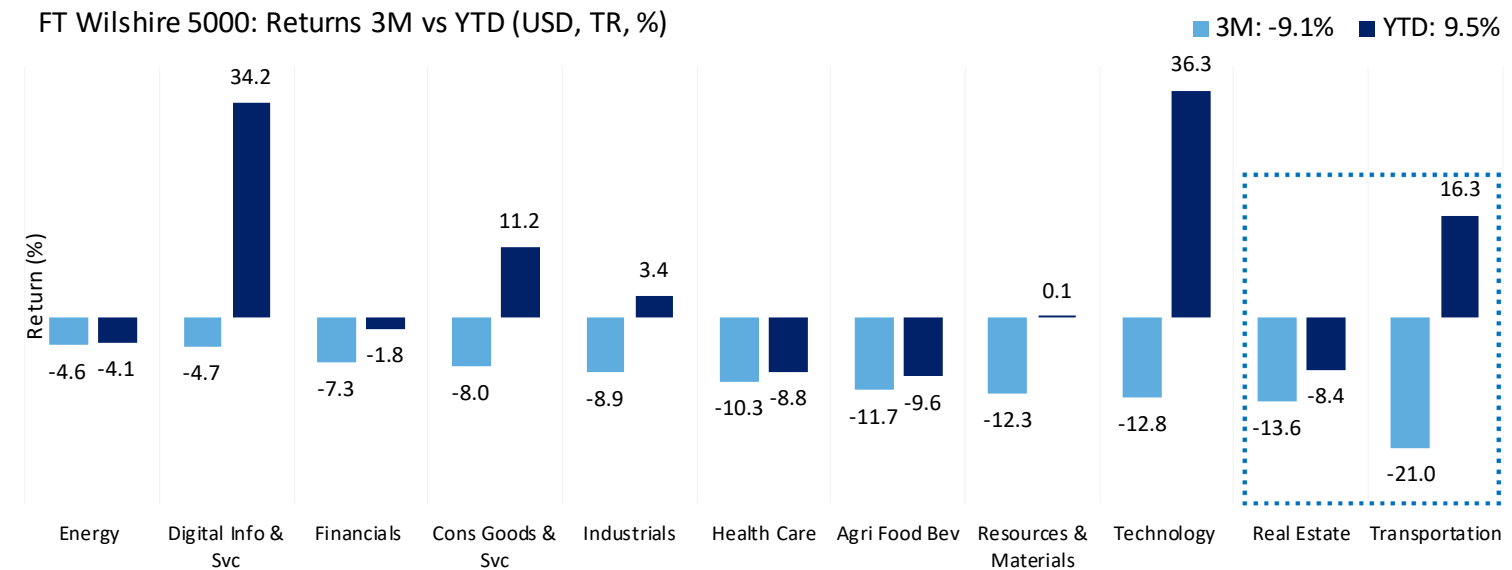


Source: Wilshire Indexes, FactSet and Refinitiv. Data as of October 31, 2023

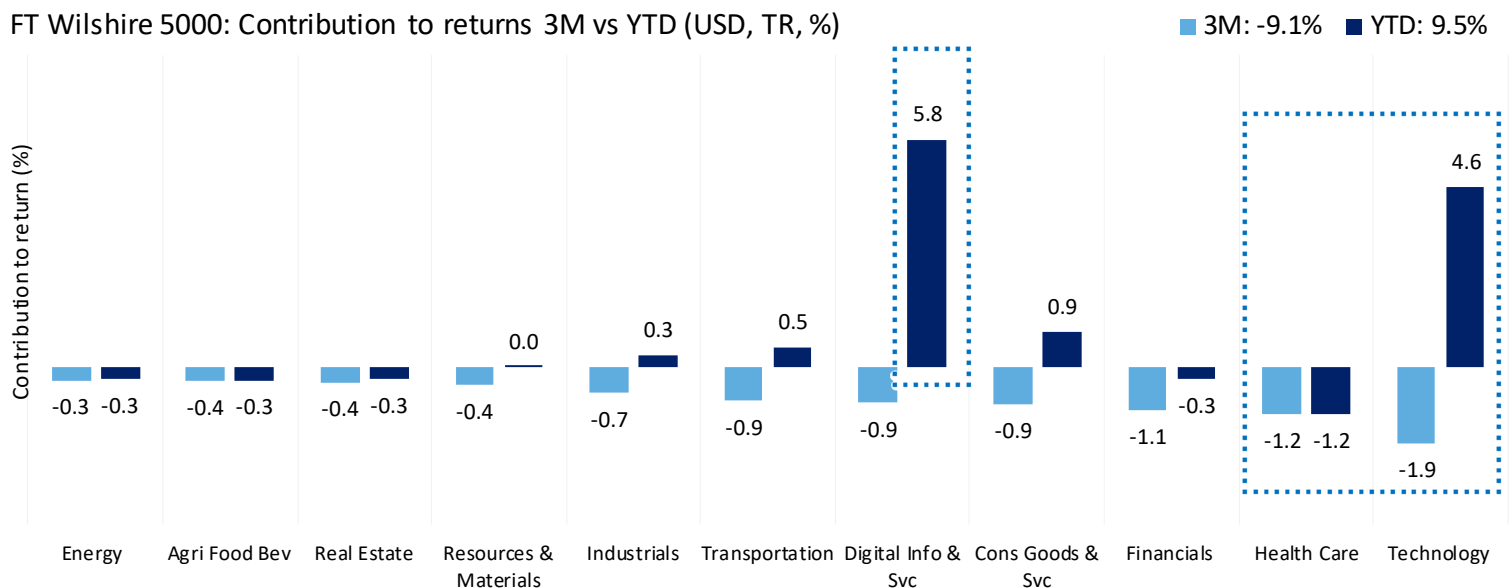
Wilshire Indexes - Performance Report (October 2023)

Sector performance and contributions: Technology the largest negative contributor over 3 months but remains a key driver of returns so far in 2023

Sector returns Energy and digital info outperformed over 3 months amongst negative returns across all sectors. Transportation and real estate have underperformed and seen significant declines.



Sector weighted contributions blend sector performance with sector weighting to establish aggregate return drivers. Despite not being the weakest performers health care and technology were the largest negative contributors to 3 month returns. Technology and Digital Info remain the dominant contributors to YTD returns



Sector returns and weights across the FT Wilshire indexes: Small cap sees significant declines in health care, technology and transportation sectors

3M sector returns and average weights across the FT Wilshire indexes: Small cap saw substantial double-digit declines in health care, technology and transportation sectors, underperforming large cap equivalents.

3M	FTW 5000		Large Cap		Small Cap		Micro Cap		Growth		Value	
	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts
Energy	-4.6	7.0	-4.8	6.7	-3.1	8.9	-7.5	6.8	0.0	1.0	-5.0	12.8
Digital Info & Svc	-4.7	19.2	-4.1	20.4	-11.8	10.9	-20.4	7.4	-4.0	32.2	-4.6	8.0
Financials	-7.3	14.9	-6.7	14.7	-10.4	15.2	-15.7	20.6	-7.2	8.0	-6.7	21.9
Cons Goods & Svc	-8.0	11.6	-6.8	11.5	-15.0	12.7	-16.1	10.0	-5.3	12.2	-8.8	10.8
Industrials	-8.9	7.4	-8.3	6.7	-11.2	12.8	-11.2	12.1	-9.7	3.9	-7.8	9.6
Health Care	-10.4	11.5	-8.4	11.4	-21.9	10.2	-25.9	22.1	-9.3	11.3	-7.3	11.5
Agri Food Bev	-11.7	3.1	-11.8	3.2	-11.2	2.3	-9.9	1.5	-13.6	0.5	-11.6	6.0
Resources & Materials	-12.3	3.6	-11.4	2.9	-14.4	8.8	-13.2	6.3	-7.4	1.6	-13.0	4.2
Technology	-12.8	14.9	-12.4	16.2	-19.5	6.3	-28.4	5.2	-13.0	22.6	-11.0	9.5
Real Estate	-13.6	2.8	-12.9	2.2	-15.0	7.2	-17.8	4.7	-11.2	2.4	-14.9	2.1
Transportation	-21.0	4.1	-20.7	4.0	-22.4	4.7	-20.7	3.4	-23.1	4.3	-17.6	3.7
Index Return (TR)	-9.1		-8.4		-13.7		-18.1		-8.4		-8.3	

YTD 2023 Sector returns and average weights across the FT Wilshire indexes: Despite declines over the last 3 months technology and digital info (the largest sectors in large cap and growth) remain the standout performers delivering strong double-digits returns in 2023 so far.

YTD	FTW 5000		Large Cap		Small Cap		Micro Cap		Growth		Value	
	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts
Technology	36.3	14.3	38.6	15.5	2.5	6.2	-14.9	5.1	48.2	21.3	20.4	9.5
Digital Info & Svc	34.2	18.3	36.7	19.6	-1.1	10.6	-12.8	7.2	41.5	31.0	18.1	8.0
Transportation	16.3	4.0	19.5	3.9	0.2	4.5	-8.3	3.5	58.1	3.9	-4.0	3.9
Cons Goods & Svc	11.2	11.6	12.9	11.5	-2.4	12.9	1.5	10.0	24.2	12.5	-1.3	10.8
Industrials	3.4	7.4	2.7	6.7	3.7	12.5	6.4	11.2	9.7	4.0	0.0	9.0
Resources & Materials	0.1	3.6	-1.3	2.9	2.3	8.9	-4.1	6.3	0.2	1.7	-1.6	4.2
Financials	-1.8	15.3	-1.2	15.2	-5.9	15.1	-16.4	20.6	0.3	8.9	-2.2	21.7
Energy	-4.1	7.3	-5.0	7.1	-1.5	8.8	-2.4	6.4	1.1	1.3	-5.4	13.0
Real Estate	-8.4	3.0	-9.1	2.4	-9.0	7.5	-14.1	4.8	-9.0	2.7	-9.3	2.1
Health Care	-8.8	11.9	-7.7	11.9	-15.8	10.5	-21.8	23.5	-3.6	11.9	-11.2	11.6
Agri Food Bev	-9.6	3.3	-10.4	3.4	-0.1	2.3	-3.9	1.4	-2.9	0.7	-11.2	6.2
Index Return (TR)	9.5		11.3		-0.7		-11.3		25.0		-0.8	

Sector-weighted contributions across the FT Wilshire indexes: large negative contributions from industrials, resources and health care hit small caps

3M sector-weighted performance contributions-blending sector performance with sector weighting to establish aggregate return drivers; Larger negative contributions from resources and materials, industrials and health care drove the significant underperformance of small cap relative to large cap over the last 3 months.

3M	FTW 5000	Large Cap	Small Cap	Micro Cap	Growth	Value
	Contr	Contr	Contr	Contr	Contr	Contr
Energy	-0.3	-0.3	-0.3	-0.5	0.0	-0.6
Agri Food Bev	-0.4	-0.4	-0.3	-0.2	-0.1	-0.7
Real Estate	-0.4	-0.3	-1.1	-0.8	-0.3	-0.3
Resources & Materials	-0.4	-0.3	-1.3	-0.8	-0.1	-0.5
Industrials	-0.7	-0.6	-1.4	-1.4	-0.4	-0.8
Transportation	-0.9	-0.8	-1.0	-0.7	-1.0	-0.7
Digital Info & Svc	-0.9	-0.8	-1.3	-1.5	-1.3	-0.4
Cons Goods & Svc	-0.9	-0.8	-1.9	-1.6	-0.7	-1.0
Financials	-1.1	-1.0	-1.6	-3.2	-0.6	-1.5
Health Care	-1.2	-1.0	-2.2	-5.7	-1.1	-0.8
Technology	-1.9	-2.0	-1.2	-1.5	-2.9	-1.0
Index Return (TR)	-9.1	-8.4	-13.7	-18.1	-8.4	-8.3

YTD sector-weighted performance contributions: The far superior positive contributions from the large digital info and technology sectors have been the drivers of both large cap outperformance relative to small cap, and growth's outperformance relative to value so far in 2023.

YTD	FTW 5000	Large Cap	Small Cap	Micro Cap	Growth	Value
	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	5.8	6.3	-0.1	-0.9	12.9	1.4
Technology	4.6	5.1	0.1	-0.8	10.3	1.9
Cons Goods & Svc	0.9	1.2	-0.2	0.1	3.0	-0.1
Transportation	0.5	0.8	0.0	-0.3	2.3	-0.2
Industrials	0.3	0.2	0.6	0.7	0.4	0.0
Resources & Materials	0.0	0.0	0.4	-0.3	0.0	-0.1
Real Estate	-0.3	-0.2	-0.6	-0.7	-0.2	-0.2
Financials	-0.3	-0.2	-0.6	-3.4	0.0	-0.5
Energy	-0.3	-0.4	-0.1	-0.2	0.0	-0.7
Agri Food Bev	-0.3	-0.4	0.0	-0.1	0.0	-0.7
Health Care	-1.2	-0.9	-0.8	-5.1	-0.4	-1.3
Index Return (TR)	9.5	11.3	-0.7	-11.3	25.0	-0.8

FT Wilshire Size and Style Indexes: Small cap sees significant underperformance in recent months. Growth remains the standout performer in 2023.

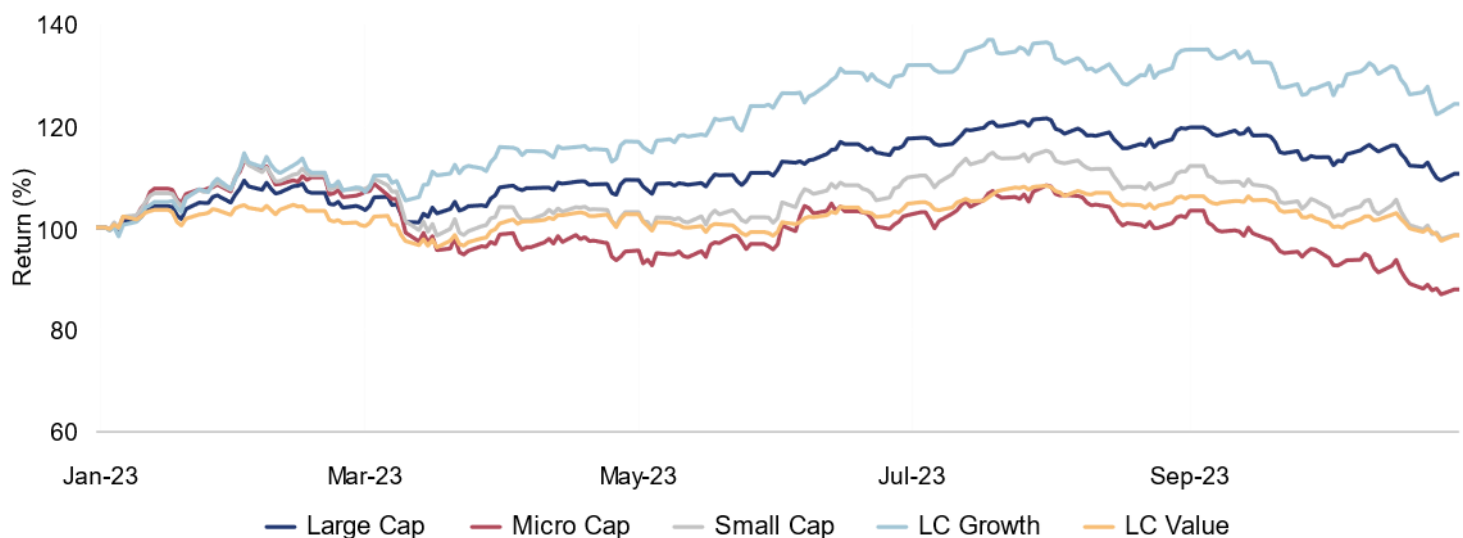
Table 1: Small cap has continued to lose ground on a relative basis, underperforming in October and over the last 3 months. Value has marginally underperformed growth in recent months, however YTD growth remains the standout performer, outperforming value by 25.8%.

USD, TR %	Size			Style	
	Large Cap	Small Cap	Micro Cap	LC Growth	LC Value
1M	-2.2	-5.6	-7.3	-1.9	-2.5
3M	-8.4	-13.7	-18.1	-8.4	-8.3
YTD	11.3	-0.7	-11.3	25.0	-0.8
2022	-19.2	-17.5	-21.4	-31.1	-6.0
2021	27.8	19.1	21.7	27.7	27.4

Table 2: Growth has delivered a 5yr annualized return of 14.0% vs a value return of 8.1%

USD, TR %	Large Cap		Small Cap		Micro Cap		LC Growth		LC Value	
	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann
2Y	-7.2	-3.7	-18.3	-9.6	-32.9	-18.1	-12.2	-6.3	-2.5	-1.3
3Y	33.1	10.0	21.7	6.8	11.7	3.7	26.6	8.2	38.5	11.5
5Y	69.7	11.2	33.5	6.0	10.8	2.1	92.4	14.0	46.6	7.9
10Y	191.3	11.3	99.6	7.2	64.6	5.1				
20Y	503.6	9.4	457.2	9.0	248.8	6.4				

Chart 1: Size and style index returns - 2023 YTD (USD, TR %)



Style and Size Indexes: Large cap outperformance relative to small cap gathers further momentum. Growth relative to value remains range-bound.

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

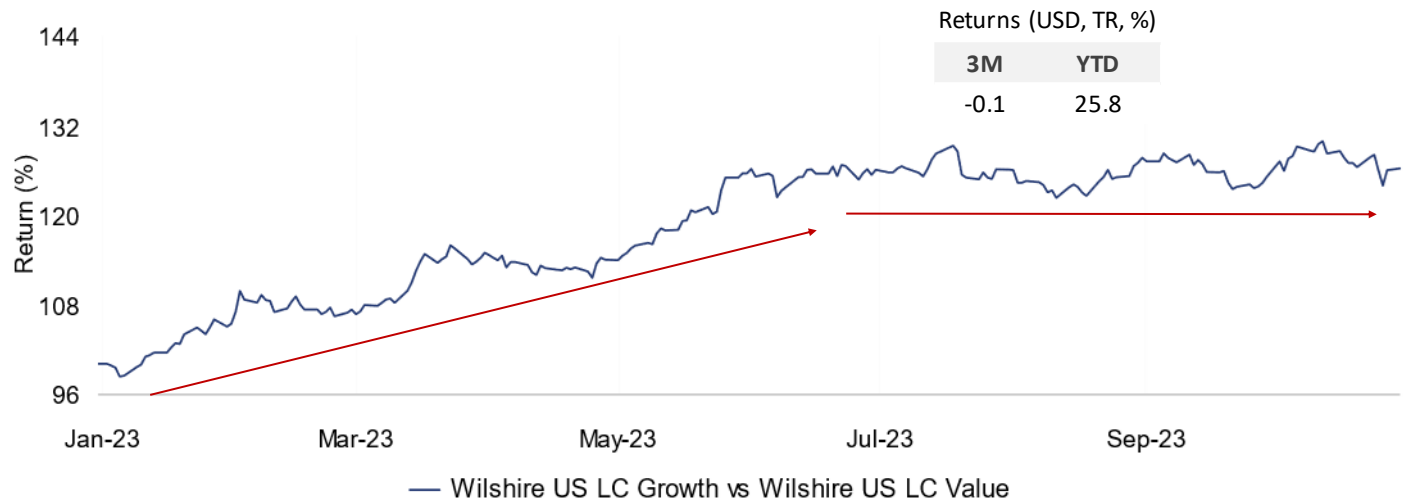


Chart 2: Large vs Small Cap relative performance (USD, TR, %).

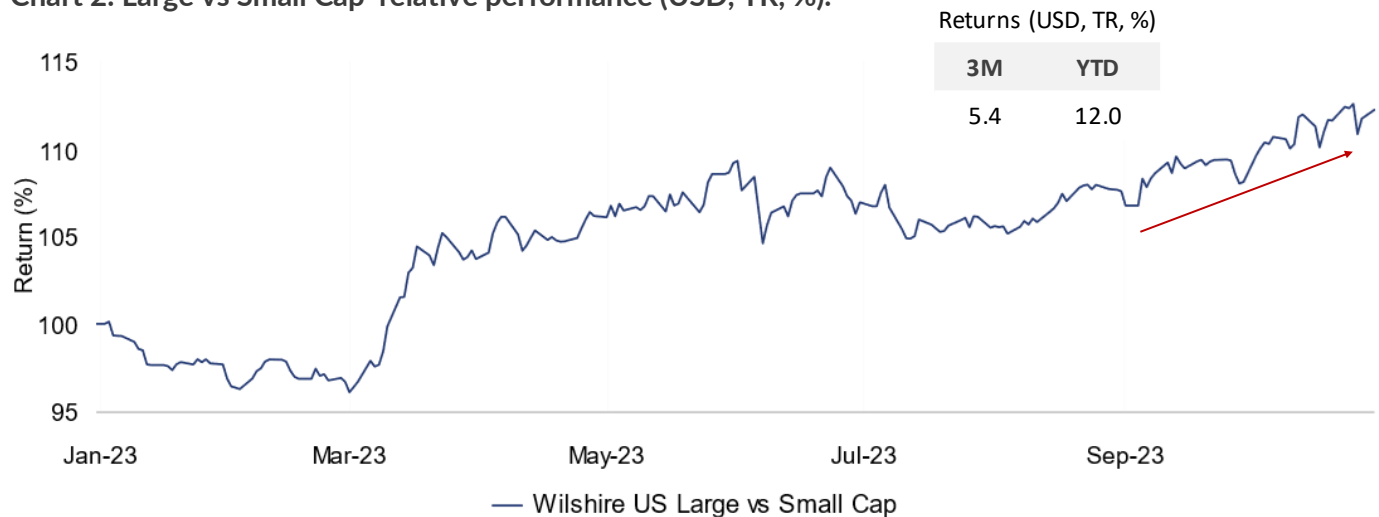
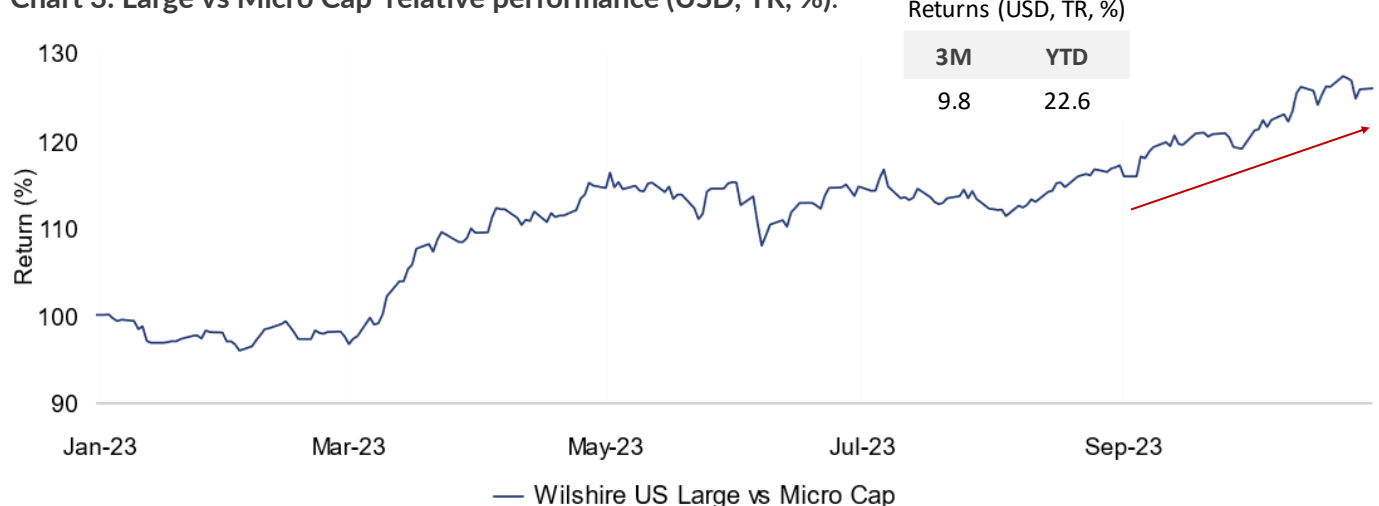


Chart 3: Large vs Micro Cap relative performance (USD, TR, %).



Source: Wilshire Indexes. Data as of October 31, 2023

Pure Factor Indexes: Risk aversion sees (low) Beta outperform over three months. Momentum, Quality and Value outperform 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.

Chart 1: 3M - Pure Beta has outperformed over 3 months with Pure Size lagging

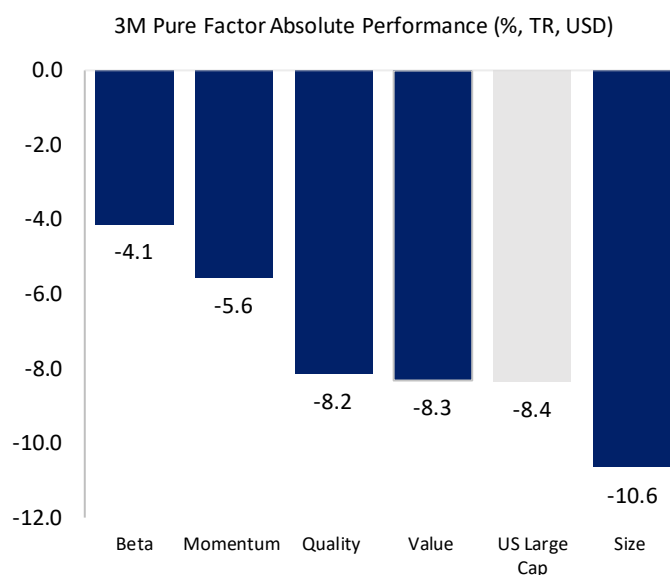


Chart 2: YTD - Pure Quality and Momentum have outperformed in 2023 so far

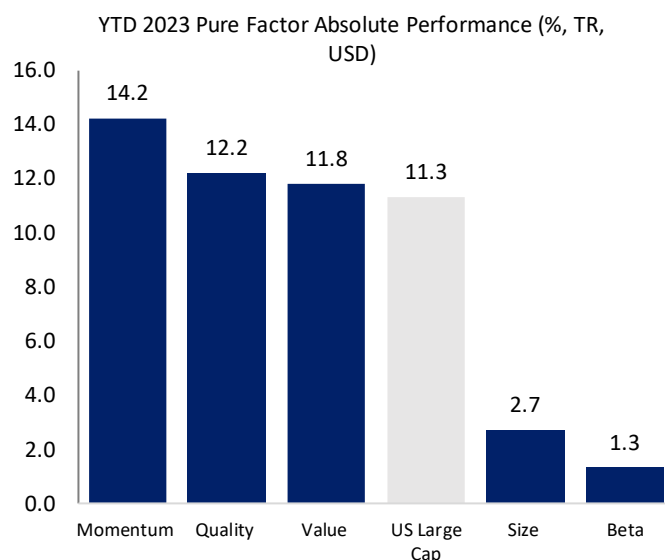


Chart 3: Pure Quality remains the strongest performer over the past 12 months

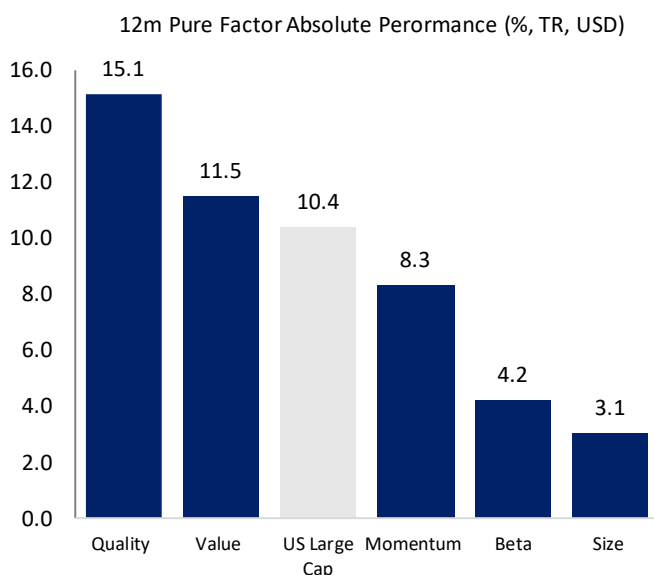
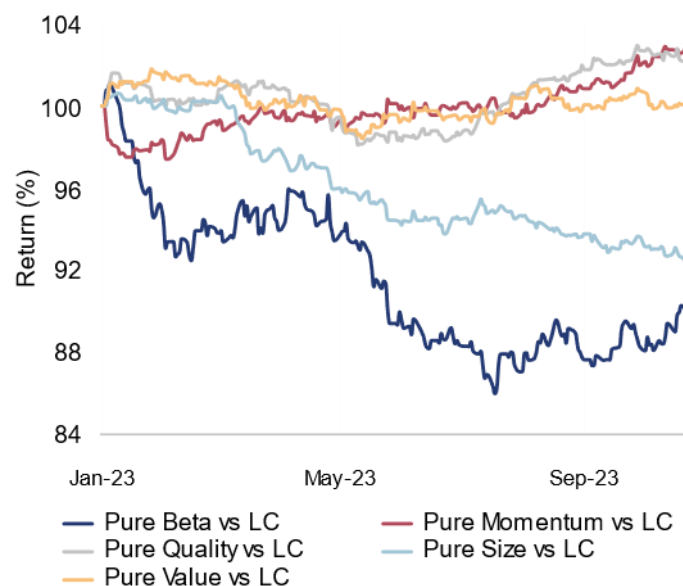


Chart 4: Pure Factor Indexes Relative to FT Wilshire US Large Cap Index over 12 months (Rebased, TR, USD)



Comparing Factor vs Style returns: Pure Factors display notably different profiles compared to their respective Style indexes since the start of 2022

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

Returns (USD, TR %)	3M	YTD	2022	3Y
Pure Factor Quality	-8.2	12.2	-13.7	45.8
Style Growth	-8.4	25.0	-31.1	26.6
Pure Factor Value	-8.3	11.8	-16.2	41.5
Style Value	-8.3	-0.8	-6.0	38.5
Pure Factor Size	-10.6	2.7	-17.5	23.8
Style Small Cap	-13.7	-0.7	-17.5	21.7

Chart 2: Pure Quality has outperformed Growth (blue) but Pure Value has matched Value style (red)



Chart 3: Much Less volatility in Pure Quality vs Pure Value (blue) than Growth style vs Value style (red)

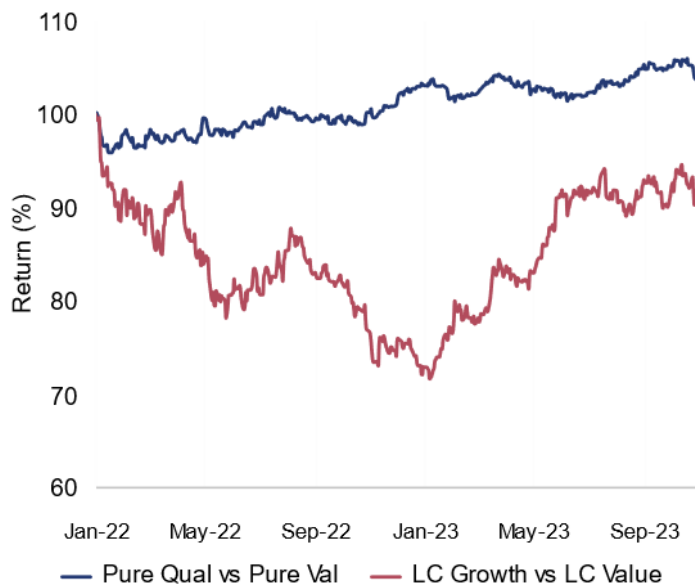
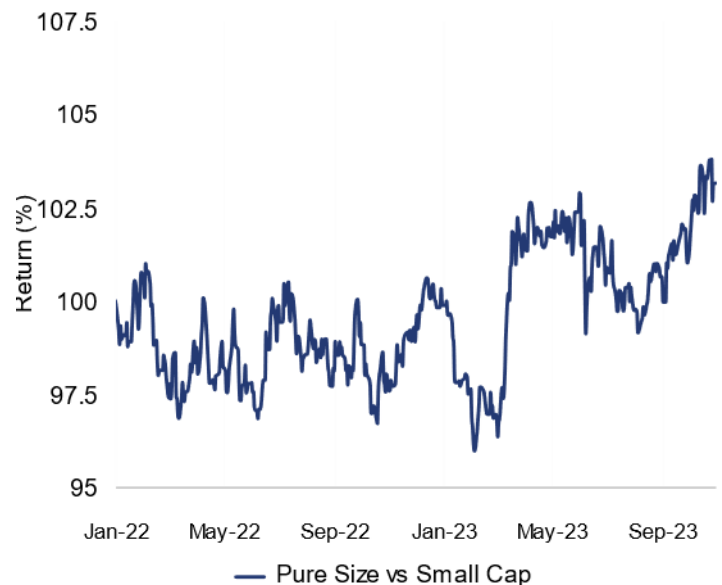


Chart 4: Pure Factor Size vs US Small Cap style since the start of 2022



Technical and Sentiment Analysis: FT Wilshire 5000 witnesses largest drawdown since the October 2022 market trough, tests key support level

Chart 1: The -10.6% decline from the 31 July high to the recent 27 Oct low was the largest since the October 2022 market trough, exceeding the drawdown witnessed after the SVB sell off in early March

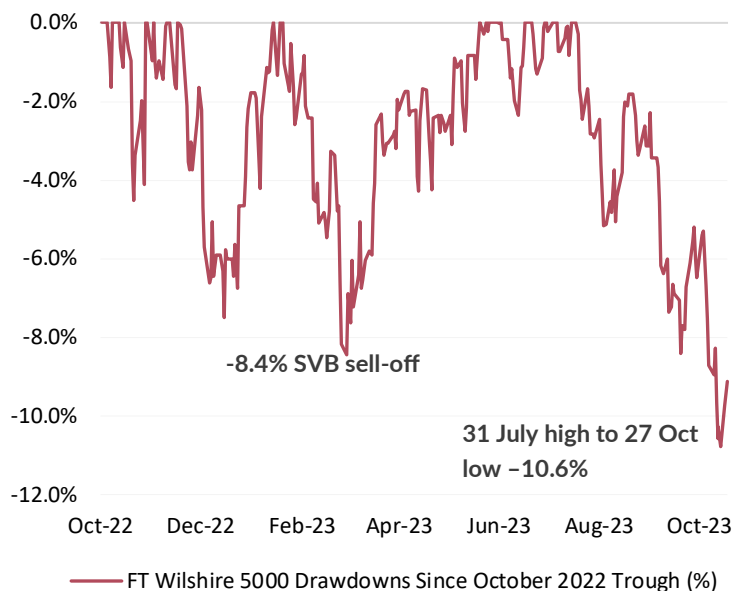


Chart 2: The FT Wilshire 5000 is testing the 50% Fibonacci retracement level from the Oct 22 low to the July 23 high. The 76.4% retracement (next potential support) is around -4% from current levels



Chart 3: Most of the key FT Wilshire US indexes are now registering an oversold Relative Strength Index (RSI)

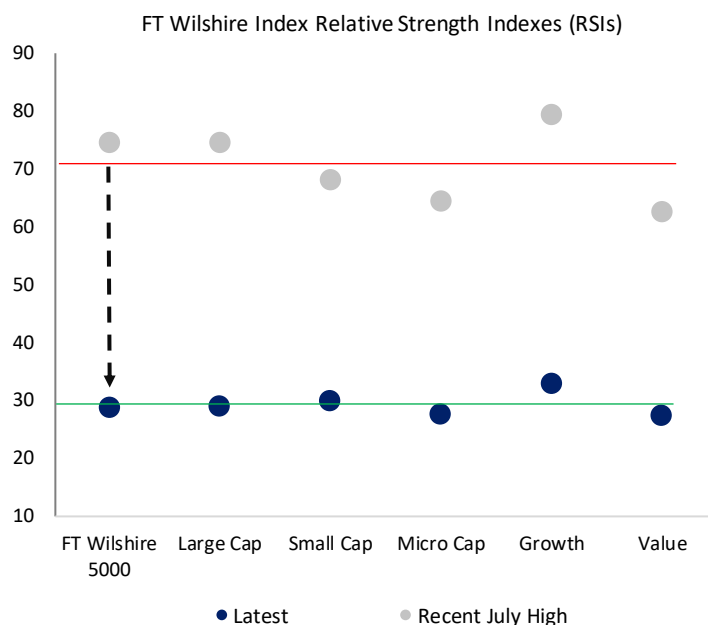
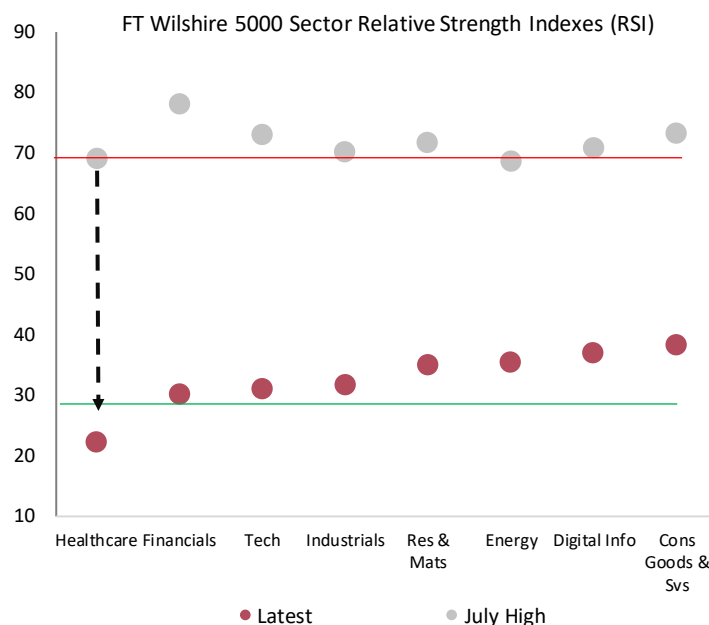


Chart 4: FT Wilshire 5000 sector Relative Strength Indexes (RSI) vs July-Rotation from overbought in July to oversold signals



Performance Dispersion Analysis: October sees lowest monthly contribution to return from 'Magnificent 7' in 2023 but they still dominate YTD returns

Chart 1: The contribution to market returns from the 'Magnificent 7' has declined since the peak in May but the stocks have still dominated YTD returns

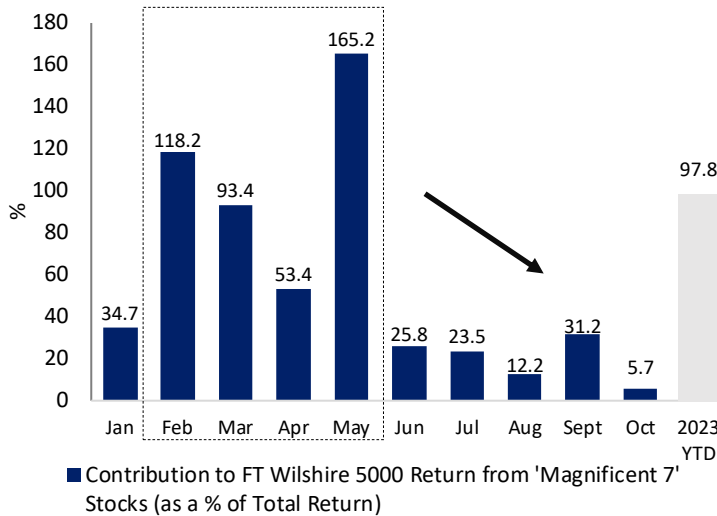
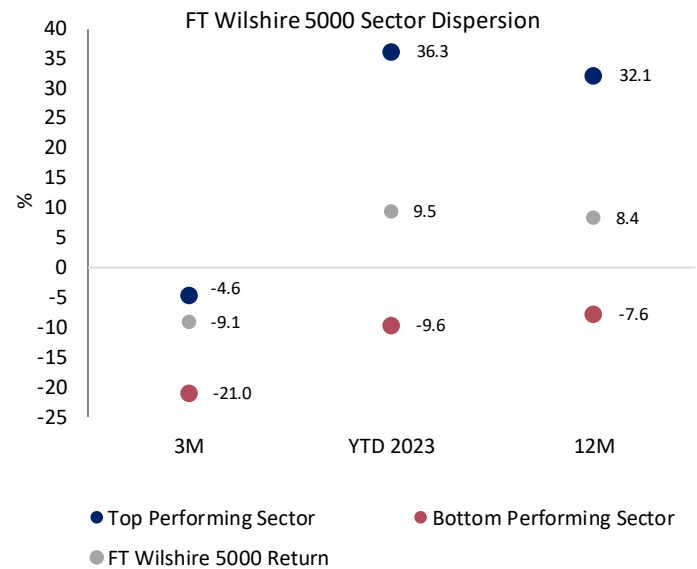


Chart 2: FT Wilshire 5000 top vs bottom performing sector returns across various time periods



FT Wilshire 5000 - Top/Bottom 10 contributors to return

3M USD: -9.1% (TR)

Name	Wght	Return (%)	Contrib (%)
Eli Lilly & Co	1.2	22.1	0.19
Unitedhealth Group I	1.2	6.2	0.06
Microsoft Corp	6.1	0.9	0.05
Progressive Corp Ohi	0.2	25.6	0.04
Amgen	0.3	10.1	0.03
Arista Networks Inc	0.1	29.2	0.02
Marathon Pete Corp	0.1	14.3	0.02
Humana Inc	0.2	14.8	0.02
At&T Inc	0.3	8.1	0.02
Verizon Communications	0.4	5.3	0.02
Meta Platforms Inc	0.4	5.3	0.02
Thermo Fisher Scientifi	0.0	0.0	0.00
Johnson & Johnson	1.7	-5.4	-0.09
Bank America Corp	0.4	-18.9	-0.09
Home Depot Inc	0.9	-10.2	-0.09
Alphabet Inc	0.5	-17.0	-0.10
J P Morgan Chase & C	0.7	-14.2	-0.11
Nvidia Corp	1.8	-6.5	-0.12
Tesla Mtrs Inc	1.0	-11.3	-0.12
Apple Inc	2.4	-12.7	-0.31

YTD USD: 9.5% (TR)

Name	Wght	Return (%)	Contrib (%)
Microsoft Corp	6.1	41.9	1.96
Apple Inc	6.6	32.0	1.77
Nvidia Corp	2.4	179.1	1.66
Amazon Com Inc	3.0	58.4	1.18
Meta Platforms Inc	1.7	150.3	1.08
Alphabet Inc	1.8	40.6	0.57
Tesla Mtrs Inc	1.4	63.0	0.53
Alphabet Inc	1.5	41.2	0.52
Eli Lilly & Co	1.2	52.6	0.43
Broadcom Inc	0.8	53.2	0.32
Danaher Corp	0.3	-17.8	-0.08
Moderna Inc	0.1	-57.7	-0.09
Bristol Myers Squibb	0.3	-25.8	-0.10
Thermo Fisher Scientifi	0.4	-19.1	-0.11
Nextera Energy Inc	0.3	-28.9	-0.13
Bank America Corp	0.5	-18.6	-0.13
Schwab Charles Cp Ne	0.2	-36.7	-0.14
Chevron Corp New	0.7	-16.5	-0.16
Johnson & Johnson	0.9	-13.6	-0.16
Pfizer Inc	0.4	-38.5	-0.29

Market Correction Perspective: FT Wilshire 5000 equal weighted index drawdown almost twice as much as market cap weighted index since 31 July

Chart 1: Whilst the FT Wilshire 5000 hit its 2023 high on 31st July the equal-weighted index has failed to close above the 2023 highs it reached in early February

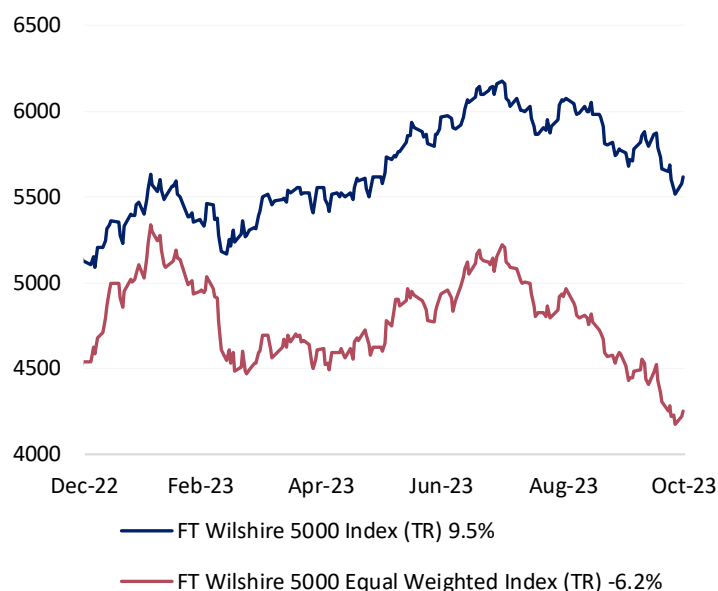


Chart 2: The drawdown of the FT Wilshire 5000 equal weighted index has been almost twice that of the market cap weighted index since 31 July

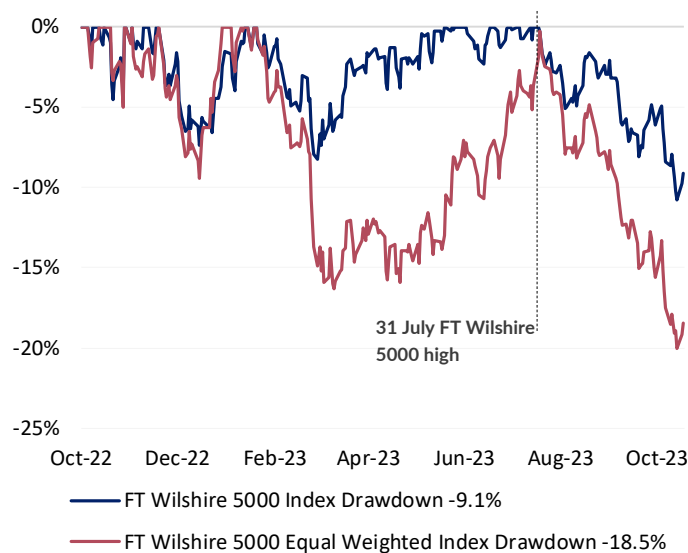


Chart 3: The 10.6% drawdown from the July high (to the recent 27 Oct low) took 13 weeks-close to the median duration of 10% declines seen since the GFC

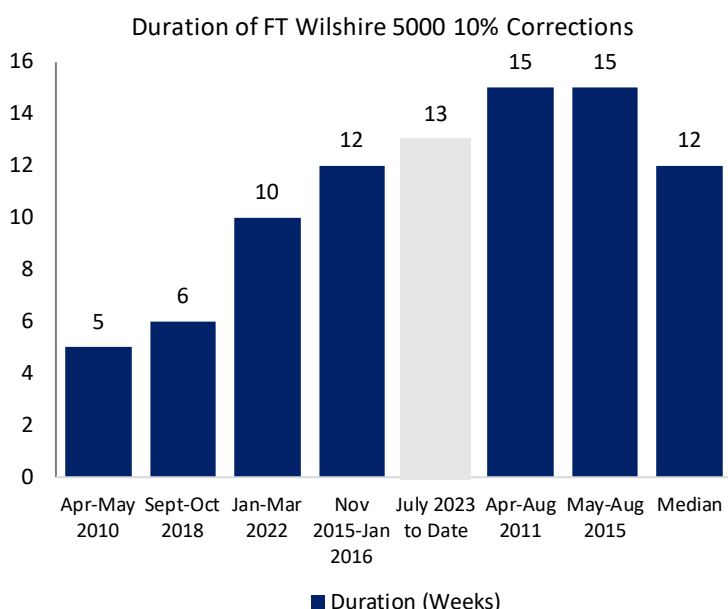
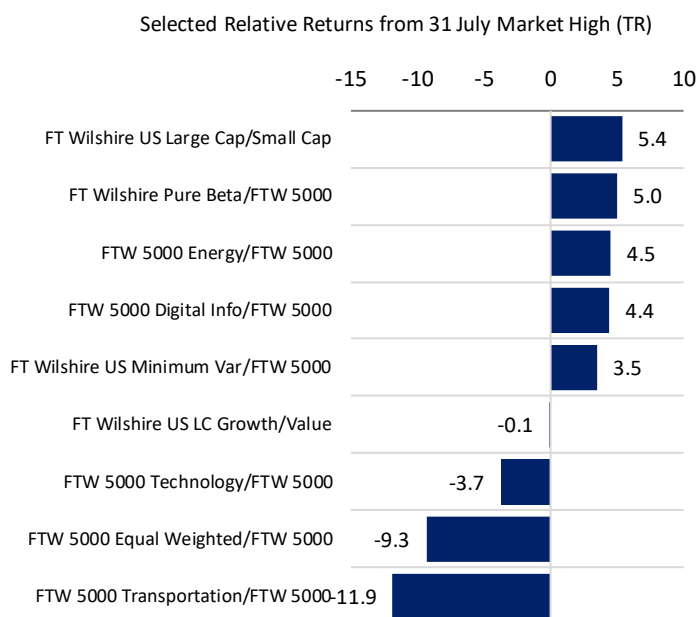
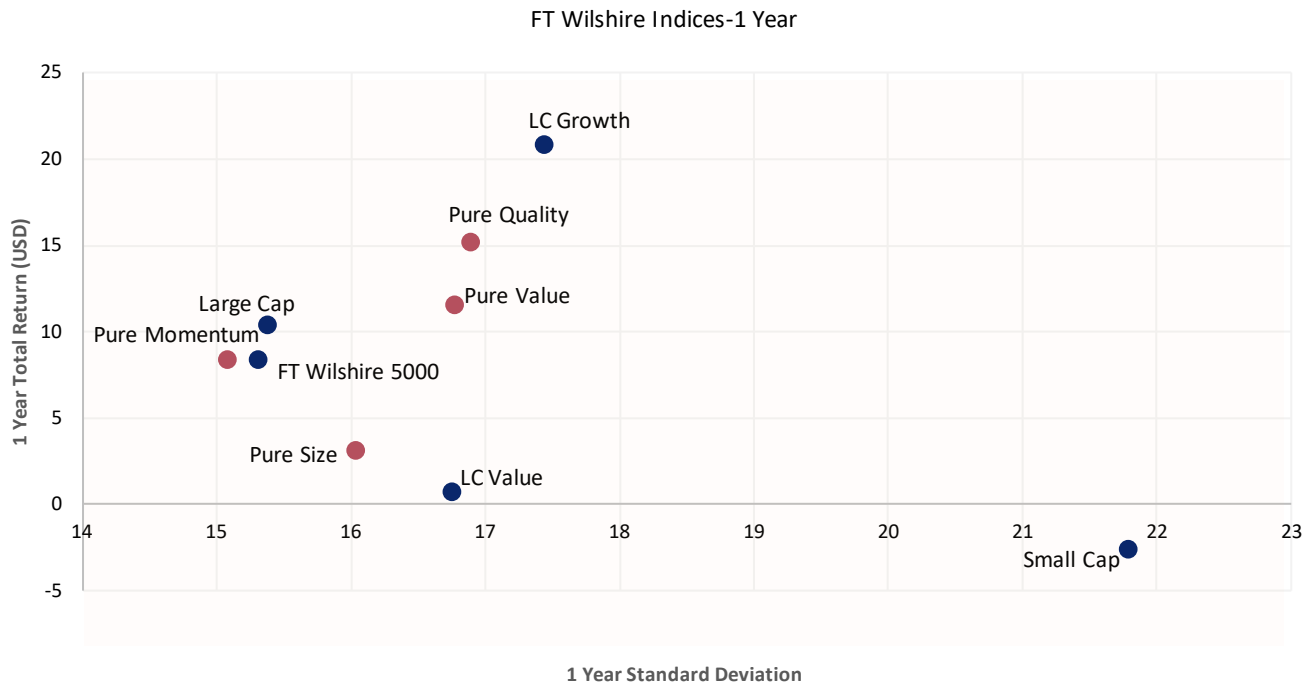


Chart 4: FT Wilshire index dynamics-A snapshot of selected relative returns since the FT Wilshire 5000 high on 31 July



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

FT Wilshire Indexes: Risk vs Return Over 1 Year



FT Wilshire Indexes: Risk vs Return Over 5 Years



FT Wilshire Global Equity Market Series (GEMS)

1

-12.1%

3 month decline in
Europe ex UK equities
(USD, TR)

2

+6.3%

Rise in global Equity
Index YTD (USD, TR)

3

-8.8%

3 month return of US
equities (TR)

4

+7.2%

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

CONTENTS

17	Synopsis	23	Regional sector comparison
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19	Multi-currency regional returns	25	Dispersion
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21	Country level performance	27	Risk/return analysis
22	Technical analysis		

US equities performance vs global non US equities. US equities have significantly outperformed the Global ex US so far in 2023 after underperforming in 2022.



Global Equity Market Synopsis: Markets continue to retreat as rising bond yields and heightened geopolitical concerns drive risk aversion

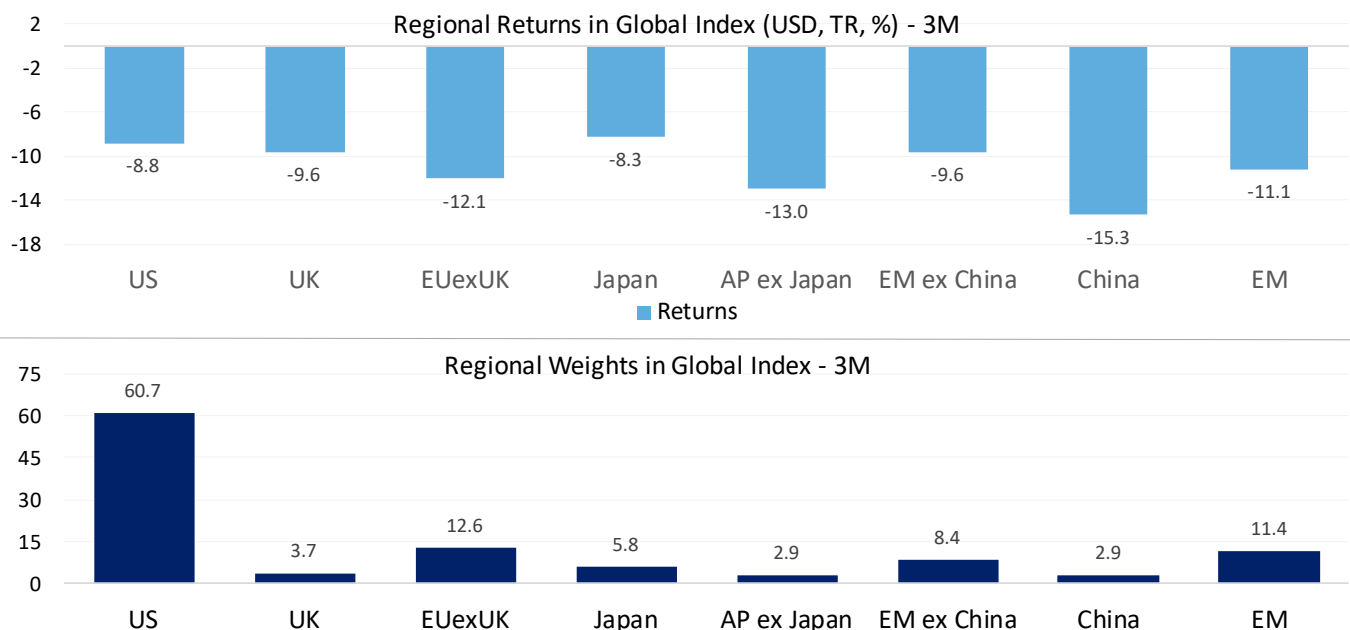
3 Month Global Markets Snapshot

- ◆ Rising bond yields and geopolitical tensions drive global equity market correction ([page 20](#))
- ◆ Further Yen depreciation creates large differences between YTD global equity returns when measured in JPY vs USD ([page 21](#))
- ◆ Europe ex UK and Chinese equities continue to lose ground on a relative basis ([page 22](#))
- ◆ Smaller negative contributions from resources and industrials help US outperform vs Global ex US ([page 24](#))
- ◆ Positive financials contribution helps drive Japanese outperformance ([page 27](#))
- ◆ FT Wilshire US Relative Strength Index shifts from overbought in July to an oversold signal ([page 29](#))
- ◆ PE de-rating drives negative returns across all major regions ([page 30](#))

Key Market Events

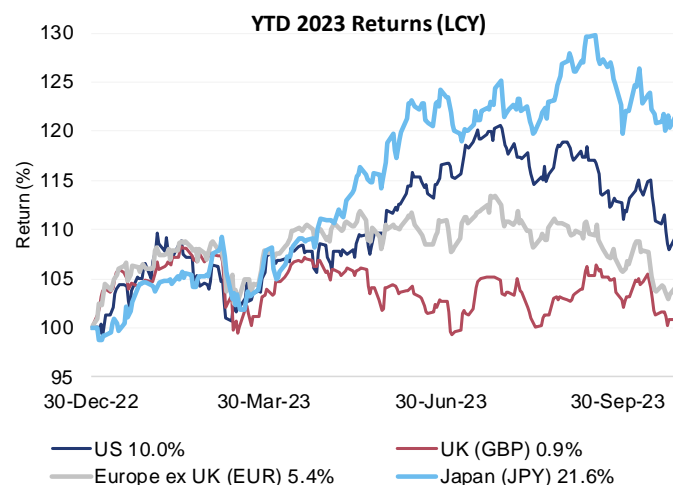
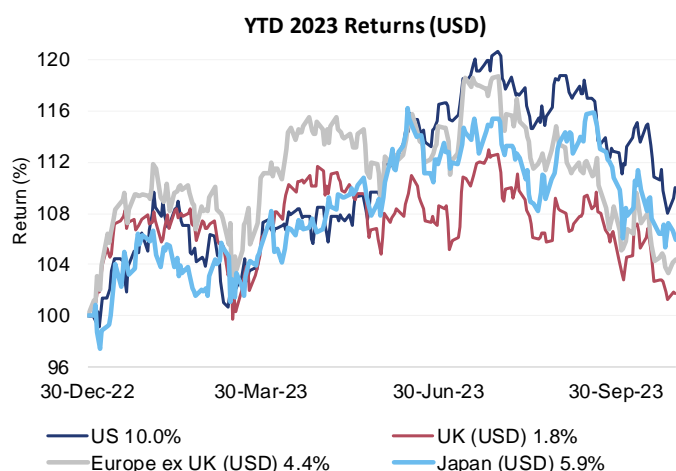
- ◆ February: Reassessment of US interest rate expectations see global bond yields rise
- ◆ March: Silicon Valley Bank (SVB) collapses with contagion fears rippling through to global markets.
- ◆ March: Bank contagion fears ease
- ◆ April: Chinese equities pullback sharply on renewed US-China geopolitical tensions
- ◆ April: JPY weakens sharply on dovish BoJ
- ◆ June: Chinese central bank cuts rates
- ◆ July: Japanese bond yields spike to the highest level in 9 years on change to BoJ yield control policy
- ◆ August: Chinese equities plunge as authorities disappoint with efforts to support economy
- ◆ September/October: Rising US bond yields and geopolitical concerns ripple through global equity markets

Chart 1: Selected regional Q3 2023 returns (TR, USD) and weights in Global Index



Region and major market performance: Europe ex UK and China continue to lose further ground on a relative basis over the last 3 months

Regional YTD returns-LCY vs USD–Large FX moves (most notably Yen weakness) has created significant differences in YTD returns when measuring the performance in LCY vs USD. The charts below shows that in USD terms (left hand chart) the US has outperformed. In local currency terms (right hand chart) we can see that Japan is the strongest year to date performer.



Regional Returns - Short Term (USD, TR, %)		3M	1M	YTD	12M	2022
Japan		-8.3	-4.4	5.9	17.0	-15.4
USA		-8.8	-2.5	10.0	8.8	-19.3
United Kingdom		-9.6	-4.5	1.8	12.3	-10.8
Emerging ex China		-9.6	-4.0	4.2	9.4	-15.4
Global		-9.8	-3.3	6.3	10.1	-17.9
Emerging		-11.1	-4.0	-0.3	12.3	-17.3
Global ex US		-11.3	-4.3	1.1	12.0	-15.8
Asia Pacific ex Japan		-11.7	-4.2	-3.0	12.5	-17.3
Europe ex UK		-12.1	-3.8	4.4	16.7	-19.1
China		-15.3	-4.1	-11.6	21.4	-21.8

Regional Returns - Long Term (USD, TR, %)		3Y		5Y		10Y		20Y	
		Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann
USA		31.0	9.4	64.7	10.5	174.2	10.6	515.2	9.5
United Kingdom		31.1	9.5	14.3	2.7	16.3	1.5	165.3	5.0
Japan		5.8	1.9	16.7	3.1	56.0	4.5	147.0	4.6
Asia Pacific ex Japan		-6.7	-2.3	19.0	3.5	40.9	3.5	348.8	7.8
Europe ex UK		22.1	6.9	32.2	5.7	51.5	4.2	286.4	7.0
Emerging		-3.5	-1.2	17.9	3.3	32.8	2.9	376.4	8.1
Emerging ex China		24.8	7.7	34.7	6.1	44.2	3.7	400.9	8.4
China		-43.7	-17.4	-12.6	-2.7	18.0	1.7	376.8	8.1
Global ex US		11.3	3.6	22.9	4.2	40.4	3.5	248.7	6.4
Global		22.5	7.0	45.3	7.8	101.3	7.2	373.0	8.1

Source: Wilshire Indexes. Data as of October 31, 2023

FX adjusted market returns: YTD Global equity index return over three times as large for an unhedged Japanese investor vs return in based in USD

FX swings result in sizeable impact on unhedged regional equity returns depending on the location of investors. The has been most pronounced in 2023 for JPY returns for an unhedged Japanese based investor, a result of continued Yen weakness. YTD global equities have returned 22.0% (in JPY terms), versus a 6.3% return in USD, 7.4% in EUR and just 5.4% for a GBP-based investor.

Table 1: Regional returns in various FX - 3M

3M Return (TR, %)	USD	GBP	EUR	JPY
Japan	-8.3	-2.8	-4.3	-2.2
USA	-8.8	-3.3	-4.9	-2.8
United Kingdom	-9.6	-4.1	-5.7	-3.6
Developed	-9.6	-4.2	-5.7	-3.7
Global	-9.8	-4.4	-5.9	-3.9
Emerging	-11.1	-5.8	-7.3	-5.3
Asia Pacific ex Japan	-11.7	-6.4	-7.9	-5.9
Europe ex UK	-12.1	-6.8	-8.3	-6.3
China	-15.3	-10.2	-11.7	-9.8

Table 2: Regional returns in various FX - YTD

YTD Return (TR, %)	USD	GBP	EUR	JPY
USA	10.0	9.0	11.1	26.2
Developed	7.2	6.3	8.3	23.1
Global	6.3	5.4	7.4	22.0
Japan	5.9	5.0	6.9	21.6
Europe ex UK	4.4	3.5	5.4	19.8
United Kingdom	1.8	0.9	2.8	16.8
Emerging	-0.3	-1.1	0.7	14.5
Asia Pacific ex Japan	-3.0	-3.8	-2.1	11.3
China	-11.6	-12.3	-10.7	1.5

Global Equity Relative Returns: US outperformance regains some momentum as Europe ex UK and China continue to underperform

Chart 1 : US vs Global ex US (USD, TR, %)

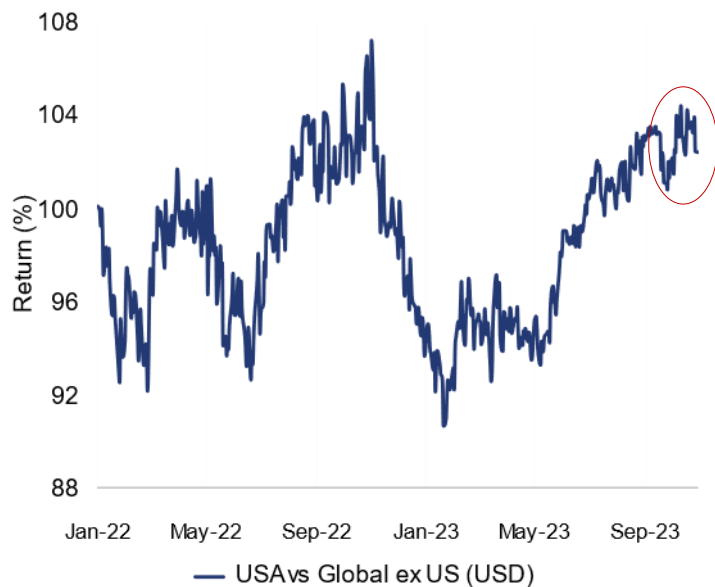


Chart 2: Emerging Markets vs Developed (USD, TR, %)

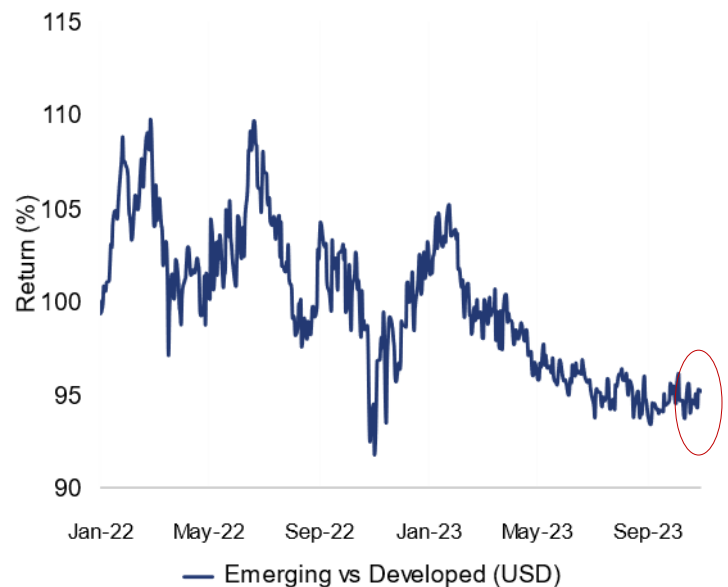
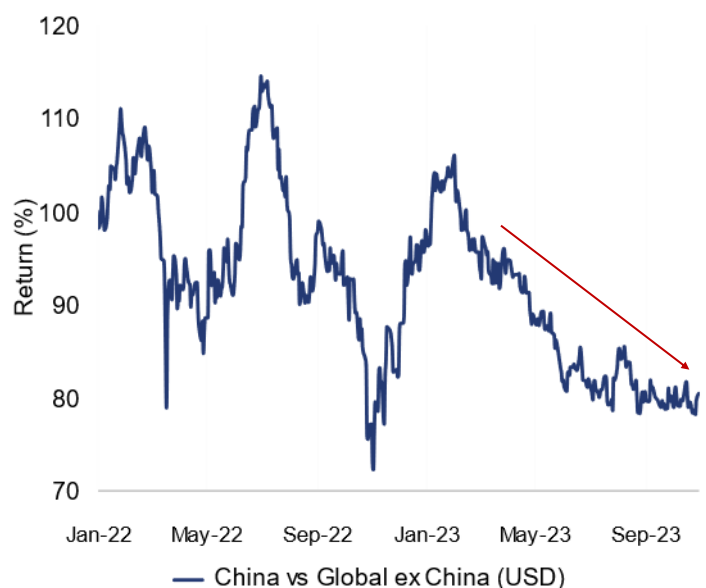


Chart 3: Europe ex UK vs Global ex Dev Europe (USD, TR, %)



Chart 4: China vs Global ex China (USD, TR, %)



Developed and Emerging market country level performance: Risk aversion sees widespread country level declines

Chart 1: 1M - Marked risk aversion saw declines across all countries in October. Developed markets outperformed emerging, aided by continued US outperformance vs China.

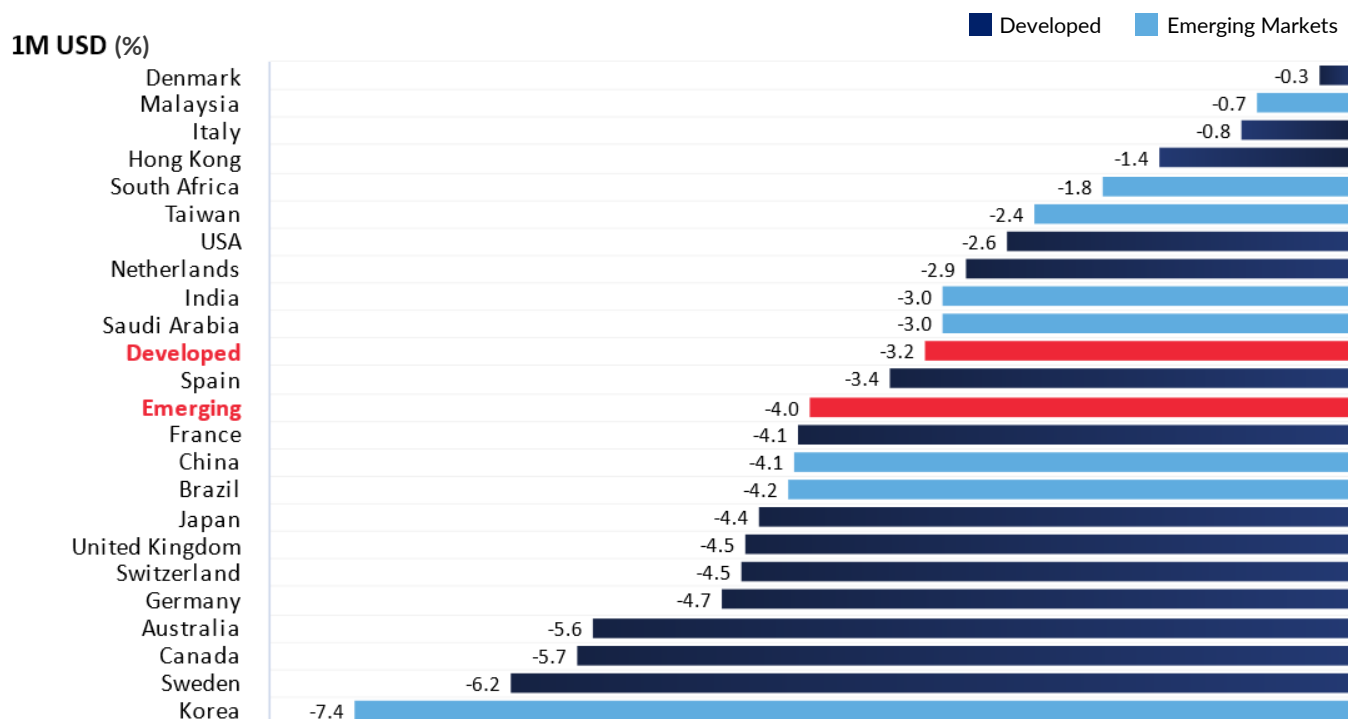
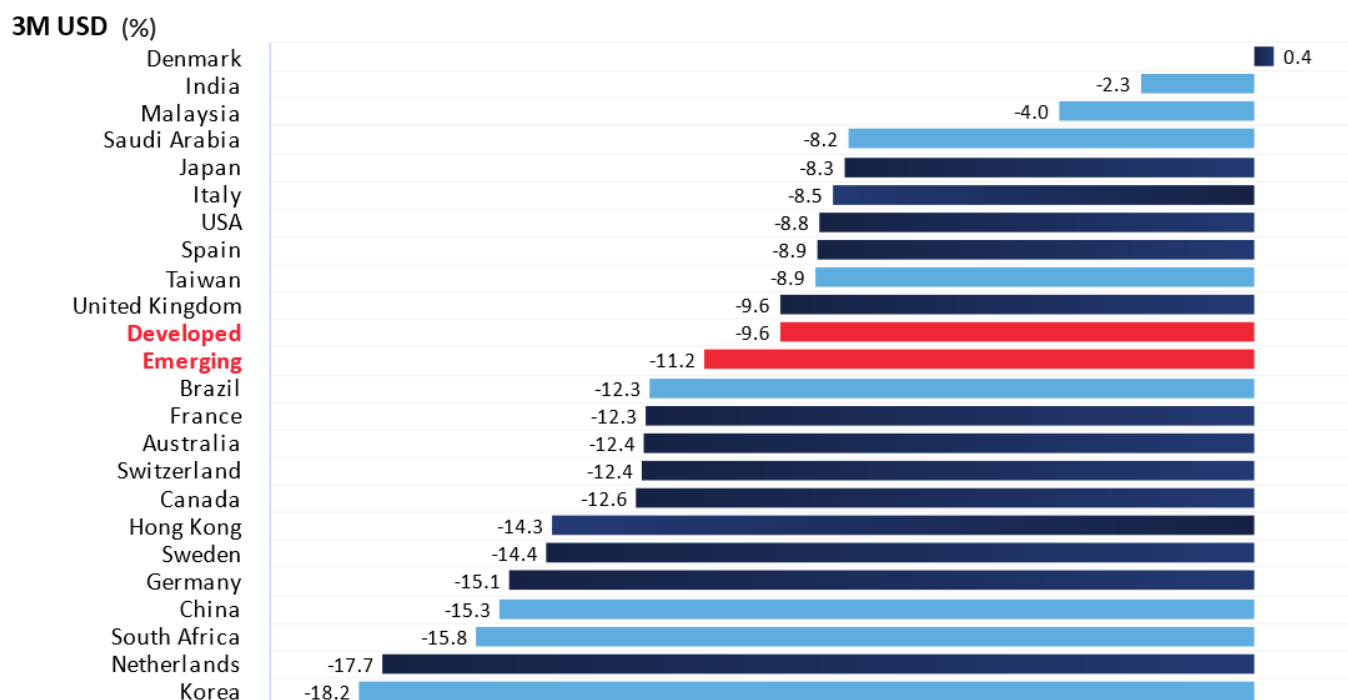


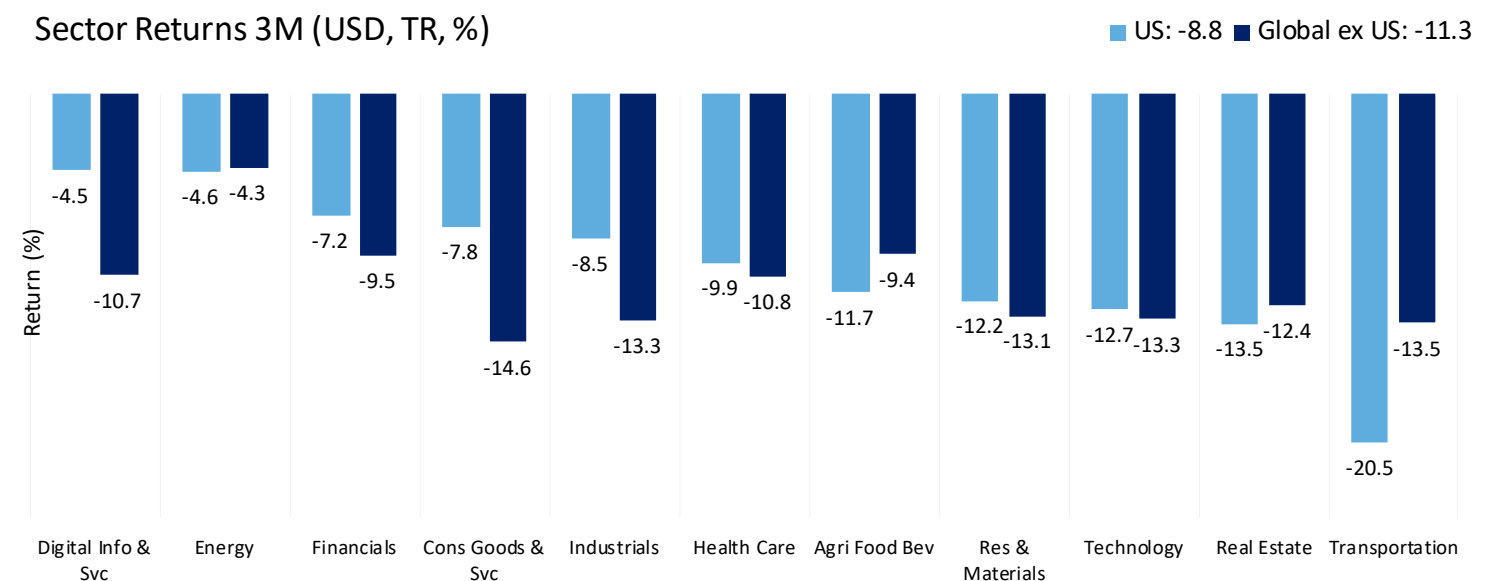
Chart 2: 3 month - Declines over the past three months have been global in scale, spreading across both developed and emerging markets. Only Denmark saw positive returns. India and Malaysia have outperformed within emerging markets.



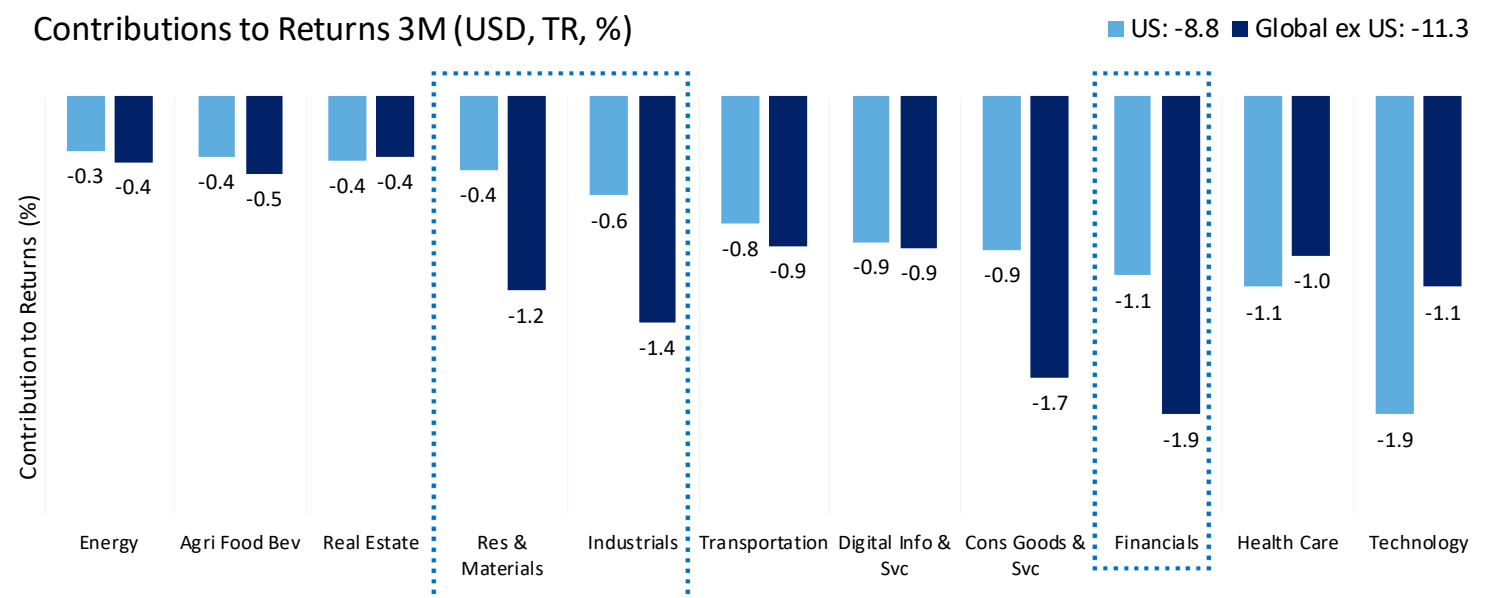
Source: Wilshire Indexes. Data as of October 31, 2023

3M-US vs Global ex US sector returns and sector-weighted contribution analysis: Smaller negative contributions from resources and industrials in the US

3M US vs Global ex US Sector Returns. US (light blue) digital information, consumer goods, financials and industrials outperformed global ex US (dark blue) over 3 months. US transportation significantly underperformed global peers.

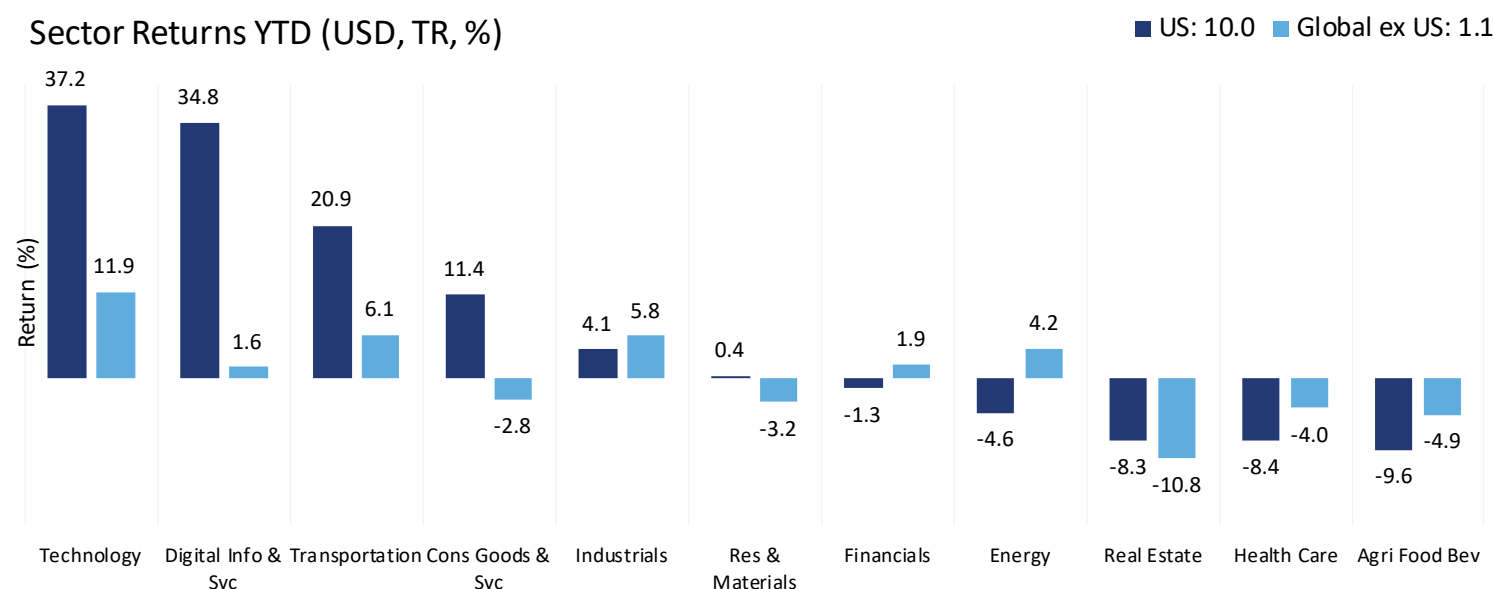


3M US vs Global ex US Sector weighted regional contribution analysis. The larger negative contribution from US technology was offset by a smaller drag from resources and materials, industrials and financials, helping the US to outperform Global ex US over the 3 month period.

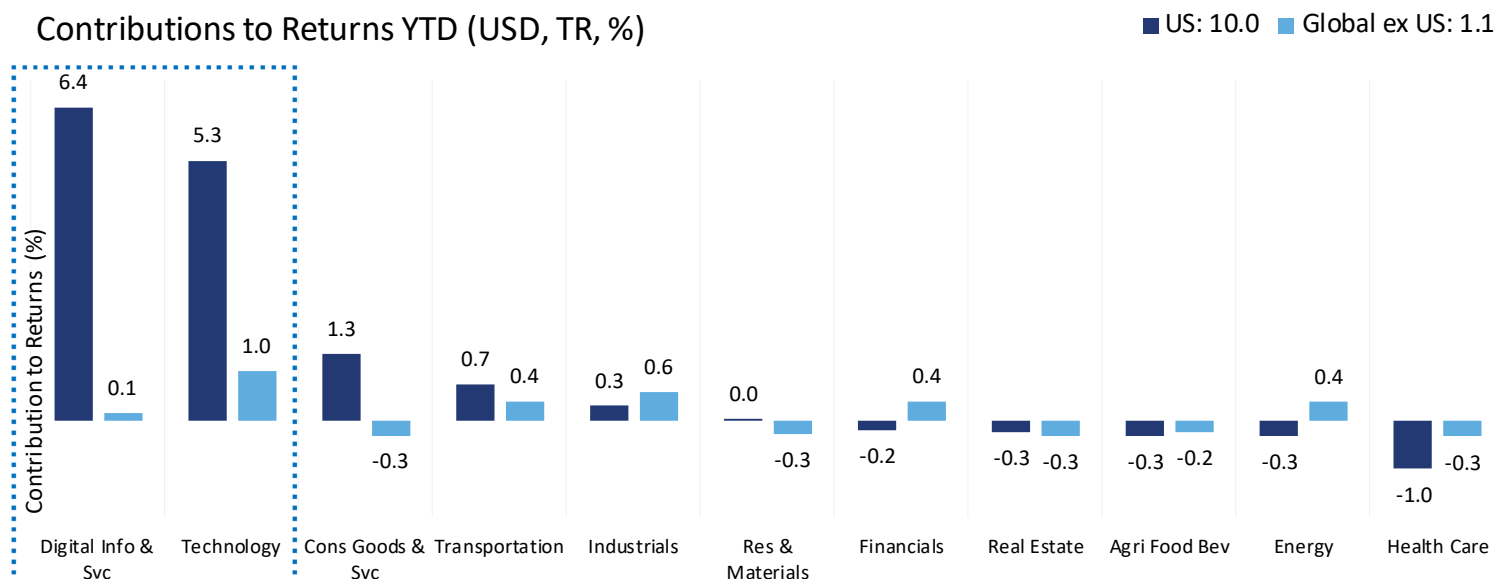


YTD-US vs Global ex US sector returns and sector-weighted contributions: Technology and digital info the key drivers of US YTD outperformance

US vs Global ex US YTD Sector Returns: US (dark blue) technology, transportation, digital information and transportation sectors have significantly outperformed Global ex US (light blue) so far in 2023. Global ex US industrials, financials, energy and health care have outperformed the US.



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 outperformance vs Global ex US YTD, more than offsetting the negative contributions from health care, financials and energy.



Regional level sector weights and returns: 3M and YTD 2023-Positive Japanese financials returns a standout amongst widespread declines over 3 months

3M regional sector average weights and returns– Amongst widespread negative returns the positive return of Japanese financials was a standout feature over the last three months. Japan also saw outperformance from its relatively large transportation sector (12.6% weighting vs 3.7% in the US)

3M	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
Digital Info & Svc	-4.5	19.4	-10.7	8.5	-9.9	4.5	-5.8	5.9	-10.2	13.0	-13.2	11.4	-18.8	20.7
Energy	-4.6	7.1	-4.3	9.0	1.0	16.4	-4.2	8.0	2.0	2.2	-6.2	8.4	-8.5	5.5
Financials	-7.2	15.0	-9.5	20.0	-13.4	19.4	-8.1	17.6	2.7	11.5	-9.1	21.3	-13.0	16.2
Cons Goods & Svc	-7.8	11.7	-14.6	11.5	-12.1	16.0	-17.5	12.0	-10.0	9.3	-14.0	11.7	-16.6	26.3
Industrials	-8.5	7.0	-13.3	10.1	-7.5	12.0	-14.4	13.1	-12.8	18.7	-14.9	4.9	-17.5	2.6
Health Care	-9.9	11.5	-10.8	8.8	-11.6	12.6	-10.2	15.1	-12.5	7.0	-7.1	4.2	-3.0	5.8
Agri Food Bev	-11.7	3.1	-9.4	4.9	-10.8	7.9	-11.6	6.6	-0.5	3.4	-7.3	4.6	-12.1	4.5
Res & Materials	-12.2	3.6	-13.1	8.9	-9.8	7.2	-12.7	8.1	-8.6	6.4	-15.6	8.8	-16.2	3.6
Technology	-12.7	15.0	-13.3	8.6	-25.8	0.6	-19.2	6.3	-14.6	11.5	-9.8	16.4	-6.9	3.4
Real Estate	-13.5	2.8	-12.4	2.9	-14.7	2.3	-10.2	1.2	-4.3	4.3	-13.1	2.2	-22.7	3.4
Transportation	-20.5	3.7	-13.5	6.6	-20.4	1.1	-19.1	6.0	-4.3	12.7	-14.4	6.1	-21.0	8.0
Index Return (TR)	-8.8		-11.3		-9.6		-12.1		-8.3		-11.1		-15.3	

YTD 2023 regional sector average weights and returns: The continued underperformance of the overweight consumer goods and services sector (24.8% weighting) remains a notable drag on the YTD performance of the Chinese index.

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	37.2	14.3	11.9	8.5	-14.9	0.6	5.6	6.4	9.9	11.6	16.1	16.1	-3.8	3.4
Digital Info & Svc	34.8	18.4	1.6	8.5	0.7	4.7	13.6	5.9	0.7	13.5	-4.3	11.6	-8.1	20.7
Transportation	20.9	3.5	6.1	6.4	3.4	1.0	6.4	6.0	15.9	12.0	5.1	5.9	0.4	7.5
Cons Goods & Svc	11.4	11.8	-2.8	11.5	2.6	15.9	4.3	12.2	-3.0	9.6	-12.9	11.6	-18.8	24.8
Industrials	4.1	7.1	5.8	10.0	16.5	11.5	3.6	13.2	8.2	18.6	2.4	4.7	-12.3	2.7
Res & Materials	0.4	3.6	-3.2	9.2	-12.4	7.7	2.4	8.3	8.9	6.4	-7.9	9.0	-17.0	3.8
Financials	-1.3	15.5	1.9	20.0	3.0	19.4	9.3	17.3	16.1	11.0	1.6	21.5	-4.7	16.6
Energy	-4.6	7.3	4.2	8.9	13.8	16.0	3.7	8.1	17.3	2.1	4.3	8.2	-0.6	5.6
Real Estate	-8.3	3.1	-10.8	3.0	-9.7	2.5	-8.2	1.2	-4.0	4.4	-9.5	2.3	-26.9	3.7
Health Care	-8.4	12.0	-4.0	8.8	-4.8	12.6	1.7	14.6	-13.3	7.5	-7.4	4.3	-16.9	6.4
Agri Food Bev	-9.6	3.3	-4.9	5.1	-11.7	8.3	-2.9	6.8	8.3	3.4	-5.1	4.7	-18.0	4.8
Index Return (TR)	10.0		1.1		1.8		4.4		5.9		-0.3		-11.6	

Source: Wilshire Indexes. Data as of October 31, 2023

Wilshire Indexes - Performance Report (October 2023)

Regional sector sector-weighted performance contribution comparisons: 3M & YTD 2023-Positive financials contribution helps drive Japanese outperformance

Regional sector-weighted contributions to 3M returns: A positive contribution from financials (vs negative contributions in other regions) was one of the key drivers behind Japan's outperformance over the past three months.

3M	US	Global ex US	UK	EU ex UK	Japan	EM	China
	Contr	Contr	Contr	Contr	Contr	Contr	Contr
Energy	-0.3	-0.4	0.2	-0.3	0.0	-0.5	-0.5
Agri Food Bev	-0.4	-0.5	-0.8	-0.8	0.0	-0.3	-0.5
Real Estate	-0.4	-0.4	-0.3	-0.1	-0.2	-0.3	-0.8
Res & Materials	-0.4	-1.2	-0.7	-1.0	-0.5	-1.4	-0.6
Industrials	-0.6	-1.4	-0.9	-1.9	-2.4	-0.7	-0.5
Transportation	-0.8	-0.9	-0.2	-1.2	-0.5	-0.9	-1.7
Digital Info & Svc	-0.9	-0.9	-0.4	-0.3	-1.3	-1.5	-3.9
Cons Goods & Svc	-0.9	-1.7	-1.9	-2.1	-0.9	-1.6	-4.4
Financials	-1.1	-1.9	-2.6	-1.4	0.3	-1.9	-2.1
Health Care	-1.1	-1.0	-1.5	-1.5	-0.9	-0.3	-0.2
Technology	-1.9	-1.1	-0.1	-1.2	-1.7	-1.6	-0.2
Index Return (TR)	-8.8	-11.3	-9.6	-12.1	-8.3	-11.1	-15.3

Regional sector-weighted contributions to YTD returns: Over a third of China's YTD return has come from the sizeable negative contribution from the consumer goods and services sector

YTD	US	Global ex US	UK	EU ex UK	Japan	EM	China
	Contr	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	6.4	0.1	0.0	0.8	0.1	-0.5	-1.7
Technology	5.3	1.0	-0.1	0.4	1.1	2.6	-0.1
Cons Goods & Svc	1.3	-0.3	0.4	0.5	-0.3	-1.5	-4.7
Transportation	0.7	0.4	0.0	0.4	1.9	0.3	0.0
Industrials	0.3	0.6	1.9	0.5	1.5	0.1	-0.3
Res & Materials	0.0	-0.3	-1.0	0.2	0.6	-0.7	-0.6
Financials	-0.2	0.4	0.6	1.6	1.8	0.3	-0.8
Real Estate	-0.3	-0.3	-0.2	-0.1	-0.2	-0.2	-1.0
Agri Food Bev	-0.3	-0.2	-1.0	-0.2	0.3	-0.2	-0.9
Energy	-0.3	0.4	2.2	0.3	0.4	0.4	0.0
Health Care	-1.0	-0.3	-0.6	0.2	-1.0	-0.3	-1.1
Index Return (TR)	10.0	1.1	1.8	4.4	5.9	-0.3	-11.6

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

Chart 1: Largest contribution to 3M returns from top 10 largest stocks in UK

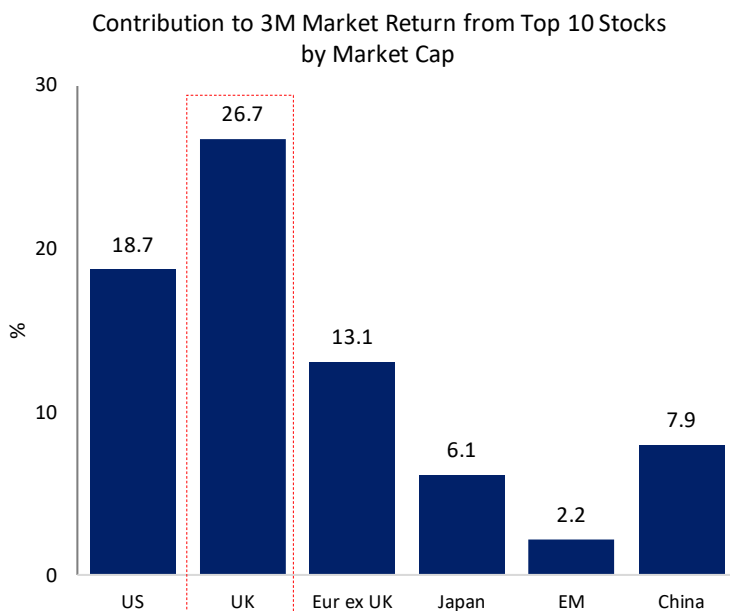


Chart 2: YTD the top 10 stocks have dominated YTD returns in the US relative to other regions

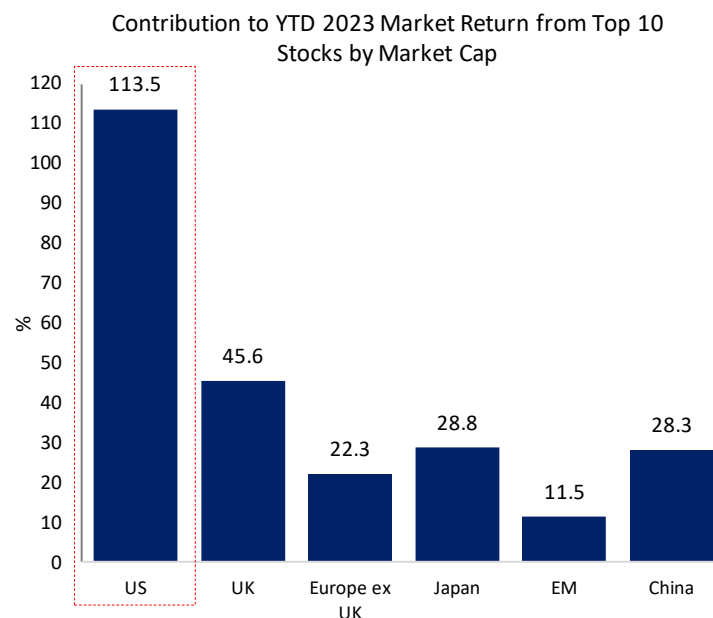


Chart 3: 3m vs YTD FT Wilshire regional index sector dispersion-US, UK, Europe ex UK and Japan

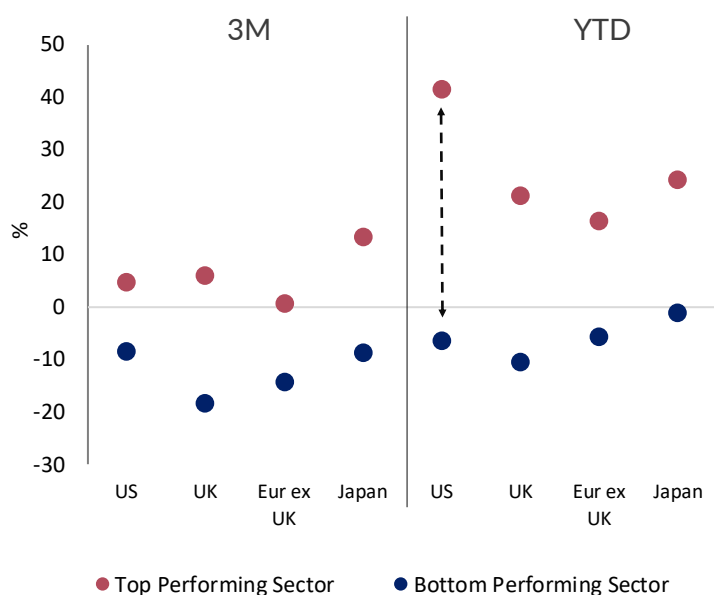
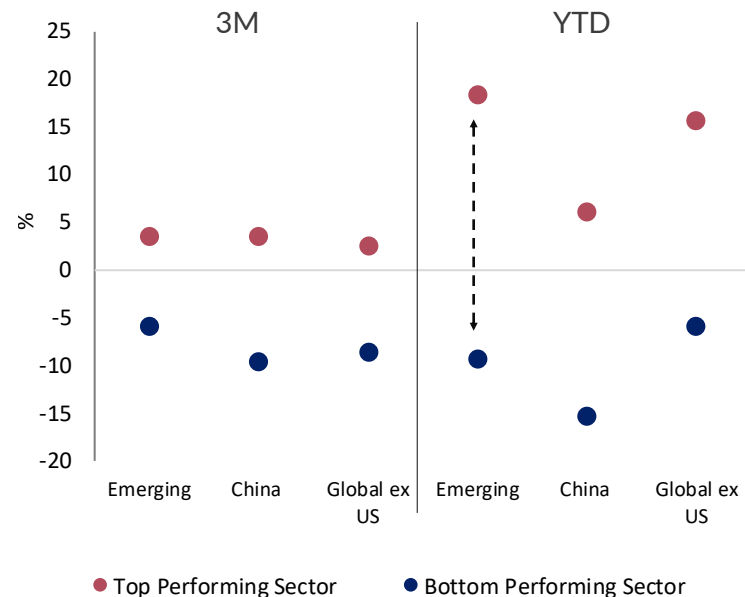


Chart 4: 3m vs YTD FT Wilshire regional index sector dispersion-Emerging markets, China and Global ex US



Sentiment and Technical analysis: US and Japan only markets yet to see a negative moving average intersect pattern following global market correction

Chart 1: FT Wilshire regional Relative Strength Indexes (RSI)-US registering an oversold RSI signal

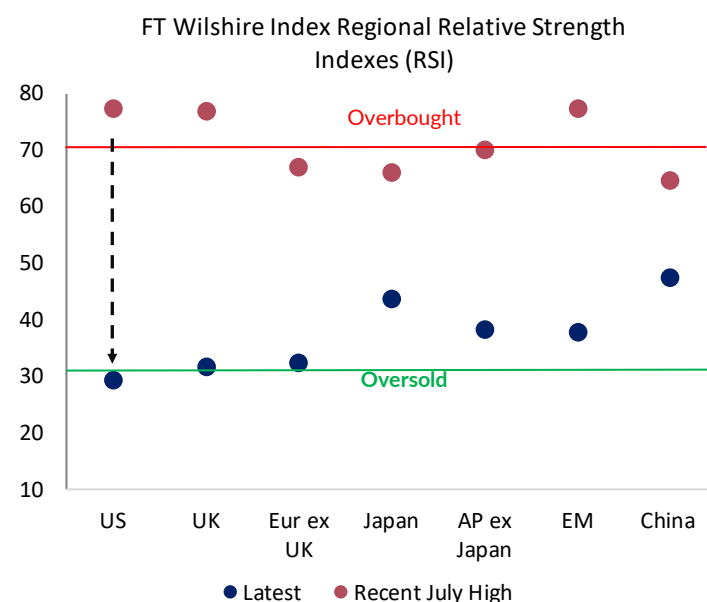


Chart 2: FT Wilshire Europe ex UK witnessed a negative 'Death Cross' moving average intersect pattern on the 17th October

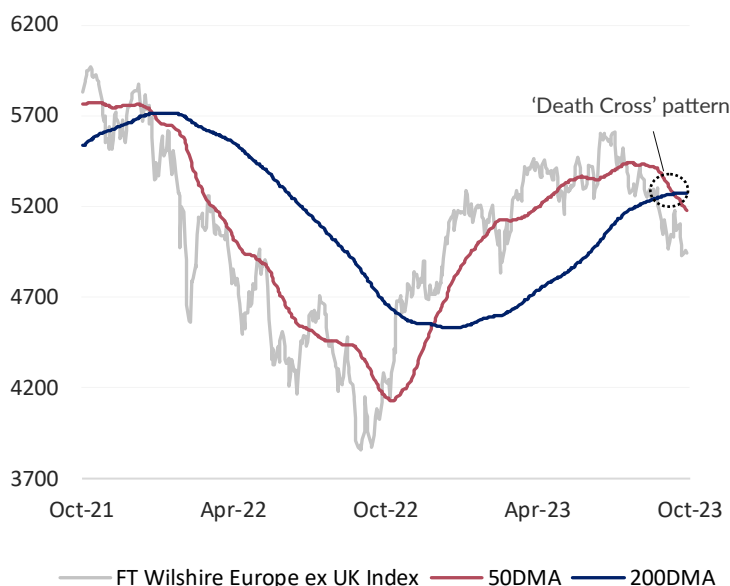


Chart 3: Regional spread between index 50 and 200DMA-US and Japan only markets not to see a negative moving average intersect

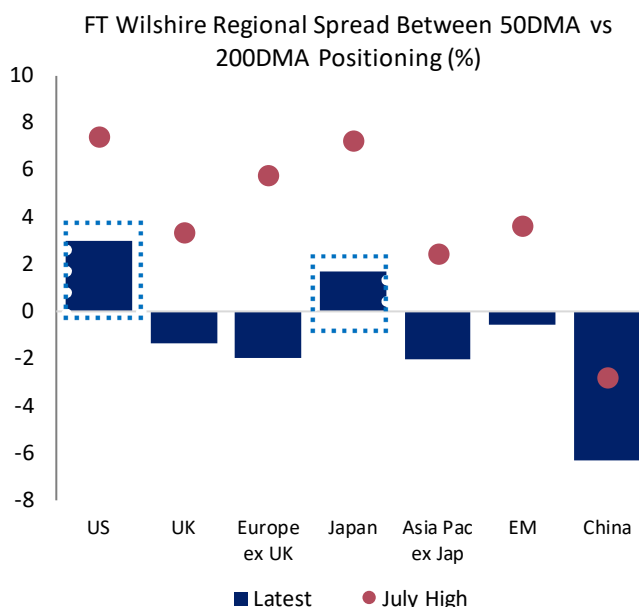
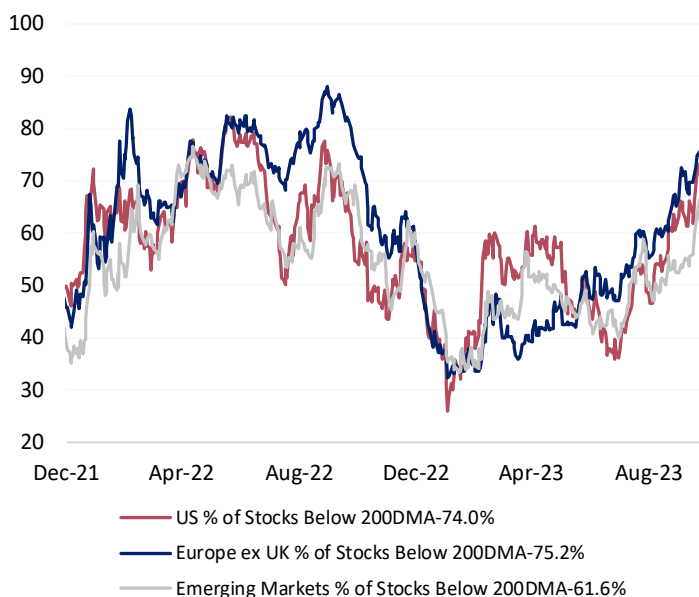
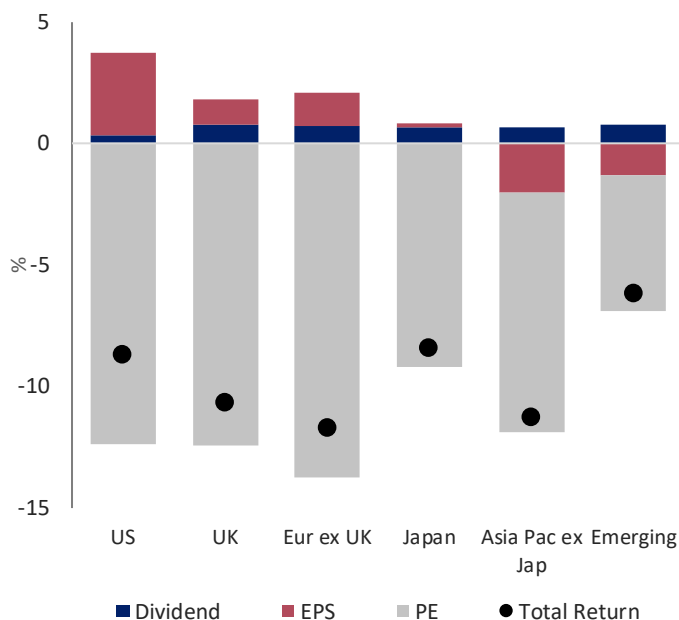


Chart 4: The percentage of stocks below their respective 200DMA in the US and Europe ex UK has hit the highest level of 2023 so far



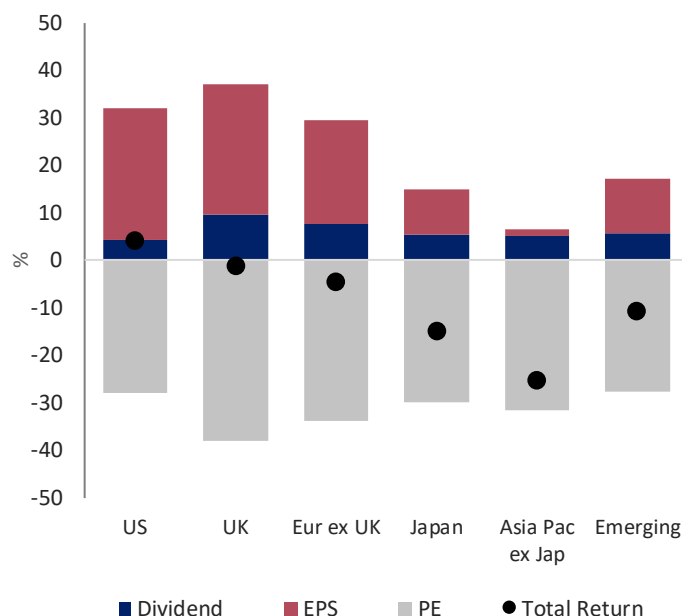
Perspectives: Regional total return decomposition over 3 months and since the 2021 PE peak. Examining regional large cap/small cap YTD return dynamics

Chart 1-3M total return decomp-PE de-rating drives returns across the main regions



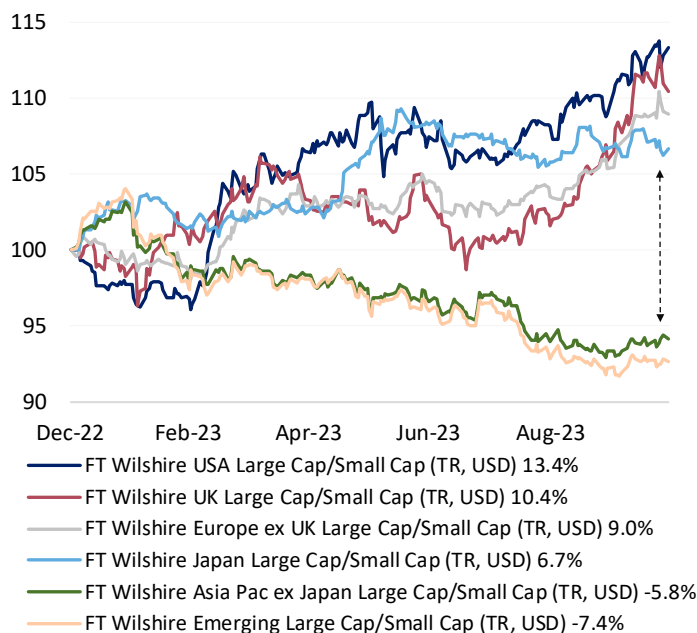
*Based on Factset data

Chart 2-Total return decomp from 2021 PE peaks-
US has seen price largely flat, a size PE de-rating but a significant rise in EPS since the 2021 peak



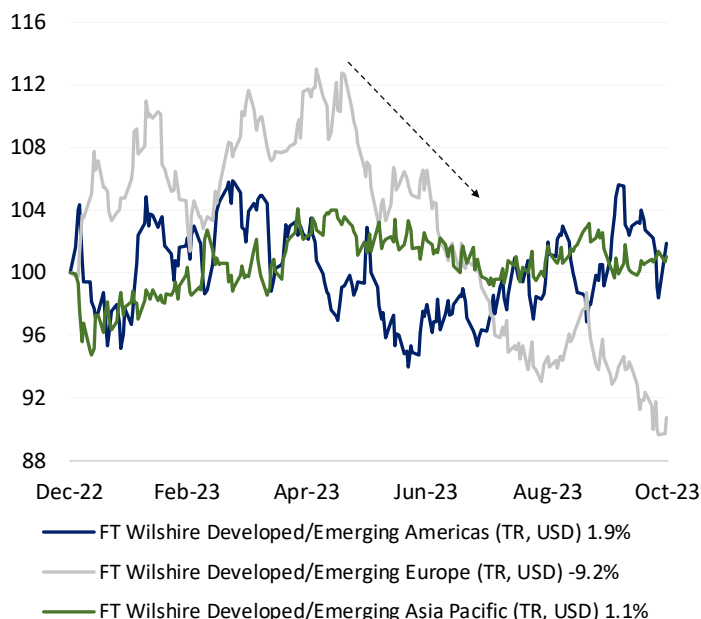
*Based on Factset data

Chart 3-Regional large cap relative to small cap YTD performance. Asia Pacific ex Japan and EM display different profile to US, Europe and Japan. UK see inflection in July



Source: Wilshire Indexes and FactSet. Data as of October 31, 2023

Chart 4-Regional Developed/Emerging market YTD performance-Developed Europe has significantly under-performance Emerging since May



Market Capitalization of major markets and Regional sector weighting comparisons

Chart 1: Markets size (USD, Bn) and weights - Top 12 countries

	Latest	% Global Index	10Y Ago	% Global Index
USA	39,599	60.8	19,130	47.9
Japan	3,766	5.8	2,920	7.3
UK	2,402	3.7	3,069	7.7
China	1,968	3.0	899	2.3
Canada	1,909	2.9	1,565	3.9
Switzerland	1,701	2.6	1,351	3.4
France	1,657	2.5	1,343	3.4
India	1,410	2.2	422	1.1
Australia	1,202	1.8	1,227	3.1
Taiwan	1,190	1.8	536	1.3
Germany	1,185	1.8	1,271	3.2
Korea	844	1.3	676	1.7
Global	65,178		39,942	

Chart 2: Markets size (USD, Bn) and weights - Regions as % of Global Index

	Latest	% Global Index	10Y Ago	% Global Index
Developed	57,672	88.5	35,324	88.4
USA	39,599	60.8	19,130	47.9
Europe ex UK	8,150	12.5	7,033	17.6
Asia Pacific ex Japan	7,751	11.9	5,043	12.6
Emerging	7,506	11.5	4,614	11.6
Japan	3,766	5.8	2,920	7.3
UK	2,402	3.7	3,069	7.7
China	1,968	3.0	899	2.3
Global	65,178		39,942	

Chart 3: Markets size (USD, Bn) and weights - Developed and Emerging markets

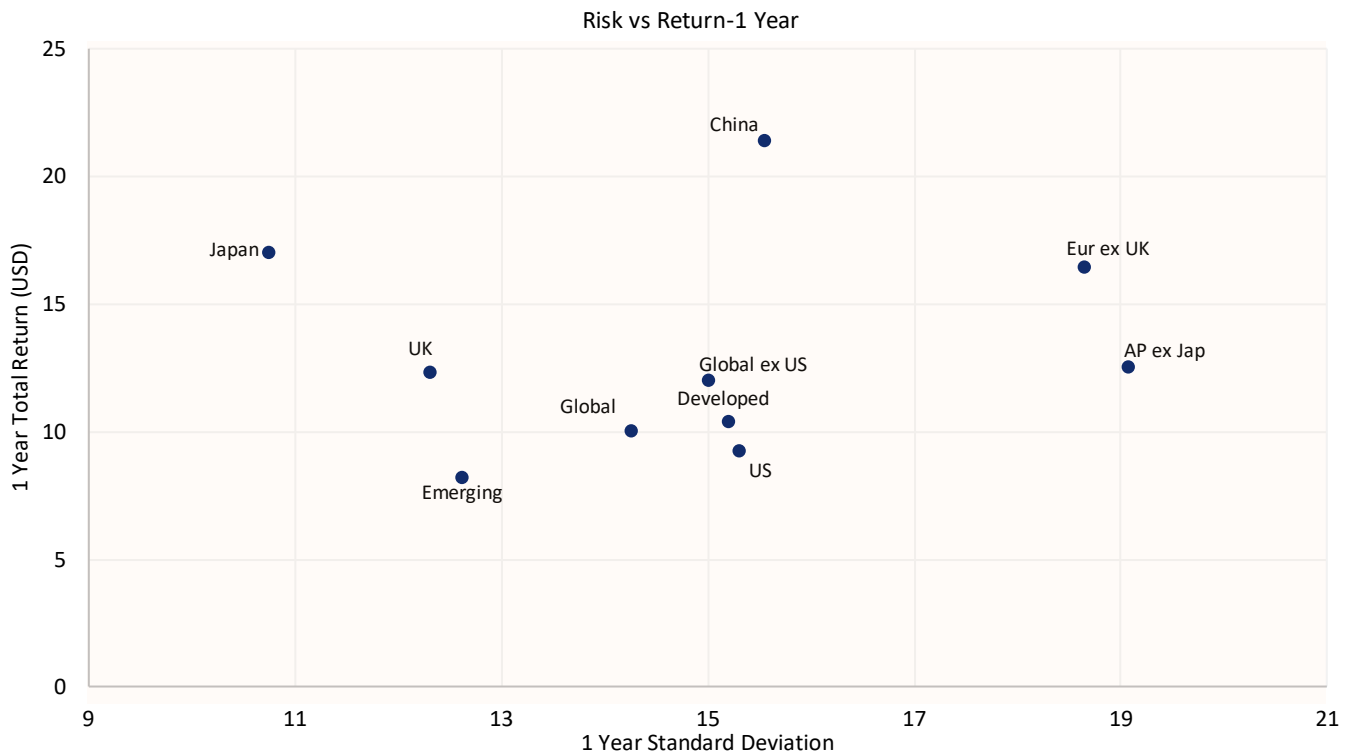
Developed	Latest	% Developed	10Y Ago	% Developed
USA	39,599	68.5	19,130	53.9
Japan	3,766	6.5	2,920	8.2
UK	2,402	4.2	3,069	8.7
Canada	1,909	3.3	1,565	4.4
Switzerland	1,701	2.9	1,351	3.8
Developed	57,833		35,469	

Emerging	Latest	% Emerging	10Y Ago	% Emerging
China	1,968	26.2	899	20.6
India	1,410	18.8	422	9.7
Taiwan	1,190	15.9	536	12.3
Korea	844	11.3	676	15.5
Brazil	396	5.3	502	11.5
Emerging	7,506		4,362	

Chart 4: Markets size (USD, Bn) - US vs Global ex US sectors

	US		Global ex US	
	Latest	%	Latest	%
Sector				
Digital Info	7,899	19.9	2,165	8.5
Financials	6,017	15.2	5,172	20.2
Technology	5,880	14.8	2,206	8.6
Consumer Good	4,718	11.9	2,987	11.7
Healthcare	4,402	11.1	2,214	8.7
Energy	2,836	7.2	2,391	9.3
Industrials	2,753	7.0	2,532	9.9
Res & Materials	1,421	3.6	2,264	8.8
Transportation	1,349	3.4	1,666	6.5
Agriculture	1,222	3.1	1,263	4.9
Real Estate	1,103	2.8	725	2.8
	39,599		24,862	

Risk vs Return: Regional equities 1 year and 10 years



Source: Wilshire Indexes. Data as of October 31, 2023

Fixed Income and FX

1

+91bps

3 month rise in US 10-year yield

2

+86bps

3 month rise in US 10-year real yield

3

+4.7%

Rise in DXY dollar index over 3 months

4

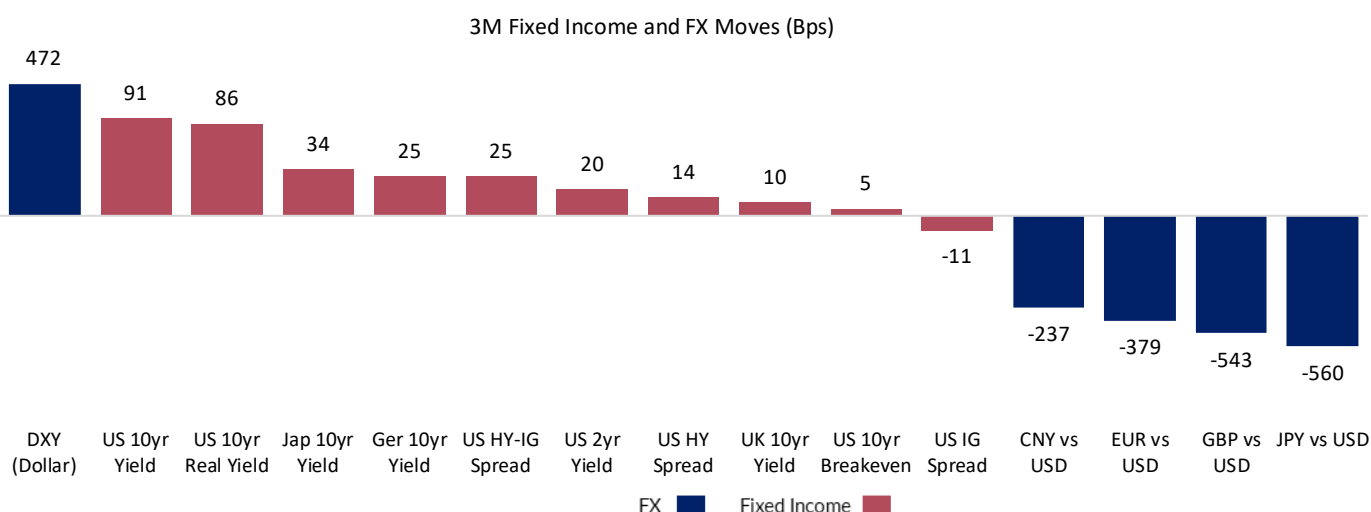
-11.3%

Decline in JPY vs USD YTD

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3 month moves in key FX and fixed income markets



Source: Refinitiv and FactSet. Data as of October 31, 2023

Wilshire Indexes - Performance Report (October 2023)

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	3M	YTD
US (1-3yr)	5.2	5.2	4.4	0.7	2.1
China (1-3yr)	2.3	2.2	2.3	-2.2	-3.0
EURO* (1-3yr)	3.2	3.3	2.4	-3.5	0.2
Italy (1-3yr)	4.0	3.9	3.2	-3.6	1.1
UK (1-3yr)	4.7	4.6	3.6	-4.1	2.3
Can (1-3yr)	4.8	5.0	3.9	-4.1	-0.6
Aus (1-3yr)	4.3	4.1	3.3	-6.0	-5.9
Japan (1-3yr)	0.0	0.0	0.0	-6.4	-13.0

Chart 2: 7-10 year government bond returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	3M	YTD
China (7-10yr)	2.7	2.7	2.8	-2.0	-1.6
EURO* (7-10yr)	2.8	2.7	2.4	-5.5	-0.7
US (7-10yr)	4.9	4.6	3.7	-5.7	-4.7
UK (7-10yr)	4.5	4.2	3.6	-5.8	-1.3
Italy (7-10yr)	4.7	4.4	4.3	-7.0	2.3
Can (7-10yr)	4.2	4.1	3.2	-8.0	-5.5
Japan (7-10yr)	0.7	0.6	0.4	-8.5	-14.7
Aus (7-10yr)	4.6	4.3	3.8	-10.7	-9.5

Chart 3: Inflation Linked bond returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	3M	YTD
US IL (5-10yr)	2.5	2.3	1.6	-4.1	-2.0
Japan* IL (5-10yr)	-0.7	-0.8	-0.6	-6.1	-9.9
UK IL (5-10yr)	1.0	0.6	0.2	-7.2	0.7
EURO* IL (5-10yr)	1.4	1.1	0.8	-7.5	-0.8
Italy IL (All)	2.4	2.0	1.9	-8.4	1.4
Aus IL (All)	1.8	1.2	0.6	-9.0	-5.1
Can IL (All)	2.3	2.2	1.3	-10.5	-11.3

Chart 4: Investment grade & high yield returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	3M	YTD
US HY (All)	9.5	8.9	8.7	-2.1	4.7
EURO HY (All)	8.0	7.4	7.6	-3.8	4.8
UK HY (All)	10.6	10.4	10.3	-4.1	9.6
EURO IG (All)	4.6	4.5	4.1	-4.4	1.8
US IG (All)	6.4	6.0	5.4	-4.9	-1.4
UK IG (All)	6.4	6.1	5.7	-6.0	1.9
Japan BBB (All)	1.5	1.4	1.6	-6.7	-11.6
Japan IG (All)	1.0	0.9	0.9	-7.2	-12.8

Fixed Income key observations: US real yields the driver behind the rise in nominal yields as the US 10-year tests the key 5% resistance level in October

Chart 1: The US has led a further rise in 10-year yields with markets pricing in US rate remaining higher for longer on the back of strong economic data

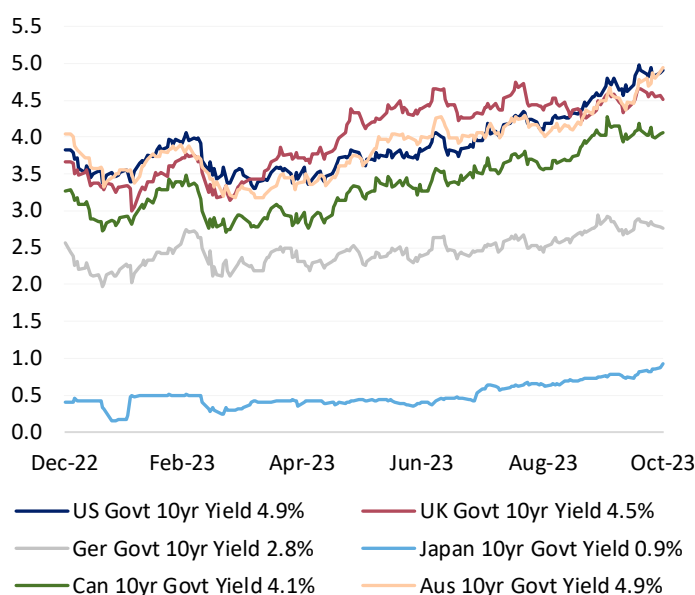


Chart 2: The US 10-year rose to its highest level since 2007 in October, briefly testing the 5% resistance level

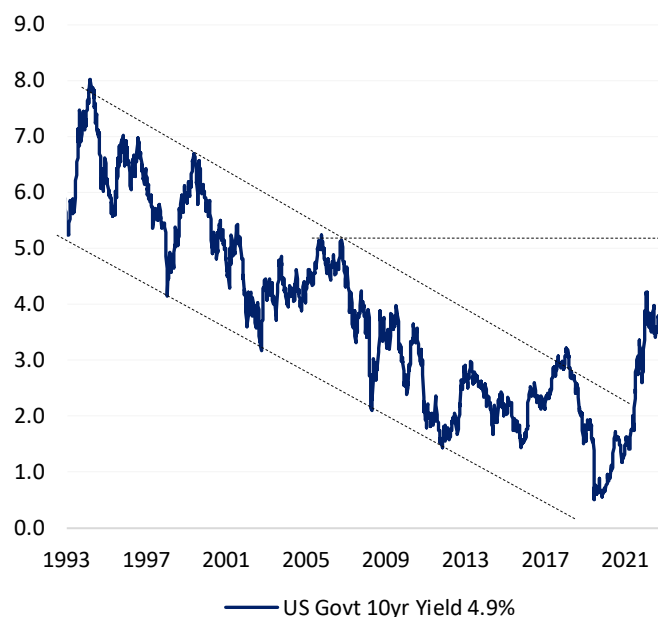


Chart 3: The 91 bps rise in the US 10-year yield over the last three months has been driven almost entirely by the 86 bps increase in real yields

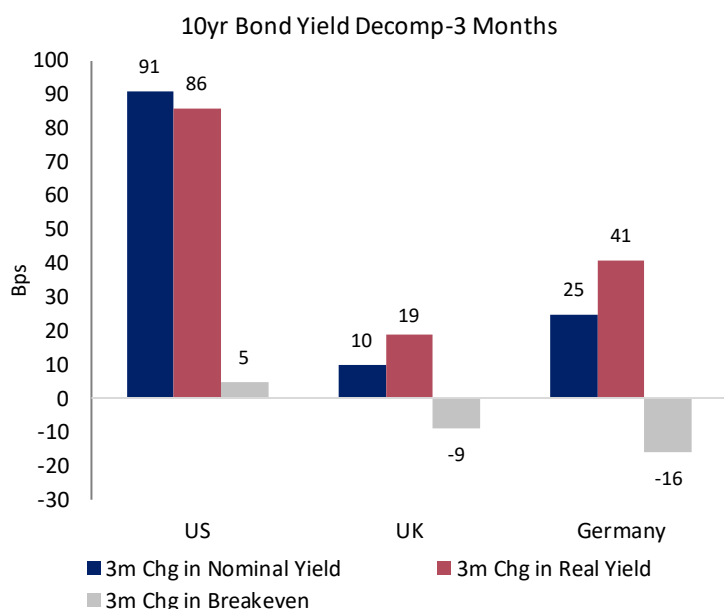


Chart 4: The rise in the US 10 year government bond yield has led to a decline (narrowing) in spreads over a the last 3 months. Only US HY credit spreads have seen a modest rise.

3m Shift in Spreads Over US 10-Year Bond (Bps)			
	Latest (Bps)	3m Ago (Bps)	Shift vs 3m Ago (Bps)
UK 10-Year - US 10-Year	-39.2	35.8	-75.0
German 10-Year - US 10-Year	-213.9	-148.2	-65.7
Japan 10-Year - US 10-Year	-398.5	-336.4	-62.1
US Investment Grade Corp - US 10-Year	150.0	159.0	-9.0
US High Yield Corp - US 10-Year	459.0	444.0	15.0

FX return perspectives: Rising US interest rate expectations and flight to safety help lift the dollar over the last three months

Chart 1: The DXY dollar has seen a 4.7% rise over the past three months

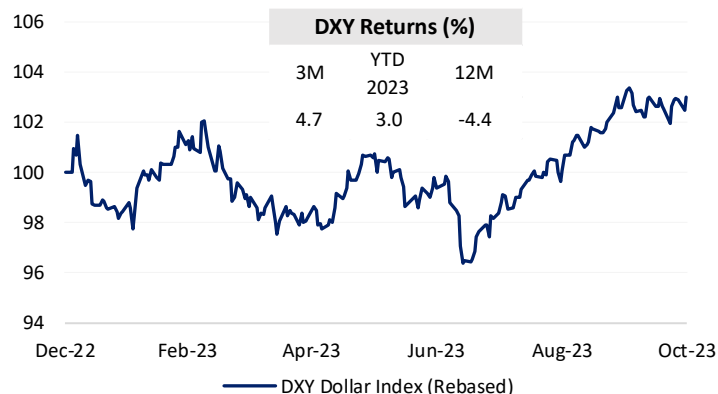


Chart 2: Although below its peak, the DXY dollar has still seen a 48.8% rise from the March 2008 lows

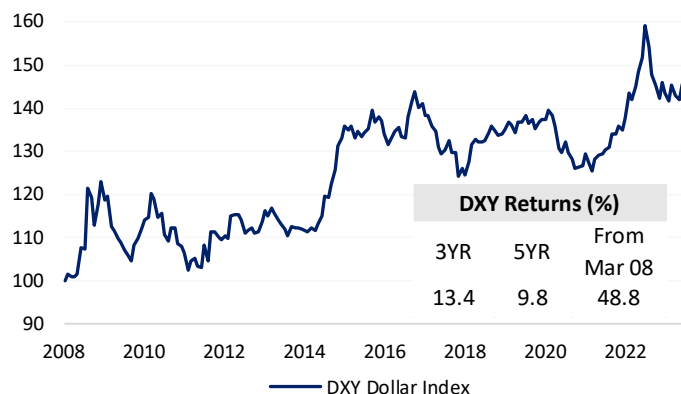


Chart 3: Regional trade-weighted FX returns-YTD (rebased)

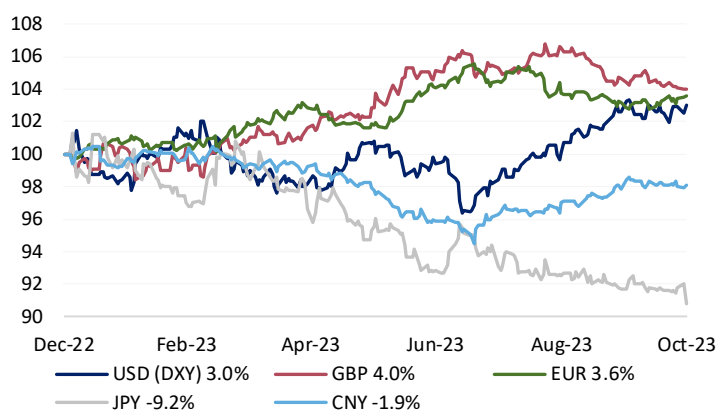


Chart 4: Regional trade-weighted FX returns over 5 years (rebased)

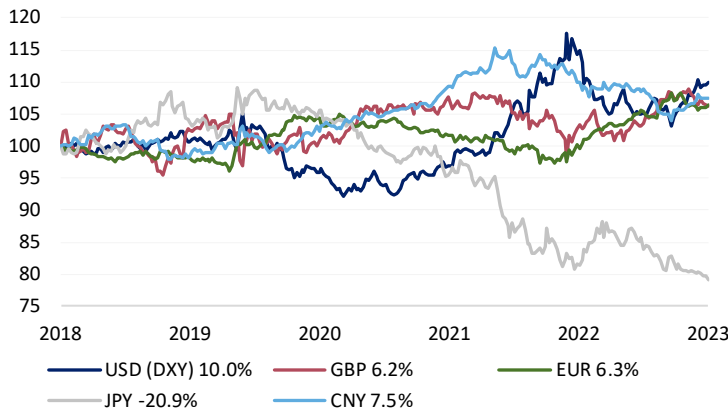


Chart 5: USD returns vs JPY, Euro, GBP and Renminbi spot rate-YTD (rebased)

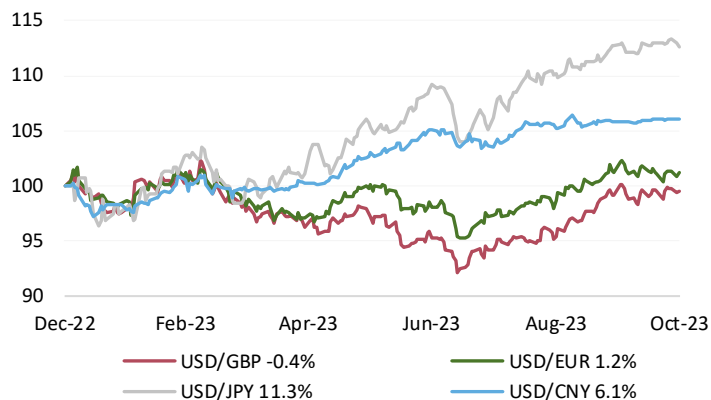
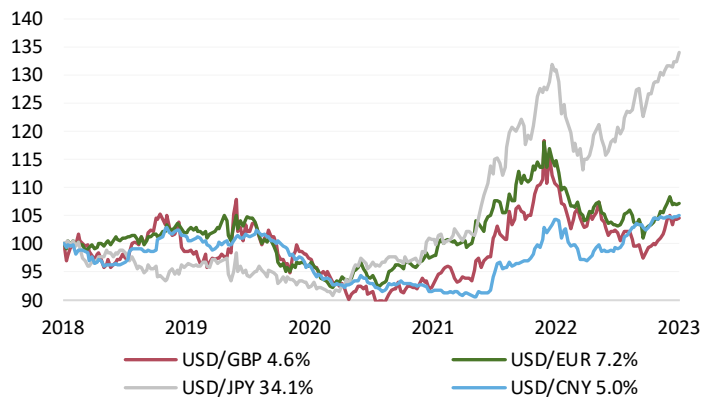


Chart 6: USD returns vs JPY, Euro, GBP and Renminbi spot rate returns over 5 years (rebased)



FX spot rate returns from a regional perspective

The dollar continued to make gains against most major currencies in recent months, helped by the higher for longer narrative and a flight to safe havens on the back of heightened geopolitical tensions between Israel and Hamas. Risk aversion in markets has also led to a rise in the Swiss franc, given its perceived safe haven status. The Japanese Yen has continued to depreciate, hitting new multi-decade lows against the dollar in October.

Moves vs USD (TR, %)	1M	3M	YTD
CHF	0.5	-4.2	1.6
EUR	0.1	-3.8	-1.2
CNY	0.0	-0.7	-3.0
JPY	0.0	-5.6	-11.3
GBP	-0.4	-5.4	0.4
AUD	-1.5	-5.7	-7.0
CAD	-2.1	-4.9	-2.3

Moves vs EUR (TR, %)	1M	3M	YTD
CHF	0.7	-0.6	2.7
JPY	0.0	-1.6	-11.3
CNY	0.0	1.7	-4.8
USD	-0.1	3.8	1.2
GBP	-0.4	-1.6	1.9
AUD	-1.7	-2.0	-5.7
CAD	-2.2	-1.2	-1.2

Moves vs CNY (TR, %)	1M	3M	YTD
CAD	2.0	2.7	-3.5
CHF	0.6	-2.1	7.9
EUR	0.0	-1.7	5.0
USD	0.0	0.7	3.0
GBP	0.0	-4.7	4.4
JPY	-1.3	-4.1	-9.1
AUD	-2.3	-3.8	-1.0

Moves vs AUD (TR, %)	1M	3M	YTD
CNY	2.3	3.8	1.0
EUR	1.7	2.0	5.7
USD	1.5	5.7	7.0
GBP	1.3	0.4	7.5
JPY	0.9	-1.3	-6.3
CAD	-0.6	0.8	5.0

Moves vs GBP (TR, %)	3M	1M	YTD
USD	5.4	0.4	-0.4
CNY	5.0	0.0	-4.2
EUR	1.7	0.4	-1.8
CHF	1.0	1.1	0.8
CAD	0.4	-1.8	-2.8
JPY	-0.4	0.4	-12.0
AUD	-0.4	-1.3	-7.5

Moves vs JPY (TR, %)	3M	1M	YTD
USD	5.6	0.0	11.3
CNY	4.1	1.3	9.1
CHF	2.3	1.4	15.3
EUR	1.6	0.0	11.3
CAD	1.3	-0.6	13.0
AUD	1.3	-0.9	6.3
GBP	0.4	-0.4	12.0

Moves vs CHF (TR, %)	3M	1M	YTD
USD	4.2	-0.5	-1.6
CNY	2.1	-0.6	-7.9
EUR	0.6	-0.7	-2.7
CAD	-0.7	-2.6	-3.8
GBP	-1.0	-1.1	-0.8
JPY	-2.3	-1.4	-15.3

Trade Weighted (TR, %)	3M	1M	YTD
DXY	4.7	0.4	3.0
CNY	1.6	0.3	-1.8
EUR	-0.6	0.3	1.1
GBP	-2.0	-0.6	4.2
JPY	-2.1	-0.1	-8.7
AUD	-2.7	-2.4	-3.2

Source: Refinitiv. Data as of October 31, 2023

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

1

+5.6%

3 month rise in oil price

2

+9.9%

Rise in gold price so far in 2023

3

-13.3%

Return of the Wilshire US REITs over 3 months

4

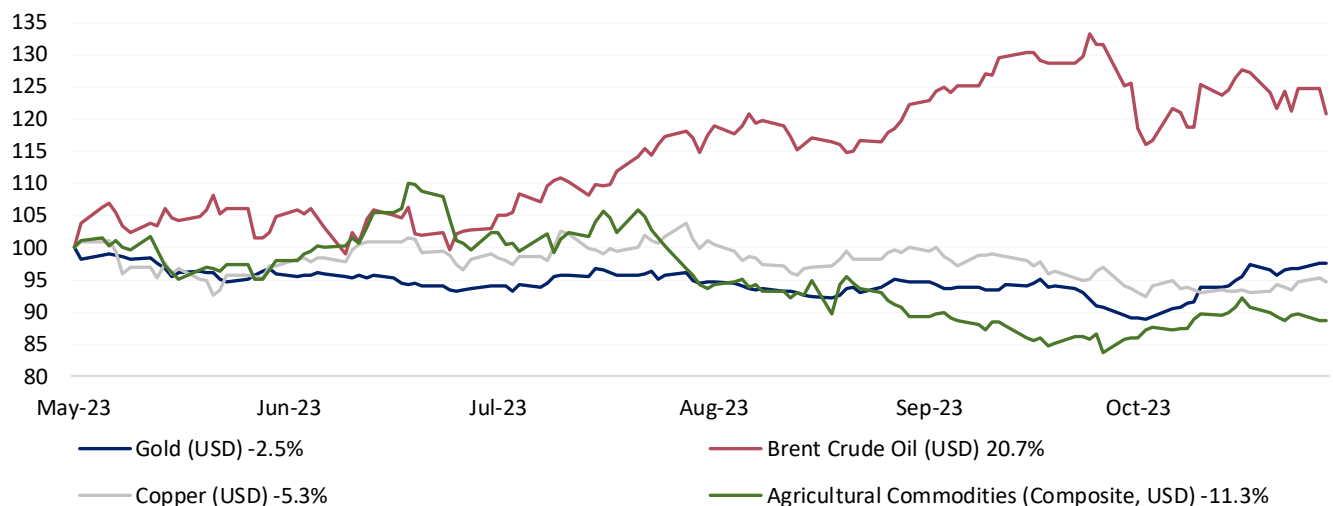
+87.9%

Rise in the FT Wilshire Digital assets index in YTD

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- 34 Commodities
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- 36 Absolute Return (Wilshire Liquid Alt)
- 37 Digital Assets
- 38 Risk/return analysis

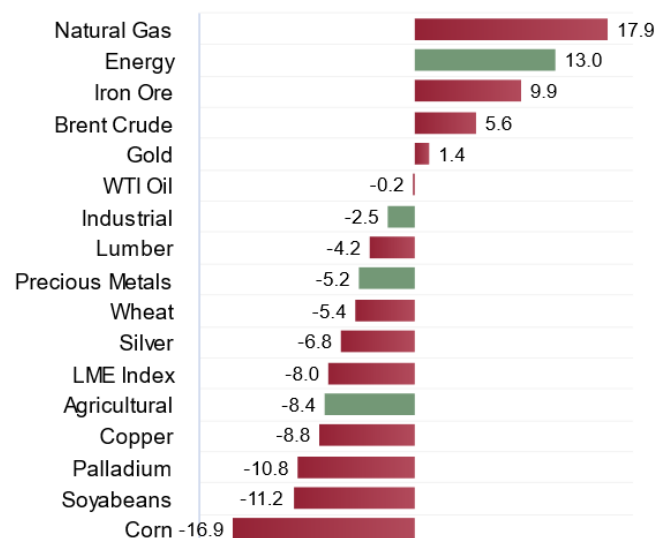
Commodity prices (rebased): Movements in gold, copper, oil and agricultural commodities from 4th May (recent gold price peak)



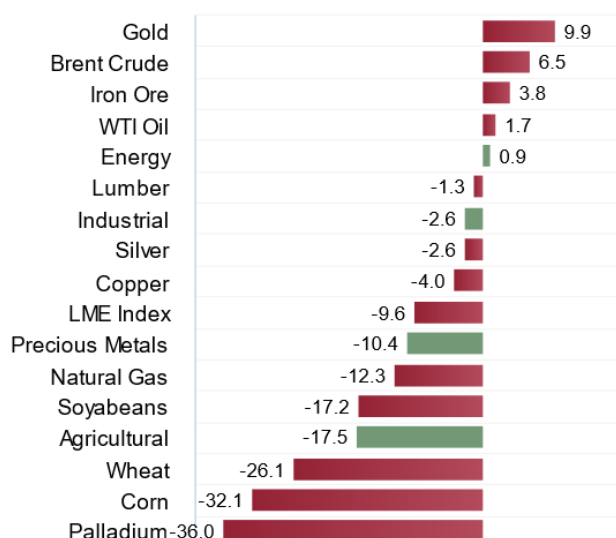
Commodities: Gold and oil both rise on heightened geopolitical concerns in October. Gold testing key \$2,000 resistance level

The gold price spiked higher in October despite rising real yields, as investors moved to safe haven assets following the heightened tensions between Israel and Hamas. This also (initially) led to oil moving higher, although Brent Crude remains below its recent peak hit on the 27th September (\$96.6).

3M USD (TR, %)



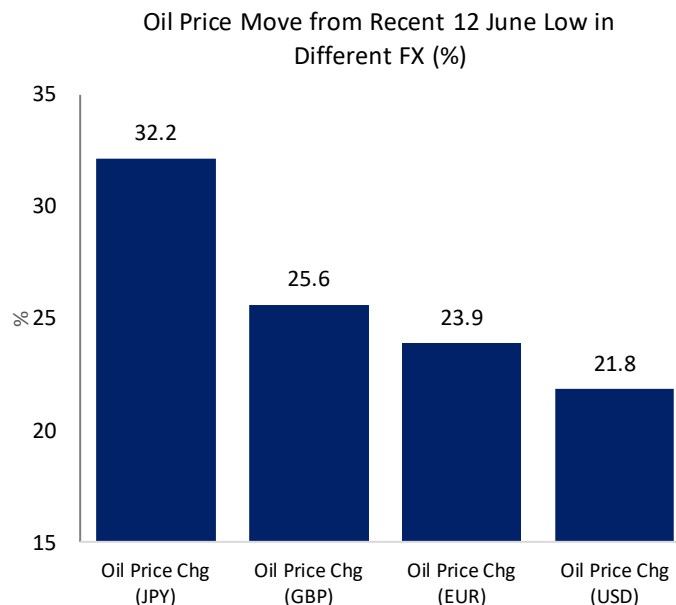
YTD USD (TR, %)



The gold price is against testing key resistance levels of around \$2000 after its recent spike higher



Oil price move adjusted for different FX impact from the 12 June low-over a 10% difference between oil price move in JPY and USD



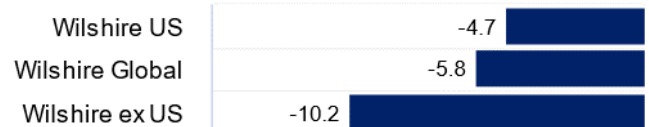
Property (Wilshire REIT indexes): Rising bond yields hit REIT returns as US office sector continues to underperform

Both US and non-US REITs saw double-digit declines over 3 months, hit by the backdrop of rising US bond yields. Within the US self-storage and office sectors were the worst performers. YTD the US office REITs sector has also significantly underperformed.

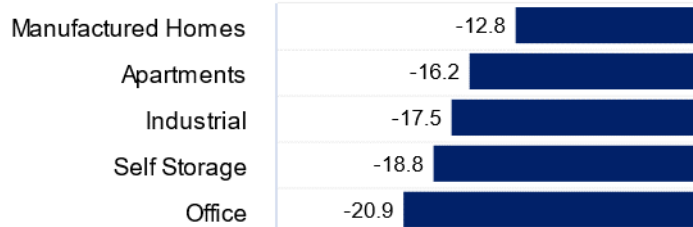
3M USD (TR, %)



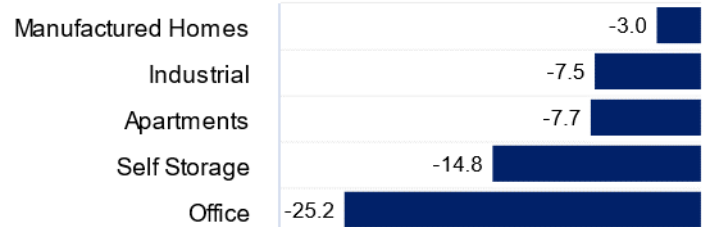
YTD USD (TR, %)



3M USD (TR, %)



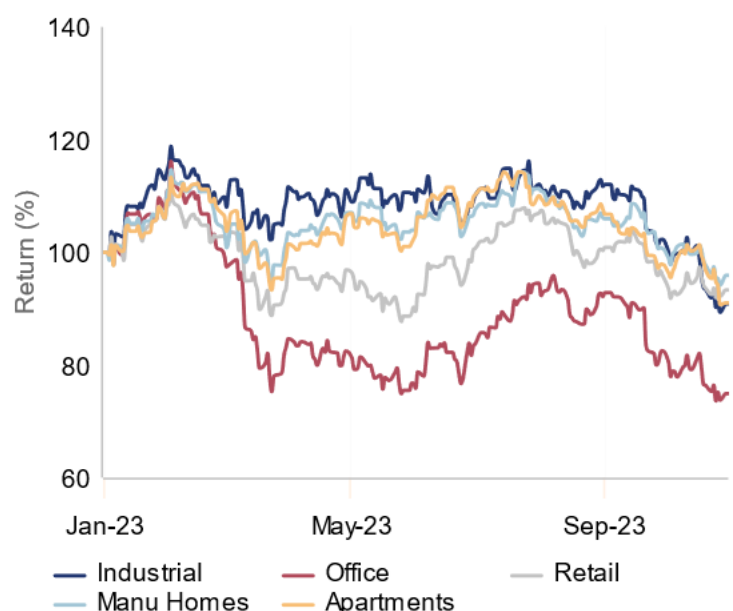
YTD USD (TR, %)



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



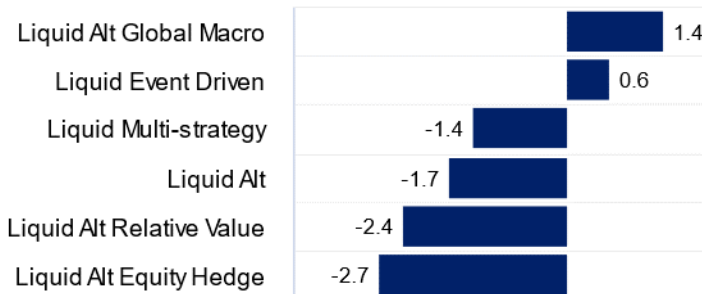
Wilshire US REIT sector performance - 12M
(Rebased, TR)



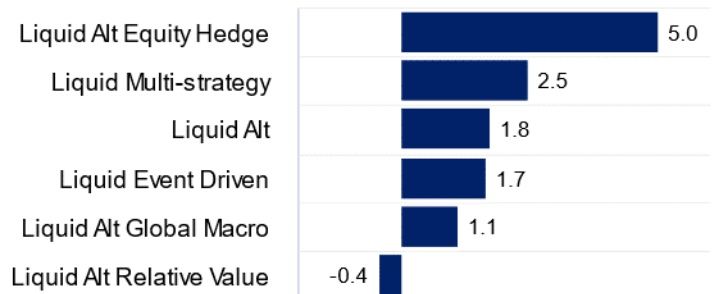
Wilshire Liquid Alternative Indexes (Absolute Return): Global Macro and Event Driven see small positive returns against the backdrop of equity market declines

Wilshire Liquid Alternative indexes benefitted from the volatility and decline in equity markets over the last three months, with Global Macro and Event Driven indexes posting modest positive returns. Despite underperforming over the last three months Equity Hedge remains the standout YTD performer.

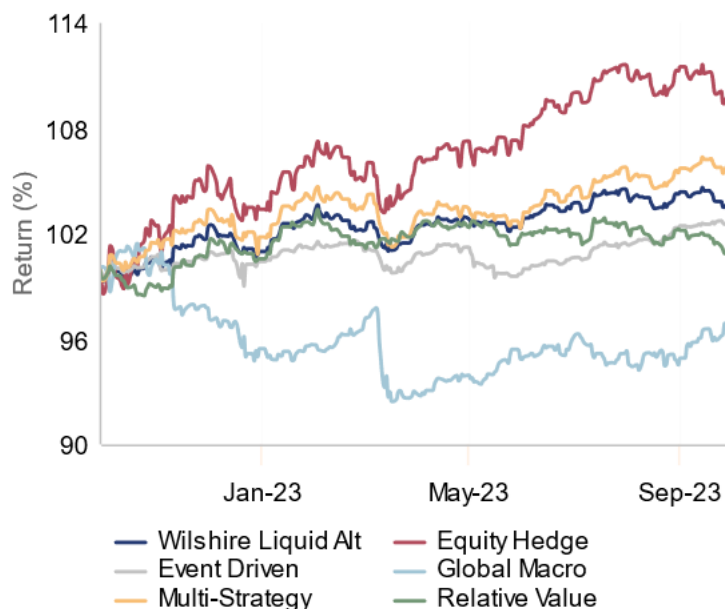
3M USD (TR, %)



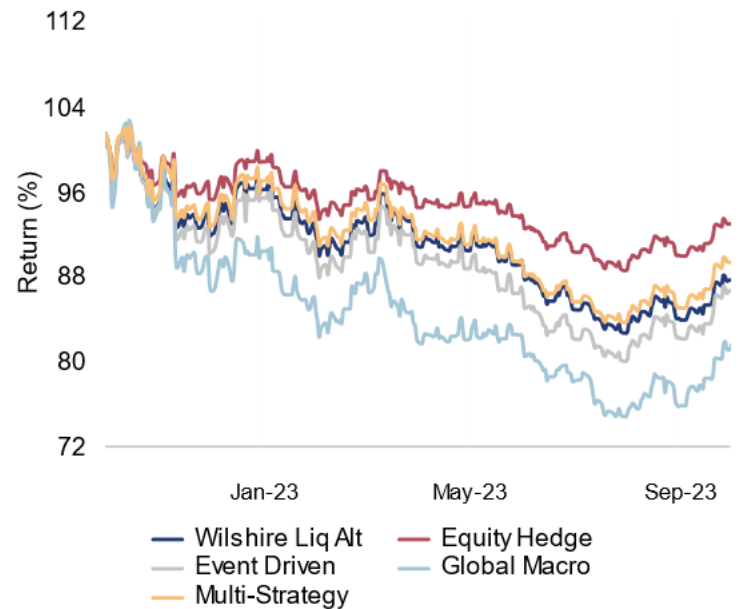
YTD USD (TR, %)



Wilshire Liquid Alternative Index performance - total returns (rebased)

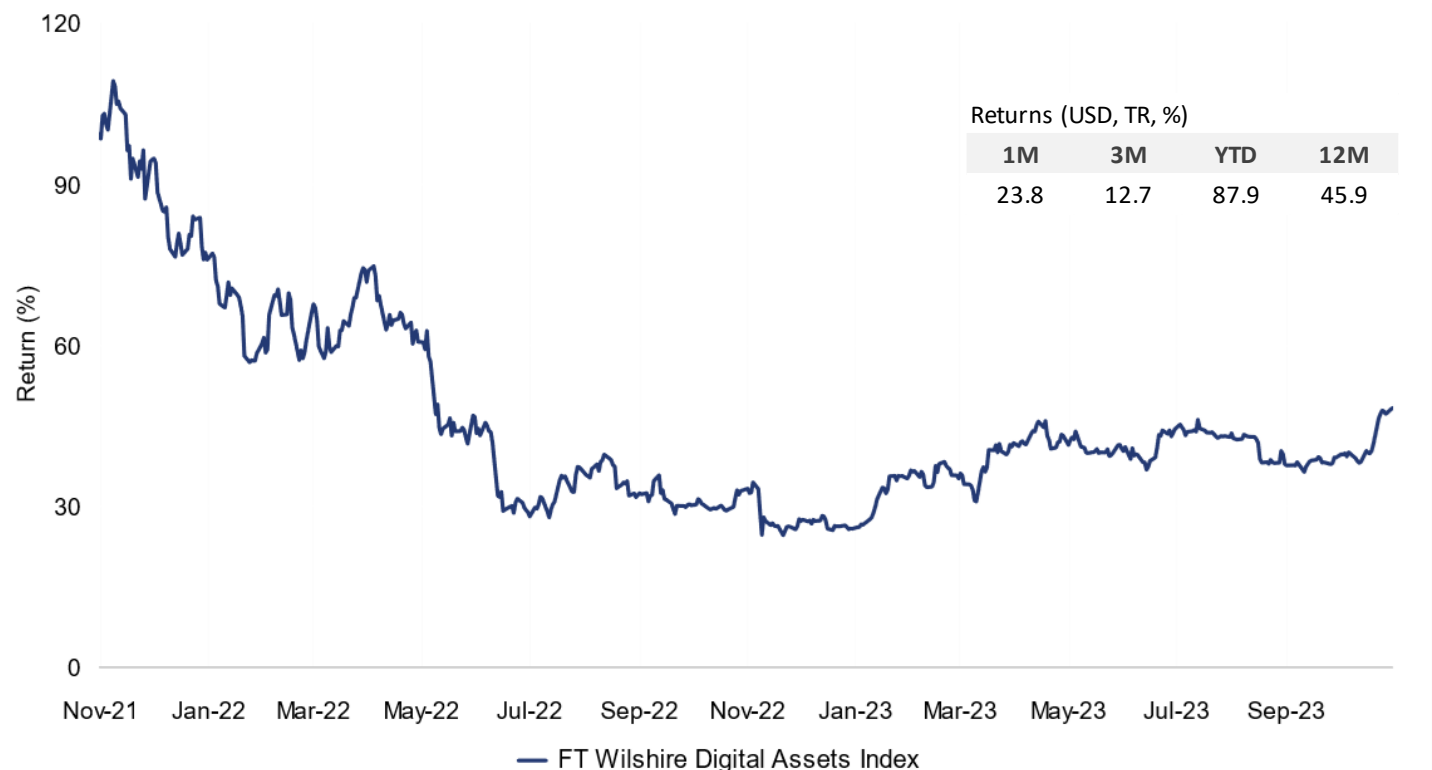


Wilshire Liquid Alternative Index relative performance vs FT Wilshire 5000 Index - total returns (rebased)

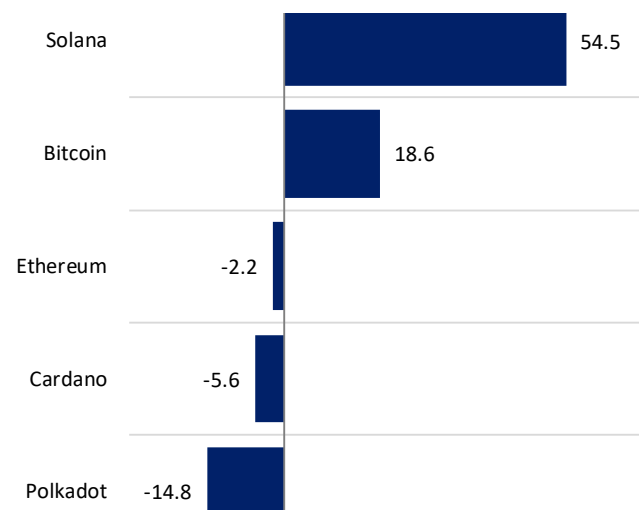


Digital Assets Index: Double-digit returns in October

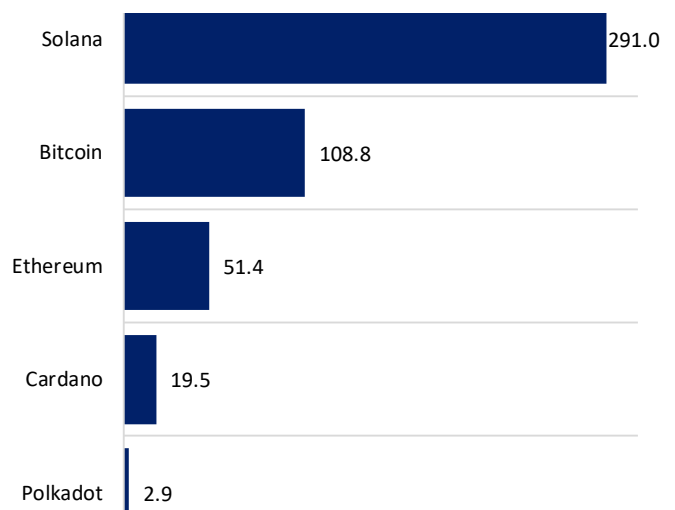
The FT Wilshire Digital Assets Index has seen strong returns, rising 23.8% in October and delivering a return of 12.7% over the last 3 months. The index is up 87.9% YTD.



FT Wilshire Digital Assets Index selected constituent performance - 3M (% , USD)

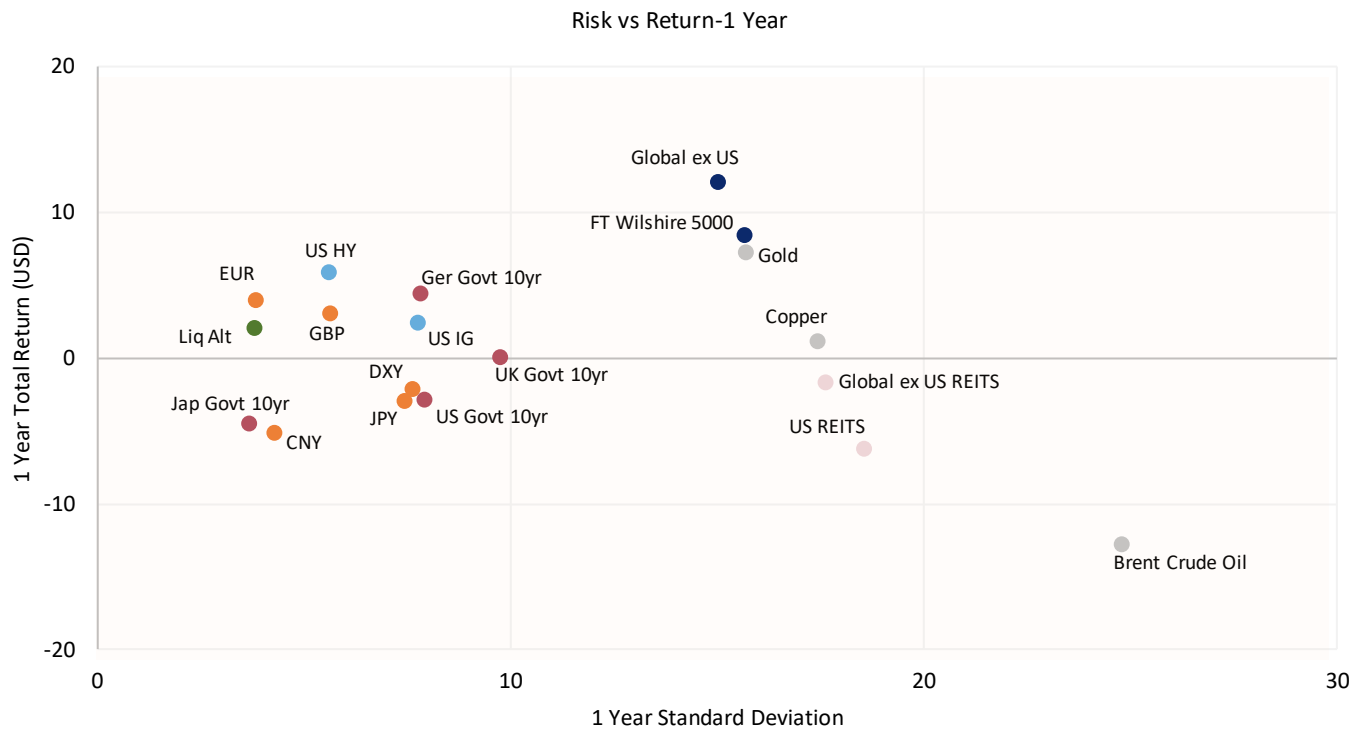


FT Wilshire Digital Assets Index selected constituent performance - YTD 2023 (% , USD)

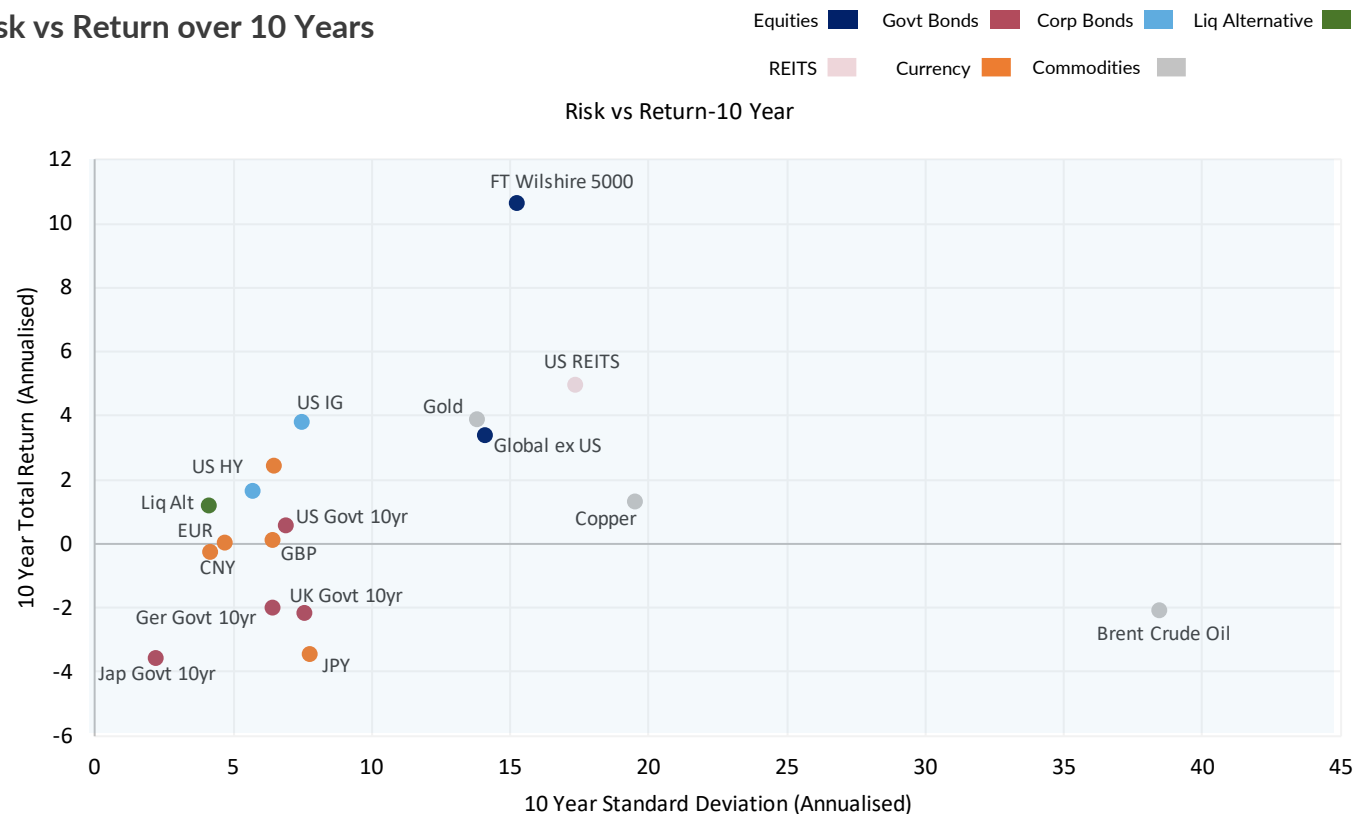


Multi Asset Class: Risk vs Return

Risk vs Return over 1 Year



Risk vs Return over 10 Years



Source: Wilshire Indexes, Refinitiv and FactSet. Data as of October 31, 2023

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