

September 30, 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

- The FT Wilshire 5000 saw its largest monthly decline of 2023 in September (-4.8%). The index fell -3.3% in Q3 but is up 12.5% YTD
- Value style (-2.8%) outperformed growth (-3.5%) in Q3. Large cap (-3.1%) outperformed small cap (-4.2%)
- Technology was the biggest drag on Q3 returns but the sector is still up 40.7% YTD

**-3.3%**

FT Wilshire 5000  
return in Q3 2023  
(TR)

**+12.5%**

FT Wilshire 5000  
YTD return (TR)

See [PAGE 4](#)

## Global Equities

- All major regions saw declines in Q3 with Japan outperforming (-1.1%). Europe ex UK (-5.5%) underperformed
- The US (+12.6%) and Japan (+10.9%) remain the top performers YTD (USD)
- The negative contribution from technology was the main drag on returns for both the US and Global ex US in Q3

**-5.5%**

Q3 2023 return of  
Europe ex UK  
equities (USD,TR)

**+10.0%**

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

See [PAGE 16](#)

## Fixed Income, Foreign Exchange

- The US 10-year bond yield spikes to its highest level since 2007 in Q3 as markets reassess 2024 US interest rate expectations
- The US 10-year yield rose by 74bps in Q3, driven by a 59bps rise in the real yields
- The dollar continued its rise in Q3, appreciating +4.0% against GBP

**+74bps**

Rise in US 10-year  
bond yield in Q3  
2023

**+3.2%**

Q3 2023 rise in the  
DXY dollar index

See [PAGE 28](#)

## Alternatives

- The oil price rises to a 10 month high driven by concerns over tightening supply
- US REITs declined in Q3 (-6.4%) with the Self Storage sector falling -12.0%
- FT Wilshire Digital Assets Index declined -12.0% in Q3 but has still risen 57.1% YTD

**+28.1%**

Rise in oil price in  
Q3 2023

**+57.1%**

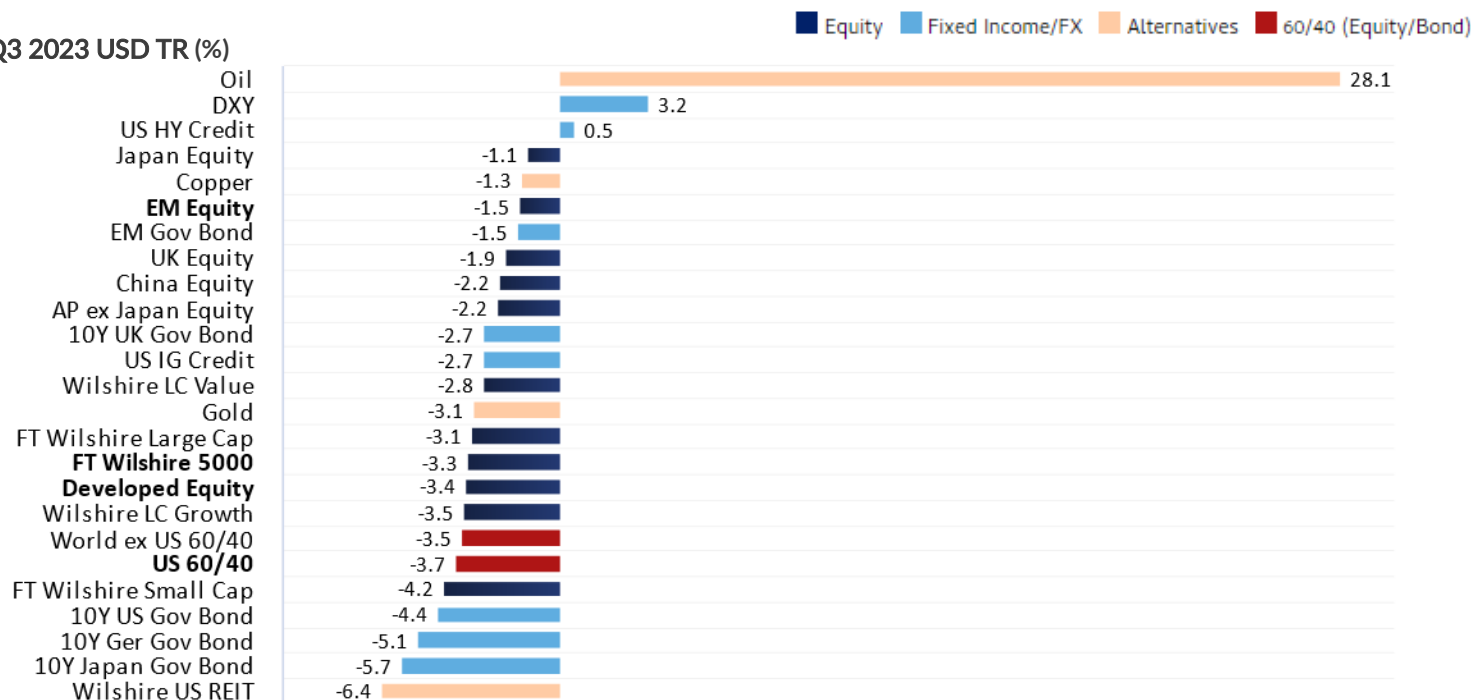
FT Wilshire Digital  
Assets Index return  
YTD

See [PAGE 33](#)

## Multi-Asset Class returns: Surging US bond yields thwart the equity market rally in Q3. Oil price spikes to 10 month high on tightening supply

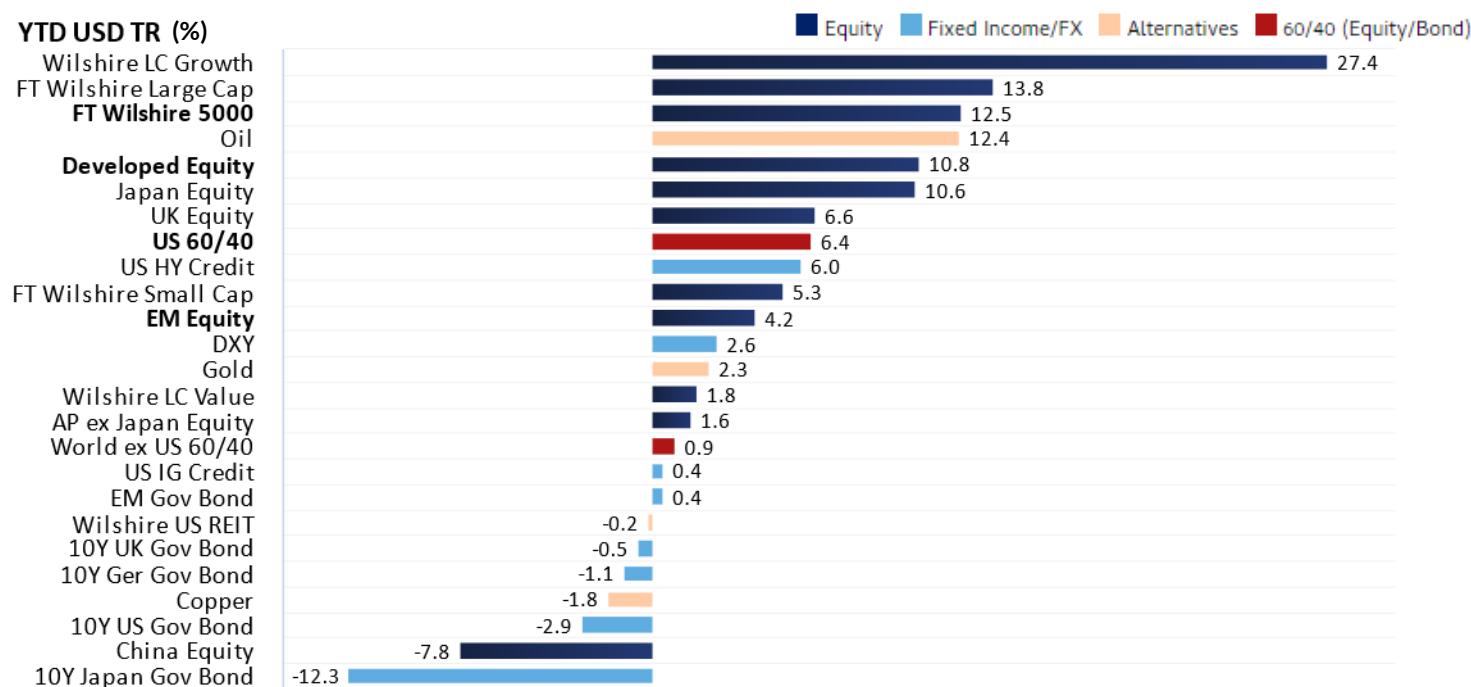
**Chart 1:** Q3 witnessed simultaneous declines in equities and bonds driven largely by markets recalibrating to the likelihood of US interest rates remaining higher for longer. The oil price continued to climb on supply cuts. The dollar delivered a positive return helped by rising US interest rate expectations

Q3 2023 USD TR (%)



**Chart 2:** Despite the pullback in Q3 US LC growth has delivered strong YTD returns. At a regional equity level the US and Japan have outperformed, China remains the laggard. US HY credit is the standout performer within fixed income, with Japanese government bonds (in USD) significantly underperforming

YTD USD TR (%)



Source: Wilshire, FactSet and Refinitiv. Data as of September 29, 2023

# FT Wilshire 5000 Index Insights

1

**-3.3%**

The return of the FT Wilshire 5000 in Q3 2023

2

**+12.5%**

Appreciation of the FT Wilshire 5000 YTD

3

**+25.6%**

Outperformance of Growth style versus Value YTD

4

**+40.7%**

Performance of the Technology sector YTD

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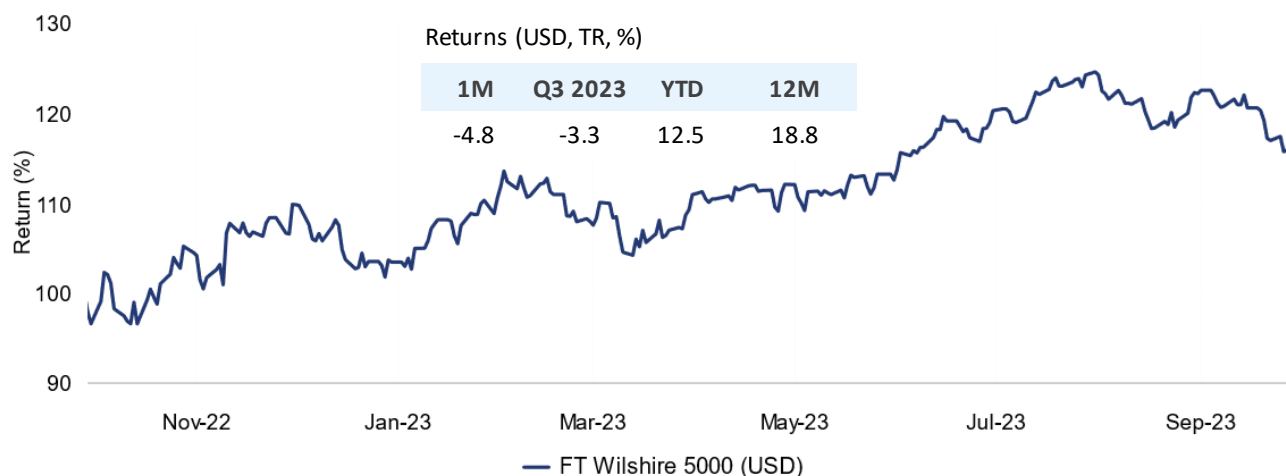
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The FT Wilshire 5000 index saw its largest monthly decline of 2023 in September, with Q3 the first quarterly decline for a year. A reassessment of the US interest rate trajectory for 2024 has disrupted the market rally and led to a surge in US bond yields. Despite the pull back in the third quarter the FT Wilshire 5000 is still up 12.5% year to date.



Source: Wilshire, FactSet. Data as of September 29, 2023

# FT Wilshire 5000 Key Observations: Higher for longer narrative rattles markets in Q3 as surging bond yields knock tech stocks off their perch

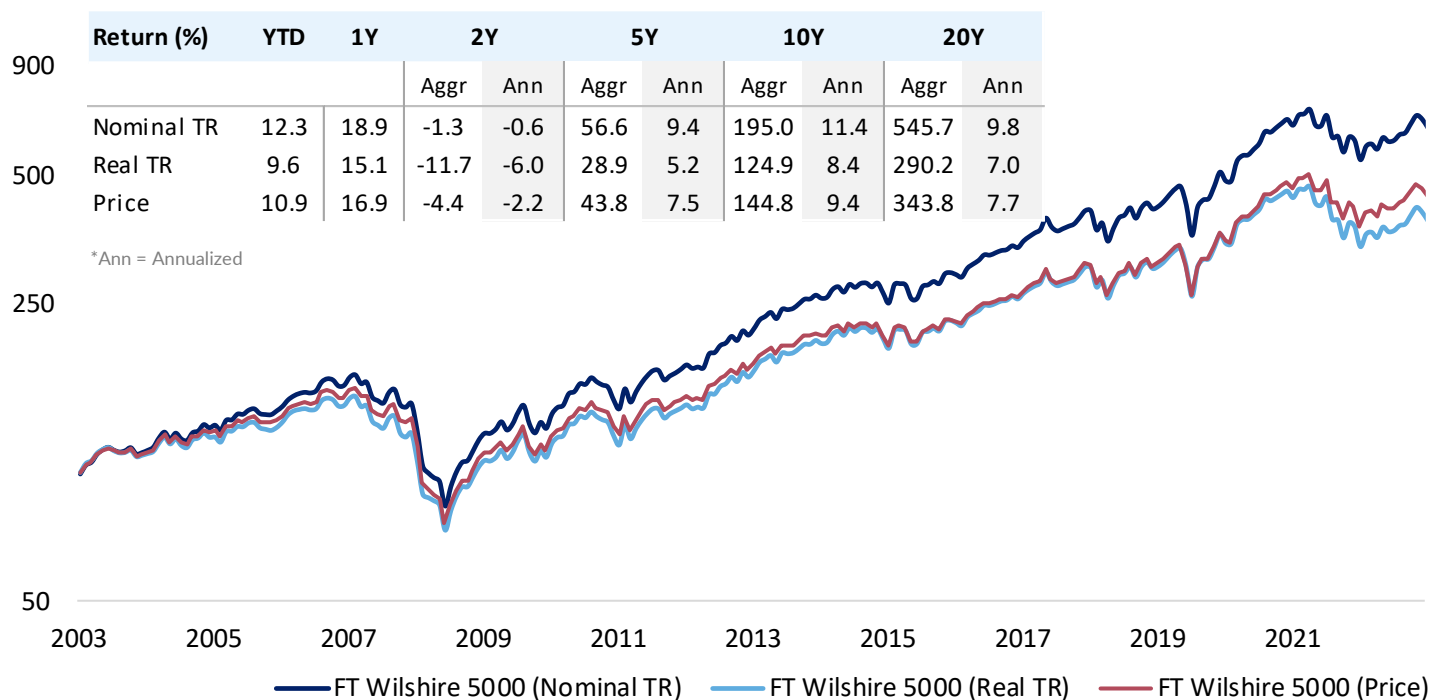
## Market snapshot

- ◆ The FT Wilshire 5000 fell -4.8% in September, -3.3% in Q3 but has delivered a return of 12.5% year to date in 2023. ([page 4](#))
- ◆ FT Wilshire large cap Value outperformed Growth in Q2. Large cap continues to outperform Small cap ([page 9](#))
- ◆ Technology lost some momentum in Q3 as bond yields rose. The sector was the biggest drag on Q3 returns but tech and digital info are still the dominant drivers of returns YTD ([page 8](#))
- ◆ Within the Pure factor space Quality continues to lead the way. Pure Value has significantly outperformed Value style YTD ([page 12](#))
- ◆ The contribution to returns from the 'Magnificent 7' stocks has fallen significantly in the recent months ([page 14](#))

## Chronology of Key Market Events in 2023

- ◆ January: Risk appetite buoyed by hopes of soft landing and the visibility of peak rates
- ◆ February: Fed caution against excessive interest rate optimism - markets retreat
- ◆ March: Silicon Valley Bank (SVB) collapses, markets slash US rate expectations
- ◆ March/April: AI theme turbo charges US market
- ◆ May: Debt ceiling brinkmanship
- ◆ June: Market rallies on Debt ceiling resolution. Strong economic data fuels 'Goldilocks' outlook narrative
- ◆ July: Weaker than expected US inflation helps boost risk appetite. US inflation falls to lowest in over 2 years
- ◆ August: Fed chair Powell strikes hawkish tone at Jackson Hole
- ◆ September: Markets reassess trajectory of US 2024 interest rates. Rise in bond yields rattles equity markets

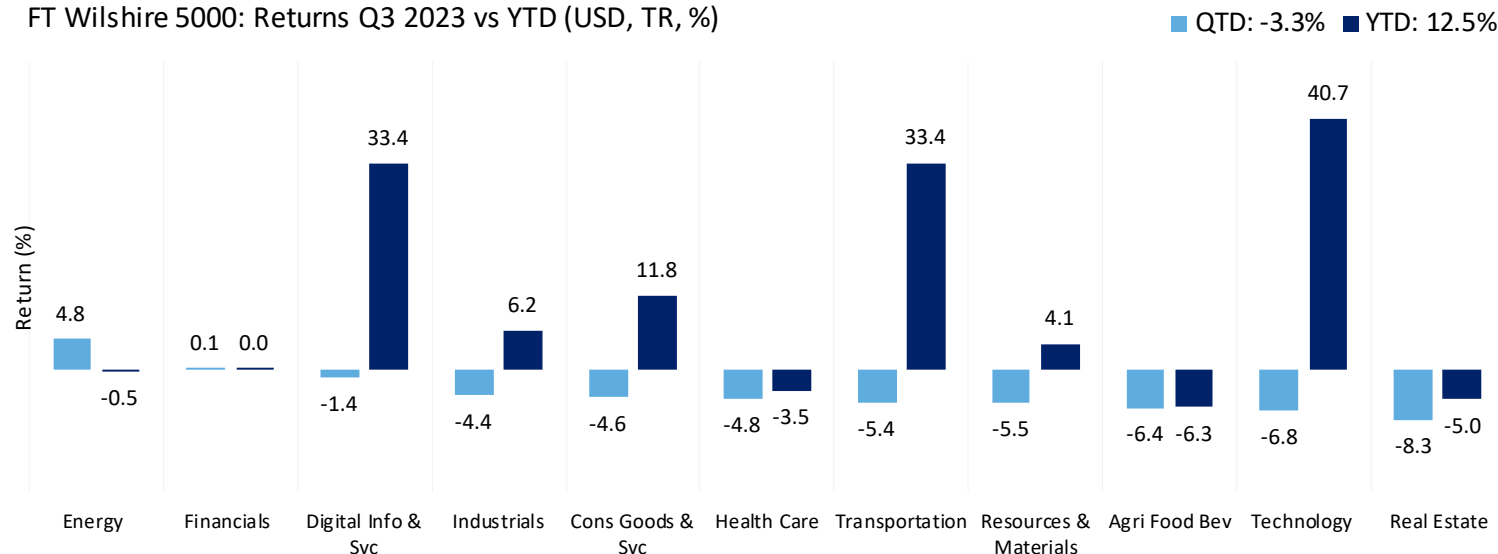
**Chart 1: FT Wilshire 5000 Real vs nominal total return** - despite the sizeable 2022 drawdown, US equities have delivered an 8.4% real annualized return over the last 10 years and 5.2% in the last 5 years



## Sector performance and contributions: Positive energy returns fail to offset the drag from technology in Q3. Tech and digital info still drive positive YTD returns

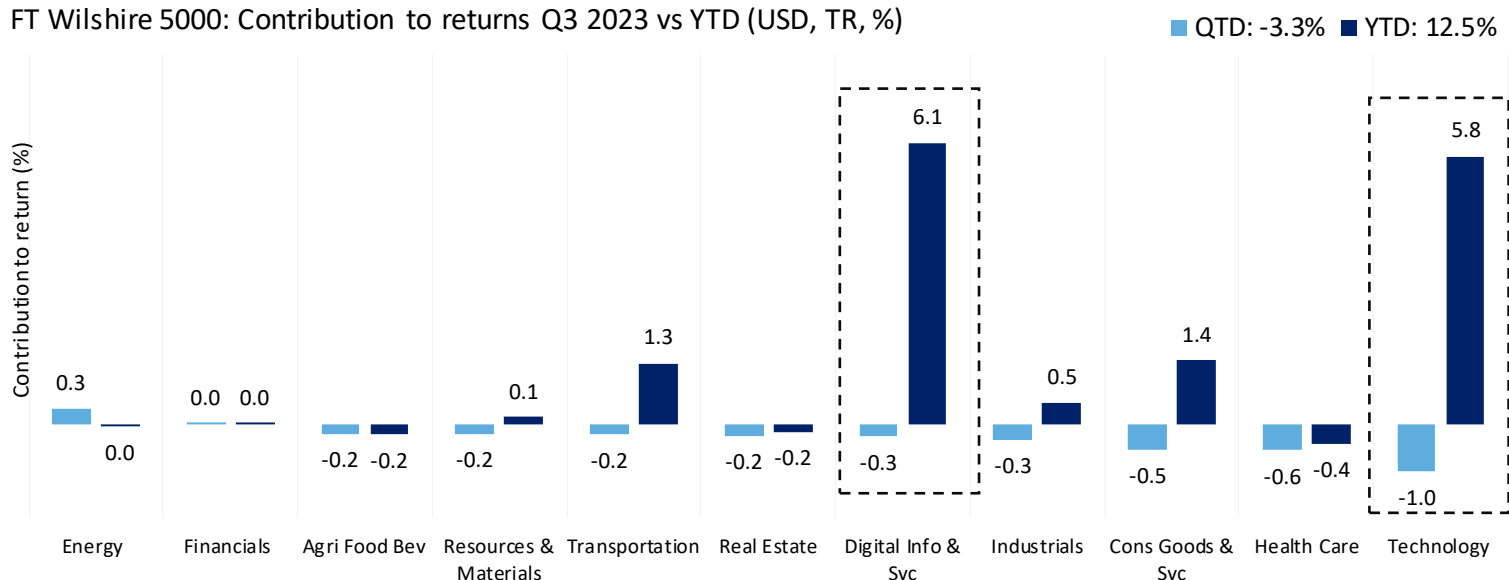
**Sector returns** Energy was the standout performer in Q3 aided by the strong rise in the oil price. Financials also saw a small positive return. The decline in the large technology sector was the key feature in Q3. Despite this, the sector has still delivered strong double-digit returns so far in 2023.

FT Wilshire 5000: Returns Q3 2023 vs YTD (USD, TR, %)



**Sector weighted contributions** blend sector performance with sector weighting to establish aggregate return drivers. A positive contribution from energy failed to offset the large negative contribution from technology in Q3. Technology and digital info remain by far the largest positive contributors to returns in 2023 (dark blue).

FT Wilshire 5000: Contribution to returns Q3 2023 vs YTD (USD, TR, %)





## Sector returns and weights across the FT Wilshire indexes: Technology declines hit large cap and growth but value benefits from higher energy exposure in Q3

**Q3 2023 sector returns and average weights across the FT Wilshire indexes:** Positive energy returns in Q3 particularly benefitted Value with its 12.6% weighting. Declines in technology hit large cap and growth the hardest, with exposures of 16.3% and 22.4%, respectively. Declines in health care and consumer goods (combined 23.4% weighting) were key drivers behind small cap underperformance.

Q3 2023	FTW 5000		Large Cap		Small Cap		Micro Cap		Growth		Value	
	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts
Energy	4.8	6.9	4.3	6.7	3.9	8.6	9.7	6.4	4.1	1.2	4.5	12.6
Financials	0.1	14.8	-0.3	14.7	1.1	14.7	-2.2	20.0	-1.7	8.5	0.2	21.4
Digital Info & Svc	-1.4	19.0	-1.3	20.2	-10.2	10.9	-10.7	7.3	-1.5	31.4	-0.4	8.0
Industrials	-4.4	7.4	-4.3	6.7	-6.8	12.7	-2.6	11.9	-3.7	4.2	-4.5	9.4
Cons Goods & Svc	-4.6	11.7	-4.4	11.5	-9.5	12.9	-2.6	10.2	-3.1	12.2	-6.1	10.8
Health Care	-4.8	11.5	-3.3	11.5	-15.4	10.5	-15.5	23.2	-2.7	11.2	-3.9	11.7
Transportation	-5.4	4.2	-5.2	4.1	-7.6	4.8	-4.8	3.5	-2.3	4.3	-8.4	3.9
Resources & Materials	-5.5	3.6	-5.9	2.9	-5.7	9.0	-3.2	6.3	-6.2	1.6	-5.7	4.3
Agri Food Bev	-6.4	3.1	-6.6	3.2	-3.2	2.3	-5.9	1.5	-4.1	0.5	-6.9	6.2
Technology	-6.8	15.0	-6.7	16.3	-10.3	6.4	-14.1	5.2	-7.1	22.4	-5.5	9.6
Real Estate	-8.3	2.9	-9.2	2.3	-8.8	7.3	-8.2	4.7	-9.7	2.4	-8.6	2.1
<b>Market</b>	<b>-3.3</b>		<b>-3.1</b>		<b>-4.2</b>		<b>-6.6</b>		<b>-3.5</b>		<b>-2.8</b>	

**YTD 2023 Sector returns and average weights across the FT Wilshire indexes:** Despite the pull back in Q3 technology and digital info (high exposure in large cap and growth) remain amongst the standout performers delivering strong positive year to date returns.

YTD	FTW 5000		Large Cap		Small Cap		Micro Cap		Growth		Value	
	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts	Return	Wghts
Technology	40.7	14.2	42.4	15.4	15.3	6.2	0.2	5.1	52.4	21.1	23.6	9.5
Transportation	33.4	4.0	37.6	3.9	12.2	4.6	2.4	3.6	92.0	3.8	3.6	3.9
Digital Info & Svc	33.4	18.2	35.3	19.4	4.1	10.6	-6.6	7.1	39.4	30.7	19.0	8.0
Cons Goods & Svc	11.8	11.7	12.7	11.5	3.1	13.0	8.3	10.0	23.0	12.6	-0.8	10.8
Industrials	6.2	7.4	4.9	6.7	8.7	12.5	11.6	11.1	14.1	4.1	1.6	8.9
Resources & Materials	4.1	3.6	1.8	2.9	8.5	8.9	1.8	6.3	-0.3	1.7	2.9	4.2
Financials	0.1	15.3	0.5	15.3	-2.3	15.1	-12.9	20.6	2.6	9.1	-0.8	21.6
Energy	-0.5	7.3	-1.3	7.1	0.3	8.8	5.6	6.3	0.4	1.4	-1.3	13.0
Health Care	-3.5	12.0	-3.0	12.0	-7.2	10.6	-12.3	23.8	2.2	12.0	-7.6	11.7
Real Estate	-5.0	3.1	-6.4	2.4	-4.2	7.6	-7.7	4.8	-7.8	2.7	-4.8	2.1
Agri Food Bev	-6.3	3.3	-7.3	3.5	5.4	2.3	1.4	1.4	2.1	0.7	-8.3	6.3
<b>Market</b>	<b>12.5</b>		<b>13.8</b>		<b>5.3</b>		<b>-4.4</b>		<b>27.4</b>		<b>1.8</b>	

## Sector-weighted contributions across the FT Wilshire indexes: Superior positive contribution from energy helps drive value outperformance in Q3

**Q3 2023 sector-weighted performance contributions across the FT Wilshire indexes:** The Superior positive contribution from energy and a smaller drag from technology were the key drivers of value outperformance relative to growth in Q3. A larger drag from health care and consumer goods drove the underperformance of small cap relative to large cap.

Q3 2023	FTW 5000	Large Cap	Small Cap	Micro Cap	Growth	Value
	Contr	Contr	Contr	Contr	Contr	Contr
Energy	0.3	0.3	0.3	0.6	0.0	0.6
Financials	0.0	0.0	0.2	-0.4	-0.1	0.1
Agri Food Bev	-0.2	-0.2	-0.1	-0.1	0.0	-0.4
Resources & Materials	-0.2	-0.2	-0.5	-0.2	-0.1	-0.2
Transportation	-0.2	-0.2	-0.4	-0.2	-0.1	-0.3
Real Estate	-0.2	-0.2	-0.6	-0.4	-0.2	-0.2
Digital Info & Svc	-0.3	-0.3	-1.1	-0.8	-0.5	0.0
Industrials	-0.3	-0.3	-0.9	-0.3	-0.2	-0.4
Cons Goods & Svc	-0.5	-0.5	-1.2	-0.3	-0.4	-0.7
Health Care	-0.6	-0.4	-1.6	-3.6	-0.3	-0.5
Technology	-1.0	-1.1	-0.7	-0.7	-1.6	-0.5
<b>Market</b>	<b>-3.3</b>	<b>-3.1</b>	<b>-4.2</b>	<b>-6.6</b>	<b>-3.5</b>	<b>-2.8</b>

**YTD sector-weighted performance contributions across the FT Wilshire indexes:** Strong positive contributions from the large digital info and technology sectors remains the drivers behind the outperformance of the FT Wilshire 5000, large cap and growth indexes so far in 2023

YTD	FTW 5000	Large Cap	Small Cap	Micro Cap	Growth	Value
	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	6.1	6.8	0.4	-0.5	12.1	1.5
Technology	5.8	6.5	0.9	0.0	11.1	2.3
Cons Goods & Svc	1.4	1.5	0.4	0.8	2.9	-0.1
Transportation	1.3	1.5	0.6	0.1	3.5	0.1
Industrials	0.5	0.3	1.1	1.3	0.6	0.1
Resources & Materials	0.1	0.1	0.8	0.1	0.0	0.1
Financials	0.0	0.1	-0.3	-2.7	0.2	-0.2
Energy	0.0	-0.1	0.0	0.4	0.0	-0.2
Real Estate	-0.2	-0.2	-0.3	-0.4	-0.2	-0.1
Agri Food Bev	-0.2	-0.3	0.1	0.0	0.0	-0.5
Health Care	-0.4	-0.4	-0.8	-2.9	0.3	-0.9
<b>Market Return</b>	<b>12.5</b>	<b>13.8</b>	<b>5.3</b>	<b>-4.4</b>	<b>27.4</b>	<b>1.8</b>

Source: Wilshire. Data as of September 29, 2023



## FT Wilshire Size and Style Indexes: Value makes up ground in Q3 but still lags YTD. Growth the standout performer so far in 2023

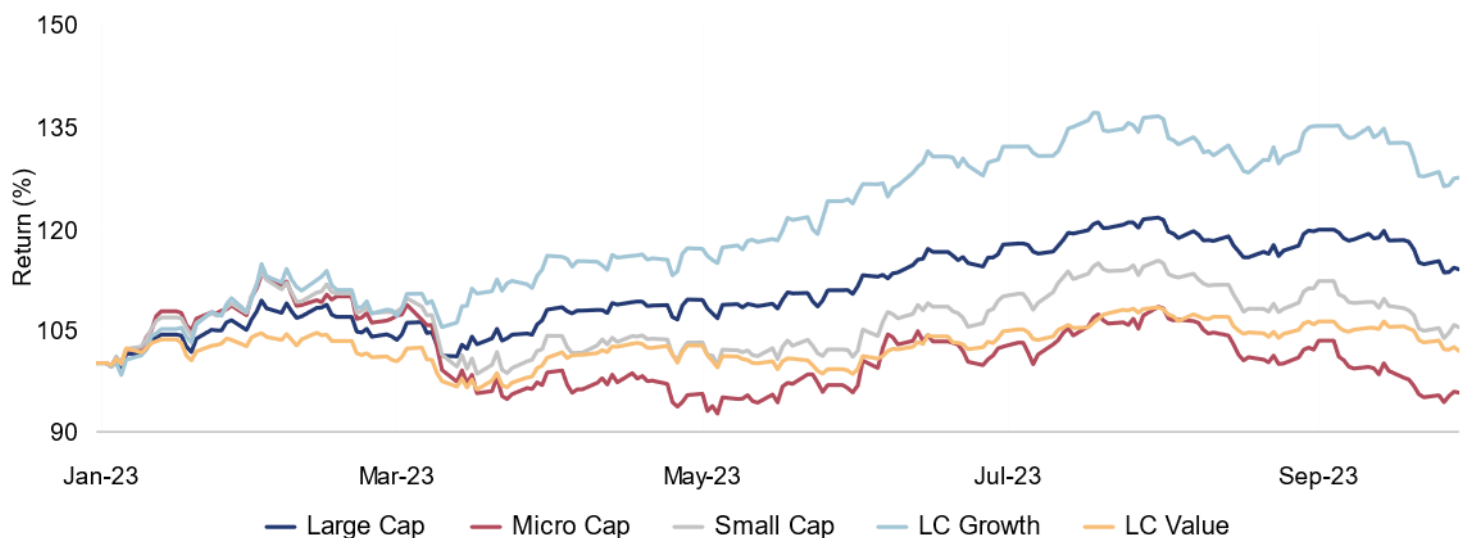
**Table 1:** September saw the largest declines of 2023 so far for most of main FT Wilshire style indexes. Value outperformed in Q3 but has still only delivered a modest positive return YTD. Growth remains the standout performer in 2023. Large cap has comfortably outperformed small cap.

USD, TR %	Size			Style	
	Large Cap	Small Cap	Micro Cap	LC Growth	LC Value
<b>1M</b>	-4.7	-5.2	-6.2	-5.6	-3.7
<b>Q3 2023</b>	-3.1	-4.2	-6.6	-3.5	-2.7
<b>YTD</b>	13.8	5.3	-4.4	27.3	1.8
<b>2022</b>	-19.2	-17.5	-21.4	-31.1	-6.0
<b>2021</b>	27.8	19.1	21.7	27.7	27.4

**Table 2:** Growth has delivered a 5yr annualized return of 12.4% vs a value return of 7.4%

USD, TR %	Large Cap		Small Cap		Micro Cap		LC Growth		LC Value	
	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann
<b>2Y</b>	0.6	0.3	-10.9	-5.6	-26.2	-14.1	-3.6	-1.8	4.2	2.1
<b>3Y</b>	33.4	10.1	31.9	9.7	22.7	7.1	26.0	8.0	39.9	11.8
<b>5Y</b>	61.6	10.1	27.5	5.0	6.7	1.3	79.2	12.4	42.7	7.4
<b>10Y</b>	209.4	12.0	118.8	8.1	81.3	6.1				
<b>20Y</b>	552.5	9.8	536.1	9.7	309.5	7.3				

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



# Style and Size Indexes: Growth outperformance relative to value loses momentum in Q3. Large cap resumes outperformance vs small cap

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

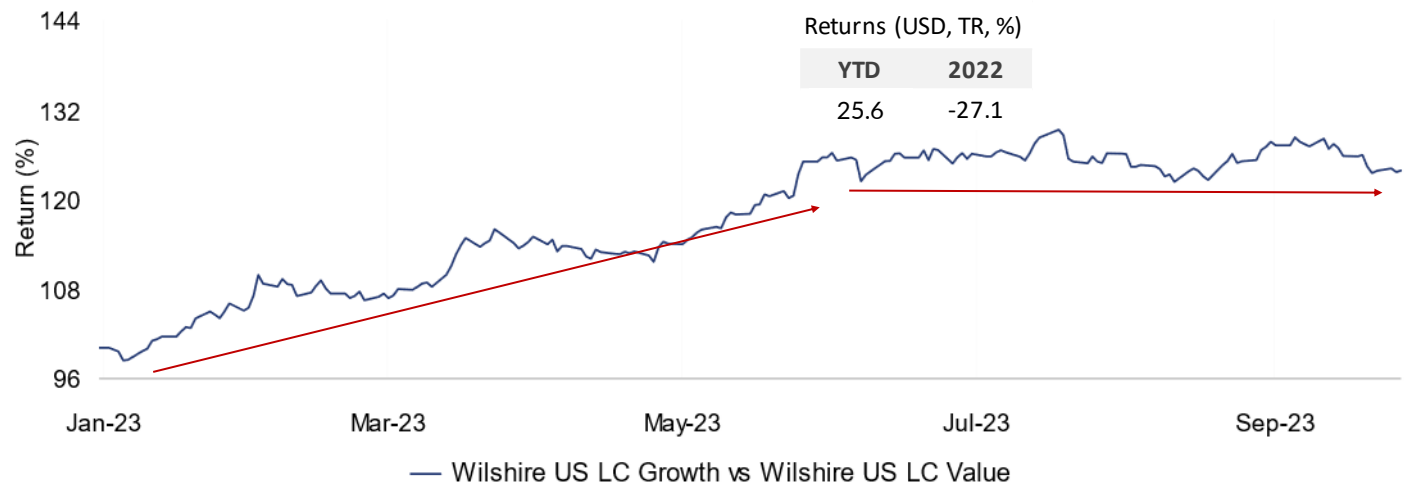


Chart 2: Large vs Small Cap relative performance (USD, TR, %).

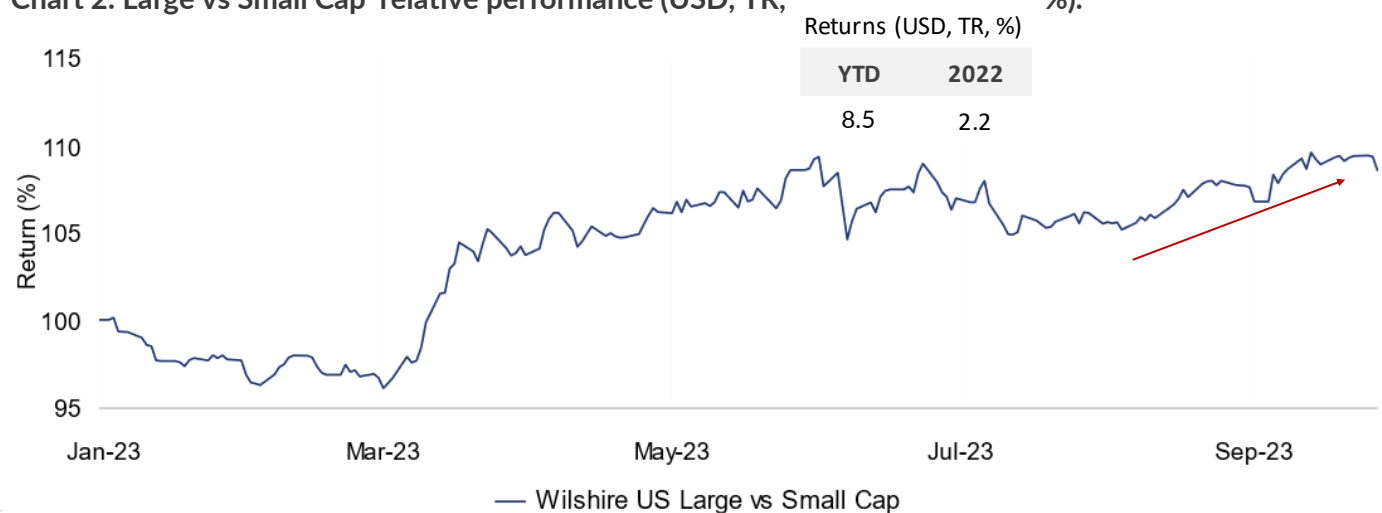
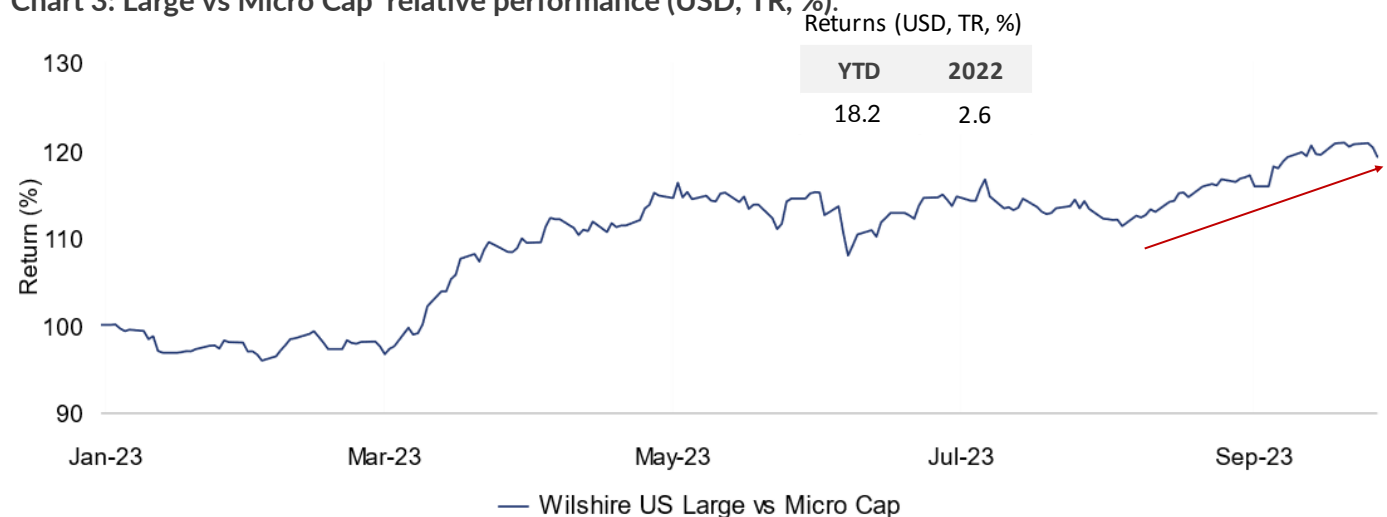


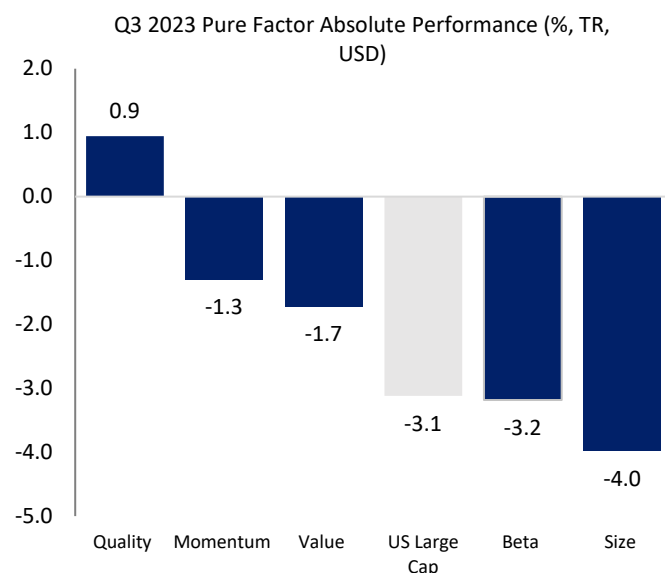
Chart 3: Large vs Micro Cap relative performance (USD, TR, %).



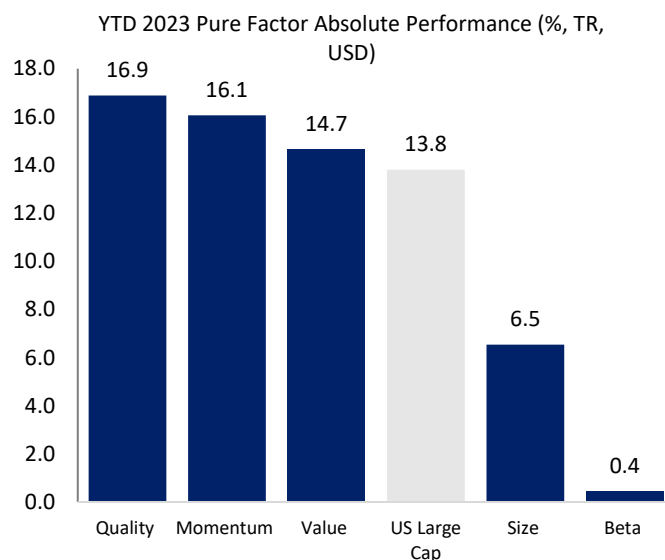
## Pure Factor Indexes: Shift to Quality continues in Q3. Pure Value keeps pace YTD with Size and Beta significantly underperforming

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.

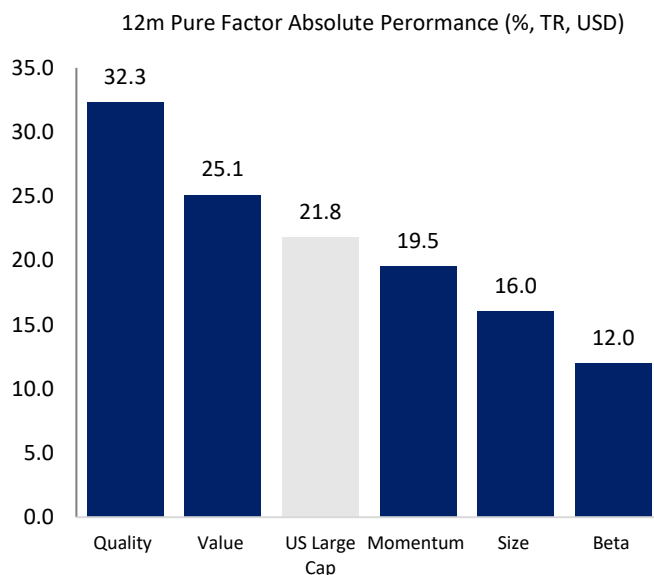
**Chart 1: Q3 2023 - Pure Quality was the standout performer with Pure Size underperforming**



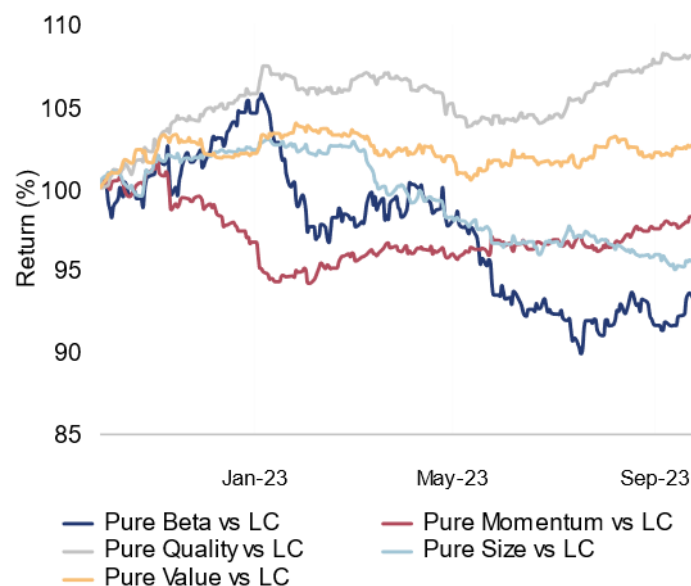
**Chart 2: YTD -Quality, Momentum and Value the strongest performers with Beta lagging**



**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: Significantly different YTD return profiles delivered by Pure Factors compared to their respective Style indexes

**Chart 1:** Pure Factor and Style Absolute Performance - Q3, YTD, 2022 and 3YR

Returns (USD, TR %)	Q3 2023	YTD	2022	3Y
Pure Factor Quality	0.9	16.9	-13.7	46.5
Style Growth	-3.5	27.3	-31.1	26.0
Pure Factor Value	-1.7	14.7	-16.2	42.3
Style Value	-2.7	1.8	-6.0	39.9
Pure Factor Size	-4.0	6.5	-17.5	27.1
Style Small Cap	-4.2	5.3	-17.5	31.9

**Chart 2:** Pure Factor Quality vs Growth style (blue) and Pure Value vs Value style (red)



**Chart 3:** Pure Quality vs Pure Value (blue) and Growth style vs Value style (red)

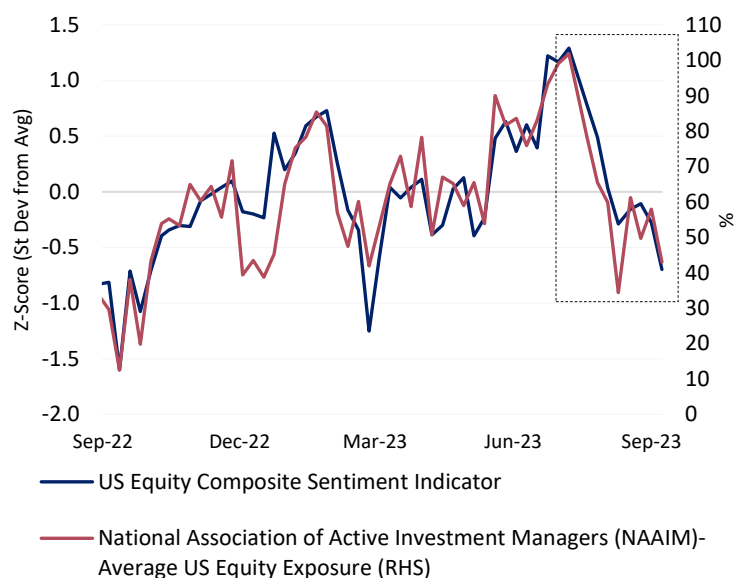


**Chart 4:** Pure Factor Size vs US Small Cap style

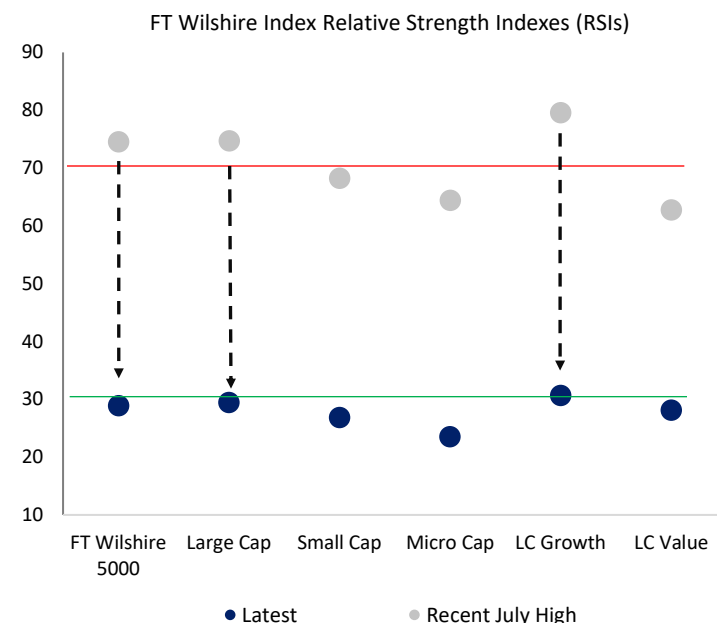


# Sentiment and Technical Analysis: FT Wilshire 5000 registers an oversold signal as the index tests the lower support level of a trading channel

**Chart 1:** Q3 saw our US Equity Composite Sentiment Indicator of technical measures decline from exuberant levels to the lowest since March. Survey-based measures of US equity exposure (NAAIM) fell from the highest to the second lowest level so far in 2023



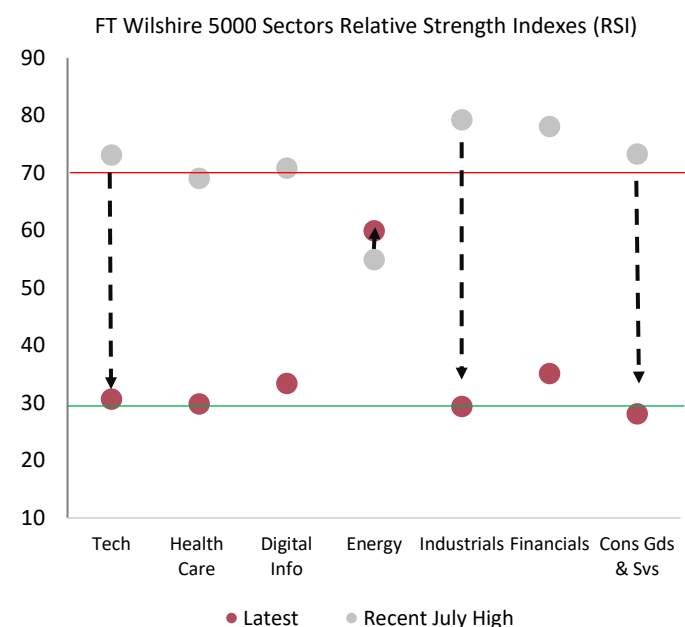
**Chart 2:** FT Wilshire index Relative Strength Indexes (RSI)-shift from overbought in July to registering a current oversold signal for the FT Wilshire 5000



**Chart 3:** The FT Wilshire 5000 index is testing the lower support level of the trading channel seen since the market lows in October 2022

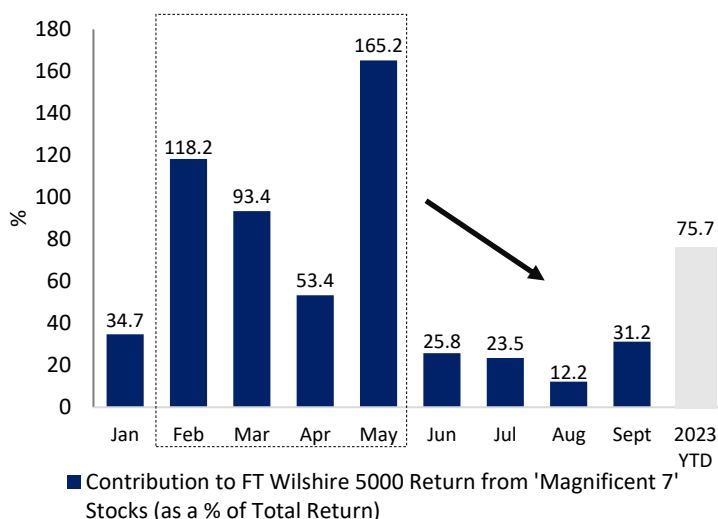


**Chart 4:** FT Wilshire 5000 sector Relative Strength Indexes (RSI) vs July-Technology rotates from overbought in July to oversold signal

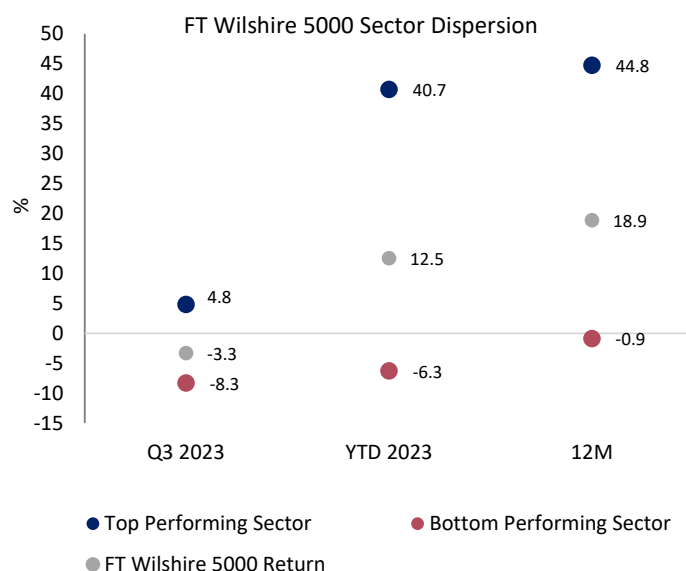


# Performance Dispersion Analysis: Waning contribution in recent months from 'Magnificent 7' stocks vs high concentration earlier in 2023

**Chart 1:** The contribution to market returns from the 'Magnificent 7' has declined vs Feb to May period but they still account for 75.7% of YTD returns



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



## 3M Returns (USD, TR, %)

FT Wilshire 5000: -3.3%			
	Wght	Return (%)	Contrib (%)
Alphabet Inc Cl-A	1.9	9.3	0.15
Eli Lilly & Co	1.1	14.8	0.14
Alphabet Inc Cl-C	1.6	9.0	0.13
Rtx Corporation	0.3	-26.0	-0.09
Microsoft Corp	5.5	-7.1	-0.41
Apple Inc	6.4	-11.6	-0.82

Wilshire Large Cap: -3.1%			
	Wght	Return (%)	Contrib (%)
Alphabet Inc Cl-A	2.1	9.3	0.18
Eli Lilly & Co	1.2	14.8	0.15
Alphabet Inc Cl-C	1.8	9.0	0.15
Rtx Corporation	0.3	-26.0	-0.10
Microsoft Corp	6.3	-7.1	-0.46
Apple Inc	7.3	-11.6	-0.94

Wilshire Small Cap: -4.2%			
	Wght	Return (%)	Contrib (%)
Texas Pacific Land Corp	0.3	38.8	0.08
Vertiv Holdings Co	0.3	50.2	0.08
Vistra Energy Corp	0.3	27.2	0.05
Masimo Corp	0.1	-46.7	-0.08
Exact Sciences Corp	0.3	-27.3	-0.09
Apellis Pharmaceuticals	0.1	-58.2	-0.10

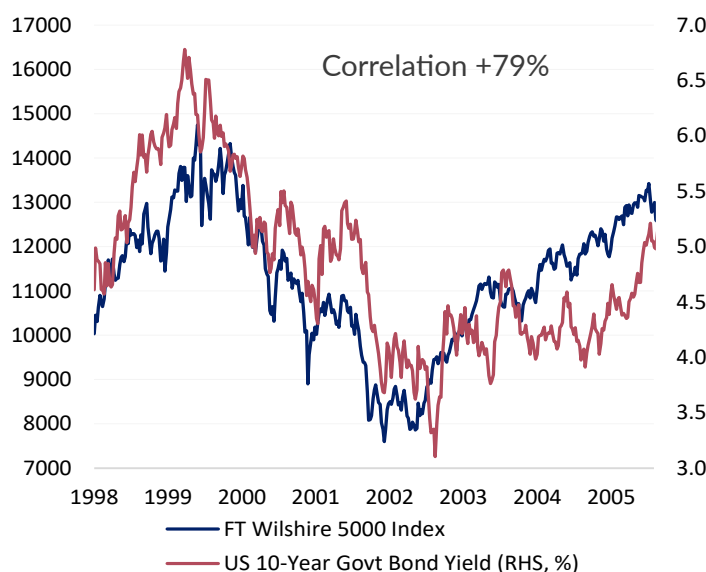
Wilshire Micro Cap: -6.6%			
	Wght	Return (%)	Contrib (%)
Reata Pharmaceuticals I		69.0	0.32
Abercrombie & Fitch	0.5	49.6	0.15
Uranium Energy Corp	0.3	51.5	0.11
Harmonic Lightwaves	0.2	-40.4	-0.12
Immunogen Inc	0.7	-15.9	-0.13
Morphic Hldg Inc	0.2	-60.0	-0.21

Wilshire Growth: -3.5%			
	Wght	Return (%)	Contrib (%)
Alphabet Inc Cl-A	3.7	9.3	0.29
Alphabet Inc Cl-C	3.1	9.0	0.26
Meta Platforms Inc	3.2	4.6	0.13
Tesla Mtrs Inc	3.3	-4.4	-0.15
Microsoft Corp	10.9	-7.1	-0.80
Apple Inc	12.6	-11.6	-1.60

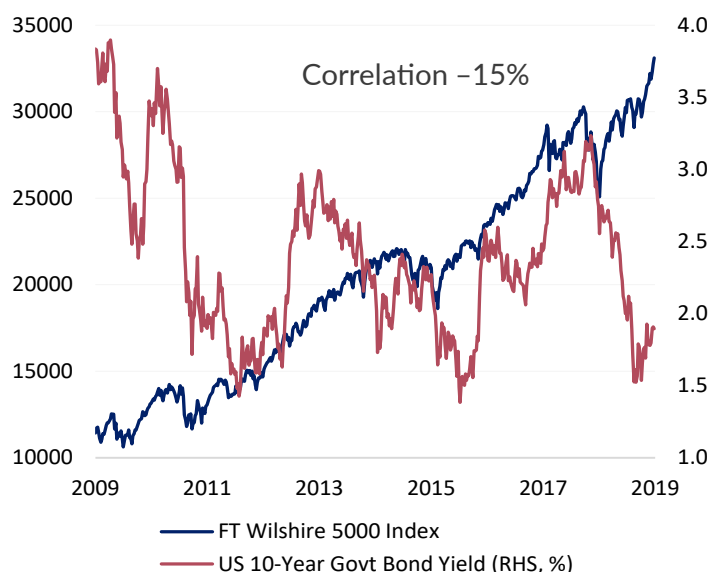
Wilshire Value: -2.8%			
	Wght	Return (%)	Contrib (%)
Eli Lilly & Co		21.8	0.49
Exxon Mobil Corp	2.7	10.6	0.26
Abbvie Inc	1.5	11.9	0.16
Merck & Co Inc New	1.5	-10.2	-0.17
Nextera Energy Inc	0.7	-22.3	-0.19
Rtx Corporation	0.6	-26.0	-0.21

# Perspectives: Contrasting the pre and post-GFC period US equity vs bond yield correlations. Rising real yields hit growth/value relative performance

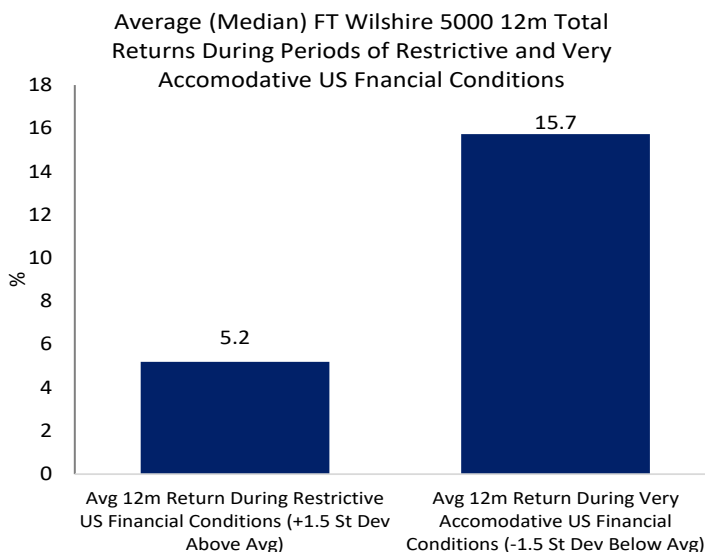
**Chart 1:** US equity returns and bond yields experienced a relative strong positive correlation in the decades leading up to the GFC. What was seen as bad for bonds was good for equities and vice versa



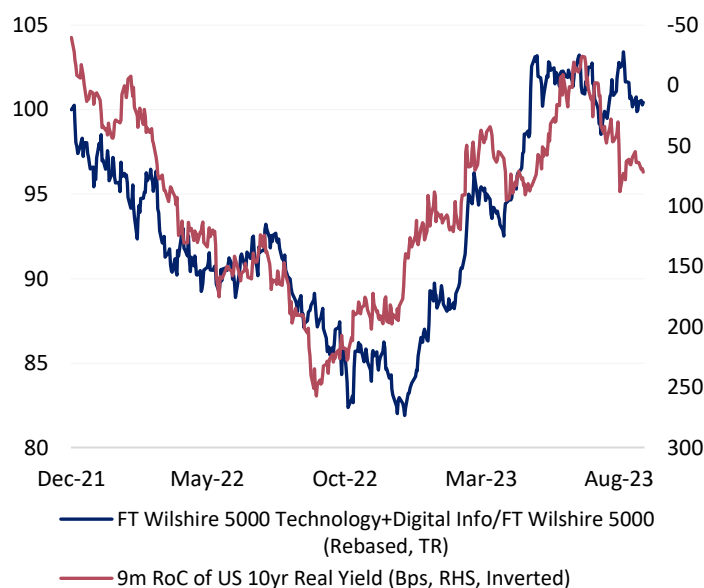
**Chart 2:** The Post GFC to Covid period (2009-2019) of financial repression witnessed very little correlation between US equity returns and shifts in US bond yields



**Chart 3:** Average 12m returns have been around three times lower during periods of restrictive US financial conditions (which we currently face) vs periods of very accommodative financials conditions, as experienced through much of the post-GFC era



**Chart 4:** The rise in US real yields in recent months has led to a loss of momentum in the relative performance of technology and digital information sectors



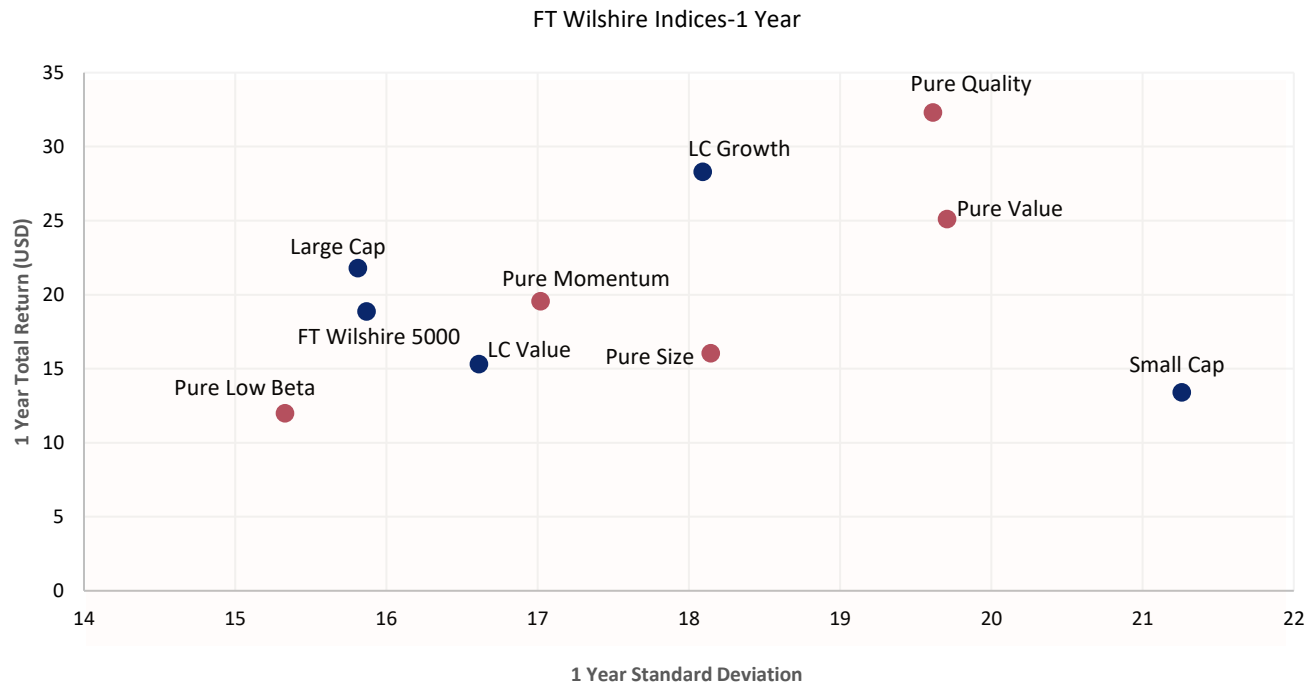
\*Apple, Amazon, Microsoft, Alphabet, Nvidia, Meta and Tesla

Source: Wilshire. Data as of September 29, 2023



# 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

Pure Factor ■ Style ■



# FT Wilshire Global Equity Market Series (GEMS)

1

**-5.5%**

Decline in European ex UK equities in Q3 2023 (USD, TR)

2

**+10.0%**

Rise in global Equity Index YTD (USD, TR)

3

**-3.1%**

Q3 2023 return of US equities (TR)

4

**+8.0%**

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

## CONTENTS

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| 17 Synopsis                        | 23 Regional sector comparison            |
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| 20 Relative returns                | 26 Market Cap (incl US)                  |
| 21 Country level performance       | 27 Risk/return analysis                  |
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**US equities performance vs global non US equities.** Despite the Q3 decline US equities have significantly outperformed the Global ex US so far this year after underperforming in 2022.



# Global Equity Market Synopsis: Global equities see first negative quarter for a year as rising bond yields rattle markets in Q3. YTD returns remain positive.

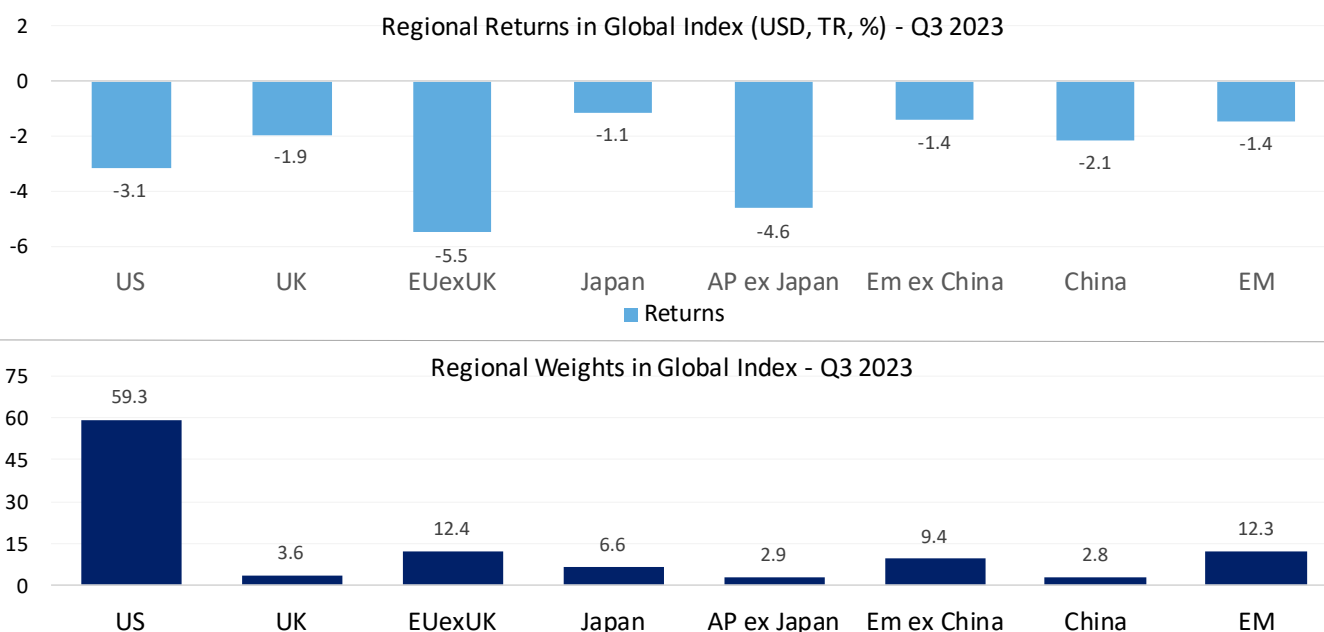
## Global Markets Snapshot

- ◆ The Global equity index witnessed its first quarterly decline in Q3 but YTD returns remain positive ([page 19](#))
- ◆ Japanese equities outperformed in Q3 with Europe ex UK the laggard ([page 19](#))
- ◆ Continued Yen weakness creates large differences between YTD global equity returns when measured in JPY vs USD ([page 20](#))
- ◆ Negative contribution from technology was the main drag on returns in the US and Global ex US ([page 23](#))
- ◆ Positive contributions from financials and transportation were the key drivers of Japanese outperformance in Q3 ([page 24](#))
- ◆ FT Wilshire US Relative Strength Index shifts from overbought to an oversold signal over Q3 ([page 28](#))

## Key Market Events

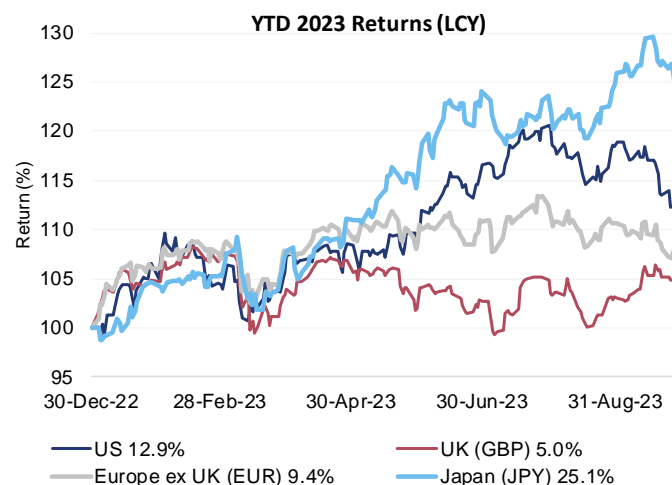
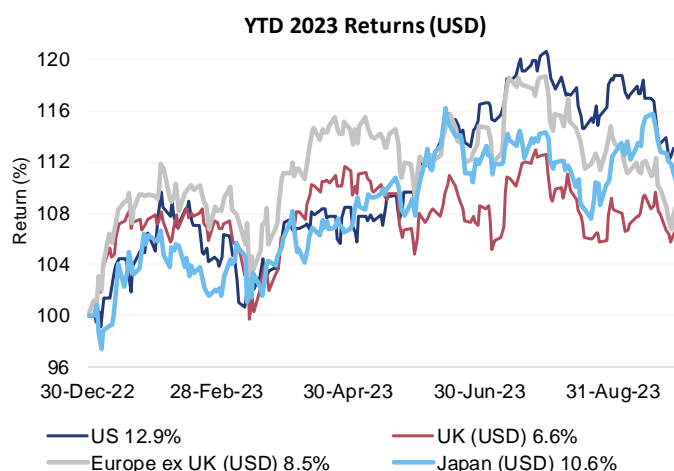
- ◆ February: Reassessment of US interest rate expectations see global bond yields rise
- ◆ March: Silicon Valley Bank (SVB) collapses with contagion fears rippling through to global markets.
- ◆ March: Markets rebound as bank contagion fears ease. UBS agrees takeover of Credit Swiss
- ◆ April: Chinese 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: Rise in US bond yields ripples through global equity markets

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



## Region and major market performance: Japan outperforms in Q3 as European equities continue to lag. US and Japan remain the standout performers YTD

**Regional YTD returns-LCY vs USD**–Sizeable moves in FX (particularly Yen weakness) has meant 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 marginally outperformed. However in local currency terms (right hand chart) we can see that Japan has comfortably outperformed year to date.



Regional Returns - Short Term (USD, TR, %)	Q3 2023	1M	YTD	12M	2022
Japan	-1.1	-1.6	10.6	22.8	-15.4
Emerging ex China	-1.4	-1.5	8.6	17.9	-15.4
Emerging	-1.4	-1.8	4.2	14.6	-17.3
United Kingdom	-1.9	-1.7	6.6	27.0	-10.8
China	-2.1	-2.8	-7.7	5.0	-21.8
Asia Pacific ex Japan	-2.2	-1.9	1.6	13.5	-17.3
Global ex US	-3.1	-2.8	5.9	21.3	-15.8
USA	-3.1	-4.7	12.9	19.1	-19.3
Global	-3.2	-3.9	10.0	19.9	-17.9
Europe ex UK	-5.5	-4.8	8.5	32.9	-19.1

Regional Returns - Long Term (USD, TR, %)	3Y		5Y		10Y		20Y	
	Aggr	Ann	Aggr	Ann	Aggr	Ann	Aggr	Ann
USA	32.5	9.8	56.6	9.4	191.9	11.3	562.0	9.9
United Kingdom	32.0	9.7	11.1	2.1	25.8	2.3	193.7	5.5
Japan	6.7	2.2	11.4	2.2	60.0	4.8	171.1	5.1
Asia Pacific ex Japan	0.6	0.2	12.0	2.3	52.4	4.3	408.6	8.5
Europe ex UK	19.7	6.2	26.3	4.8	63.8	5.1	326.0	7.5
Emerging	4.0	1.3	12.5	2.4	44.0	3.7	438.2	8.8
Emerging ex China	30.7	9.3	29.9	5.4	57.0	4.6	463.0	9.0
China	-36.9	-14.2	-19.5	-4.2	24.8	2.2	471.4	9.1
Global ex US	14.3	4.5	18.0	3.4	51.2	4.2	288.3	7.0
<b>Global</b>	<b>24.5</b>	<b>7.6</b>	<b>38.6</b>	<b>6.7</b>	<b>115.0</b>	<b>8.0</b>	<b>416.5</b>	<b>8.6</b>

Source: Wilshire. Data as of September 29, 2023

## FX adjusted market returns: Global equity return in 2023 over twice as large for an unhedged Japanese investor vs return in USD terms

FX swings can have a large impact on unhedged regional equity returns depending on the location of investors. The most notable example in 2023 has been for JPY returns for an unhedged Japanese based investor (due to weakness of the yen). YTD global equities have returned 24.4% (in JPY terms), versus a 10.0% return in USD, 10.9% in EUR and just 8.4% for a GBP-based investor.

**Table 1:** Regional returns in various FX - Q3

Q3 2023 Return (TR, %)	USD	GBP	EUR	JPY
Japan	-1.1	3.0	1.9	2.1
Emerging	-1.4	2.7	1.6	1.8
United Kingdom	-1.9	2.1	1.1	1.2
China	-2.1	1.9	0.8	1.0
Asia Pacific ex Japan	-2.2	1.9	0.8	1.0
USA	-3.1	0.9	-0.2	0.0
<b>Global</b>	-3.2	0.9	-0.2	0.0
Developed	-3.4	0.6	-0.4	-0.2
Europe ex UK	-5.5	-1.6	-2.6	-2.4

**Table 2:** Regional returns in various FX - YTD

YTD Return (TR, %)	USD	GBP	EUR	JPY
USA	12.9	11.2	13.8	27.6
Developed	10.8	9.2	11.7	25.3
Japan	10.6	9.0	11.5	25.1
<b>Global</b>	10.0	8.4	10.9	24.4
Europe ex UK	8.5	7.0	9.4	22.7
United Kingdom	6.6	5.0	7.4	20.5
Emerging	4.2	2.6	5.0	17.8
Asia Pacific ex Japan	1.6	0.1	2.4	14.9
China	-7.7	-9.1	-7.0	4.3

# Global Equity Relative Returns: US market leadership loses some momentum towards the end of Q3. Europe ex UK underperformance continues.

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



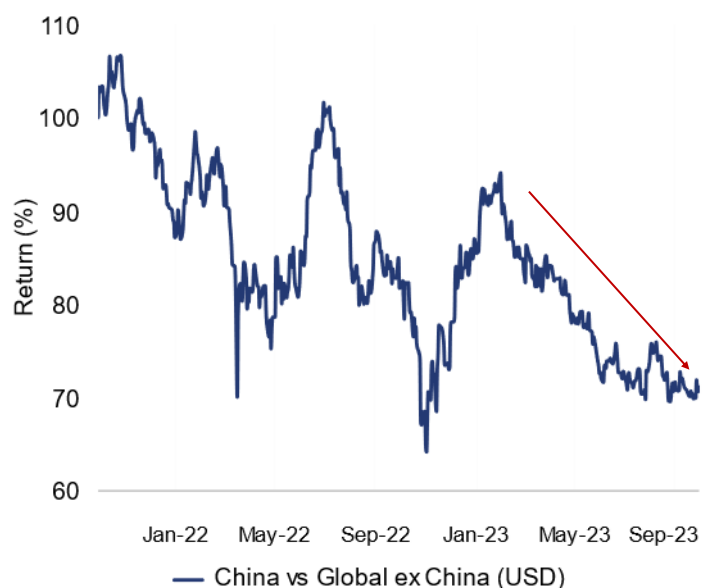
Chart 2: Emerging Markets vs Developed (USD, TR, %)



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

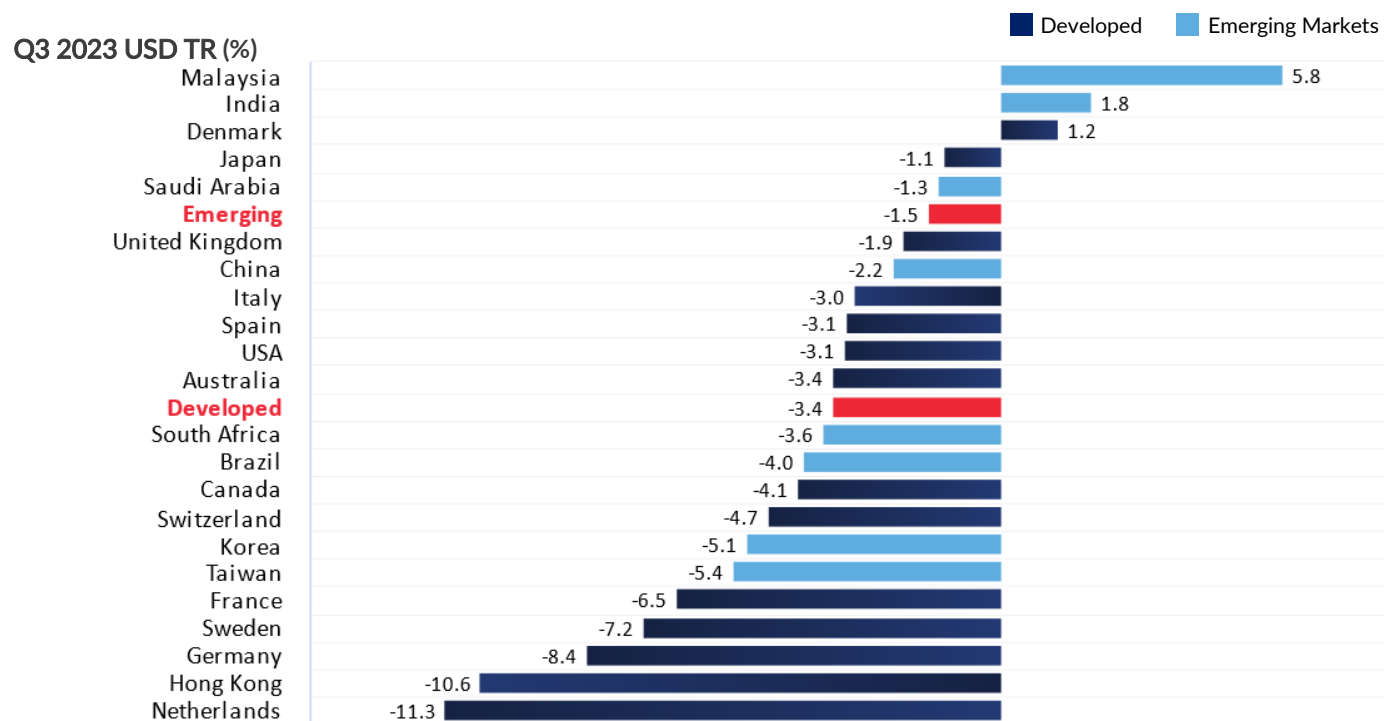


Chart 4: China vs Global ex China (USD, TR, %)



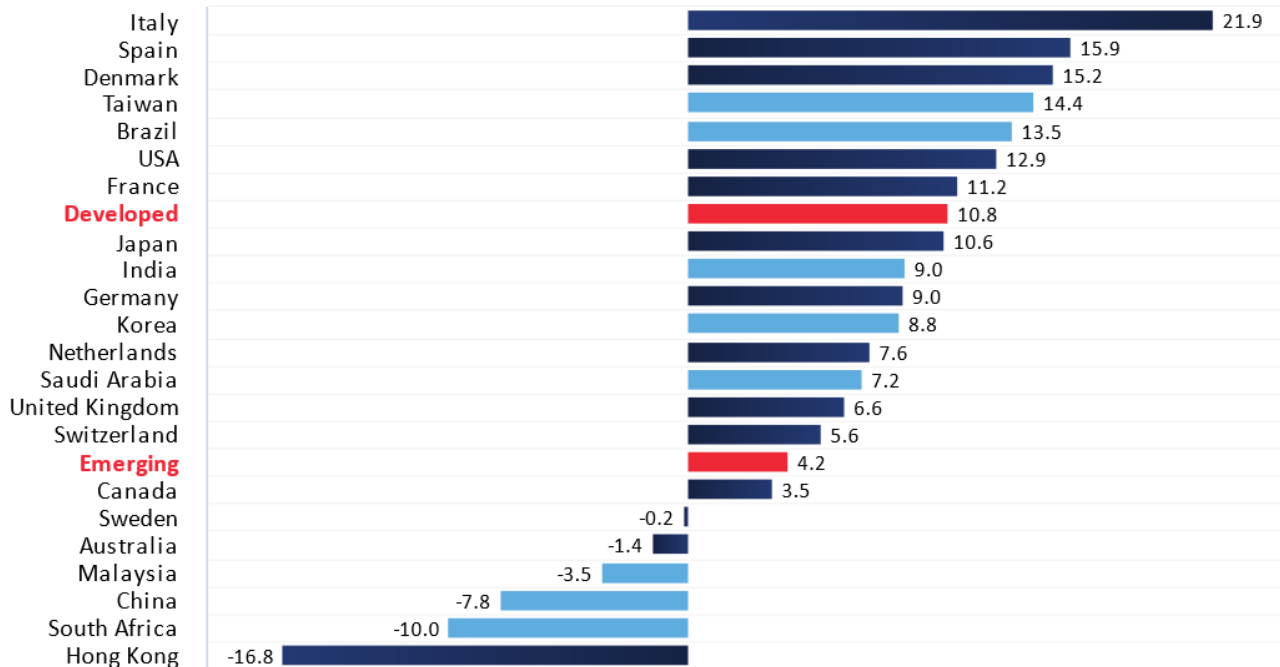
# Developed and Emerging market country level performance: Emerging markets outperform developed in Q3. European equities underperform.

**Chart 1: Q3 2023** - Emerging markets outperformed developed in Q3 helped by positive returns in Malaysia and India. Only Denmark managed to deliver a small positive return amongst developed market. Q3 saw relatively sizeable declines for European countries, most notably France, Germany and the Netherlands.



**Chart 2: YTD 2023** - Despite declines in Q3, European equities remain amongst the top performers so far in 2023. Developed markets have comfortably outperformed emerging helped by still strong US returns. Hong Kong has significantly underperformed within developed markets. Taiwan and Brazil are the strongest within EM

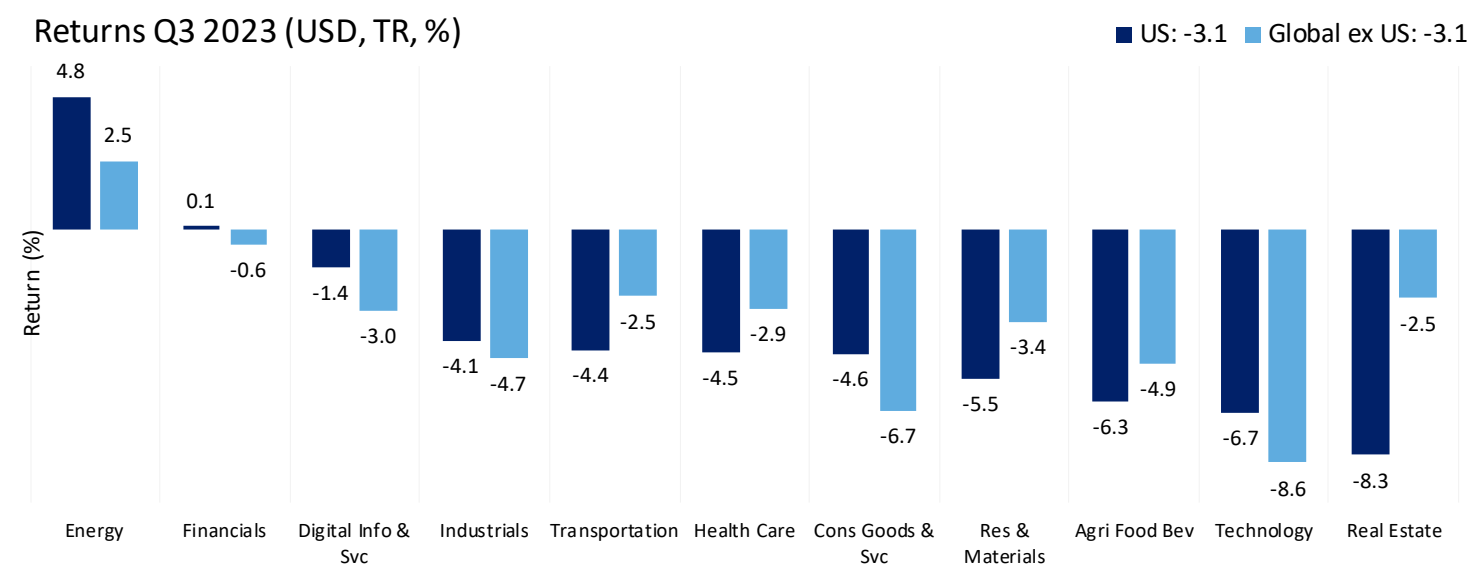
## YTD USD



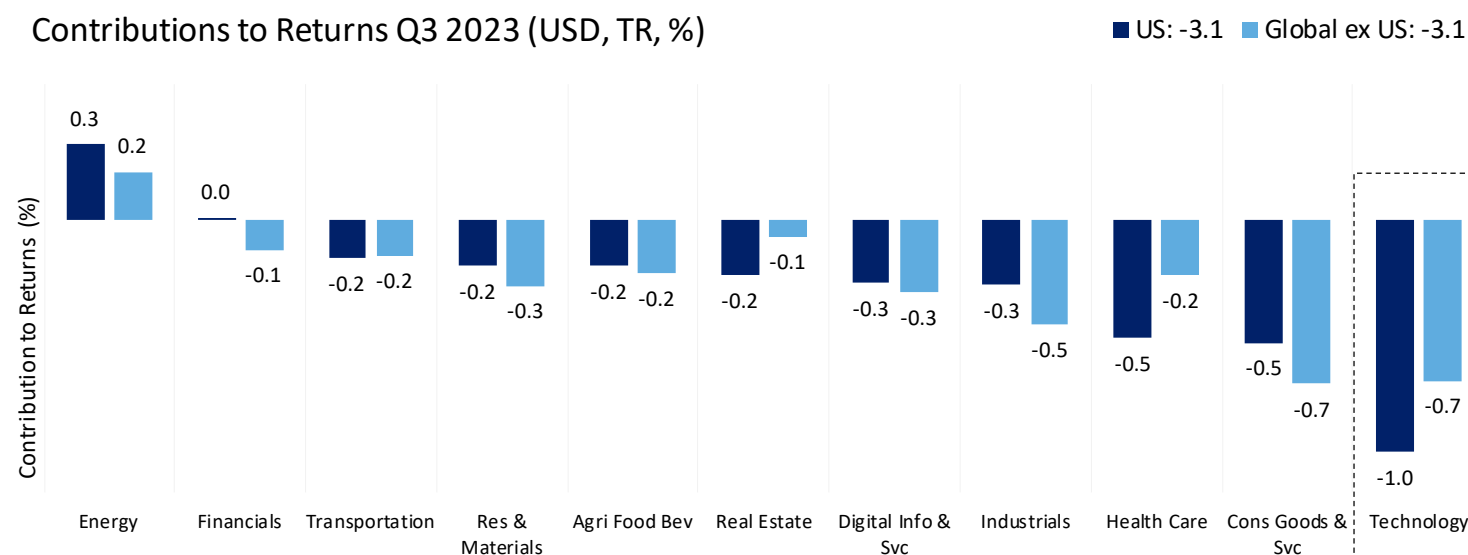


## Q3 2023-US vs Global ex US sector returns and sector-weighted contribution analysis: US sees larger drag from technology in Q3

**Q3 2023 US vs Global ex US Sector Returns.** US (dark blue) energy and financials outperformed Global ex US (light blue), and were the only two sectors to deliver positive returns in Q3. US transportation, resources and materials and real estate were the main underperformers relative to Global ex US.

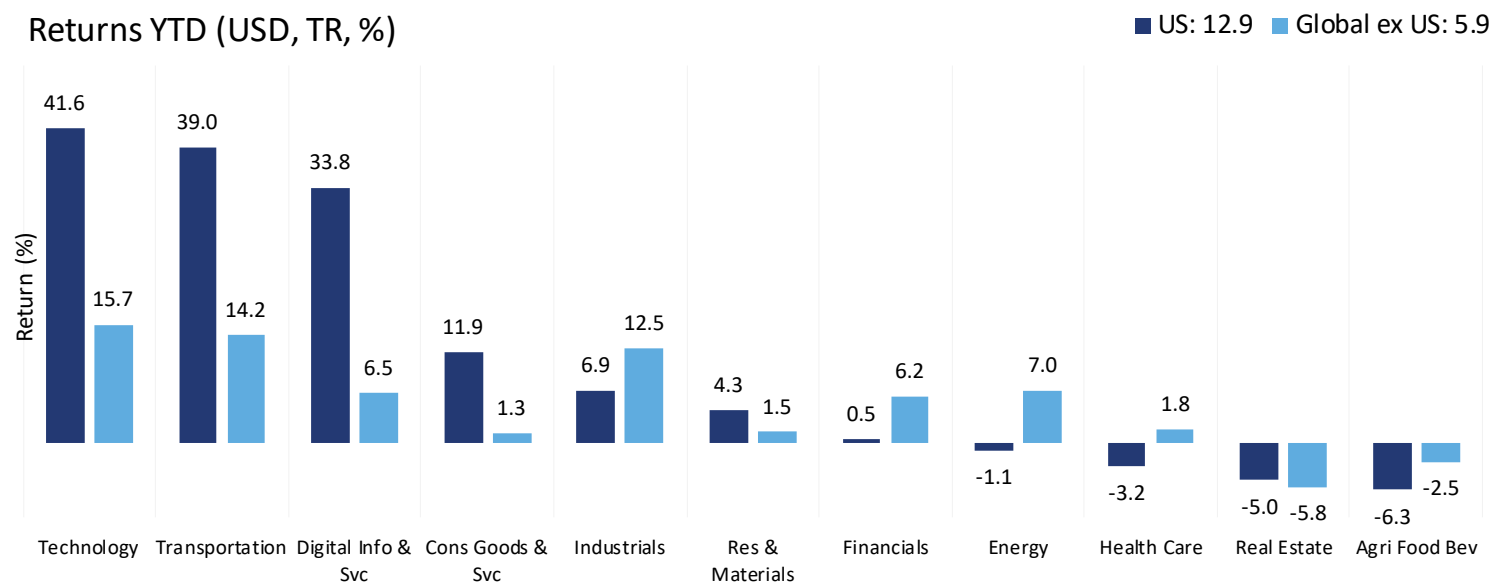


**Q3 2023 US vs Global ex US Sector weighted regional contribution analysis.** The marginally superior positive contribution from energy in the US failed to offset the larger negative contribution from technology in Q3.

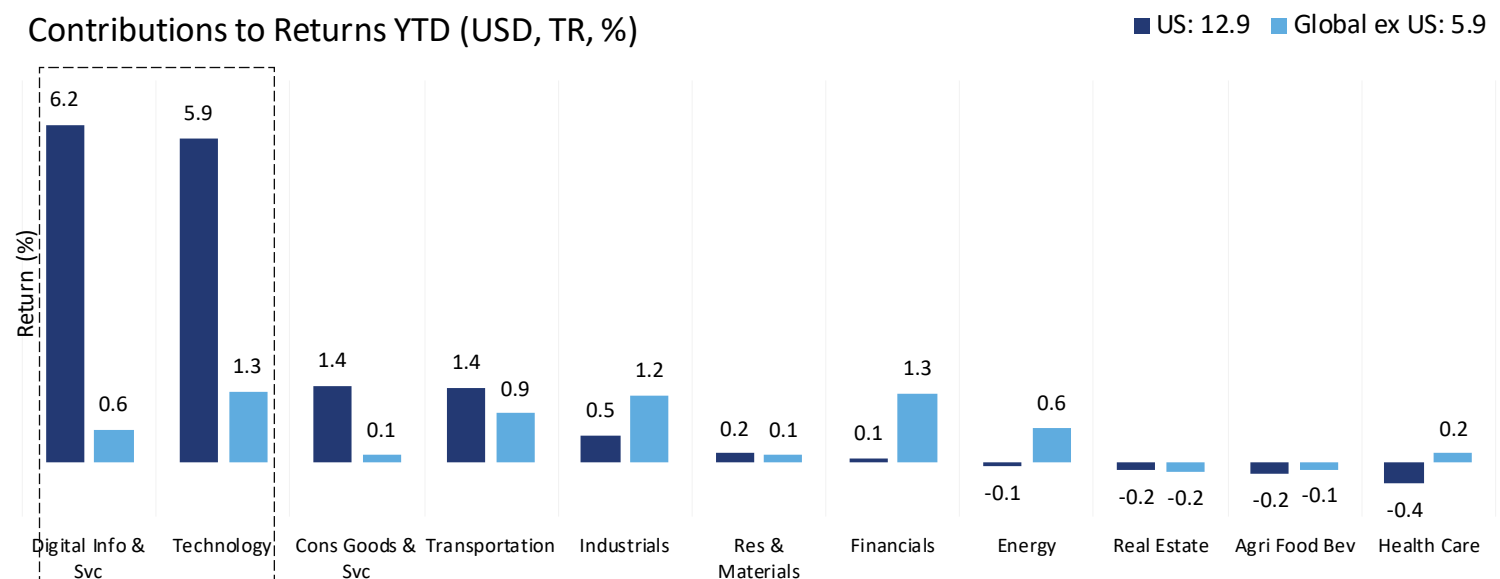


## YTD-US vs Global ex US sector returns and sector-weighted contributions: Technology and digital info the key drivers of US outperformance in 2023

**US vs Global ex US YTD Sector Returns:** US technology, transportation, digital information and consumer goods sectors have significantly outperformed Global ex US 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 far superior positive contribution from technology and digital information are the main drivers of US outperformance vs Global ex US so far in 2023, more than offsetting the smaller contributions from financials and energy.



## Regional level sector weights and returns: Q3 and YTD 2023-Strong financials and transportation sectors returns drives Japan outperformance in Q3

**Q3 2023 regional sector average weights and returns**– The positive returns of Japanese financials and transportation sectors were a key driver behind Japan's outperformance in Q3.

Q3 2023	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
Energy	4.8	7.0	2.5	8.7	6.0	16.0	-0.6	8.0	13.3	1.8	3.6	8.4	-2.4	5.6
Financials	0.1	14.9	-0.6	21.7	-3.5	19.5	-0.1	17.3	12.0	9.3	-1.1	28.7	-2.8	16.3
Digital Info & Svc	-1.4	19.2	-3.0	10.6	-1.8	4.5	-3.3	5.9	-2.9	26.9	-3.3	10.3	-5.4	21.4
Industrials	-4.1	7.0	-4.7	9.6	0.5	11.9	-7.7	13.2	-4.6	16.0	0.5	4.4	-9.5	2.7
Transportation	-4.4	3.8	-2.5	6.3	-10.8	1.2	-8.5	6.1	7.2	10.4	-1.4	5.5	-0.5	8.2
Health Care	-4.5	11.5	-2.9	8.3	-4.2	12.5	-1.8	14.8	-5.8	5.9	-1.1	3.8	-1.4	6.0
Cons Goods & Svc	-4.6	11.8	-6.7	10.8	-4.0	16.1	-13.3	12.3	-4.3	7.9	0.3	10.0	3.5	24.6
Res & Materials	-5.5	3.7	-3.4	8.5	-1.5	7.3	-3.1	8.1	-1.8	5.4	-1.8	8.0	-5.1	3.7
Agri Food Bev	-6.3	3.2	-4.9	4.7	-6.9	8.1	-7.8	6.6	0.5	2.8	-1.9	4.1	-3.4	4.6
Technology	-6.7	15.2	-8.6	8.2	-18.4	0.6	-14.1	6.5	-8.7	9.9	-5.9	14.8	-5.6	3.4
Real Estate	-8.3	2.9	-2.5	2.8	-2.6	2.4	0.8	1.1	2.1	3.6	-0.3	2.0	-5.7	3.5
<b>Market Returns</b>	<b>-3.1</b>		<b>-3.1</b>		<b>-1.9</b>		<b>-5.5</b>		<b>-1.1</b>		<b>-1.4</b>		<b>-2.1</b>	

**YTD 2023 regional sector average weights and returns:** Accounting for almost a quarter of the market, the significant underperformance of consumer goods and services has been a key theme for China so far in 2023.

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	41.6	14.2	15.7	8.3	-5.8	0.6	10.3	6.4	16.6	10.9	18.4	15.4	-6.8	3.4
Transportation	39.0	3.5	14.2	6.3	14.4	1.0	16.5	6.0	24.2	11.3	12.1	5.7	6.1	7.5
Digital Info & Svc	33.8	18.3	6.5	9.2	5.0	4.7	14.7	5.9	6.3	18.6	1.0	11.2	-1.9	20.9
Cons Goods & Svc	11.9	11.8	1.3	11.3	7.5	15.9	7.6	12.3	0.4	9.1	-9.3	11.1	-15.2	24.4
Industrials	6.9	7.2	12.5	9.8	21.3	11.4	9.5	13.2	14.9	17.5	11.8	4.5	-7.2	2.7
Res & Materials	4.3	3.6	1.5	9.0	-10.4	7.8	6.9	8.3	12.5	6.0	-1.4	8.7	-13.3	3.9
Financials	0.5	15.5	6.2	20.5	11.3	19.4	12.0	17.2	17.2	10.2	4.8	24.0	-0.5	16.6
Energy	-1.1	7.3	7.0	8.9	15.3	15.9	3.9	8.1	21.8	1.9	8.9	8.4	5.7	5.7
Health Care	-3.2	12.1	1.8	8.6	2.5	12.6	8.0	14.5	-6.8	7.1	-6.8	4.2	-21.7	6.4
Real Estate	-5.0	3.1	-5.8	3.0	-5.5	2.5	-5.6	1.2	-1.0	4.1	-3.3	2.2	-19.5	3.7
Agri Food Bev	-6.3	3.4	-2.5	5.0	-10.4	8.3	-0.2	6.9	8.3	3.2	-2.5	4.6	-15.3	4.8
<b>Market Returns</b>	<b>12.9</b>		<b>5.9</b>		<b>6.6</b>		<b>8.5</b>		<b>10.6</b>		<b>4.2</b>		<b>-7.7</b>	

Source: Wilshire. Data as of September 29, 2023

Wilshire Indexes - Performance Report (September 2023)

## Regional sector sector-weighted performance contribution comparisons: Q3 & YTD 2023-Consumer goods the main driver of China's YTD underperformance

**Regional sector-weighted contributions to Q3 returns:** Relatively large positive contributions from financials and transportation (combined weight of 19.5%) help drive Japanese outperformance, offsetting the negative contribution from technology.

Q3 2023	US	Global ex US	UK	EU ex UK	Japan	EM	China
	Contr	Contr	Contr	Contr	Contr	Contr	Contr
Energy	0.3	0.2	1.0	0.0	0.2	0.3	-0.1
Financials	0.0	-0.1	-0.7	0.0	1.1	-0.3	-0.4
Transportation	-0.2	-0.2	-0.1	-0.5	0.7	-0.1	0.0
Res & Materials	-0.2	-0.3	-0.1	-0.3	-0.1	-0.1	-0.2
Agri Food Bev	-0.2	-0.2	-0.6	-0.5	0.0	-0.1	-0.2
Real Estate	-0.2	-0.1	-0.1	0.0	0.1	0.0	-0.2
Digital Info & Svc	-0.3	-0.3	-0.1	-0.2	-0.8	-0.3	-1.1
Industrials	-0.3	-0.5	0.1	-1.0	-0.7	0.0	-0.3
Health Care	-0.5	-0.2	-0.5	-0.3	-0.3	0.0	-0.1
Cons Goods & Svc	-0.5	-0.7	-0.6	-1.6	-0.3	0.0	0.9
Technology	-1.0	-0.7	-0.1	-0.9	-0.9	-0.9	-0.2
	-3.1	-3.1	-1.9	-5.5	-1.1	-1.4	-2.1

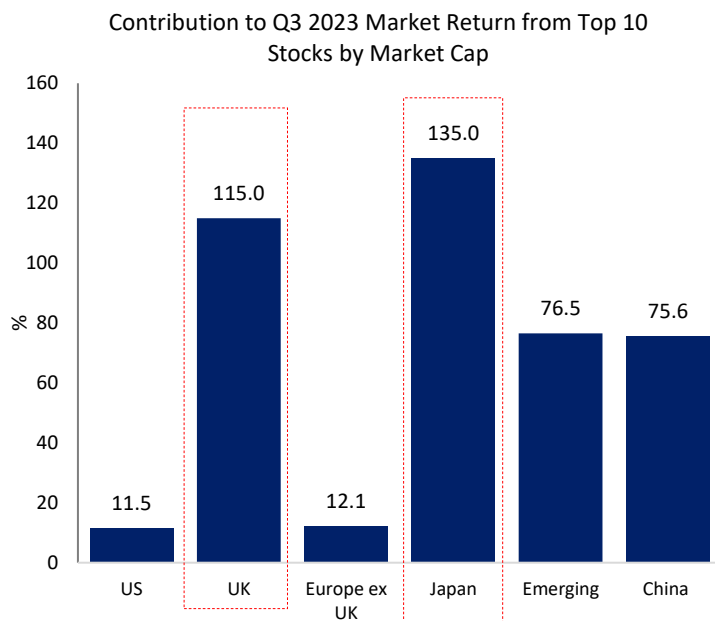
**Regional sector-weighted contributions to YTD returns:** The sizeable negative contribution from consumer goods and services has been the main driver behind China's notable YTD underperformance.

YTD	US	Global ex US	UK	EU ex UK	Japan	EM	China
	Contr	Contr	Contr	Contr	Contr	Contr	Contr
Digital Info & Svc	6.2	0.6	0.2	0.9	1.2	0.1	-0.4
Technology	5.9	1.3	0.0	0.7	1.8	2.8	-0.2
Cons Goods & Svc	1.4	0.1	1.2	0.9	0.0	-1.0	-3.7
Transportation	1.4	0.9	0.1	1.0	2.7	0.7	0.5
Industrials	0.5	1.2	2.4	1.3	2.6	0.5	-0.2
Res & Materials	0.2	0.1	-0.8	0.6	0.8	-0.1	-0.5
Financials	0.1	1.3	2.2	2.1	1.8	1.1	-0.1
Energy	-0.1	0.6	2.4	0.3	0.4	0.7	0.3
Real Estate	-0.2	-0.2	-0.1	-0.1	0.0	-0.1	-0.7
Agri Food Bev	-0.2	-0.1	-0.9	0.0	0.3	-0.1	-0.7
Health Care	-0.4	0.2	0.3	1.2	-0.5	-0.3	-1.4
Market Returns	12.9	5.9	6.6	8.5	10.6	4.2	-7.7

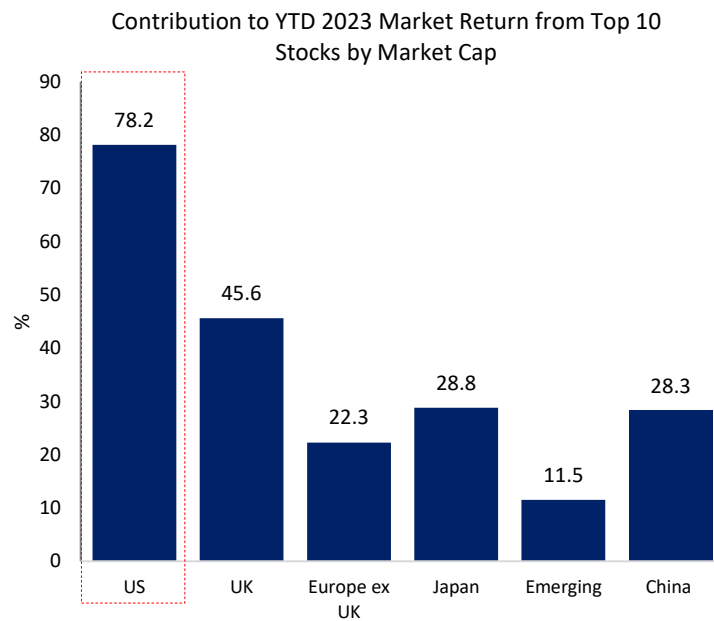
Source: Wilshire. Data as of September 29, 2023

# Regional Equities : Contribution to returns from top 10 largest stocks by market cap and sector performance dispersion

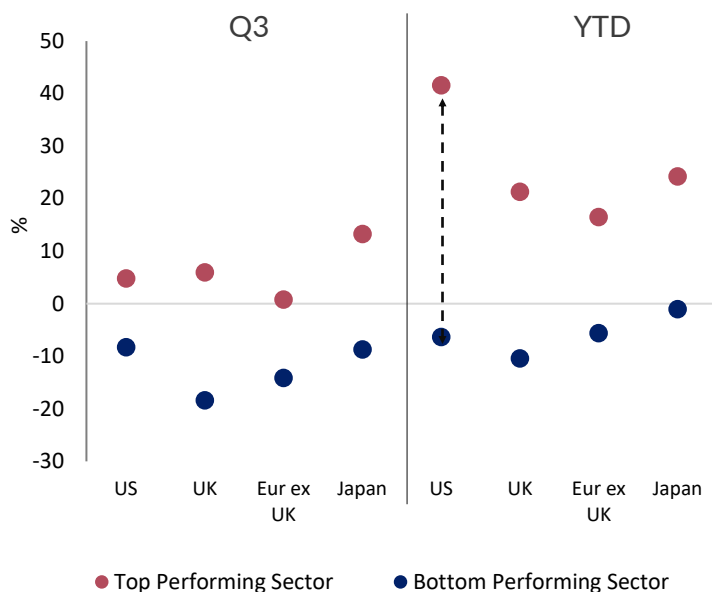
**Chart 1:** Largest contribution to Q3 returns from top 10 largest stocks largest in UK and Japan



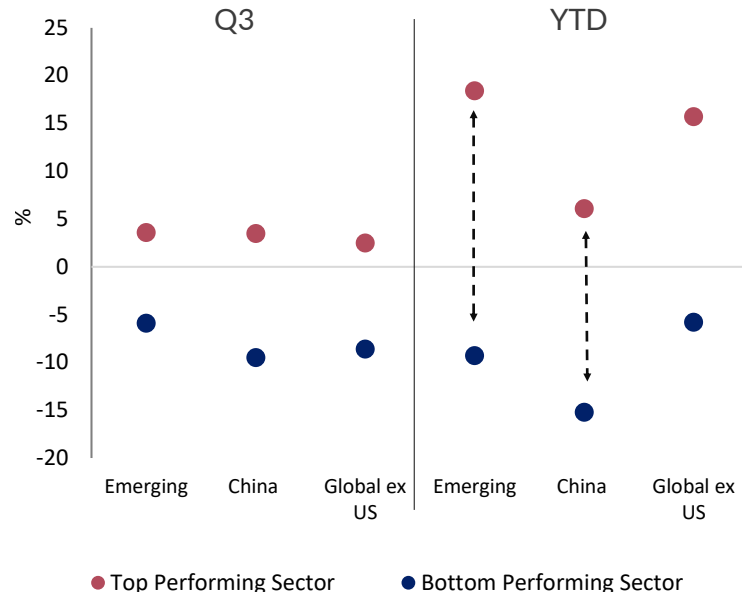
**Chart 2:** YTD the top 10 stocks have contributed over three-quarters of the US market return



**Chart 3:** Q3 vs YTD FT Wilshire regional index sector dispersion-US, UK, Europe ex UK and Japan

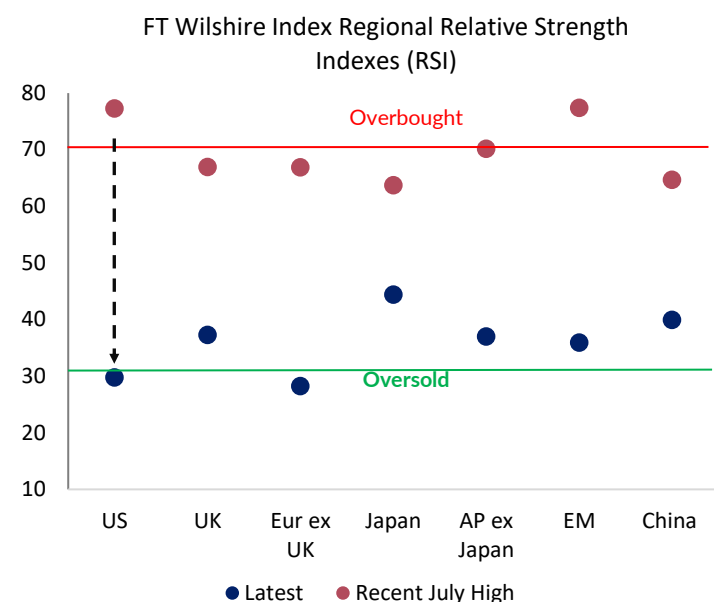


**Chart 4:** Q3 vs YTD FT Wilshire regional index sector dispersion-Emerging markets, China and Global ex US

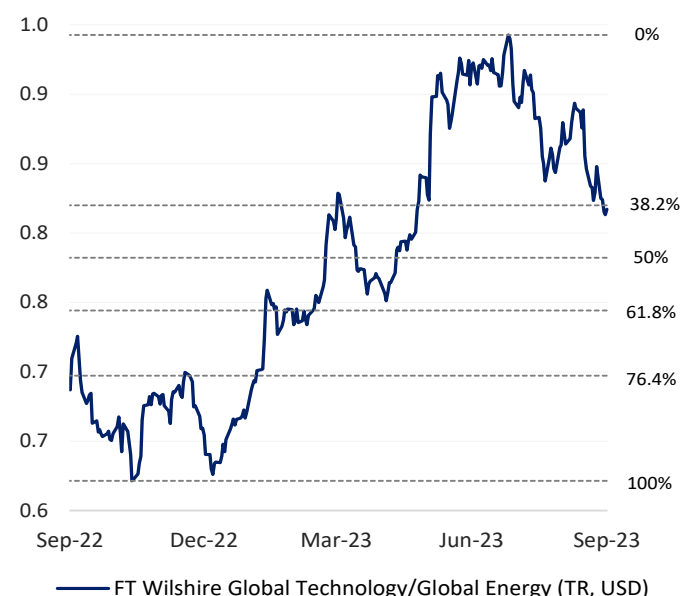


# Technical analysis: Markets rotate from overbought to oversold signals in Q3. Technology relative to energy sector performance testing support levels.

**Chart 1:** FT Wilshire regional Relative Strength Indexes (RSI)-The US has rotated from overbought in July to registering an oversold RSI signal



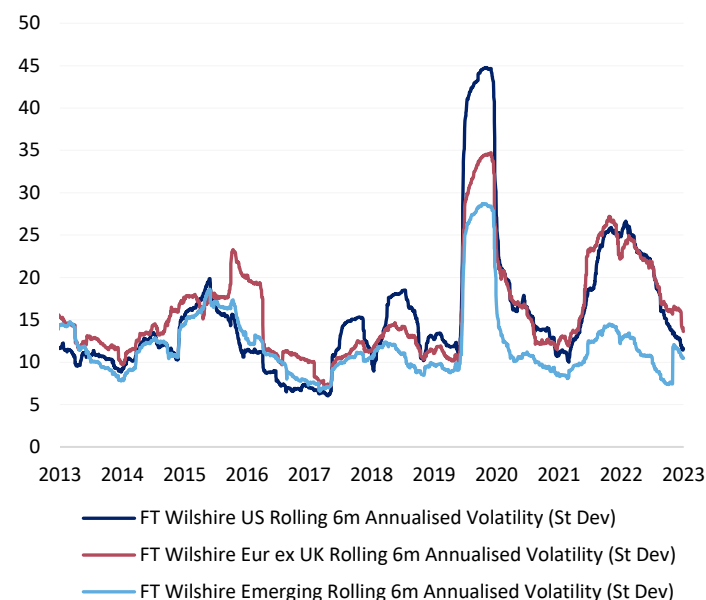
**Chart 2:** FT Wilshire Global technology relative to energy sector performance is testing the 38.2% Fibonacci retracement (support) level from the October 2022 lows to the peak in July



**Chart 3:** The percentage of stocks hitting new 3 month lows in the US has hit 34%-over 2.5 standard deviations above the average levels

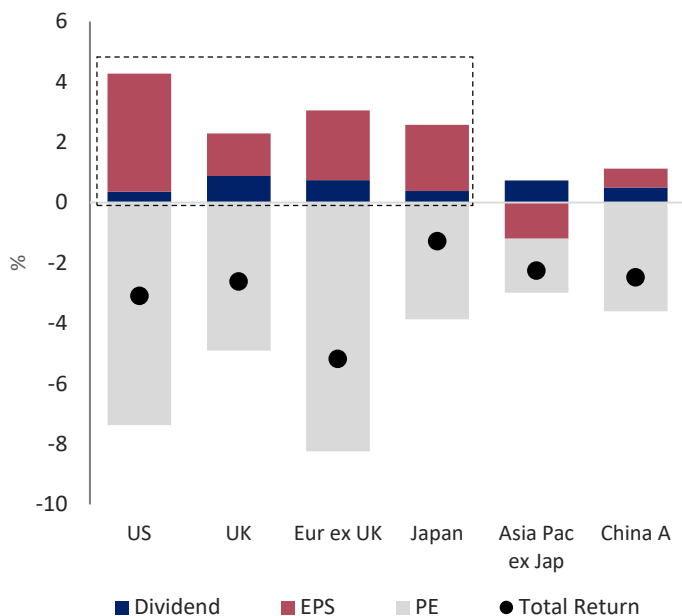


**Chart 4:** Regional volatility (rolling 6m annualised) has declined in US and Eur ex UK but remains above pre-Covid levels. Emerging has seen a recent spike higher



# Perspectives: Q3 regional total return decomposition, largest sector price vs EPS profiles and examining year to date developed/emerging returns

**Chart 1-Regional Q3 2023 total return decomposition**-PE de-rating drives returns across most regions but EPS revisions remain positive.



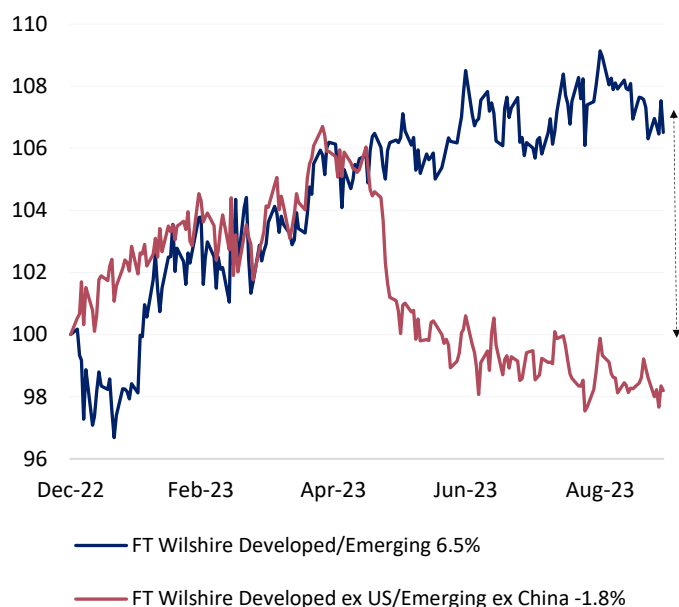
\*Based on Factset data

**Chart 2-Comparing regional largest sector Q3 change in price vs Q3 EPS revisions (12m forward)**-US tech sees positive EPS revisions despite decline in price in Q3

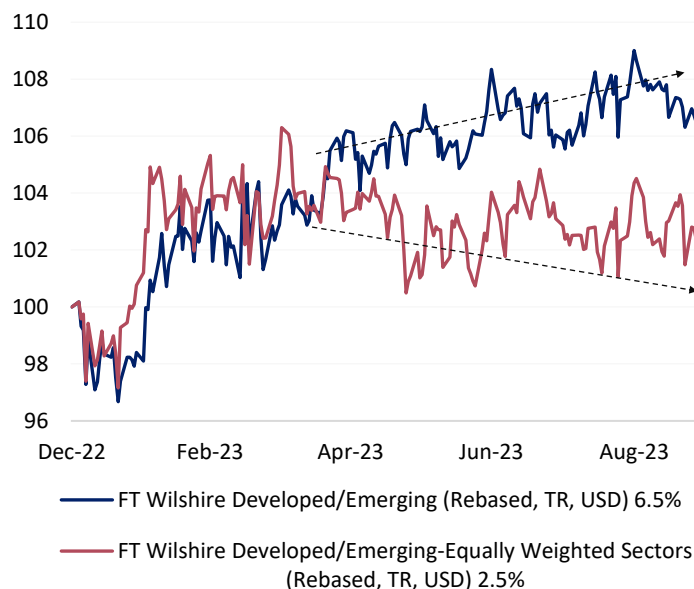
Regional Largest Sector Q3 2023 Chg in Price vs 3m Chg in 12m Forward EPS Estimates*		
	Q3 % Chg in Price	Q3 % Chg in EPS
US Technology Services	-6.7	8.4
UK Financials	-3.3	-2.9
Europe ex UK Financials	-0.5	6.1
Japan Industrials	-4.2	2.1
Asia Pac ex Japan Financials	-2.3	-3.7
Emerging Financials	-1.4	4.4
China Cons Goods	3.5	0.9
Global ex US Financials	-0.3	0.1

\*Based on Factset data

**Chart 3-FT Wilshire Developed/Emerging YTD performance**-Large difference in Developed/Emerging performance when excluding the US and China



**Chart 4-FT Wilshire Developed/Emerging YTD performance**-Developed has underperformed since March when using equally-weighted sectors





## 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	40,770	60.4	18,403	47.8
Japan	3,939	5.8	2,923	7.6
UK	2,518	3.7	2,971	7.7
China	2,053	3.0	877	2.3
Canada	2,030	3.0	1,520	3.9
Switzerland	1,782	2.6	1,320	3.4
France	1,728	2.6	1,289	3.4
India	1,455	2.2	378	1.0
Australia	1,289	1.9	1,166	3.0
Germany	1,243	1.8	1,203	3.1
Taiwan	1,218	1.8	506	1.3
Korea	912	1.4	651	1.7
<b>Global</b>	<b>67,552</b>		<b>38,485</b>	

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

	Latest	% Global Index	10Y Ago	% Global Index
<b>Developed</b>	<b>59,726</b>	<b>88.4</b>	<b>34,107</b>	<b>88.6</b>
USA	40,770	60.4	18,403	47.8
Europe ex UK	8,486	12.6	6,726	17.5
Asia Pacific ex Japan	8,112	12.0	4,810	12.5
Emerging	7,826	11.6	4,378	11.4
Japan	3,939	5.8	2,923	7.6
UK	2,518	3.7	2,971	7.7
China	2,053	3.0	877	2.3
<b>Global</b>	<b>67,552</b>		<b>38,485</b>	

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

Developed	Latest	% Developed	10Y Ago	% Developed
USA	40,770	68.1	18,403	53.8
Japan	3,939	6.6	2,923	8.5
UK	2,518	4.2	2,971	8.7
Canada	2,030	3.4	1,520	4.4
Switzerland	1,782	3.0	1,320	3.9
<b>Developed</b>	<b>59,902</b>		<b>34,236</b>	

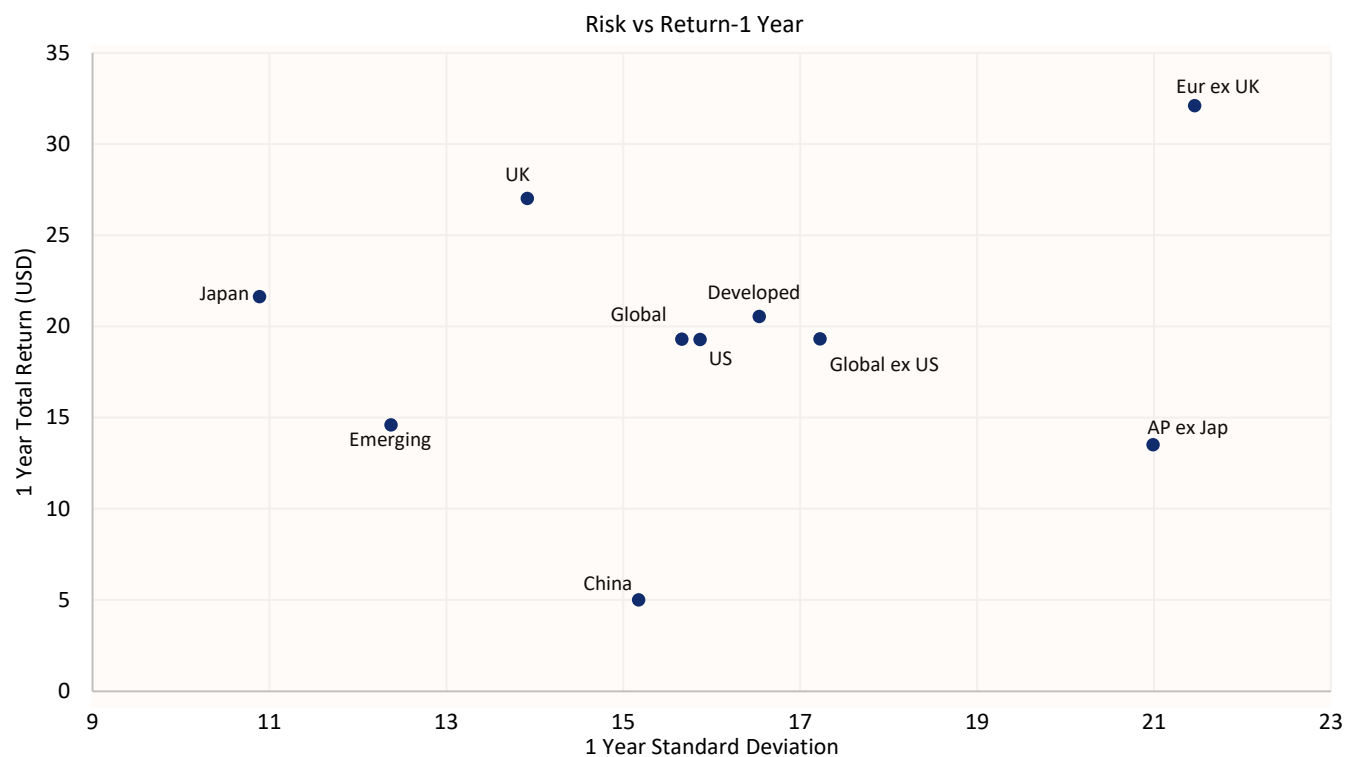
  

Emerging	Latest	% Emerging	10Y Ago	% Emerging
China	2,053	26.2	877	21.2
India	1,455	18.6	378	9.1
Taiwan	1,218	15.6	506	12.2
Korea	912	11.7	651	15.7
Brazil	414	5.3	477	11.5
<b>Emerging</b>	<b>7,826</b>		<b>4,140</b>	

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

	US		Global ex US	
	Latest	%	Latest	%
<b>Sector</b>				
Digital Info	7,912	19.4	2,256	8.4
Financials	6,138	15.1	5,416	20.3
Technology	6,081	14.9	2,247	8.4
Consumer Good	4,746	11.6	3,086	11.5
Healthcare	4,689	11.5	2,367	8.9
Energy	2,942	7.2	2,447	9.1
Industrials	2,835	7.0	2,688	10.1
Transportation	1,552	3.8	1,783	6.7
Res & Materials	1,463	3.6	2,368	8.9
Agriculture	1,267	3.1	1,317	4.9
Real Estate	1,145	2.8	765	2.9
	<b>40,770</b>		<b>25,975</b>	

# Risk vs Return: Regional equities 1 year and 10 years



Source: Wilshire. Data as of September 29, 2023

# Fixed Income and FX

1

## 74bps

Q3 2023 rise in US 10-year yield

2

## -122bps

Decline in US high yield corporate spread from the March peak

3

## +3.2%

Rise in DXY dollar index in Q3 2023

4

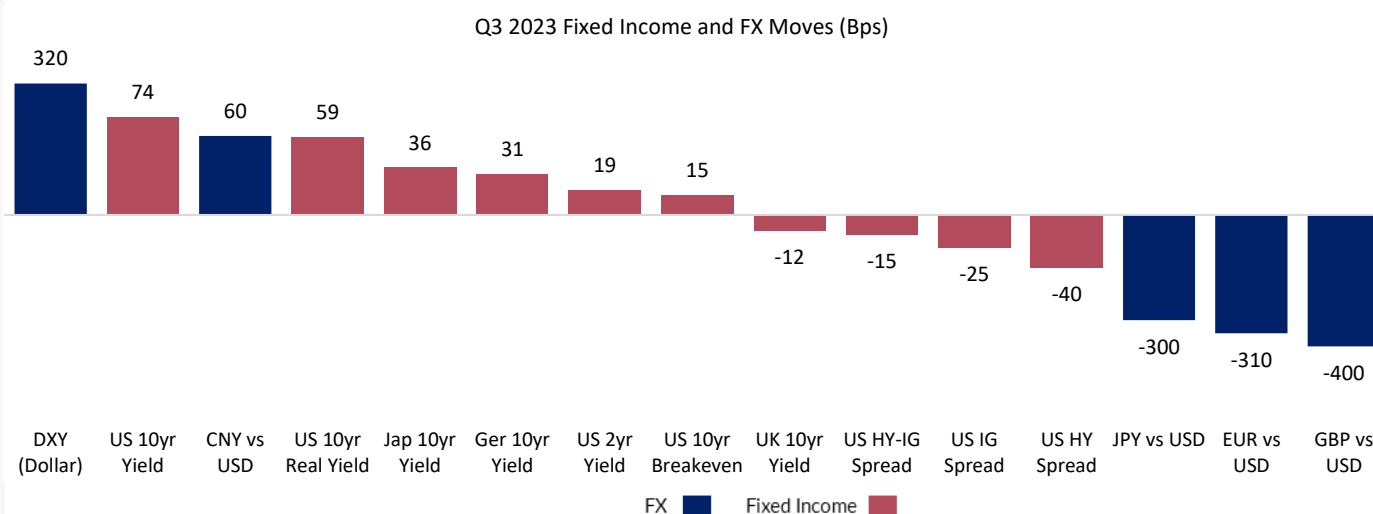
## -11.3%

Decline in JPY vs USD YTD

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- 29 Fixed income performance
- 30 Fixed income market commentary
- 31 Foreign exchange - REER, key spot rates
- 32 Regional spot rate returns

### Moves in key FX and fixed income markets in Q3 2023



Source: Refinitiv and Factset. Data as of September 29, 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	Q3	YTD
US (1-3yr)	5.2	5.1	4.4	<b>0.7</b>	1.7
China (1-3yr)	2.2	2.0	2.3	<b>-0.1</b>	-2.9
Can (1-3yr)	5.0	4.8	3.9	<b>-1.7</b>	1.4
UK (1-3yr)	4.6	5.0	3.6	<b>-1.8</b>	2.4
Aus (1-3yr)	4.1	3.9	3.3	<b>-2.0</b>	-3.8
Italy (1-3yr)	3.9	3.6	3.2	<b>-2.4</b>	0.6
EURO* (1-3yr)	3.3	3.0	2.4	<b>-2.4</b>	-0.1
Japan (1-3yr)	0.0	0.0	0.0	<b>-3.4</b>	-11.6

Chart 2: 7-10 year government bond returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	Q3	YTD
China (7-10yr)	2.7	2.5	2.8	<b>0.0</b>	-1.8
UK (7-10yr)	4.2	4.4	3.6	<b>-2.7</b>	-0.5
US (7-10yr)	4.6	4.2	3.7	<b>-4.4</b>	-2.9
Aus (7-10yr)	4.3	4.1	3.8	<b>-5.0</b>	-5.1
EURO* (7-10yr)	2.7	2.5	2.4	<b>-5.1</b>	-1.1
Japan (7-10yr)	0.6	0.5	0.4	<b>-5.7</b>	-12.3
Italy (7-10yr)	4.4	4.0	4.3	<b>-6.3</b>	1.6
Can (7-10yr)	4.1	3.7	3.2	<b>-6.7</b>	-3.2

Chart 3: Inflation Linked bond returns

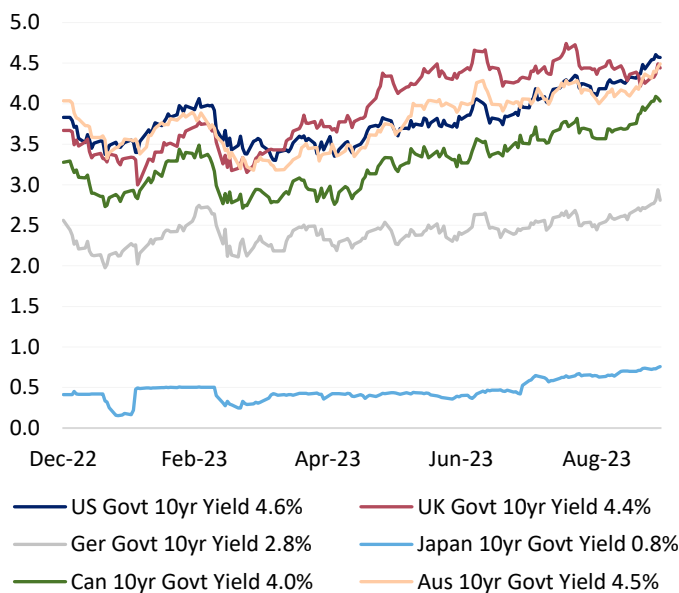
USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	Q3	YTD
US IL (5-10yr)	2.3	2.0	1.6	<b>-2.8</b>	-1.2
UK IL (5-10yr)	0.6	0.8	0.2	<b>-3.8</b>	2.4
Aus IL (All)	1.2	1.3	0.6	<b>-3.8</b>	-1.9
Japan* IL (5-10yr)	-0.8	-0.7	-0.6	<b>-3.9</b>	-8.8
EURO* IL (5-10yr)	1.1	0.9	0.8	<b>-5.9</b>	-0.7
Italy IL (All)	2.0	1.7	1.9	<b>-6.5</b>	1.4
Can IL (All)	2.2	2.0	1.3	<b>-9.7</b>	-8.3

Chart 4: Investment grade & high yield returns

USD (TR, %)	Yields			Returns	
	Latest	1M	31-Dec-22	Q3	YTD
US HY (All)	8.9	8.7	8.7	<b>0.5</b>	6.0
UK HY (All)	10.4	10.5	10.3	<b>-0.5</b>	10.0
EURO HY (All)	7.4	7.5	7.6	<b>-1.3</b>	5.3
UK IG (All)	6.1	6.4	5.7	<b>-1.9</b>	2.7
EURO IG (All)	4.5	4.3	4.1	<b>-2.7</b>	1.5
US IG (All)	6.0	5.8	5.4	<b>-2.7</b>	0.4
Japan BBB (All)	1.4	1.4	1.6	<b>-3.6</b>	-10.1
Japan IG (All)	0.9	0.8	0.9	<b>-4.1</b>	-10.9

# Fixed Income key observations: Markets reprice in the Fed's higher for longer view as US 10-year yields spike to the highest level since 2007

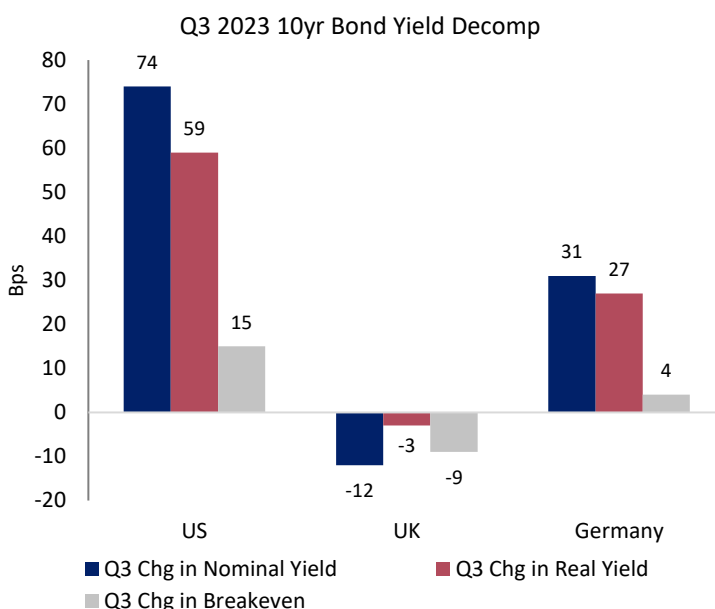
**Chart 1:** The US has led the renewed rise in 10-year yields with markets (upwardly) reassessing the trajectory for US interest rates in 2024



**Chart 2:** With the US 10-year breaking out of its 30-year range the next resistance level yields could lie at the 2006-2007 levels of around 5%



**Chart 3:** The rise in US and German 10 year yields in Q3 was predominantly driven by real yields rather than breakeven.

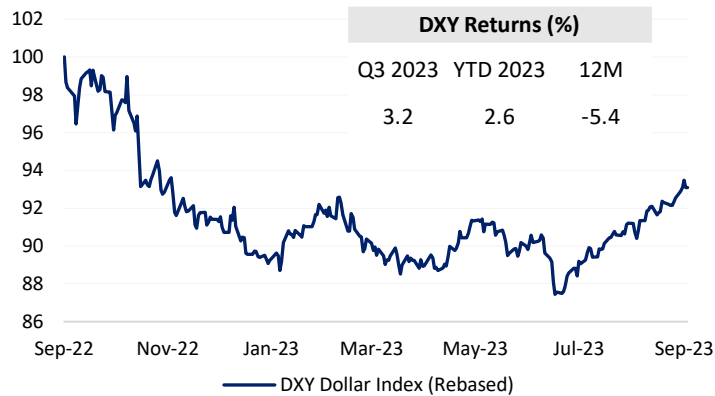


**Chart 4:** The rise in the US 10 year government bond yield has led to a decline (narrowing) in spreads over a regional and corporate bonds from recent peaks-most notably US high yield corporate spreads

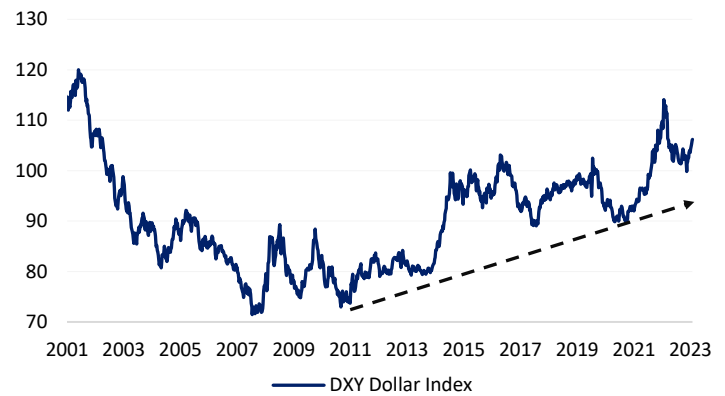
Shift in Spreads Over US 10-Year Bond (Bps)			
	Latest (Bps)	Recent Peak (Bps)	Shift vs Recent Peak (Bps)
US High Yield Corp - US 10-Year	435.0	557.0	-122.0
Japan 10-Year - US 10-Year	-381.8	-288.0	-93.8
UK 10-Year - US 10-Year	-13.1	68.6	-81.7
German 10-Year - US 10-Year	-176.4	-100.7	-75.7
US Investment Grade Corp - US 10-Year	149.0	196.2	-45.0

# FX return perspectives: Rising US interest rate expectations for 2024 sees DXY dollar hit a 10 month high.

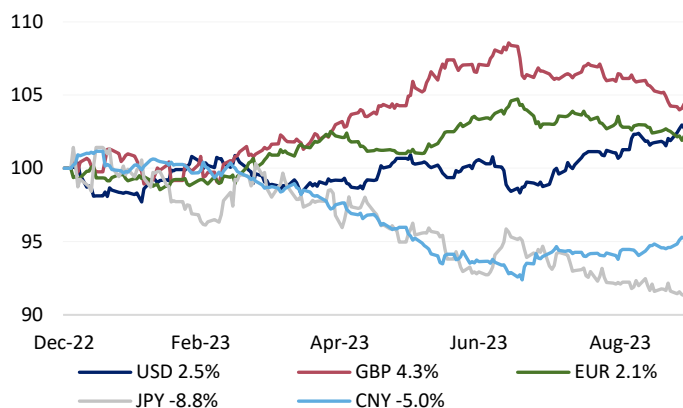
**Chart 1:** The DXY dollar has continued to rise from its mid-July low, climbing 3.2% in Q3



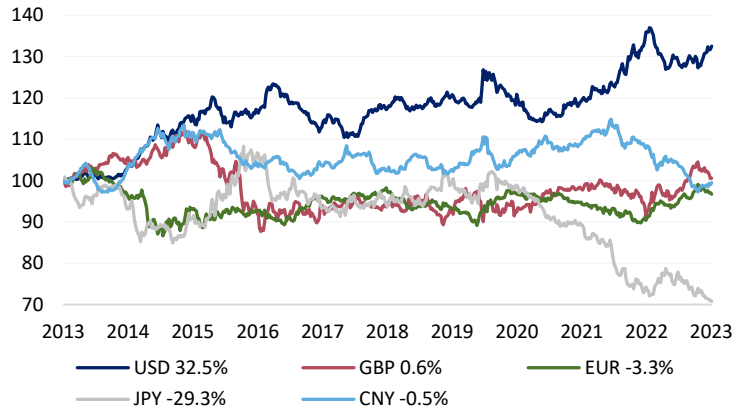
**Chart 2:** Although currently below its peak, the DXY dollar has been in a structural uptrend since 2011



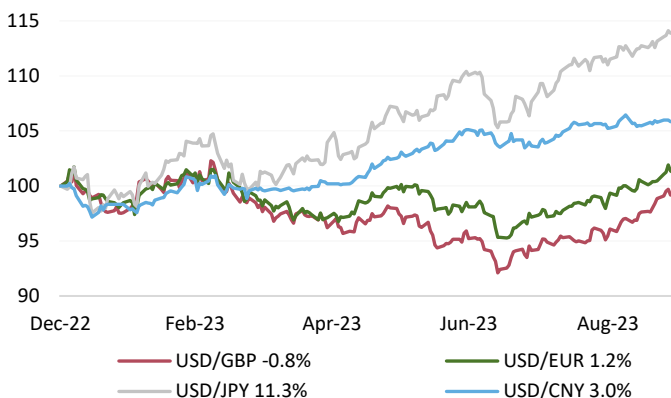
**Chart 3:** Regional Real Effective Exchange Rate returns-YTD (rebased)



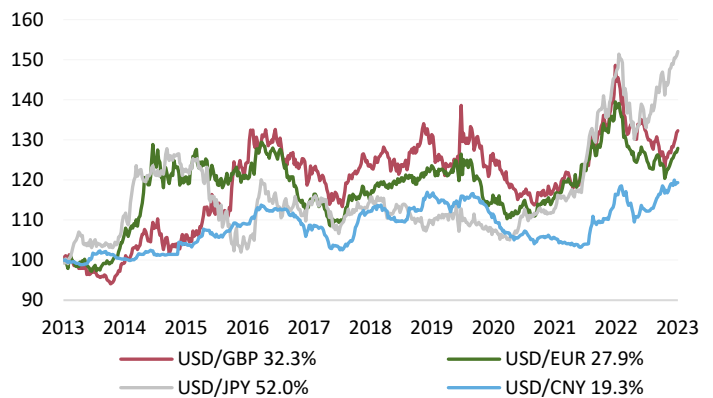
**Chart 4:** Regional Real Effective Exchange Rate returns over 10 years (rebased)



**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 10 years (rebased)



## FX spot rate returns from a regional perspective

The dollar continued to make gains from the lows in mid-July, driven largely by rising US interest rate expectations relative to other major regions. Sterling saw notable declines against the dollar in Q3 as the Bank of England left rates unchanged, with markets now sensing UK rates are close to peak. The Bank of Japan's continued dovish stance means the JPY depreciated further in Q3 against the dollar.

Moves vs USD (TR, %)	Q3 2023	1M	YTD	12M
CNY	0.6	0.0	-3.0	-1.0
CHF	-2.1	-3.5	1.0	6.6
CAD	-2.5	-0.5	-0.2	0.8
JPY	-3.0	-2.2	-11.3	-3.5
EUR	-3.1	-2.5	-1.2	7.7
AUD	-3.5	-0.8	-5.6	-1.0
GBP	-4.0	-3.8	0.8	9.7

Moves vs EUR (TR, %)	Q3 2023	1M	YTD	12M
USD	3.1	2.5	1.2	-7.7
CNY	2.4	1.8	-4.8	-9.9
CHF	0.8	-1.0	2.0	-1.1
CAD	0.6	2.1	1.1	-6.5
JPY	0.0	0.0	-11.3	-11.3
AUD	-0.1	2.2	-4.1	-8.1
GBP	-1.1	-1.3	2.3	2.0

Moves vs CNY (TR, %)	Q3 2023	1M	YTD	12M
CAD	1.9	-0.1	-5.4	-3.2
USD	-0.6	0.0	3.0	1.0
CHF	-1.3	-2.6	7.2	10.0
AUD	-2.0	0.9	1.3	2.5
EUR	-2.4	-1.7	5.0	11.0
JPY	-2.8	-2.0	-7.6	-0.9
GBP	-4.1	-5.0	4.4	13.1

Moves vs AUD (TR, %)	Q3 2023	1M	YTD	12M
USD	3.5	0.8	5.6	1.0
CNY	2.0	-0.9	-1.3	-2.5
CAD	1.0	0.3	5.7	1.8
EUR	0.1	-2.2	4.1	8.1
JPY	-0.3	-1.4	-7.3	-2.5
GBP	-1.0	-3.5	6.2	9.9

Moves vs GBP (TR, %)	Q3 2023	1M	YTD	12M
CNY	4.3	5.3	-4.2	-11.6
USD	4.0	3.8	-0.8	-9.7
CHF	1.9	0.2	-0.3	-3.1
CAD	1.6	3.4	-1.0	-8.2
EUR	1.1	1.3	-2.2	-2.0
AUD	1.0	3.5	-6.2	-9.9
JPY	0.2	1.9	-12.3	-14.5

Moves vs JPY (TR, %)	Q3 2023	1M	YTD	12M
USD	3.0	2.2	11.3	3.5
CNY	2.8	2.0	7.6	0.9
CHF	1.4	-1.8	13.7	10.8
CAD	0.9	2.1	13.7	4.2
AUD	0.3	1.4	7.3	2.5
EUR	0.0	0.0	11.3	11.3
GBP	-0.2	-1.9	12.3	14.5

Moves vs CHF (TR, %)	Q3 2023	1M	YTD	12M
USD	2.1	3.5	-1.0	-6.6
CNY	1.3	2.6	-7.2	-10.0
CAD	-0.4	3.1	-1.2	-5.5
EUR	-0.8	1.0	-2.0	1.1
JPY	-1.4	1.8	-13.7	-10.8
GBP	-1.9	-0.2	0.3	3.1

Trade Weighted (TR, %)	Q3 2023	1M	YTD	12M
DXY	3.2	2.5	2.6	-5.4
CNY	1.4	1.0	-2.5	-4.5
EUR	-0.5	-0.6	1.0	4.6
JPY	-1.4	-1.0	-8.4	-3.9
GBP	-1.6	-2.0	4.4	8.5
AUD	-1.7	0.4	-1.8	-2.6

Source: Refinitiv. Data as of September 29, 2023



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

1

**+28.1%**

Q3 rise in oil price

2

**+2.3%**

YTD rise in gold price

3

**-12.0%**

Return of the Wilshire US  
Self Storage REITS in Q3

4

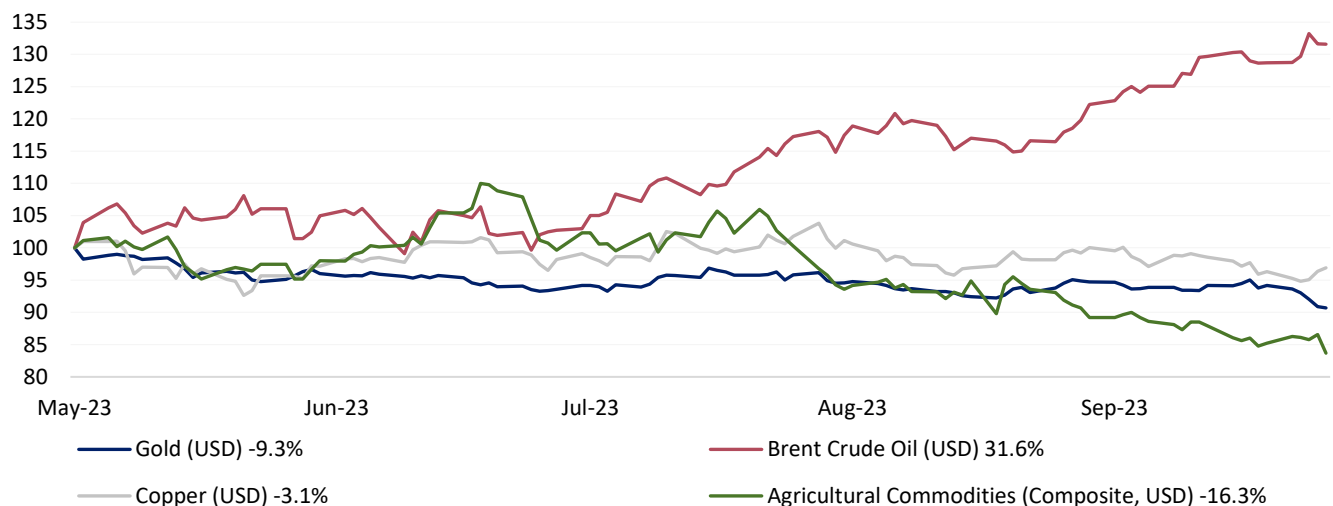
**+51.7%**

Rise in the FT Wilshire  
Digital assets index in  
YTD

## CONTENTS

- 34 Commodities
- 35 Property (Wilshire REIT indexes)
- 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)



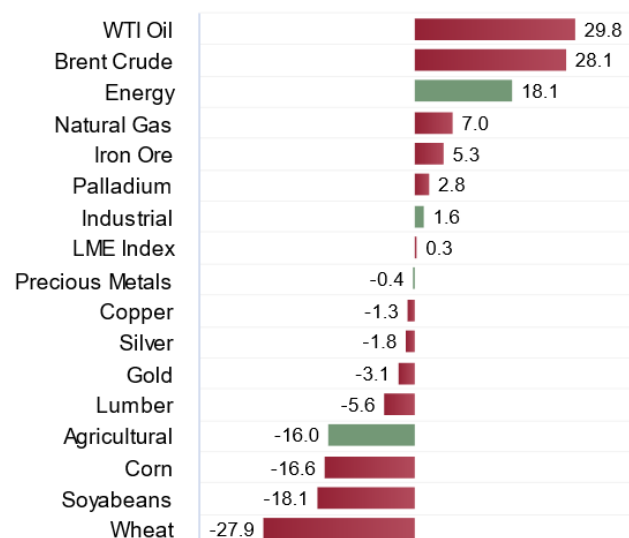
Source: Wilshire and Refinitiv. Data as of September 29, 2023

Wilshire Indexes - Performance Report (September 2023)

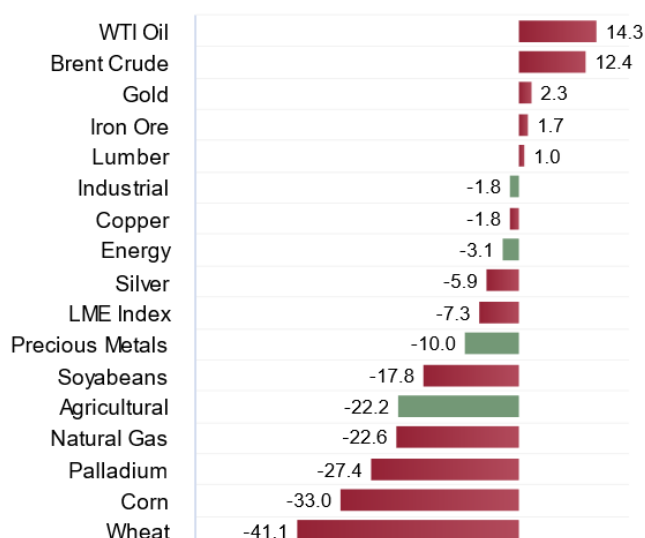
## Commodities: Supply cuts drive oil price to its highest level since November 2022. Rise in the dollar takes the shine off gold.

The oil price experienced an unrelenting rise in Q3, largely driven by supply cuts from the world's largest producers (Saudi Arabia and Russia). The rise accelerated further towards the end of the September on data showing US oil inventories fell to their lowest level in over 12 months. Gold weakened in Q3 as the dollar rose (see chart below) but has still delivered a positive YTD return.

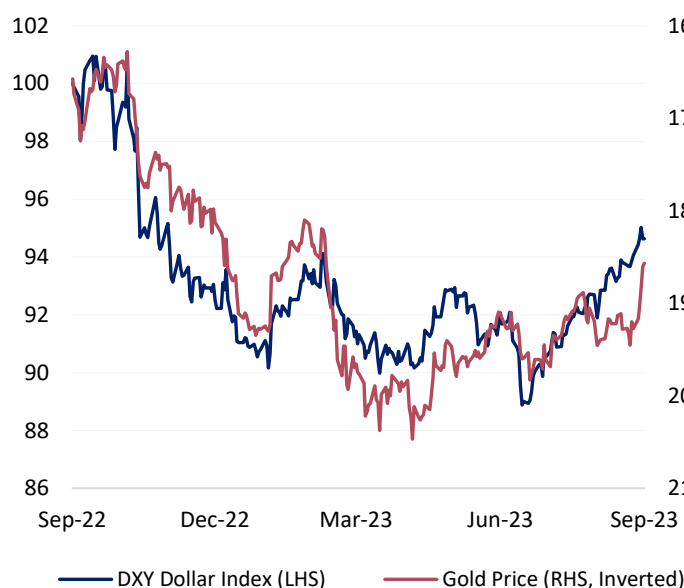
Q3 2023 USD TR (%)



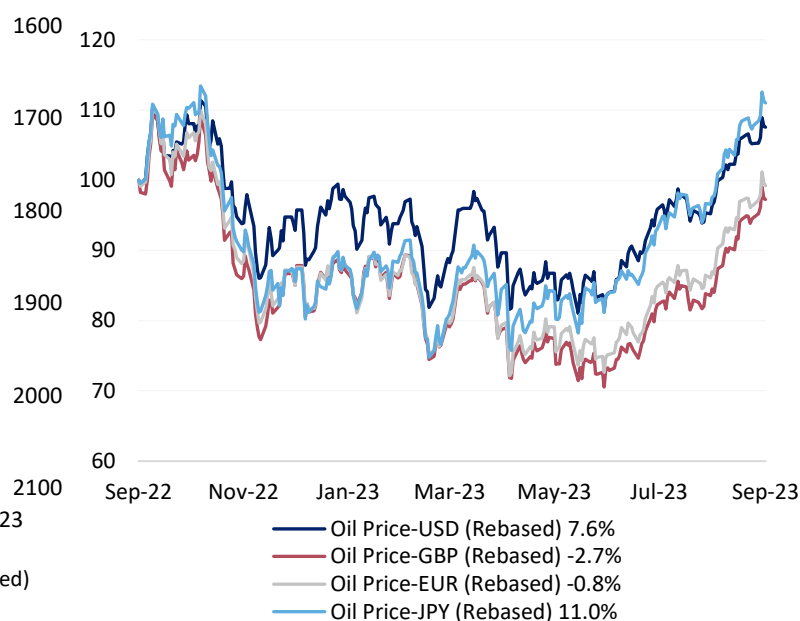
YTD USD (TR, %)



The gold price has seen a negative correlation with the DXY dollar index over the past 12 months



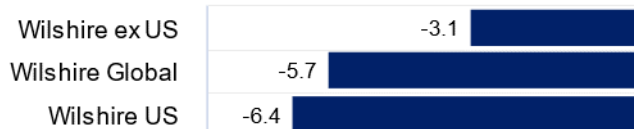
Oil price move adjusted for different FX impact over the past 12 months-almost a 13% difference between oil price move in GBP and JPY



## Property (Wilshire REIT indexes): Negative returns in Q3 as the US underperforms. Office REITS outperform in Q3 but still lag YTD.

The Wilshire US REITs index underperformed Global ex US in Q3 but has still delivered a superior YTD return so far in 2023. At a US sector level, Self-Storage and Apartments underperformed in Q3. Office REITs regained some ground on a relative basis but have still significantly underperformed YTD.

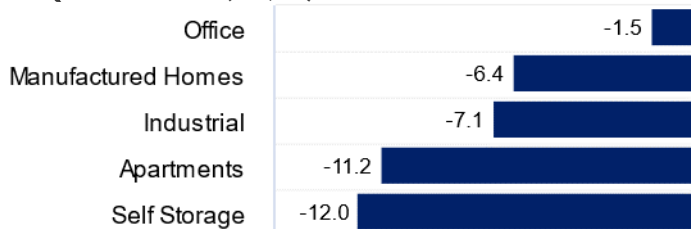
Q3 2023 USD (TR, %)



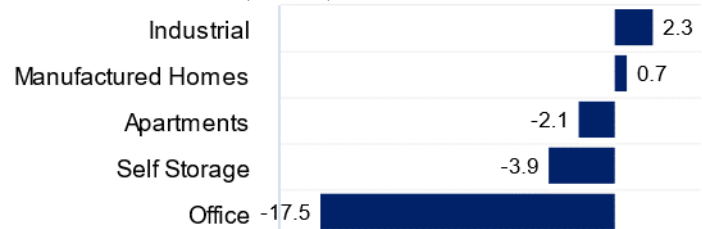
YTD USD (TR, %)



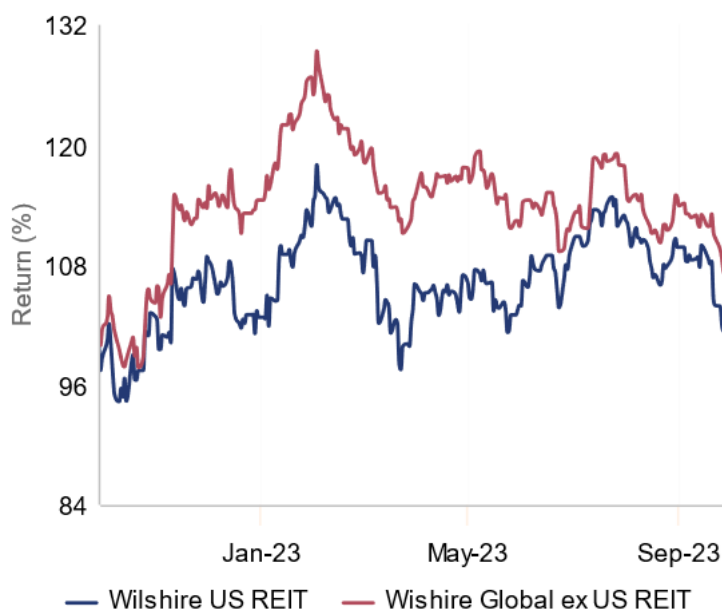
Q3 2023 USD (TR, %)



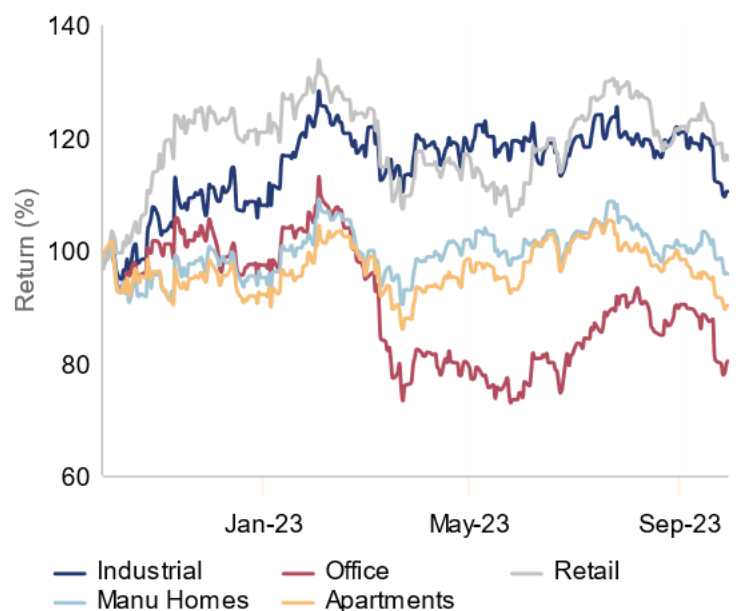
YTD USD (TR, %)



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



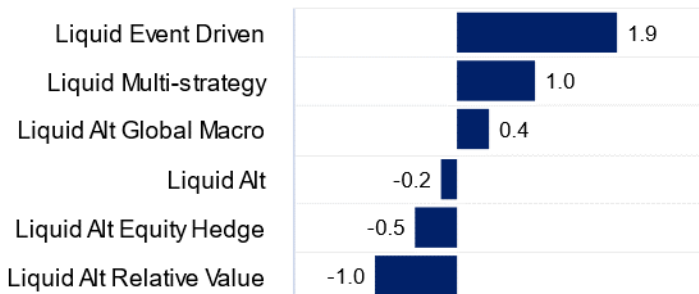
Wilshire US REIT sector performance - 12M (Rebased, TR)



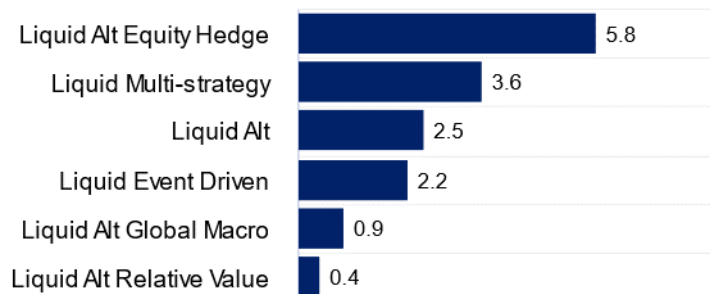
## Wilshire Liquid Alternative Indexes (Absolute Return): Small positive returns in Q3 against a backdrop of declining equity markets.

Event Driven, Multi-Strategy and Global Macro Wilshire Liquid Alternative indexes delivered a modest positive return in Q3. YTD Equity Hedge remains the standout performer, with Global Macro and Relative Value the laggards, delivering only a small positive return in 2023 so far.

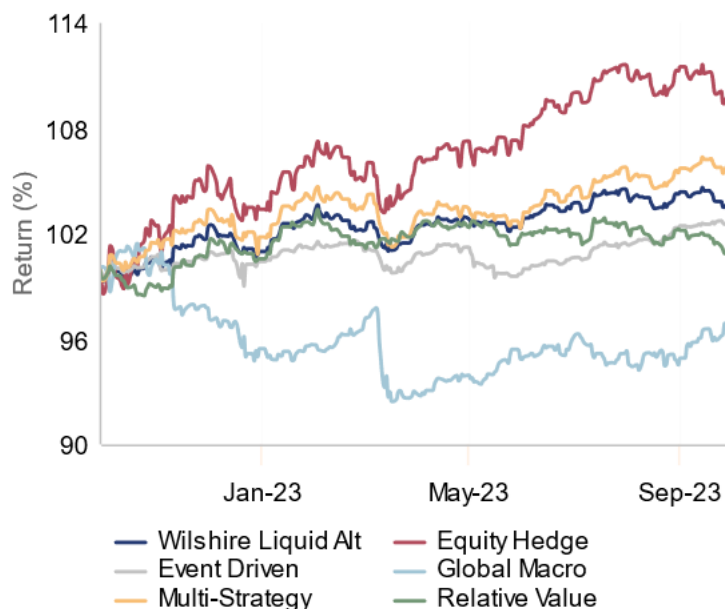
Q3 2023 USD (TR, %)



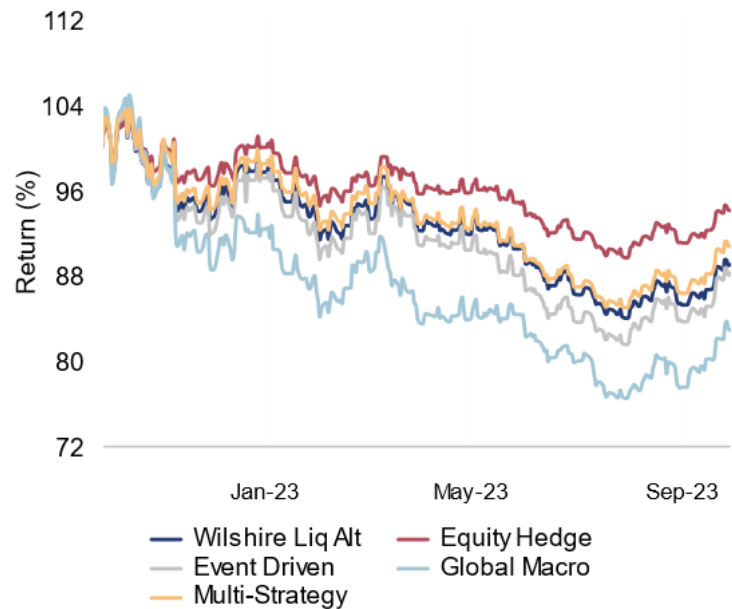
YTD USD (TR, %)



Wilshire Liquid Alternative Index performance - total returns (rebased)



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

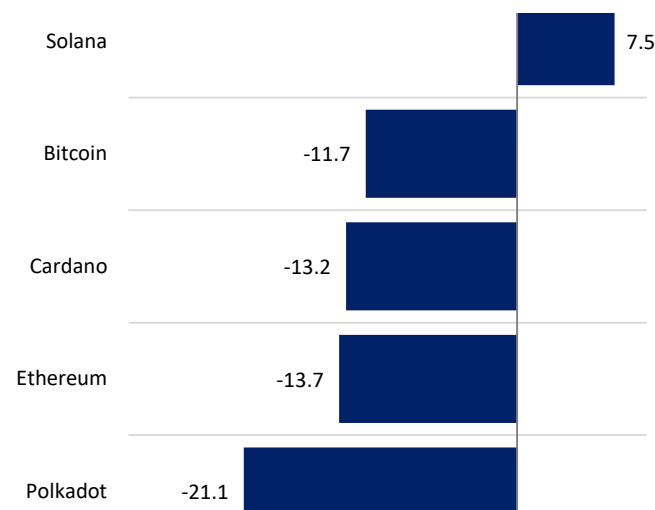


## Digital Assets Index: Declines in Q3 but the index still sees sizeable gains YTD

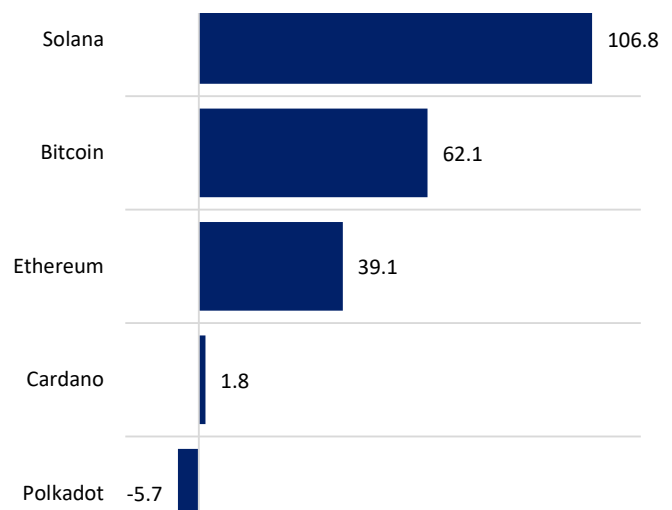
The FT Wilshire Digital Assets Index declined –12.0% in Q3 but has still made significant gains in 2023, up 51.7% YTD so far and 28.7% over the past 12 months.



FT Wilshire Digital Assets Index selected constituent performance - Q3 2023 (% , USD)

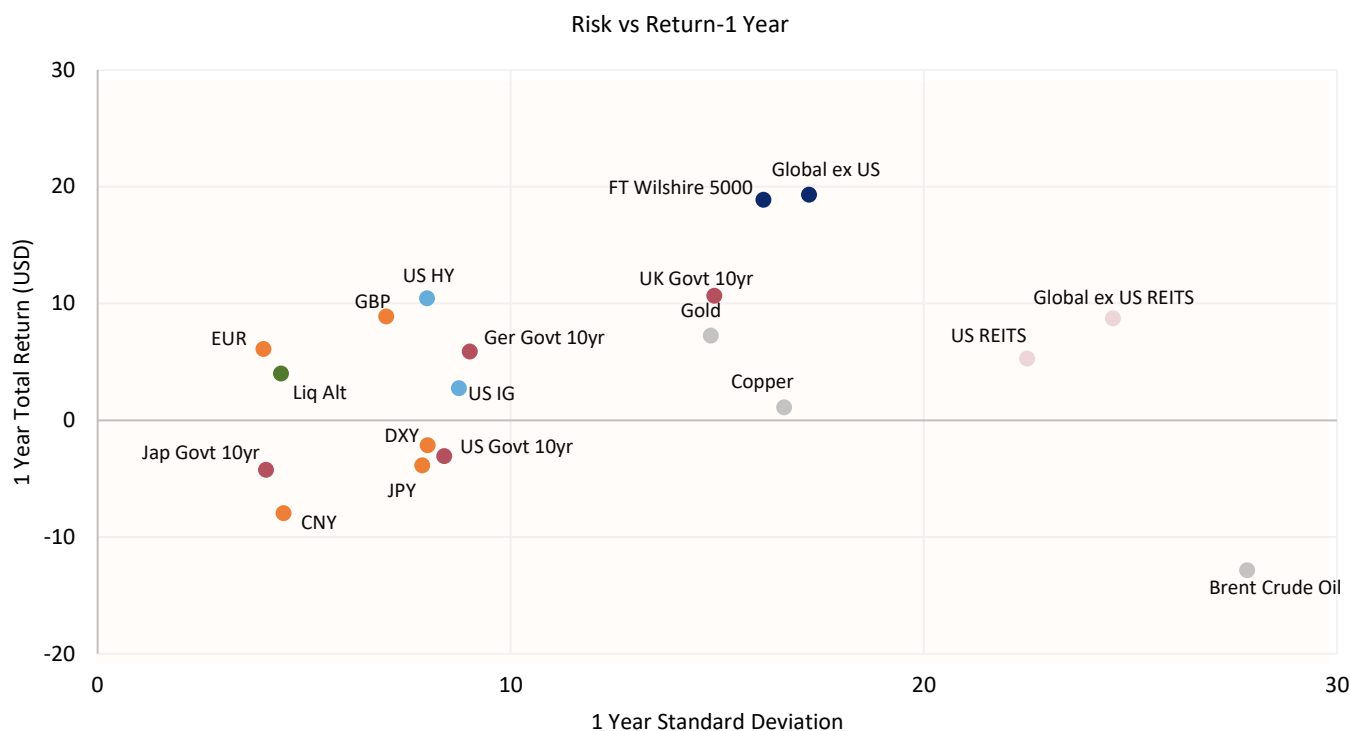


FT Wilshire Digital Assets Index selected constituent performance - YTD 2023 (% , USD)

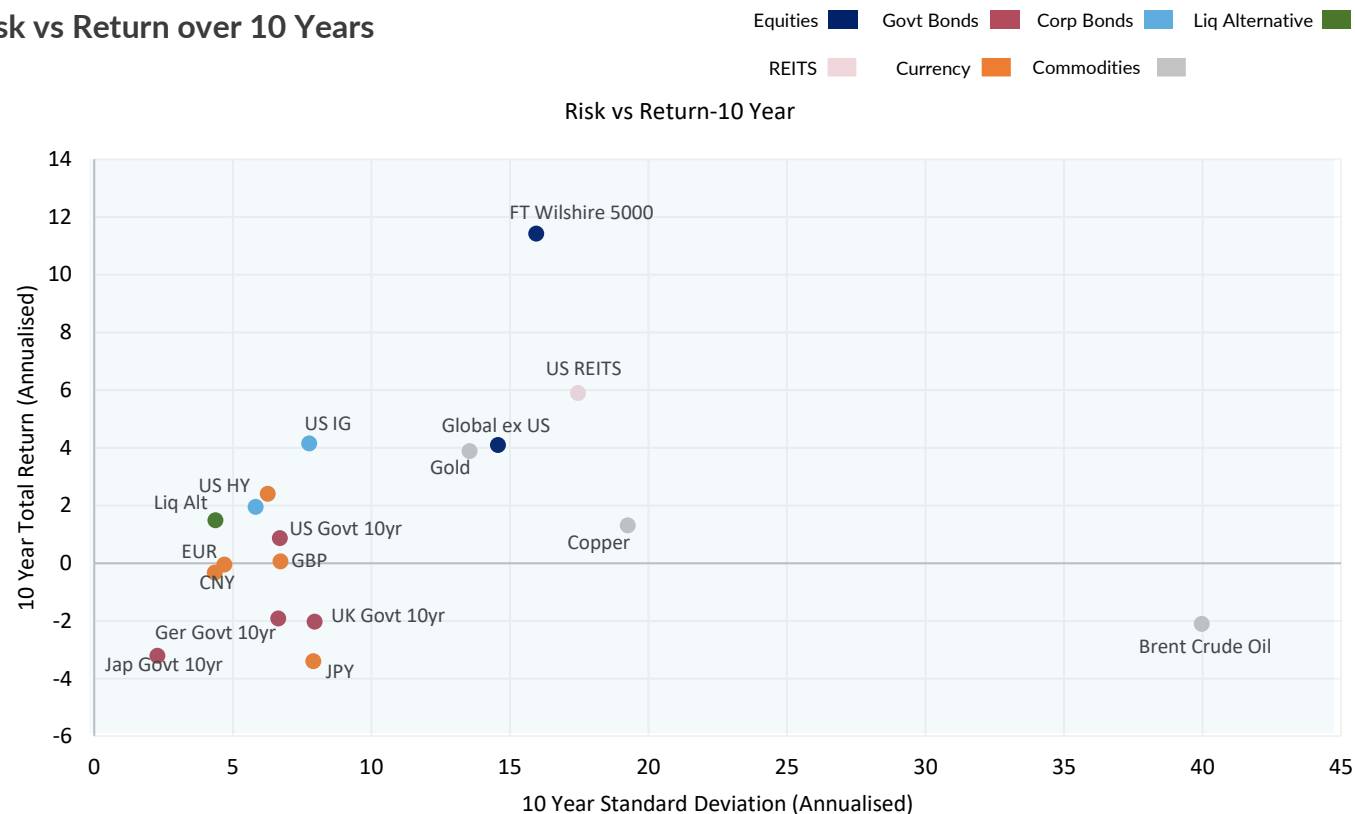


# Multi Asset Class: Risk vs Return

## Risk vs Return over 1 Year



## Risk vs Return over 10 Years



Source: Wilshire, Refinitiv and FactSet. Data as of September 29, 2023

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