

Global Strategy

How Have Markets & Sectors Performed Through Stagflation?

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We DO NOT expect Stagflation...

Inflation will peak higher and persist longer than earlier expected, but it's the recession part of Stagflation that we disagree with. Growth, PMIs, and earnings momentum are at very strong levels: expected Q2 global growth, G3 new orders to inventories and MSCI ACWI earnings momentum are at 83rd, 60th and 86th percentiles, respectively, of a 20y history. They will still be at decent levels after being knocked down by the latest commodity shock, which is compounding already existing supply bottlenecks. That is our base case...

...but it's best to be prepared

Today it's not just commodity prices rising, but also volumes of commodities becoming scarce (potential self embargo on Russian Oil, Gas, Aluminium, Wheat; no supply of Wheat, Corn and Potash from Ukraine). While a 10% rise in oil prices hurts GDP by between 0.1-0.2%, a 10% decline in oil volumes can compromise growth by 0.7%, so 3-5x more than just a price shock.

What's priced

Our numbers show that prices across asset classes are now implying an average PMI for US, EU and China to drop below 50. Coupled with inflation expectations (10y breakevens) at the highest level on record, it is fair to say market is pricing in a non-trivial probability of stagflation.

How did industries & regions do as growth shifted lower amidst high inflation?

We look at 3 different regimes (low/medium/high) of both growth and inflation. For each growth/inflation combination (total of 3x3 permutations), we compute the average monthly returns for each industry group. The main conclusions are:

1. European equity returns have been more sensitive than US returns to oncoming stagflationary pressures. EM returns were most negatively impacted. In these regions returns declined almost linearly with the decline in growth.
2. US returns held up well as growth downshifted, but deeper through stagflationary pressures they 'caught-down' to Europe. EM was still the underperformer across regions.
3. Industries that outperformed through stagflationary pressures were more consistent across regions. These were Staples, Healthcare, Real Estate.
4. Sectors that underperformed in Stagflation differed significantly. Tech suffered the most in the US, Financials in Europe, while in EM it was Materials and Energy.
5. As growth moved from the middle to the lower end of its distribution, across all regions, Materials and Energy saw the biggest drop in returns despite elevated inflation.

[Part I : What Stagflation has historically meant for US Equities](#)

[Part II : What Stagflation has historically meant for European Equities](#)

[Part III : What Stagflation has historically meant for EM Equities](#)

[Appendix : Growth/inflation : Diverging trends in 6 charts](#)

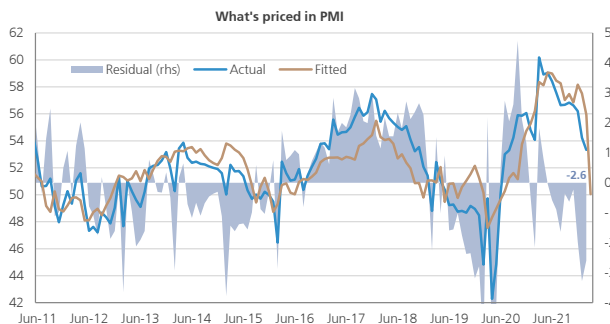
Part I: What stagflation has historically meant for US Equities

Today, the market is clearly worried. The latest commodity shock emanating from Russia's invasion of Ukraine is compounding already existing supply bottlenecks. As a result, in addition to having a negative impact on margins or disposable income directly, it could also impact business and consumer confidence.

Our numbers show that prices across asset classes are now implying an average PMI for US, EU and China to drop below 50 (Figure 1). Coupled with inflation expectations (10y breakevens) at the highest level on record (Figure 2), it is fair to say market is pricing in a non-trivial probability of stagflation.

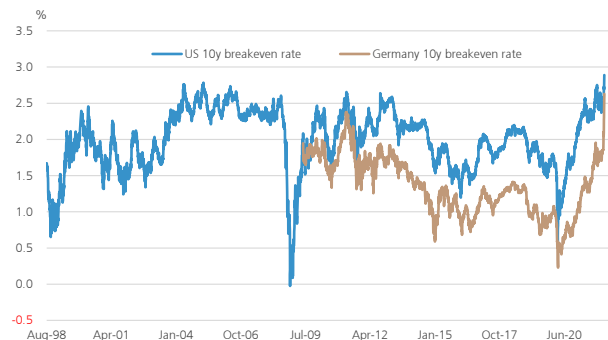
Latest price actions imply stagflation could be around the corner

Figure 1: Cross asset prices are now implying G3 (US, EU and China) PMI to drop below 50



Source: UBS, Haver, Bloomberg, MSCI, Datastream. Note: The average of China, US and Euro area PMI was regressed on our cross asset volatility index, a USD/EMFX index, a global cyclical stocks index, MSCI ACWI 12m fwd P/E and Bloomberg's commodity index.

Figure 2: US and EU 10y breakevens are at their all time high

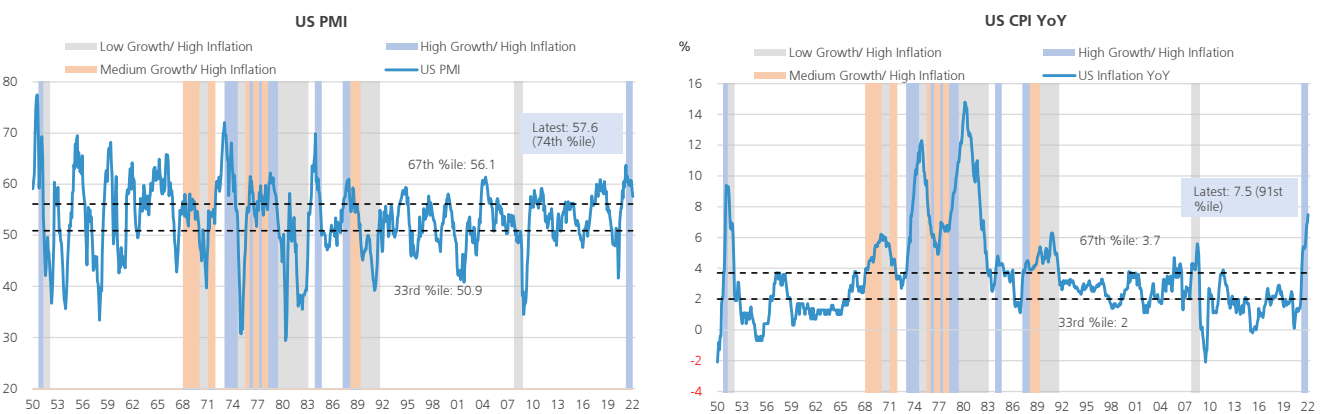


Source: UBS, Bloomberg

Using history as a guide, we focus on the levels of returns and the changes in returns when growth (PMIs) downshifts from the top third to middle and bottom third of its distribution within the context of high (top third) inflation. We regard the state of inflation being in the top third and growth being in the bottom third of their respective distributions as one that represents stagflationary pressures. This is always in the top right box of the 3x3 matrices in this note.

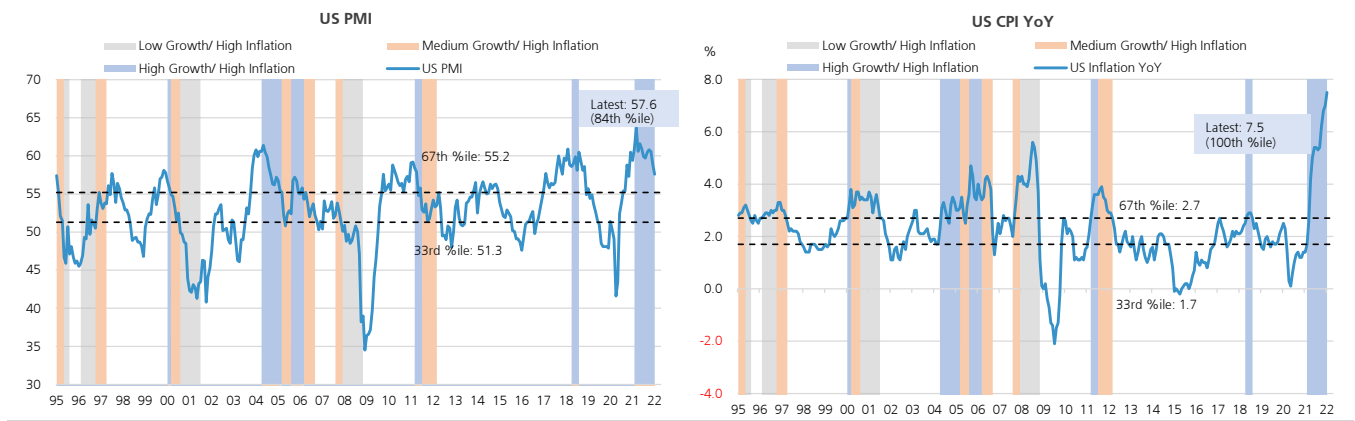
We use two data-sets for the US. One that begins in 1995, and the other (from Fama and French) that begins in 1950. 1951, 1969, 1973, 1979-83, 1990 and 2008 were the main stagflationary episodes based on this definition. The dataset from 1995 also identifies 1996 and 2001 as displaying stagflationary pressures. The results are not dissimilar.

Figure 3: US Manufacturing PMI and US Headline CPI YoY - since 1950



Source: UBS, Bloomberg

Figure 4: US Manufacturing PMI and US Headline CPI YoY - since 1995



Source: UBS, Bloomberg

The main findings are:

1. When inflation is in the top third of its distribution (right most column of Figure 5), a modest downshift in growth doesn't hurt US returns much (average returns drop only from 1.22% to 1.03%). As we will show later (Figure 10 and Figure 15) this is not true for Europe (returns drop as much from high to medium growth as they do from medium to low growth) and EM (returns drop more sharply from high to medium growth than medium to low growth). In the US, as growth then shifts to the bottom third of its distribution (stagflationary pressures - top right of Figure 5) average monthly returns drop sharply to -0.15%

When inflation is high, a modest downshift in growth doesn't hurt US equity returns much

2. In this state of stagflationary pressures (top right of Figure 5 and Figure 6), the US Industries that historically outperformed the market (unsurprisingly) are Food Staples & Retailing, HH and Personal Products, Pharma and Biotech, Food and Beverages, Banks, Real Estate & Energy. Industries that have underperformed are Communication Services, Info Tech, Autos, Insurance, Cap Goods, Utilities.

3. Figure 8 shows which sectors see the biggest changes in returns when we move from a high inflation & high growth world (where we were till recently) to a high inflation & moderate or low growth world. As we move to a high inflation & moderate growth world, Energy, Materials, Tech and Retailing, Autos, Consumer Durables begin to lose ground very quickly, even if Energy still outperforms the market. Defensives actually gain as funds shift here from cyclical, with Food, Bev & Tobacco, Pharma, and Financials seeing the biggest gains. A further step down in growth, which makes for a stagflationary state, sees all sectors lose ground, including defensives. Returns in Tech, Energy and Real Estate downshift the most, even if the latter two still outperform the market.

Deeper through stagflationary pressures, US equity returns drop more sharply and funds start shifting towards defensives sectors

Figure 5: US sectors' performance, conditional to growth and inflation levels -since 1995

	Low Inflation (<1.7)				Medium Inflation				High Inflation (>2.7)			
	# of months : 41; Average all sectors: 0.57				# of months : 36; Average all sectors: 0.86				# of months : 34; Average all sectors: -0.15			
Low PMI (<51.3)	Info_Tech	1.58	Industrials	0.49	Info_Tech	1.63	Cons_Disc	0.80	Cons_Staples	0.72	Materials	-0.02
	Cons_Disc	1.36	Utilities	0.14	Health_Care	1.42	Materials	0.79	Health_Care	0.34	Utilities	-0.21
	Comm_Svs	1.05	Materials	0.11	Comm_Svs	1.23	Industrials	0.72	Real_Estate	0.27	Cons_Disc	-0.38
	Health_Care	0.97	Financials	0.10	Financials	1.10	Real_Estate	0.67	Energy	0.07	Index	-0.41
	Cons_Staples	0.80	Energy	-0.17	Cons_Staples	1.05	Utilities	0.06	Industrials	-0.02	Info_Tech	-0.91
	Index	0.75	Real_Estate	-0.33	Index	0.98	Energy	-0.17	Financials	-0.02	Comm_Svs	-1.24
Medium PMI	# of months : 37; Average all sectors: 1.15				# of months : 34; Average all sectors: 1.2				# of months : 36; Average all sectors: 1.03			
	Cons_Disc	1.86	Health_Care	1.30	Info_Tech	2.26	Cons_Disc	1.14	Real_Estate	1.78	Financials	1.03
	Financials	1.82	Energy	0.99	Comm_Svs	1.49	Cons_Staples	1.03	Energy	1.58	Industrials	0.93
	Info_Tech	1.60	Cons_Staples	0.76	Materials	1.45	Energy	0.95	Cons_Staples	1.36	Index	0.87
	Materials	1.54	Real_Estate	0.64	Industrials	1.34	Real_Estate	0.92	Info_Tech	1.31	Materials	0.45
	Index	1.33	Utilities	0.32	Utilities	1.22	Financials	0.83	Health_Care	1.25	Cons_Disc	0.34
High PMI (>55.2)	# of months : 27; Average all sectors: 1.77				# of months : 46; Average all sectors: 1.25				# of months : 36; Average all sectors: 1.22			
	Energy	2.28	Index	1.83	Info_Tech	1.81	Health_Care	1.27	Energy	2.08	Index	1.13
	Financials	2.18	Comm_Svs	1.66	Cons_Disc	1.71	Financials	1.15	Real_Estate	1.92	Cons_Staples	0.94
	Industrials	2.18	Real_Estate	1.38	Industrials	1.36	Utilities	1.06	Info_Tech	1.57	Financials	0.90
	Info_Tech	2.10	Health_Care	1.31	Comm_Svs	1.34	Energy	1.03	Utilities	1.38	Health_Care	0.89
	Cons_Disc	1.95	Cons_Staples	1.30	Index	1.33	Materials	0.93	Materials	1.23	Cons_Disc	0.84
Materials	1.93	Utilities	1.09	Real_Estate	1.29	Cons_Staples	0.70	Industrials	1.18	Comm_Svs	0.60	

Source: UBS, MSCI, Bloomberg

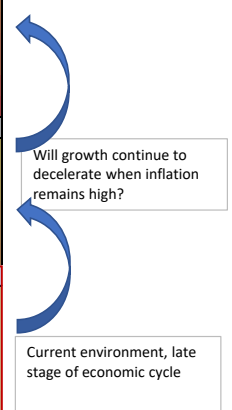
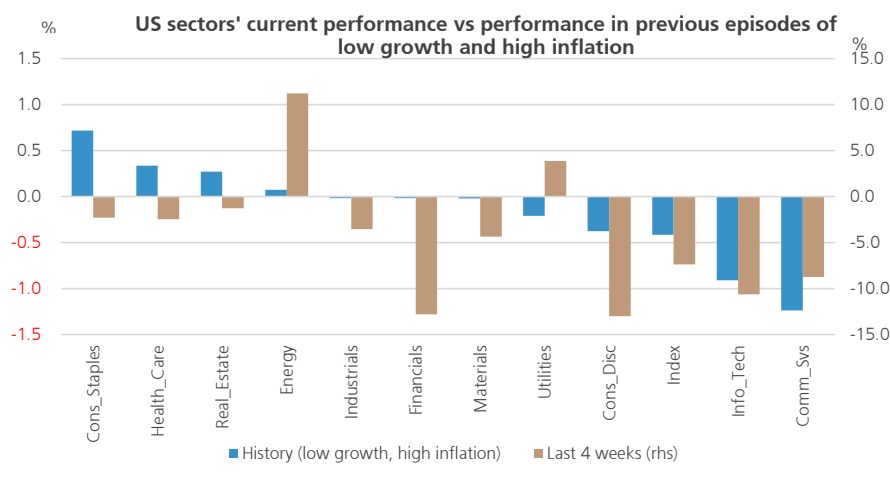


Figure 6: US industry groups' performance, conditional to growth and inflation levels -since 1995

	Low Inflation (<1.7)				Medium Inflation				High Inflation (>2.7)			
	Number of months : 41;		Average all industries : 0.73		Number of months : 36;		Average all industries : 0.92		Number of months : 34;		Average all industries : -0.21	
Low PMI (<51.3)	Auto & Comp	2.36	Cons Durb & App	0.54	Semiconductors & Equip.	2.18	Cons Durb & App	0.79	Fd/Staples Rtl	0.73	Div Financials	-0.02
	Retailing	2.02	Div Financials	0.51	Tech Hware & Eq	1.84	Auto & Comp	0.75	H/H & Personal Prod	0.69	Materials	-0.02
	Software & Svs	1.97	Cap Gds	0.48	Div Financials	1.59	Insurance	0.75	Transportation	0.67	Utilities	-0.21
	Semiconductors & Equip.	1.57	Coml/Prof Svs	0.48	Pharma Biotech	1.50	Media & Ent	0.75	Food Bev & Tobacco	0.55	Cap Gds	-0.24
	Tech Hware & Eq	1.16	Transportation	0.45	Software & Svs	1.35	Cons Svs	0.73	Pharma Biotech	0.39	Software & Svs	-0.30
	Media & Ent	1.02	HTC Equip & Serv	0.41	H/H & Personal Prod	1.22	Real Estate	0.67	Banks	0.35	Cons Svs	-0.35
	Pharma Biotech	0.99	Insurance	0.22	Coml/Prof Svs	1.11	Cap Gds	0.66	Coml/Prof Svs	0.29	Insurance	-0.77
	H/H & Personal Prod	0.96	Utilities	0.14	Retailing	1.06	Banks	0.63	Cons Durb & App	0.28	Media & Ent	-0.78
	Fd/Staples Rtl	0.95	Materials	0.11	Telecom Serv	1.04	Fd/Staples Rtl	0.56	Real Estate	0.27	Auto & Comp	-1.15
	Telecom Serv	0.79	Energy	-0.17	Food Bev & Tobacco	0.99	Transportation	0.40	Energy	0.07	Tech Hware & Eq	-1.18
	Food Bev & Tobacco	0.69	Real Estate	-0.33	HTC Equip & Serv	0.86	Utilities	0.06	Retailing	0.02	Telecom Serv	-1.38
	Cons Svs	0.68	Banks	-0.48	Materials	0.79	Energy	-0.17	HTC Equip & Serv	-0.00	Semiconductors & Equip.	-3.00
Medium PMI	Number of months : 37;		Average all industries : 1.27		Number of months : 34;		Average all industries : 1.15		Number of months : 36;		Average all industries : 0.88	
	Retailing	2.16	Transportation	1.28	Tech Hware & Eq	2.63	Cons Durb & App	0.97	Real Estate	1.78	Cap Gds	0.99
	Auto & Comp	2.09	Cons Durb & App	1.25	Semiconductors & Equip.	2.58	Energy	0.95	Food Bev & Tobacco	1.78	Cons Svs	0.82
	Banks	2.06	Pharma Biotech	1.17	Software & Svs	1.76	Transportation	0.94	Energy	1.58	H/H & Personal Prod	0.71
	Software & Svs	1.86	Coml/Prof Svs	1.06	Cap Gds	1.48	Real Estate	0.92	Tech Hware & Eq	1.53	Banks	0.68
	Cons Svs	1.81	Energy	0.99	Materials	1.45	Insurance	0.88	Pharma Biotech	1.31	Materials	0.45
	Insurance	1.76	H/H & Personal Prod	0.92	Cons Svs	1.44	Div Financials	0.88	Insurance	1.25	Cons Durb & App	0.44
	Div Financials	1.75	Semiconductors & Equip.	0.72	Retailing	1.32	Coml/Prof Svs	0.81	Utilities	1.21	Media & Ent	0.41
	Media & Ent	1.67	Food Bev & Tobacco	0.64	Telecom Serv	1.22	Banks	0.71	Software & Svs	1.17	Semiconductors & Equip.	0.34
	Tech Hware & Eq	1.62	Real Estate	0.64	Utilities	1.22	Auto & Comp	0.60	Fd/Staples Rtl	1.12	Coml/Prof Svs	0.15
	Materials	1.54	Fd/Staples Rtl	0.52	H/H & Personal Prod	1.14	HTC Equip & Serv	0.54	Div Financials	1.07	Retailing	0.15
	HTC Equip & Serv	1.35	Utilities	0.32	Food Bev & Tobacco	1.11	Pharma Biotech	0.49	HTC Equip & Serv	1.05	Telecom Serv	0.07
Cap Gds	1.35	Telecom Serv	0.02	Media & Ent	1.11	Fd/Staples Rtl	0.44	Transportation	1.00	Auto & Comp	0.05	
High PMI (>55.2)	Number of months : 27;		Average all industries : 1.9		Number of months : 46;		Average all industries : 1.26		Number of months : 36;		Average all industries : 1.06	
	Auto & Comp	4.80	Materials	1.93	Tech Hware & Eq	2.06	Insurance	1.18	Tech Hware & Eq	2.09	H/H & Personal Prod	0.98
	Banks	2.64	Insurance	1.82	Retailing	1.98	Telecom Serv	1.15	Energy	2.08	Food Bev & Tobacco	0.95
	Semiconductors & Equip.	2.47	Retailing	1.73	Media & Ent	1.80	Coml/Prof Svs	1.07	Real Estate	1.92	Fd/Staples Rtl	0.82
	Transportation	2.44	HTC Equip & Serv	1.72	Software & Svs	1.78	Pharma Biotech	1.06	Transportation	1.74	Cons Durb & App	0.71
	Energy	2.28	Fd/Staples Rtl	1.52	Auto & Comp	1.66	Utilities	1.06	Semiconductors & Equip.	1.49	Coml/Prof Svs	0.70
	Cap Gds	2.25	Real Estate	1.38	Semiconductors & Equip.	1.62	Energy	1.03	Utilities	1.38	Cons Svs	0.69
	Tech Hware & Eq	2.24	Food Bev & Tobacco	1.36	Cons Svs	1.53	Banks	0.94	Software & Svs	1.29	Insurance	0.69
	Media & Ent	2.06	Coml/Prof Svs	1.11	HTC Equip & Serv	1.35	Materials	0.93	Materials	1.23	Pharma Biotech	0.68
	Cons Svs	2.01	Utilities	1.09	Transportation	1.34	H/H & Personal Prod	0.88	HTC Equip & Serv	1.23	Media & Ent	0.68
	Div Financials	2.01	Pharma Biotech	1.05	Cap Gds	1.31	Fd/Staples Rtl	0.75	Cap Gds	1.08	Banks	0.63
	Software & Svs	1.97	H/H & Personal Prod	0.98	Real Estate	1.29	Cons Durb & App	0.72	Retailing	1.00	Telecom Serv	0.36
Cons Durb & App	1.97	Telecom Serv	0.85	Div Financials	1.27	Food Bev & Tobacco	0.59	Div Financials	1.00	Auto & Comp	0.13	

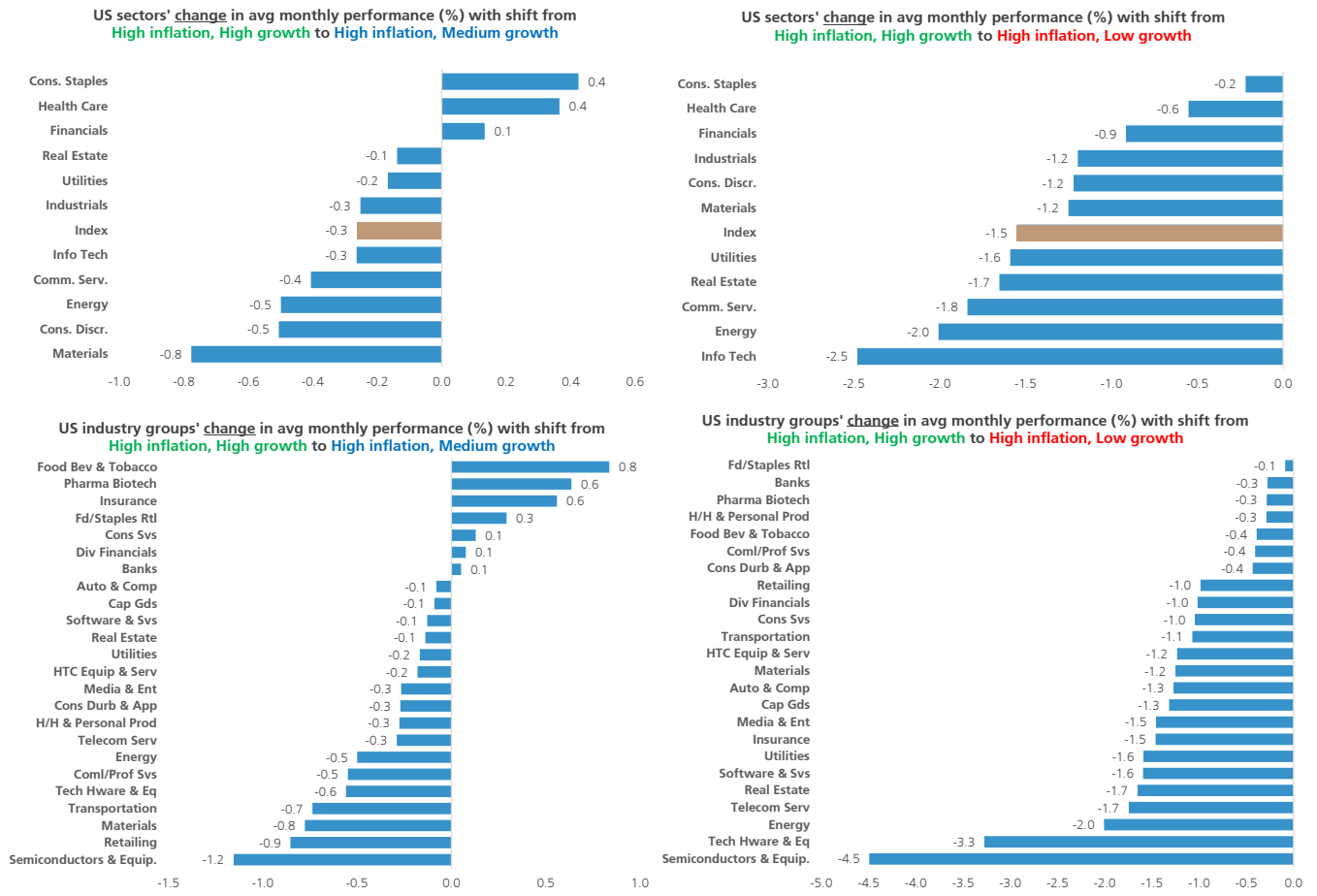
Source: UBS, MSCI, Bloomberg

Figure 7: Magnitudes of last 4 week moves have been extreme, but there is some consistency with sectors' past performance in episodes of low growth and high inflation



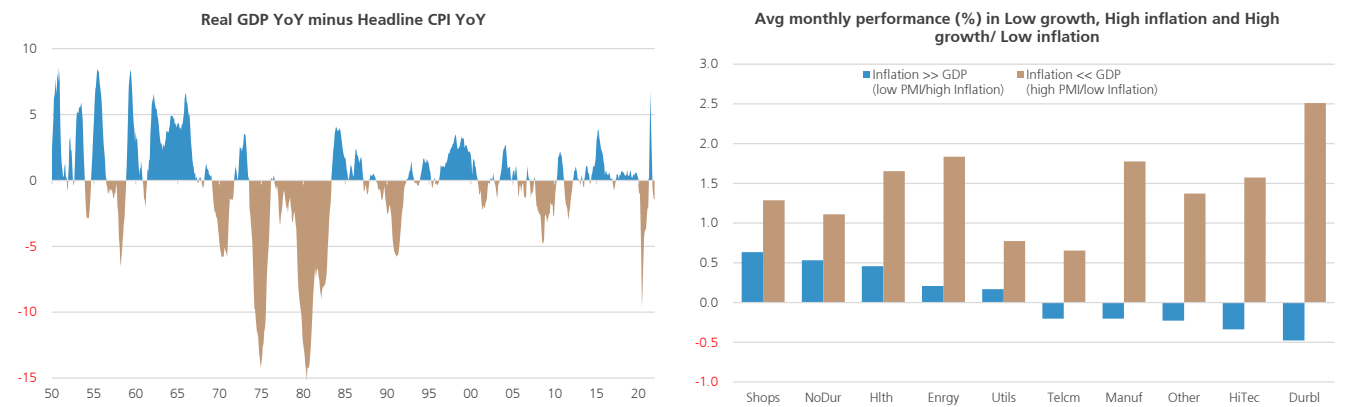
Source: UBS, MSCI, Bloomberg

Figure 8: US sectors' & industry groups' change in performance, when growth deteriorates & inflation remains high -since 1995



Source: UBS, MSCI, Bloomberg

Figure 9: Health Care, Consumer Staples performance is less sensitive to the state of the growth & inflation mix, than Tech and Durable goods -since 1950



Source: UBS, MSCI, Bloomberg, Fama & French Dataset

Part II: What stagflation has historically meant for European Equities

For Europe, our data starts in 1997. The results present some commonalities as well as some differences with US results. The main findings are :

1. High inflation in Europe has historically been a difficult environment for EU returns, much more than for the US. When it is associated with strong growth (bottom right of Figure 10), average returns are mildly positive at 0.46% (vs 1.22% for the US). When growth starts to moderate, EU returns quickly crumble (average returns drop to -0.15%, vs a small drop to +1.03% for the US) with half the sectors turning negative. As growth shifts to the bottom third of its distribution, then most of the sectors deliver negative returns, averaging -0.4% a month across all sectors (top right of Figure 10)

European equity returns are more sensitive than US returns to oncoming stagflationary pressure

2. When stagflationary pressures are high (top right of Figure 10), the outperformers are Health Care and Consumer Staples. Sectors that have underperformed the market are Financials, Material, Communication Services and Industrials

3. In our sample for Europe, the low growth & high inflation mix captures the 2012-2013 sovereign crisis which explains why EU Banks & Financials rank as the worst industries in the top right of Figure 11. In the same spirit, the high/moderate growth & high inflation combinations capture the start of the dot-com crisis (Q4 2000 & Q1 2001), when the price correction was the steepest, explaining why Tech ranks worst in the bottom right and the middle right boxes of Figure 10

4. As growth declines and inflation remains in its top third of its distribution, Energy, Utilities and Financials consistently and linearly give up performance

As growth weakens, Energy sees the biggest drop in returns despite elevated inflation

Figure 10: EU sectors groups' performance, conditional to growth and inflation levels -since 1995

	Low Inflation (<1.3)				Medium Inflation				High Inflation (>2.1)																			
	# of months : 34; Average all sectors: 1.11								# of months : 27; Average all sectors: 0.9								# of months : 38; Average all sectors: -0.4											
Low PMI (<50.6)	Info_Tech	1.86	Comm_Svs	1.15	Industrials	1.59	Index	0.84	Health_Care	0.34	Real_Estate	-0.47	Info_Tech	1.39	Comm_Svs	0.73	Cons_Staples	0.14	Index	-0.55	Health_Care	1.37	Financials	0.66	Energy	-0.18	Industrials	-0.63
	Industrials	1.46	Utilities	1.02	Info_Tech	1.39	Comm_Svs	0.73	Cons_Staples	0.14	Index	-0.55	Health_Care	1.37	Financials	0.66	Energy	-0.18	Industrials	-0.63	Cons_Disc	-0.24	Comm_Svs	-0.69				
	Health_Care	1.45	Cons_Staples	0.97	Health_Care	1.37	Financials	0.66	Cons_Staples	0.14	Index	-0.55	Health_Care	1.37	Financials	0.66	Cons_Disc	-0.24	Comm_Svs	-0.69	Info_Tech	-0.35	Materials	-0.85				
	Financials	1.39	Index	0.88	Cons_Disc	1.31	Real_Estate	0.35	Cons_Disc	-0.24	Comm_Svs	-0.69	Cons_Disc	-0.24	Comm_Svs	-0.69	Info_Tech	-0.35	Materials	-0.85	Utilities	-0.45	Financials	-0.90				
	Materials	1.38	Real_Estate	0.81	Cons_Staples	1.14	Materials	0.29	Info_Tech	-0.35	Materials	-0.85	Info_Tech	-0.35	Materials	-0.85	Info_Tech	-0.35	Materials	-0.85	Cons_Disc	-0.24	Comm_Svs	-0.69				
	Cons_Disc	1.35	Energy	-0.37	Utilities	0.86	Energy	0.28	Utilities	-0.45	Financials	-0.90	Utilities	-0.45	Financials	-0.90	Utilities	-0.45	Financials	-0.90	Utilities	-0.45	Financials	-0.90				
Medium PMI	# of months : 46; Average all sectors: 0.72								# of months : 24; Average all sectors: -0.14								# of months : 27; Average all sectors: -0.15											
	Materials	1.18	Cons_Staples	0.71	Utilities	1.07	Index	-0.28	Materials	1.12	Industrials	0.00	Materials	1.18	Cons_Staples	0.71	Utilities	1.07	Index	-0.28	Materials	1.12	Industrials	0.00				
	Energy	1.05	Cons_Disc	0.70	Comm_Svs	0.70	Industrials	-0.34	Real_Estate	1.09	Index	-0.28	Energy	1.05	Cons_Disc	0.70	Comm_Svs	0.70	Industrials	-0.34	Real_Estate	1.09	Index	-0.28				
	Info_Tech	0.83	Comm_Svs	0.67	Energy	0.46	Health_Care	-0.51	Utilities	0.91	Health_Care	-0.50	Info_Tech	0.83	Comm_Svs	0.67	Energy	0.46	Health_Care	-0.51	Utilities	0.91	Health_Care	-0.50				
	Index	0.78	Utilities	0.65	Materials	0.31	Cons_Disc	-0.63	Energy	0.37	Cons_Disc	-0.79	Index	0.78	Utilities	0.65	Materials	0.31	Cons_Disc	-0.63	Energy	0.37	Cons_Disc	-0.79				
	Real_Estate	0.76	Health_Care	0.40	Cons_Staples	0.13	Financials	-0.74	Cons_Staples	0.11	Comm_Svs	-1.32	Real_Estate	0.76	Health_Care	0.40	Cons_Staples	0.13	Financials	-0.74	Cons_Staples	0.11	Comm_Svs	-1.32				
Industrials	0.73	Financials	0.22	Real_Estate	-0.21	Info_Tech	-1.67	Financials	0.04	Info_Tech	-2.56	Industrials	0.73	Financials	0.22	Real_Estate	-0.21	Info_Tech	-1.67	Financials	0.04	Info_Tech	-2.56					
High PMI (>54.5)	# of months : 26; Average all sectors: 1.92								# of months : 46; Average all sectors: 1.28								# of months : 27; Average all sectors: 0.46											
	Info_Tech	4.27	Index	1.53	Info_Tech	2.25	Utilities	1.23	Energy	1.20	Financials	0.54	Info_Tech	4.27	Index	1.53	Info_Tech	2.25	Utilities	1.23	Energy	1.20	Financials	0.54				
	Comm_Svs	3.45	Industrials	1.40	Industrials	1.58	Index	1.17	Utilities	1.14	Index	0.28	Comm_Svs	3.45	Industrials	1.40	Industrials	1.58	Index	1.17	Utilities	1.14	Index	0.28				
	Financials	2.47	Utilities	1.39	Comm_Svs	1.42	Energy	1.13	Health_Care	1.04	Industrials	0.01	Financials	2.47	Utilities	1.39	Comm_Svs	1.42	Energy	1.13	Health_Care	1.04	Industrials	0.01				
	Cons_Disc	2.10	Cons_Staples	1.30	Cons_Disc	1.35	Financials	1.04	Real_Estate	1.01	Comm_Svs	-0.25	Cons_Disc	2.10	Cons_Staples	1.30	Cons_Disc	1.35	Financials	1.04	Real_Estate	1.01	Comm_Svs	-0.25				
	Energy	2.04	Health_Care	1.14	Materials	1.34	Health_Care	0.88	Cons_Staples	0.98	Cons_Disc	-0.30	Energy	2.04	Health_Care	1.14	Materials	1.34	Health_Care	0.88	Cons_Staples	0.98	Cons_Disc	-0.30				
Materials	1.63	Real_Estate	0.35	Cons_Staples	1.23	Real_Estate	0.76	Materials	0.94	Info_Tech	-1.14	Materials	1.63	Real_Estate	0.35	Cons_Staples	1.23	Real_Estate	0.76	Materials	0.94	Info_Tech	-1.14					

Will growth continue to decelerate when inflation remains high?

Current environment, late stage of economic cycle

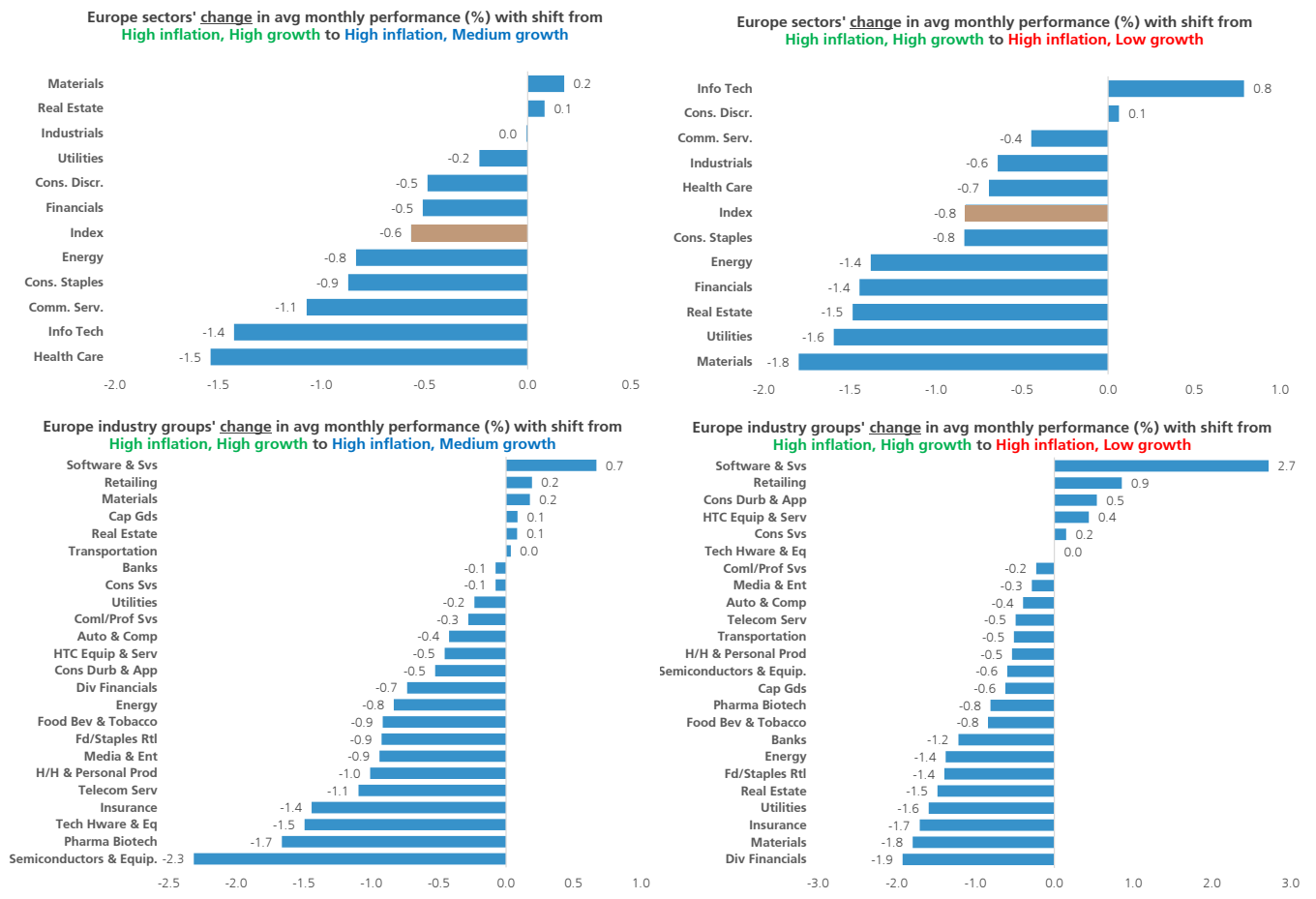
Source: UBS, MSCI, Bloomberg

Figure 11: EU industry groups' performance, conditional to growth and inflation levels -since 1995

	Low Inflation (<1.3)			Medium Inflation			High Inflation (>2.1)					
	Number of months : 34;	Average all industries : 1.3		Number of months : 27;	Average all industries : 1.17		Number of months : 38;	Average all industries : -0.31				
Low PMI (<50.6)	Semiconductors & Equip.	3.17	Transportation	1.24	Semiconductors & Equip.	2.51	Coml/Prof Svs	1.21	Software & Svs	1.03	Utilities	-0.45
	Cons Durb & App	2.28	Insurance	1.14	Retailing	1.78	Food Bev & Tobacco	1.13	HTC Equip & Serv	0.52	Real Estate	-0.47
	Div Financials	2.12	HTC Equip & Serv	1.04	Cap Gds	1.68	Software & Svs	1.13	Food Bev & Tobacco	0.42	Transportation	-0.57
	Retailing	2.07	Utilities	1.02	Cons Durb & App	1.64	Auto & Comp	1.12	Pharma Biotech	0.36	Cap Gds	-0.63
	H/H & Personal Prod	1.88	Cons Svs	1.01	Insurance	1.55	Fd/Staples Rtl	1.10	H/H & Personal Prod	0.21	Media & Ent	-0.65
	Tech Hwre & Eq	1.86	Food Bev & Tobacco	0.95	H/H & Personal Prod	1.53	Tech Hwre & Eq	1.01	Cons Durb & App	0.15	Insurance	-0.68
	Cap Gds	1.57	Auto & Comp	0.83	Transportation	1.48	Utilities	0.86	Auto & Comp	0.02	Telecom Serv	-0.70
	Pharma Biotech	1.48	Media & Ent	0.82	Media & Ent	1.40	Telecom Serv	0.63	Semiconductors & Equip.	0.00	Fd/Staples Rtl	-0.82
	Materials	1.38	Real Estate	0.81	Pharma Biotech	1.38	Real Estate	0.35	Retailing	-0.01	Banks	-0.84
	Coml/Prof Svs	1.34	Software & Svs	0.58	Cons Svs	1.34	Materials	0.29	Cons Svs	-0.17	Materials	-0.85
	Telecom Serv	1.27	Fd/Staples Rtl	0.47	HTC Equip & Serv	1.29	Energy	0.28	Energy	-0.18	Tech Hwre & Eq	-1.34
	Banks	1.24	Energy	-0.37	Div Financials	1.27	Banks	0.18	Coml/Prof Svs	-0.27	Div Financials	-1.62
	Medium PMI	Number of months : 46; Average all industries : 0.67			Number of months : 24; Average all industries : -0.36			Number of months : 27; Average all industries : -0.36				
Semiconductors & Equip.		1.84	Utilities	0.65	Utilities	1.07	Pharma Biotech	-0.47	Materials	1.12	HTC Equip & Serv	-0.37
Materials		1.18	Telecom Serv	0.64	Telecom Serv	0.70	Fd/Staples Rtl	-0.54	Real Estate	1.09	Cons Svs	-0.39
Energy		1.05	Auto & Comp	0.62	Energy	0.46	Tech Hwre & Eq	-0.63	Utilities	0.91	Insurance	-0.41
Cap Gds		0.87	Tech Hwre & Eq	0.60	Food Bev & Tobacco	0.31	Retailing	-0.66	Energy	0.37	Div Financials	-0.43
Cons Durb & App		0.87	Media & Ent	0.49	Materials	0.31	Banks	-0.71	Food Bev & Tobacco	0.34	Pharma Biotech	-0.49
H/H & Personal Prod		0.85	Insurance	0.48	H/H & Personal Prod	0.28	Semiconductors & Equip.	-0.75	Banks	0.30	Retailing	-0.68
Transportation		0.79	Software & Svs	0.44	Auto & Comp	0.20	Media & Ent	-0.86	Cap Gds	0.07	Cons Durb & App	-0.92
Retailing		0.78	Fd/Staples Rtl	0.40	HTC Equip & Serv	-0.10	Insurance	-0.87	Auto & Comp	-0.00	Software & Svs	-1.02
Real Estate		0.76	Pharma Biotech	0.36	Real Estate	-0.21	Div Financials	-1.00	Transportation	-0.02	Media & Ent	-1.30
Cons Svs		0.75	Banks	0.15	Cap Gds	-0.23	Cons Durb & App	-1.02	H/H & Personal Prod	-0.26	Telecom Serv	-1.31
Food Bev & Tobacco		0.72	Coml/Prof Svs	0.10	Cons Svs	-0.31	Coml/Prof Svs	-1.03	Coml/Prof Svs	-0.32	Semiconductors & Equip.	-1.71
HTC Equip & Serv		0.72	Div Financials	-0.08	Transportation	-0.38	Software & Svs	-2.32	Fd/Staples Rtl	-0.35	Tech Hwre & Eq	-2.84
High PMI (>54.5)	Number of months : 26; Average all industries : 2.06			Number of months : 46; Average all industries : 1.32			Number of months : 27; Average all industries : 0.23					
	Tech Hwre & Eq	4.76	Cons Durb & App	2.00	Software & Svs	2.27	Coml/Prof Svs	1.28	Food Bev & Tobacco	1.26	Div Financials	0.31
	Software & Svs	3.64	Materials	1.63	Semiconductors & Equip.	2.06	Insurance	1.25	Energy	1.20	HTC Equip & Serv	0.08
	Auto & Comp	3.51	Cap Gds	1.47	Tech Hwre & Eq	1.94	Utilities	1.23	Pharma Biotech	1.17	Cap Gds	-0.01
	Telecom Serv	3.45	Transportation	1.42	Auto & Comp	1.71	HTC Equip & Serv	1.20	Utilities	1.14	Coml/Prof Svs	-0.04
	Semiconductors & Equip.	3.05	Fd/Staples Rtl	1.39	Cons Durb & App	1.69	Div Financials	1.20	Insurance	1.03	Transportation	-0.05
	Insurance	2.88	Utilities	1.39	Cap Gds	1.67	Cons Svs	1.16	Real Estate	1.01	Telecom Serv	-0.21
	Banks	2.54	Media & Ent	1.38	Transportation	1.46	Energy	1.13	Materials	0.94	Cons Svs	-0.32
	Div Financials	2.26	Food Bev & Tobacco	1.31	Telecom Serv	1.42	Banks	0.96	H/H & Personal Prod	0.74	Media & Ent	-0.36
	HTC Equip & Serv	2.24	Coml/Prof Svs	1.08	H/H & Personal Prod	1.40	Fd/Staples Rtl	0.89	Semiconductors & Equip.	0.60	Cons Durb & App	-0.39
	H/H & Personal Prod	2.15	Pharma Biotech	1.02	Materials	1.34	Pharma Biotech	0.87	Fd/Staples Rtl	0.57	Retailing	-0.87
	Cons Svs	2.07	Retailing	0.44	Media & Ent	1.31	Real Estate	0.76	Auto & Comp	0.42	Tech Hwre & Eq	-1.34
	Energy	2.04	Real Estate	0.35	Food Bev & Tobacco	1.31	Retailing	0.22	Banks	0.38	Software & Svs	-1.69

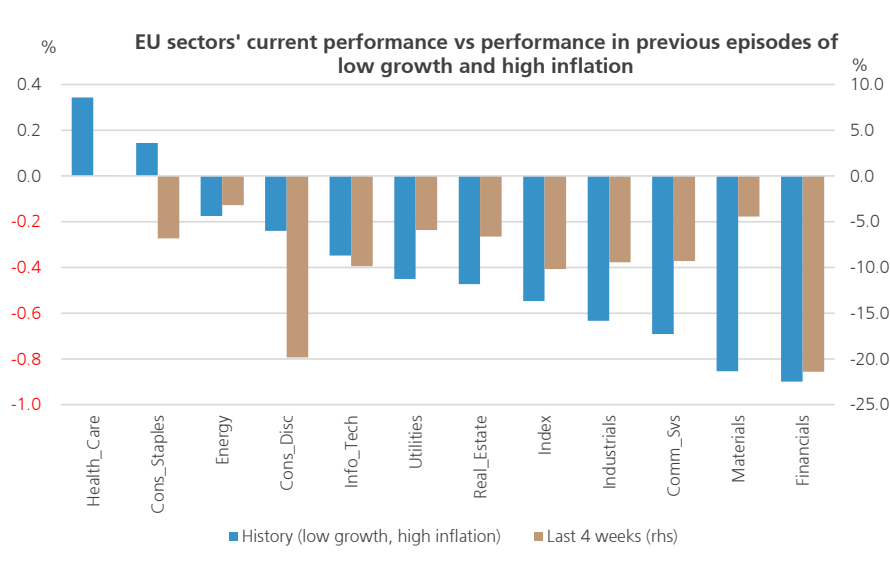
Source: UBS, MSCI, Bloomberg

Figure 12: EU sectors' & industry groups' change in performance, when growth deteriorates & inflation remains high since 1995



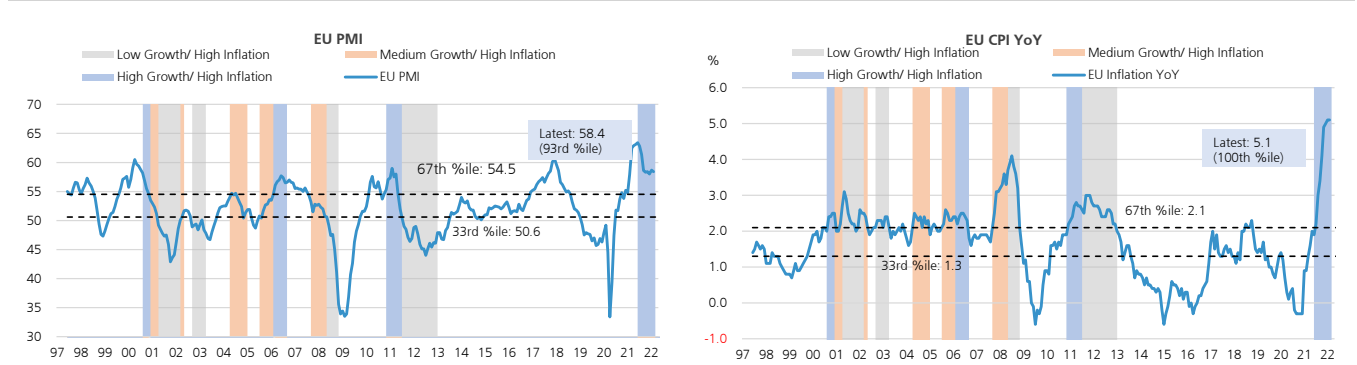
Source: UBS, MSCI, Bloomberg

Figure 13: Magnitude of last 4 week moves has been extreme, but there is some consistency with sectors' past performance in episodes of low growth and high inflation



Source: UBS, MSCI, Bloomberg

Figure 14: EU Manufacturing PMI and EU Headline CPI YoY - since 1995



Source: UBS, Bloomberg

Part III: What stagflation has historically meant for EM Equities

For EM, our data starts in 2005. The main findings are:

1. While the US and Europe are both experiencing high growth & high inflation, EM is more in line with its historical averages (Figure 18). Currently, its weighted average PMI is at 52.2 (56th %ile), while its weighted average inflation is slightly high but not at alarming levels, at 3.6% (68th %ile).

EM most recent economic data are closer to their historical averages than DM's

2. EM returns are seen to be very sensitive to the levels of growth and inflation. The difference in performance between the top right box (high inflation, low growth) and the bottom left box (low inflation, growth growth) in Figure 15 is particularly important for EM (4.15%, versus 2.32% for EU and 1.92% for the US).

EM equity returns are particularly sensitive to the levels of growth and inflation

3. When inflation is high, EM returns are poor and deteriorate rapidly as growth falters. In a state of stagflationary pressures (top right of Figure 15), every single sector and 22 out of the 24 industry groups have strong negative average monthly returns (<-0.6% a month), with MSCI EM index returning -2.46% a month in average. The defensive sectors manage to limit the damages, whereas Energy and Materials underperform the market.

In a state of stagflationary pressures, EM is the underperformer across regions

4. When both growth and inflation worsen, from a medium inflation & medium growth world, Financials and Industrials quickly move down in the ranking. For Energy, the situation shifts from bad to worse. At the opposite end, Health Care, Consumer Staples and Tech maintain their leadership although delivering negative returns

Figure 15: EM sectors groups' performance, conditional to growth and inflation levels: -since 1995

	Low Inflation (<2.74)				Medium Inflation				High Inflation (>3.57)			
	# of months : 49; Average all sectors: 1.34				# of months : 43; Average all sectors: -0.76				# of months : 43; Average all sectors: -2.06			
Low PMI (<51.03)	Info_Tech	2.48	Industrials	1.25	Info_Tech	0.40	Comm_Svs	-0.68	Health_Care	-0.69	Financials	-2.21
	Cons_Disc	1.80	Materials	1.23	Health_Care	-0.17	Index	-0.79	Cons_Staples	-0.90	Cons_Disc	-2.39
	Real_Estate	1.62	Cons_Staples	1.08	Real_Estate	-0.27	Utilities	-1.11	Info_Tech	-1.45	Industrials	-2.46
	Index	1.41	Health_Care	0.98	Cons_Staples	-0.47	Financials	-1.15	Real_Estate	-1.53	Index	-2.46
	Energy	1.28	Utilities	0.95	Cons_Disc	-0.53	Industrials	-1.26	Comm_Svs	-1.63	Materials	-3.23
	Financials	1.27	Comm_Svs	0.70	Materials	-0.64	Energy	-2.43	Utilities	-1.78	Energy	-4.04
Medium PMI	# of months : 53; Average all sectors: 1.14				# of months : 43; Average all sectors: 0.19				# of months : 37; Average all sectors: -0.56			
	Info_Tech	2.15	Industrials	0.99	Utilities	0.82	Index	0.12	Utilities	0.09	Comm_Svs	-0.48
	Materials	1.75	Cons_Staples	0.95	Health_Care	0.68	Comm_Svs	-0.04	Info_Tech	0.05	Index	-0.65
	Financials	1.59	Real_Estate	0.94	Financials	0.62	Real_Estate	-0.15	Industrials	-0.14	Real_Estate	-0.86
	Index	1.32	Energy	0.92	Info_Tech	0.58	Cons_Disc	-0.25	Financials	-0.29	Health_Care	-0.93
	Health_Care	1.12	Utilities	0.64	Cons_Staples	0.42	Cons_Staples	-0.40	Cons_Staples	-0.41	Cons_Disc	-1.31
Cons_Disc	1.03	Comm_Svs	0.33	Industrials	0.34	Materials	-0.52	Materials	-0.46	Energy	-1.35	
High PMI (>53)	# of months : 39; Average all sectors: 2.09				# of months : 50; Average all sectors: 2.01				# of months : 53; Average all sectors: 0.95			
	Materials	4.55	Cons_Disc	1.65	Materials	2.95	Energy	2.16	Materials	1.91	Utilities	0.97
	Info_Tech	3.23	Health_Care	1.63	Industrials	2.65	Index	1.94	Energy	1.73	Comm_Svs	0.78
	Financials	2.53	Utilities	1.53	Utilities	2.48	Comm_Svs	1.66	Cons_Staples	1.30	Financials	0.73
	Industrials	2.36	Energy	1.28	Cons_Staples	2.28	Info_Tech	1.25	Industrials	1.10	Info_Tech	0.71
	Index	2.35	Comm_Svs	1.07	Financials	2.18	Cons_Disc	1.24	Index	1.09	Cons_Disc	0.60
Cons_Staples	2.14	Real_Estate	0.78	Real_Estate	2.17	Health_Care	1.20	Health_Care	0.99	Real_Estate	-0.48	

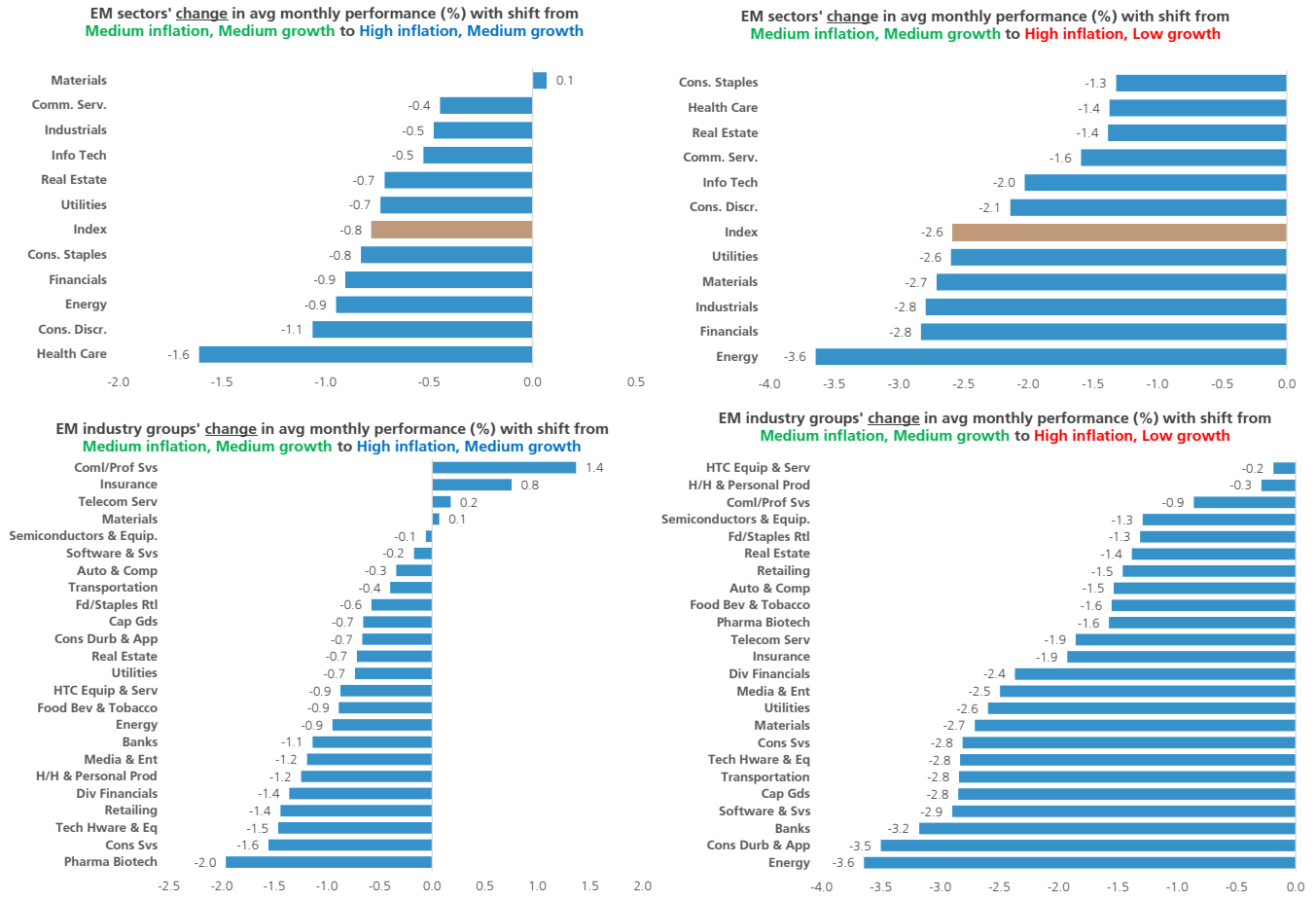
Source: UBS, MSCI, Bloomberg

Figure 16: EM industry groups' performance, conditional to growth and inflation levels since 1995

	Low Inflation (<2.74)				Medium Inflation				High Inflation (>3.57)				
	Number of months : 49; Average all industries : 1.53				Number of months : 43; Average all industries : -0.64				Number of months : 43; Average all industries : -1.73				
Low PMI (<51.03)	Semiconductors & Equip.	2.96	Media & Ent	1.44	Semiconductors & Equip.	0.68	Fd/Staples Rtl	-0.72	H/H & Personal Prod	0.29	Insurance	-1.68	
	Cons Durb & App	2.45	Energy	1.28	Tech Hware & Eq	0.59	Retailing	-0.84	HTC Equip & Serv	0.10	Auto & Comp	-1.70	
	Software & Svs	2.15	Insurance	1.26	Cons Svs	0.48	Telecom Serv	-1.06	Pharma Biotech	-0.60	Div Financials	-1.71	
	Tech Hware & Eq	2.04	Materials	1.23	HTC Equip & Serv	0.35	Banks	-1.09	Semiconductors & Equip.	-0.91	Utilities	-1.78	
	HTC Equip & Serv	2.00	Banks	1.20	Media & Ent	0.26	Utilities	-1.11	Food Bev & Tobacco	-0.98	Transportation	-2.37	
	Coml/Prof Svs	1.98	H/H & Personal Prod	1.16	Pharma Biotech	-0.25	Div Financials	-1.12	Coml/Prof Svs	-1.01	Banks	-2.42	
	Div Financials	1.80	Food Bev & Tobacco	1.09	H/H & Personal Prod	-0.25	Transportation	-1.15	Software & Svs	-1.06	Tech Hware & Eq	-2.44	
	Cons Svs	1.78	Fd/Staples Rtl	1.09	Real Estate	-0.27	Auto & Comp	-1.18	Fd/Staples Rtl	-1.19	Cap Gds	-2.54	
	Auto & Comp	1.75	Cap Gds	1.03	Coml/Prof Svs	-0.29	Cap Gds	-1.36	Telecom Serv	-1.30	Retailing	-2.63	
	Retailing	1.75	Utilities	0.95	Software & Svs	-0.29	Cons Durb & App	-1.42	Real Estate	-1.53	Materials	-3.23	
	Real Estate	1.62	Pharma Biotech	0.80	Food Bev & Tobacco	-0.42	Insurance	-1.72	Media & Ent	-1.53	Cons Durb & App	-3.59	
	Transportation	1.48	Telecom Serv	0.41	Materials	-0.64	Energy	-2.43	Cons Svs	-1.60	Energy	-4.04	
	Medium PMI	Number of months : 53; Average all industries : 1.24				Number of months : 43; Average all industries : 0.35				Number of months : 37; Average all industries : -0.31			
		Software & Svs	2.42	Cons Durb & App	1.17	Software & Svs	1.84	Semiconductors & Equip.	0.38	Software & Svs	1.67	Materials	-0.46
Semiconductors & Equip.		2.34	Div Financials	1.15	Cons Svs	1.21	Cap Gds	0.31	Coml/Prof Svs	1.22	Fd/Staples Rtl	-0.46	
Tech Hware & Eq		1.94	Cons Svs	0.99	Pharma Biotech	0.97	HTC Equip & Serv	0.28	Insurance	1.00	Auto & Comp	-0.51	
Insurance		1.89	Food Bev & Tobacco	0.96	Media & Ent	0.96	Insurance	0.25	Telecom Serv	0.74	HTC Equip & Serv	-0.59	
Media & Ent		1.77	Real Estate	0.94	Utilities	0.82	Fd/Staples Rtl	0.12	Semiconductors & Equip.	0.32	H/H & Personal Prod	-0.66	
Materials		1.75	Energy	0.92	Banks	0.75	Cons Durb & App	-0.09	Utilities	0.09	Div Financials	-0.70	
Banks		1.65	Cap Gds	0.83	Div Financials	0.66	Real Estate	-0.15	Transportation	0.07	Cons Durb & App	-0.76	
Transportation		1.41	Fd/Staples Rtl	0.69	H/H & Personal Prod	0.58	Coml/Prof Svs	-0.15	Media & Ent	-0.23	Real Estate	-0.86	
H/H & Personal Prod		1.38	Utilities	0.64	Food Bev & Tobacco	0.57	Auto & Comp	-0.17	Food Bev & Tobacco	-0.32	Pharma Biotech	-0.99	
Auto & Comp		1.38	Retailing	0.56	Telecom Serv	0.56	Energy	-0.40	Cons Svs	-0.34	Tech Hware & Eq	-1.07	
Pharma Biotech		1.20	Telecom Serv	0.45	Transportation	0.47	Materials	-0.52	Cap Gds	-0.34	Energy	-1.35	
HTC Equip & Serv		1.19	Coml/Prof Svs	0.16	Tech Hware & Eq	0.40	Retailing	-1.17	Banks	-0.39	Retailing	-2.62	
High PMI (>53)		Number of months : 39; Average all industries : 2.26				Number of months : 50; Average all industries : 1.89				Number of months : 53; Average all industries : 0.96			
	Materials	4.55	Media & Ent	2.04	Materials	2.95	Transportation	2.12	Semiconductors & Equip.	3.23	Utilities	0.97	
	Auto & Comp	4.30	HTC Equip & Serv	1.99	Cap Gds	2.94	Insurance	2.12	Materials	1.91	Transportation	0.95	
	Tech Hware & Eq	3.59	Pharma Biotech	1.90	Utilities	2.48	Cons Durb & App	1.85	Energy	1.73	Banks	0.86	
	Cons Durb & App	3.43	Fd/Staples Rtl	1.79	Fd/Staples Rtl	2.36	Auto & Comp	1.84	Auto & Comp	1.53	Insurance	0.84	
	Software & Svs	2.94	Div Financials	1.72	Software & Svs	2.32	Media & Ent	1.55	Coml/Prof Svs	1.48	Div Financials	0.69	
	Semiconductors & Equip.	2.91	Coml/Prof Svs	1.65	H/H & Personal Prod	2.29	HTC Equip & Serv	1.40	Food Bev & Tobacco	1.45	H/H & Personal Prod	0.59	
	Banks	2.84	Utilities	1.53	Telecom Serv	2.29	Retailing	1.30	Fd/Staples Rtl	1.31	Tech Hware & Eq	0.57	
	Transportation	2.83	Retailing	1.35	Div Financials	2.28	Pharma Biotech	1.29	Telecom Serv	1.18	Media & Ent	0.42	
	Food Bev & Tobacco	2.31	Energy	1.28	Food Bev & Tobacco	2.28	Tech Hware & Eq	1.17	Cap Gds	1.12	Cons Durb & App	0.29	
	Cap Gds	2.16	Cons Svs	1.22	Banks	2.22	Cons Svs	1.09	Pharma Biotech	1.09	Retailing	0.00	
	Insurance	2.15	Telecom Serv	0.92	Real Estate	2.17	Coml/Prof Svs	0.50	Cons Svs	0.99	Real Estate	-0.48	
	H/H & Personal Prod	2.08	Real Estate	0.78	Energy	2.16	Semiconductors & Equip.	0.49	Software & Svs	0.99	HTC Equip & Serv	-0.69	

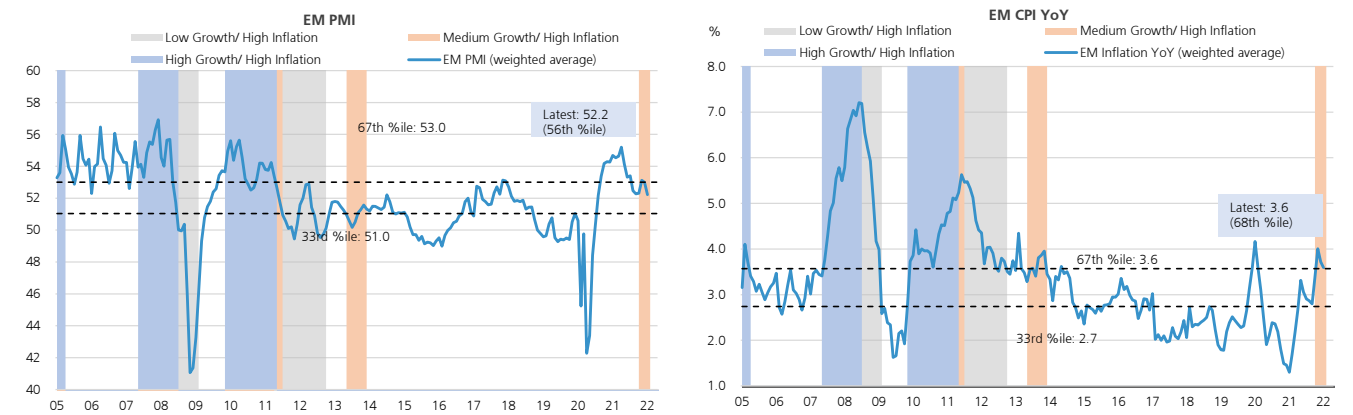
Source: UBS, MSCI, Bloomberg

Figure 17: EM sectors' & industry groups' change in performance, when both growth & inflation deteriorate -since 1995



Source: UBS, MSCI, Bloomberg

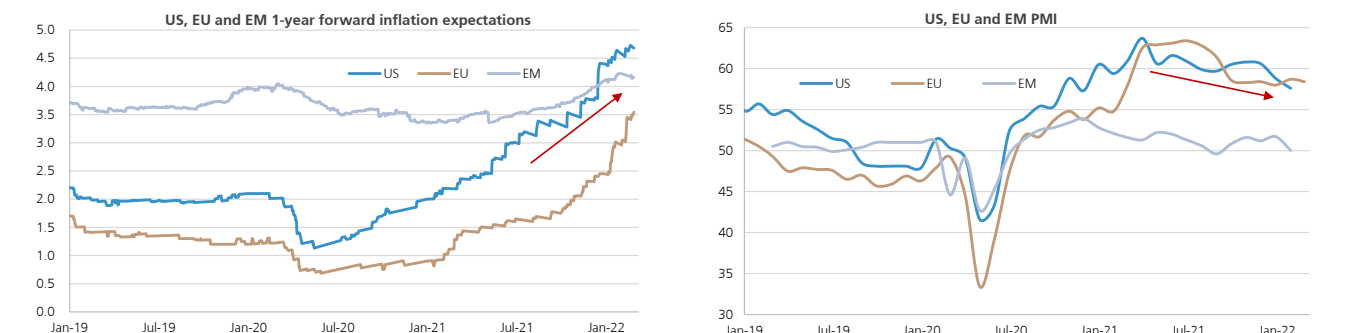
Figure 18: EM Manufacturing PMI and EM Headline CPI YoY - since 1995



Source: UBS, Bloomberg

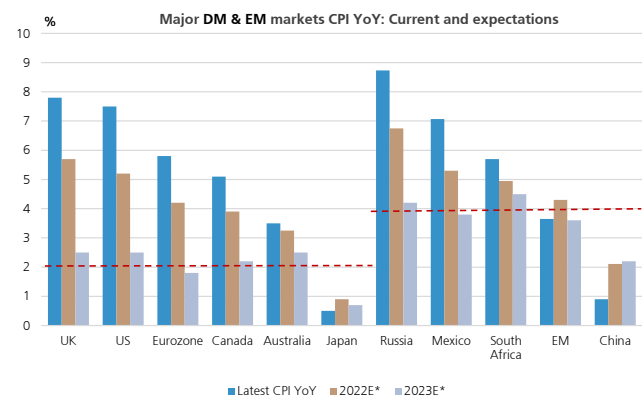
Appendix: Growth/inflation: diverging trends in 6 charts

Figure 19: Since Q2 2021, 1yr forward inflation expectations keep moving higher, while growth expectations (PMIs) keep declining



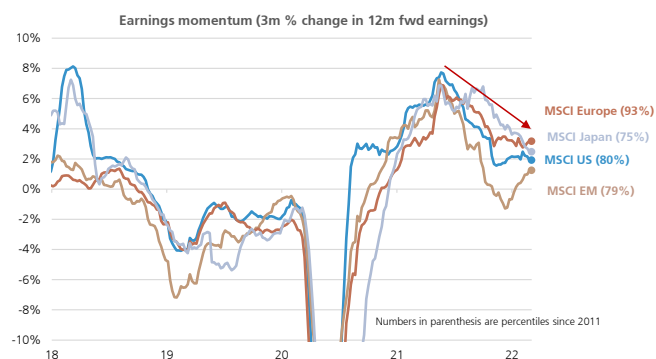
Source: UBS, Bloomberg. Note: Bloomberg forecasts used for 1-year forward inflation expectations.

Figure 20: G10 CPIs are expected to remain well above the 2% target in 2022. China inflation expectations are on the rise while other EM countries are expected to hover above 4%



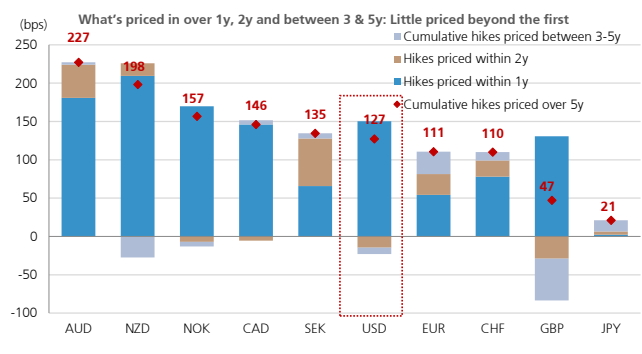
Source: UBS, Bloomberg. Note: *Bloomberg estimates for year-end 2022 and 2023.

Figure 21: Earnings momentum has decelerated, in line with declining growth expectations, although from very high levels



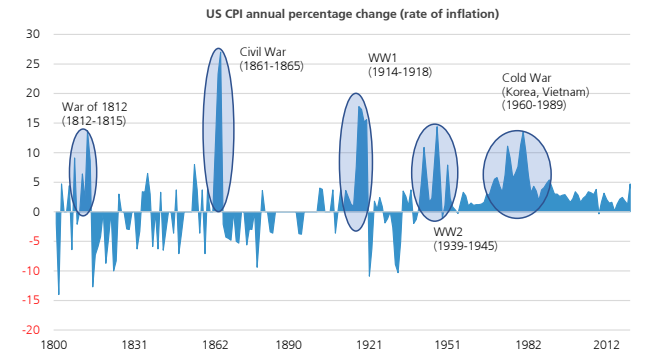
Source: UBS, IBES, MSCI, Datastream, Bloomberg

Figure 22: Forwards see a burst of hikes followed quickly by cuts, suggesting recession risks are high



Source: UBS, Bloomberg

Figure 23: Wars have a long history of being inflationary. Current geopolitical tensions are likely to support inflation in the near term, via higher energy and food prices



Source: UBS, www.minneapolisfed.org

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Valuation Method and Risk Statement

Risks of multi-asset investing include but are not limited to market risk, credit risk, interest rate risk, and foreign exchange risk. Correlations of returns among different asset classes may deviate from historical patterns. Geopolitical events and policy shocks pose risks that can reduce asset returns. Valuations may be adversely affected during times of high market volatility, thin liquidity, and economic dislocation.

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