June 2022

Global Macro Insights

Central banks turn hostile - What next?

Global Macro & SAA Team
Fidelity Solutions & Multi Asset

Executive summary

- **At the start of the year, our base case was a stagflationary scenario that would persist for around 6 months**, before making way for either a more benign reflationary scenario or a more serious downturn. After the invasion of Ukraine, we raised this short-run probability of stagflation to 80%, recognising the deeply inflationary nature of this shock, particularly for Europe.
- **Given the substantial tightening in financial conditions since, largely driven by aggressive central banks, we believe that stagflationary dynamics are peaking**. We are now shifting our attention to the transition out of stagflation into the next phase of the cycle, where recession risks intensify.
- **Over the next 12 months, we believe a soft landing is slightly more likely than a hard landing, assigning subjective probabilities of 40% and 35% to the two scenarios respectively**. We judge there is a 20% chance of continued stagflation and a 5% chance of a reflation/goldilocks scenario re-emerging.
- Given the multitude of shocks currently hitting the global economy – the war in Ukraine, China's Zero Covid Policy and liquidity withdrawal by major central banks – there is no shortage of indicators to track. **The key factors we are currently watching to gauge the next stage of the cycle are**:
    - **Soft data**: We have developed composite current and expected activity indicators for the US and Europe. Future activity in the US still looks relatively robust, but data for Europe indicates a slowdown driven by weaker consumer-related indicators.
    - **Energy disruptions**: War-related disruptions to energy flows have caused global shockwaves. Further disruptions could have profound consequences for growth and stability, especially for Europe and some emerging markets.
    - **Market implied signals**: Our calculations indicate that the US yield curve is predicting only a 12.6% chance of a recession in the next six months. However, financials conditions look less benign - they have tightened significantly this year and we believe more tightening will be necessary to control inflation.
- **Our view on asset allocation implications remains cautious**:
    - **While central banks remain hostile, our macroeconomic outlook**, with the base case of recession in Europe and a relatively high probability of a hard landing in the US, **points to a likely continuation of risk-off market action for now**.
    - Our analysis of similar episodes of rapid real yield tightening over the past five decades indicates that the risks to holding duration are becoming more balanced.
    - **We believe the next leg of tightening in financial conditions will be largely driven by credit markets**.

The Fed turns Hostile - What Next?

The war in Ukraine and China's zero covid policy (ZCP) are sending shockwaves to the rest of the world through commodity markets, supply chains, confidence and financial channels, further amplifying the stagflationary dynamics (rising inflation and slowing growth) that have gripped the world for the last few months. The probability of a recession in Europe is rising. While some markets are pricing this into various degrees, a European recession is now our base case. Major central banks are determined to bring inflation down, despite severe supply side issues, by aggressively tightening policy. This is bound to cause further damage to an already shaky growth outlook, including the US.

Of course, for inflation-targeting central banks some damage to growth is desirable, but achieving the right mix of growth and inflation – tightening policy just enough to bring inflation back to target while keeping growth around potential – is a tricky balancing act. Even US Treasury Secretary Janet Yellen, the former Federal Reserve chair, recently noted that the Fed will need to be "skilful" and "also lucky" to guide the economy to a soft landing. Ultimately, the Fed underestimated the inflationary forces in the system (as highlighted in our paper, The Great Inflation Debate published in October 2021) and has had to change gears aggressively to ensure that inflation expectations do not become dangerously de-anchored.

At the start of 2022 our base case (60%) was a stagflationary scenario that would persist for around 6 months, before making way for either a more benign reflationary scenario or a more serious downturn. After the war in Ukraine had begun, we raised this short-run probability of stagflation to 80%, recognising the deeply inflationary nature of this shock, particularly for Europe. Given the substantial tightening in financial conditions since, largely driven by aggressive central banks, we now believe these stagflationary dynamics are peaking. We are therefore shifting our attention to the transition out of stagflation into the next phase of the cycle, where recession risks intensify. Focusing on the US, we have lowered our assessment of stagflationary dynamics continuing over the next 12 months, and now assign higher probabilities to hard and soft-landing scenarios, 35% and 40% respectively, as Table 1 illustrates.

Table 1: Transitioning from stagflation to hard or soft landing?

Global Macro Scenario Grid (0-12 months horizon)

	Hard Landing			Soft Landing			Stagflation			Reflation		
Time horizon		0-6m	6-12m		0-6m	6-12m		0-6m	6-12m		0-6m	6-12m
Growth/ inflation dynamics*	Growth	⇩	⇩	Growth	⇩	⇔	Growth	⇩	⇔	Growth	⇔	⇧
	Inf.	⇩	⇩	Inf.	⇩	⇔	Inf.	⇧	⇔	Inf.	⇩	⇔
Scenario narrative	Central banks push the economy into recession, either accidentally or on purpose, in their efforts to re-anchor rising inflation expectations.			A combination of demand destruction and supply resumption allows central banks readjust mid-course after front loading hikes. Managing to achieve moderate and controlled inflation with near-trend growth.			Political/supply-side pressures mean central banks remain behind the curve. This leads to de-anchoring in inflation expectations, which subsequently damages growth/leads to a recession.			Supply side pressures ease substantially with the end of the war and an end to China's strict ZCP. Inflation expectations remain anchored, allowing the Fed to stay behind the curve and demand to remain strong.		
Probability	35%			40%			20%			5%		

*Growth/inflation arrows indicate deltas from current levels

Source: Fidelity International, June 2022.

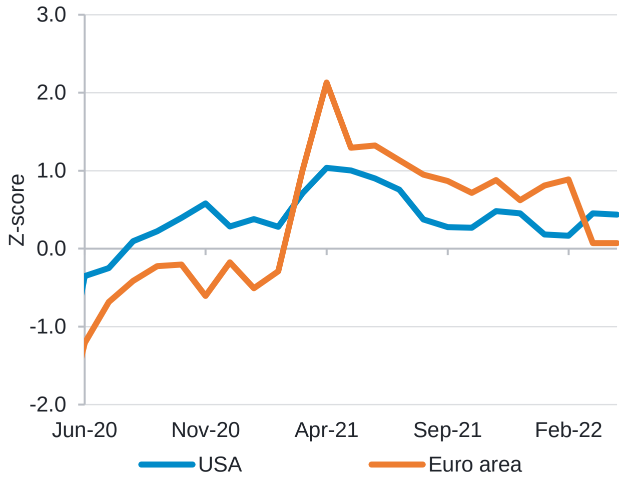
The outlook for growth is the main difference between the soft- and hard-landing scenarios. A hard landing implies significantly below trend or negative growth rates, while in a soft landing, growth would fall only moderately below trend. In either scenario, we expect inflation will fall substantially from current levels, but still settle above trend in the case of a soft landing. We also assign a 20% chance of the current stagflationary environment of stubbornly high inflation and slower growth continuing. As we move through this transition phase, we are tracking a variety of selected metrics in order to assess the probabilities of these scenarios and ensure our assessment is as forward-looking as possible but also based on solid evidence. These metrics include:

- Our proprietary activity trackers – which are gauges of current momentum and future activity expectations.
- Russian gas flows to Europe – to track the ongoing growth damage as well as the likelihood of the bigger potential growth shock on the horizon.
- Market implied measures of growth risk – in particular, the yield curve and financial conditions indices.

Tracking the data

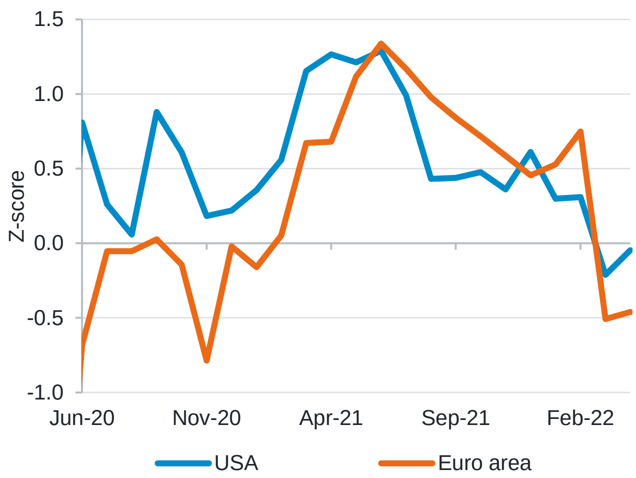
Our new US and Euro area current and expected activity trackers (Charts 1 and 2), which pull together a number of relevant and timely data releases in a simple principal component analysis (PCA) framework show a slowdown in future activity expectations over the next 3-12 months since March for both economies – evidently related to the start of the war in Ukraine in late February. The Euro area indicator is now around half a standard deviation below its long-run mean, compared to one standard deviation below during the 2011-2012 recession.

Chart 1: Current activity trackers for Euro area have dropped since the war but remain resilient



Source: Fidelity International calculations, June 2022.

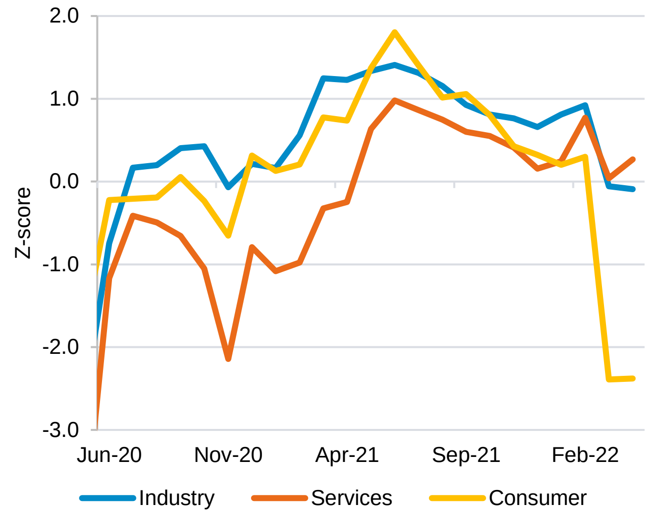
Chart 2: Our expected activity trackers point to sharp deceleration in Europe



Source: Fidelity International calculations, June 2022.

Looking into the details of the Euro area expected activity tracker (Chart 3), we note most of the stress is coming from consumer sentiment, while services sector expectations remain resilient for now. In the US, we find activity expectations for industry have fallen the most since the start of the year, while the services sector activity continues rolling over from high post-Covid bounce levels.

Chart 3: Euro area expected activity is witnessing acute stress from the consumer segment



Source: Fidelity International calculations, June 2022.

While the activity indicators on aggregate show some stabilisation since the big correction in March, particularly in the US, there are no clear signs of a material rebound either. With global consumers squeezed by the cost-of-living crisis caused by contracting real incomes (with the notable exceptions of China and Japan), rising interest rates and tightening overall financial conditions, risks to activity and growth from here are clearly skewed to the downside. In our view, the data points to a hard landing in the Euro area but is less conclusive about the US' future.

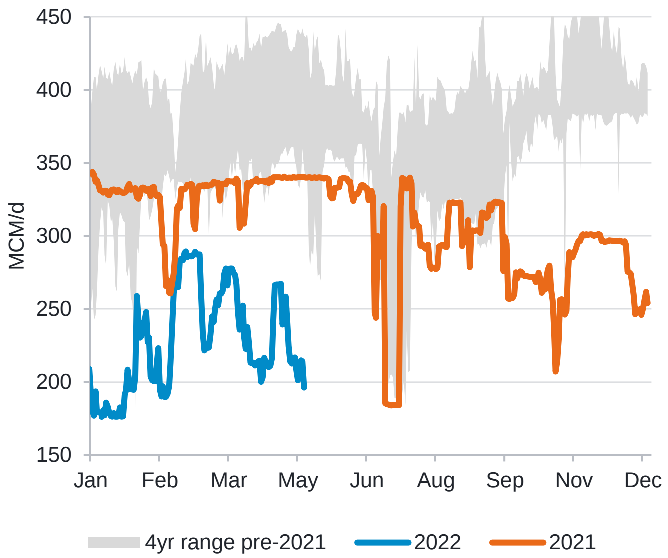
Gas flow disruption: A game-changer for Europe

Developments in energy markets also play a significant role in our assessment of the likelihood of a recession, particularly in Europe. Energy markets represent the key macro-economic transmission channel of the fallout from the Russia-Ukraine War to the global economy. Energy prices have spiked since the advent of the war, as countries across the globe have imposed embargoes on Russian energy exports, along with a series of other sanctions. Yet Europe continues to import energy from Russia, the source of nearly 40% of its domestic consumption. Despite significant pushback from the countries that are particularly exposed to the Russian oil, an oil import ban has now been agreed at the EU level. Once this has been fully implemented, we expect that focus will then shift to gas-related sanctions.

The disruption to gas flows to date has been significant, affecting both households and the industrial sector. This shock is already feeding through to the economy via higher inflation and weaker growth. Gas flows from Russia to Europe started tapering in September last year, falling sharply below their pre-2021 average. Since the start of 2022, flows have fallen by almost 30% compared to last year (Chart 4).

Chart 4: Gas flows already disrupted

Total daily gas flows from Russia to Europe



Source: Fidelity International, Bloomberg, June 2022.

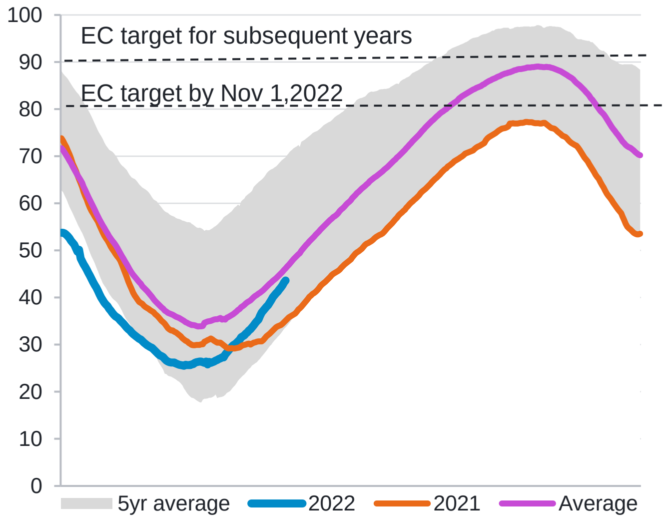
Indeed, Russia has already cut off Poland, Bulgaria, and more recently Finland, from its gas supplies, as a result of unmet demands for payment in Roubles. While these countries have a near complete dependence on Russia for natural gas, the share of gas in their final energy consumption remains relatively low at 13%,12% and 3% respectively (compared to countries such as Germany and Italy) which, as a result, makes it easier to substitute away from.

Most of this reduction has come from the Belarus (Yamal) pipeline. In Q4 of 2021, flows were less than 40% of pre-2021 averages, while 2022 flows had been averaging around 20% of pre-2021 averages. Then flows stopped entirely on the 11th of May. This route accounts for less than 20% of overall flows. The Ukraine and Nord Stream pipelines that account for the majority of gas flows, have been disrupted less, down ~17% and ~3% respectively, relative to 2021, so far this year.

However, these disruptions have yet to hit natural gas inventories in the EU, which are already above the equivalent 2021 level and are quickly converging towards the 5-year average (Chart 5). But given the amount of disruption to date, this is likely more indicative of weaker demand due to warmer weather and cutbacks in industrial use given the significantly higher prices (438% above the 2010-19 average levels as of May 2022), rather than adequate levels of supply. The level of gas inventories is a key indicator to watch, both because it speaks to the relative geopolitical power imbalance between the EU and Russia and, if it continues to rise even as supply is severely constrained, because it would provide further indications of the extent to which the EU's industrial sector is having to constrain output.

Chart 5: Rising inventories might be a sign of industrial cutbacks

EU natural gas inventories (% of full storage)



Source: Fidelity International, Bloomberg, June 2022.

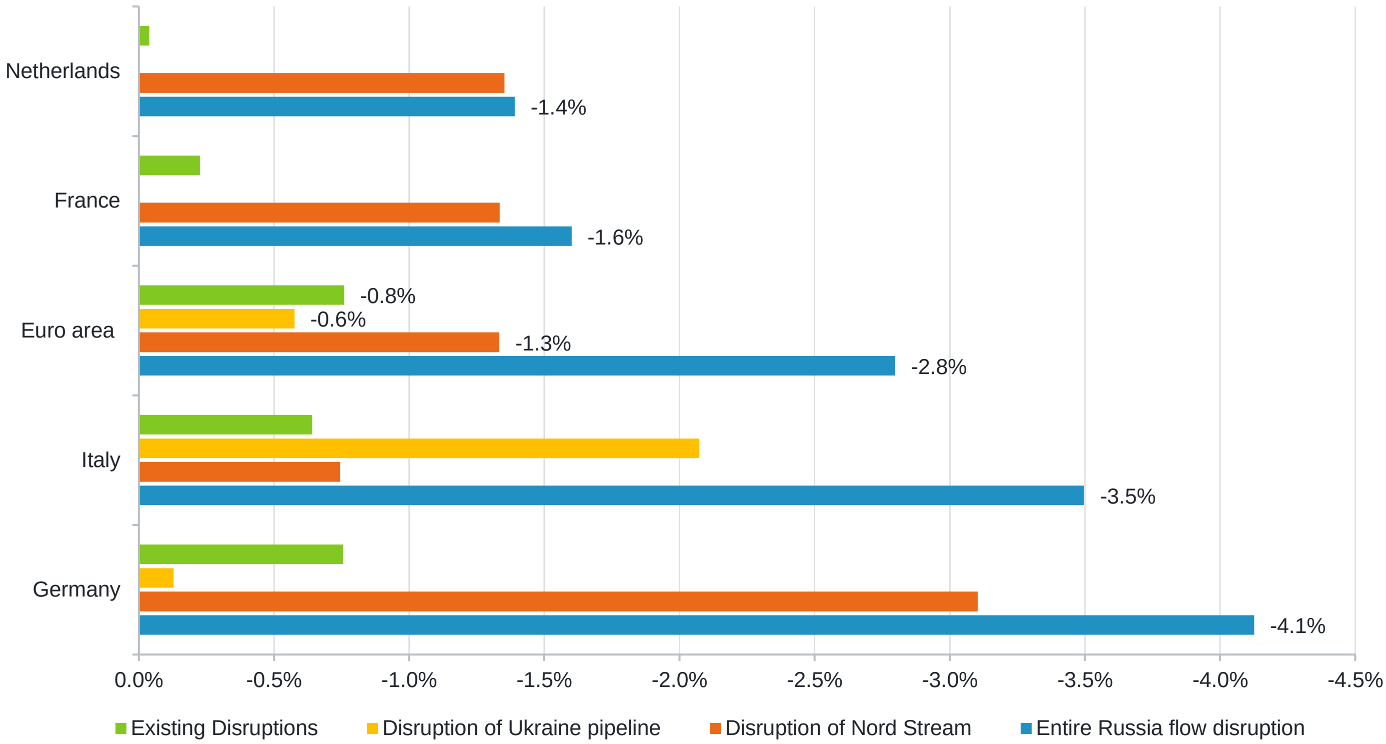
A number of studies have tried to estimate potential implications of gas supply disruptions on European GDP, yielding a wide range of possible outcomes. Using ECB's gas sensitivity estimates[1], we estimate that current disruptions are likely to lower Euro area GDP (using Gross Value Added) by 0.8% on aggregate (green bars in Chart 6). Germany is more exposed (-0.9% GVA impact), as almost one fifth of its imports from Russia flow through the Belarus pipeline, and it has a higher economic sensitivity to gas disruptions. In a total gas embargo scenario (blue bars), we estimate aggregate Euro area GVA would fall by 2.8%. Germany and Italy would face a GVA loss of 4.1% and 3.5% respectively in this case, given their higher dependency on Russian gas.

While such estimates have a degree of uncertainty, they point to a meaningful first order growth hit from a full energy embargo. Its timing, duration and phase-in structure would be the key determinants of the resulting growth impact. But with some growth damage already evident, from the war in Ukraine and China's Covid-related growth crunch, and with a hawkish ECB, the Euro area does not look likely to avoid a recession over the next 12 months.

Whether it is of a technical nature or indeed a more serious contraction is less clear at present and will depend on how the above will play out. However, President Lagarde's recent comments backing rate lift-off in July and taking rates out of the negative territory by the end of Q3 reinforce our concerns about growth downside. Fiscal policy has to step up once again to at least partly offset the shock – and the EU will have to be bold and decisive. But for the time being, pan-European policy response has fallen short.

Chart 6: Italy and Germany most at risk from a full energy embargo

The impact of gas supply disruptions on GVA in the Euro area under different scenarios, %



Note: Entire Russia flow disruption is the sum of the other three scenarios (existing disruptions, disruption of Ukraine pipeline and disruption of Nord Stream). Existing disruptions calculated as fall in Russia gas supply in 2022 until 20th May 2022 compared to same period last year.
Source: Fidelity International calculations, June 2022.

[1] ECB Economic Bulletin, Issue 1 / 2022

Reading yield curve signals on recession probabilities

Some US yield curves briefly inverted in late March and throughout April 2022, namely the 2Y10Y and the 5Y10Y. Focus in the market has shifted to what this means for the probability of recession over the next 6-12 months. Notably, not all yield curves inverted – in fact the 3M10Y steepened sharply. As a result, the implied probabilities of a recession 6 months from now, derived from these three yield curves based on a simple univariate Probit model, have also been moving in opposite directions (Chart 7). The 2Y10Y and 5Y10Y curves are implying a 35% chance of a recession 6 months from now, compared to only a 5.5% chance based on the 3M10Y curve.

The mixed signals from different parts of the yield curve is a relatively recent phenomenon. As Table 2 shows, between 1996 and 2021 there was strong positive correlation between the yield curves in question. However, since October last year, the correlation between the 3M10Y and the other two has flipped.

All three yield curves are highly successful at predicting the state of the world – recession or no recession – 6 months from now (all between 84-88%). But for predicting a *recession* only (excluding the non-recession periods the model predicted correctly), the 3M10Y curve is significantly better, with a success rate of 49%, compared to 32% and 24% for the 2Y10Y and 5Y10Y curves respectively (Table 3).

Table 2: Negative correlation between yield curves is a recent phenomenon

Correlations from 1996 to 2021			
	2Y10Y	5Y10Y	3M10Y
2Y10Y	1		
5Y10Y	0.96	1	
3M10Y	0.95	0.84	1

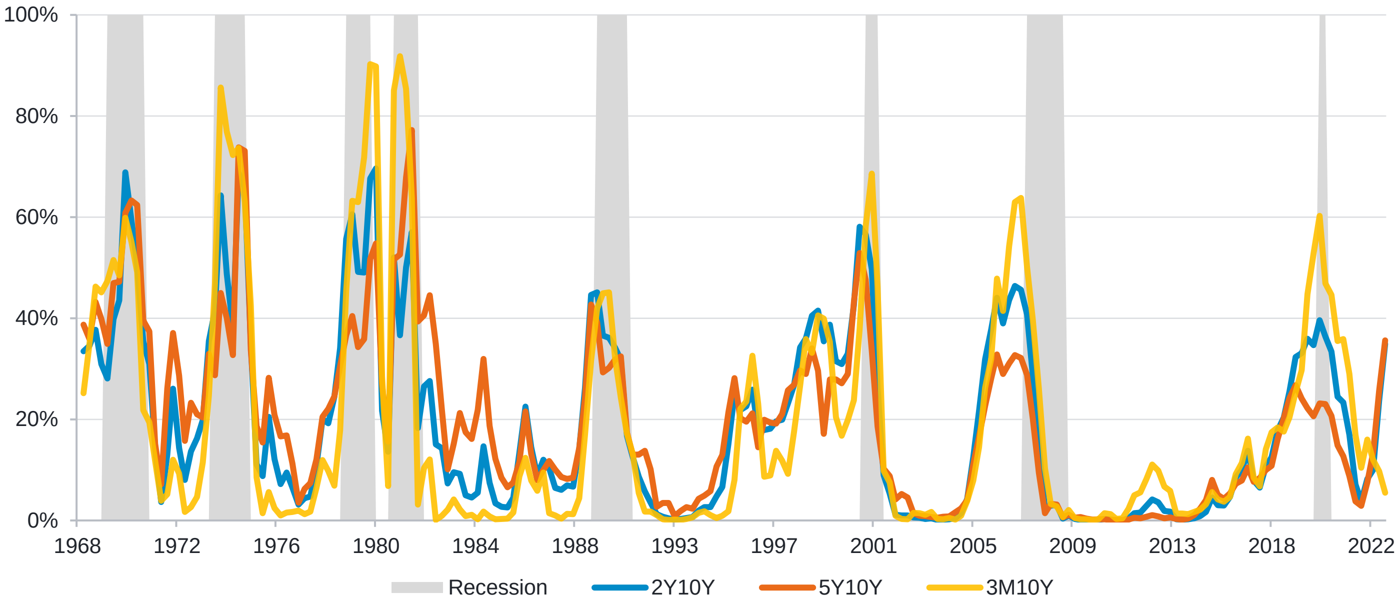
Correlations from October 2021 to Today			
	2Y10Y	5Y10Y	3M10Y
2Y10Y	1		
5Y10Y	0.98	1	
3M10Y	-0.55	-0.57	1

Source: Fidelity International calculations, Haver Analytics, June 2022.

A better approach to deciphering yield curve signals might be to consider the whole curve, rather than individual parts of it. Taking the average spread across the whole of the nominal yield curve, we find that it is even better at predicting recessions than just the 3M10Y curve. Its latest reading suggests an implied probability of a recession 6 months from now of only 13% which is around the average over the course of the cycle.

Chart 7: Yield curves are sending mixed signals on implied probabilities of US recession

Implied recession probability (2 quarters ahead) from a Probit model using selected nominal yield curves



Source: Fidelity International calculations, Haver Analytics, June 2022.

Table 3: Overall yield curve predicting a low probability of recession

Summary statistics of the yield curve Probit models

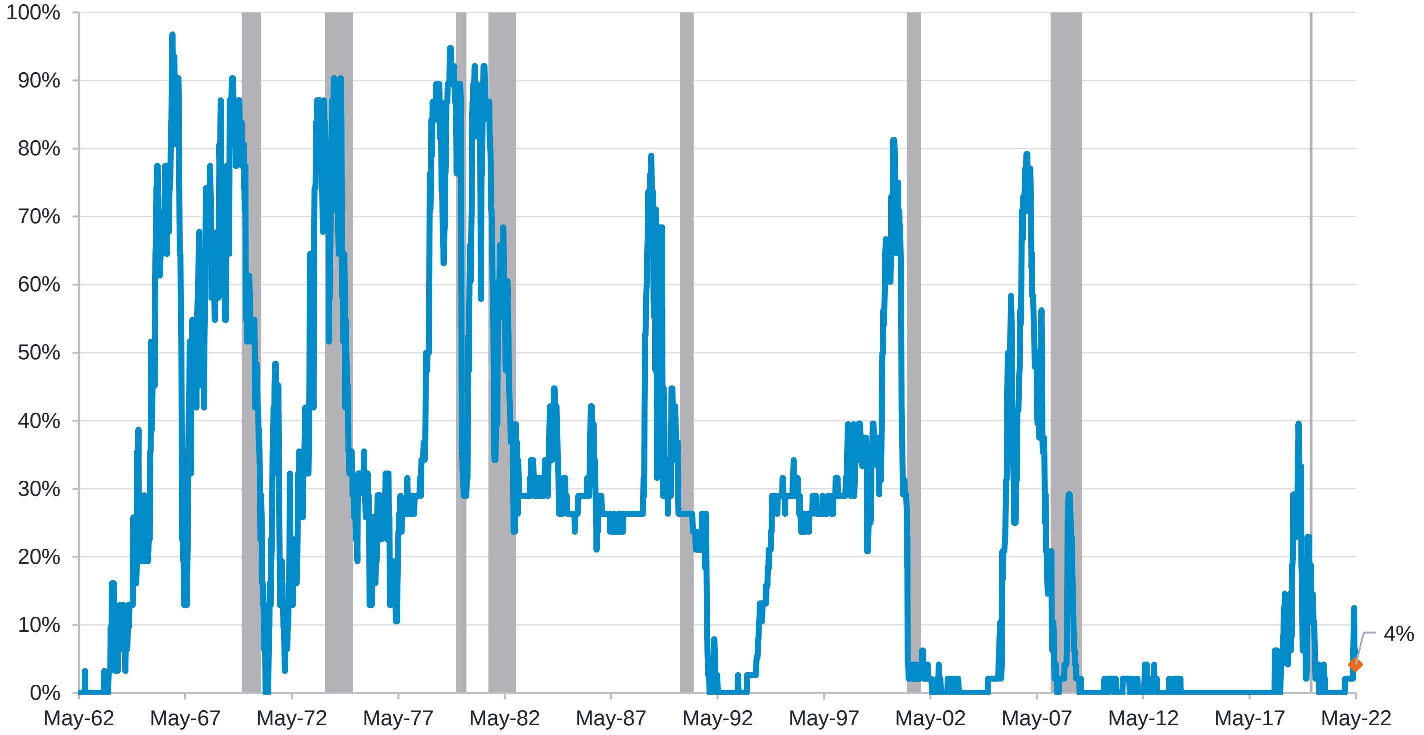
Probit models	Overall success rate	Success rate of predicting recession	Implied prob. of recession 2 qtrs ahead
3M10Y curve	88%	49%	6%
2Y10Y curve	86%	32%	35%
5Y10Y curve	85%	24%	36%
Avg. nominal curve spread	89%	51%	13%

Source: Fidelity International calculations, Haver Analytics, June 2022.

Using this approach to analyse the signals from other yield curves gives similar results. For instance, the real yield curve gives an implied probability of recession of 15% and the risk neutral yield curve[2] gives us an even lower probability of recession of around 2%. A useful way to visualise this aggregate curve shape is to calculate the percentage that is inverted across these three curves. As can be seen in Chart 8, at least 75% of these three curves became inverted before each recession since 1962, with the exception of the Covid-19 recession of 2020. Today, only 4% of these curves are inverted, suggesting that we are still some ways away from a recession.

Chart 8: The current share of inversion across the yield curves points to a low risk of recession

Percent inversion across nominal, real and risk neutral curves



Source: Fidelity International calculations, Haver Analytics, June 2022.

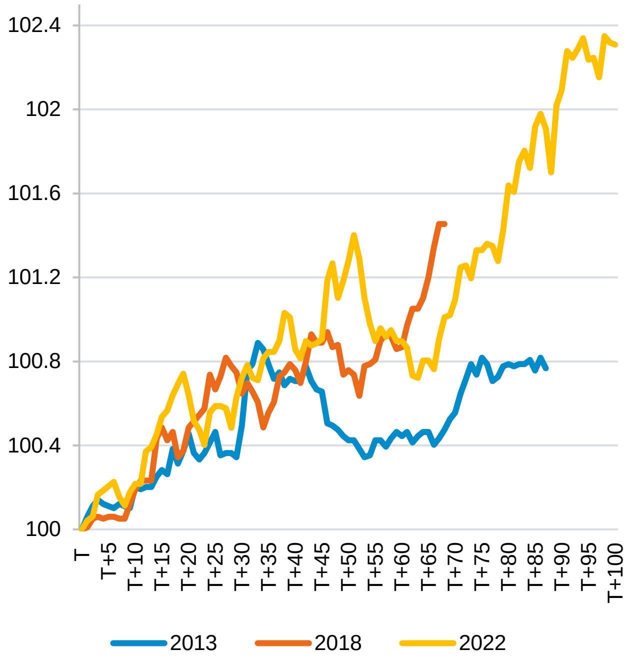
[2] These risk-neutral yields are estimated using the approach outlined in Adrian, Crump and Moench, "Pricing the Term Structure with Linear Regressions," Journal of Financial Economics 110, no. 1 (October 2013). The Federal Reserve Bank of New York produces these estimates daily, with a one-day lag.

Financial conditions as a 'lead' leading indicator

Financial conditions indices (FCIs) are broader measures of market signals than yield curves and tend to lead growth outcomes by 3-6 months. One of the most widely used measures, the Goldman Sachs FCI, is sending more concerning messages about future growth than the yield curve. As Chart 9 shows, US financial conditions – which is a reliable global proxy – have tightened by around 231bps year-to-date, which is both larger and longer than the tightening cycles of 2013 and 2018. Given changes in the GS FCI can be roughly mapped 1-to-1 to GDP growth, it is therefore unsurprising that US consensus growth expectations have fallen sharply since the start of the year (Chart 10).

Chart 9: The current tightening cycle has been both larger and longer than previous episodes in 2010s…

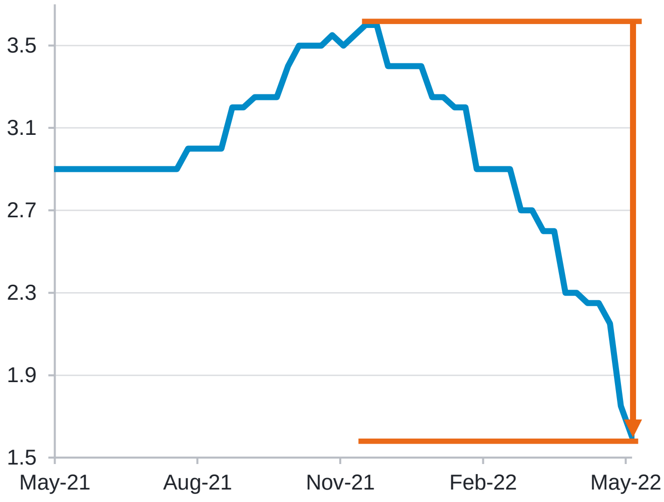
FCIs in tightening cycles rebased to 100 at trough date (business days from trough date)



Source: Fidelity International, Bloomberg, Goldman Sachs, June 2022.

Chart 10: …which resulted in growth expectations de-rating of 200bps

Consensus Q4 2022 US GDP growth expectations, %

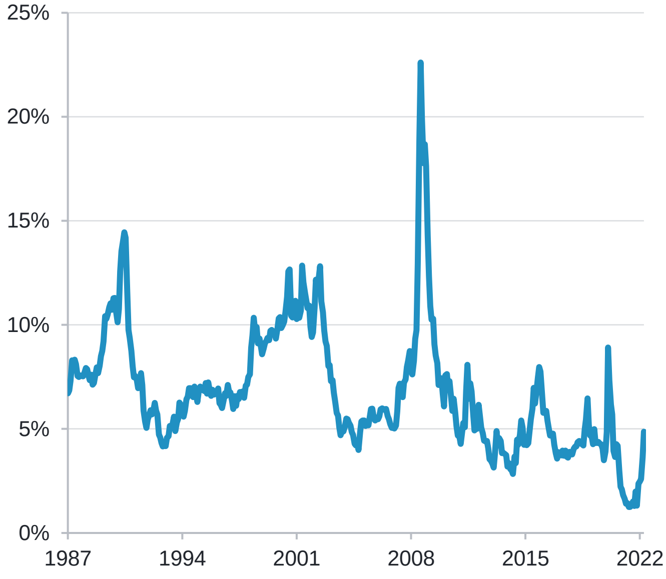


Source: Fidelity International, Bloomberg, June 2022.

With the Fed likely to stick to its hawkish policy path for now, we expect more tightening in financial conditions will come. What is likely to change is FCI tightening leadership, from rates, currency and equities to credit markets. Indeed, all-in credit yields, adjusted for inflation expectations, have yet to provide a meaningful tightening to financial conditions, and have only just returned to their 2010-19 average (Chart 11).

Chart 11: Credit still has more work to do in tightening financial conditions

US HY yield to worst minus the 5Y breakeven rate



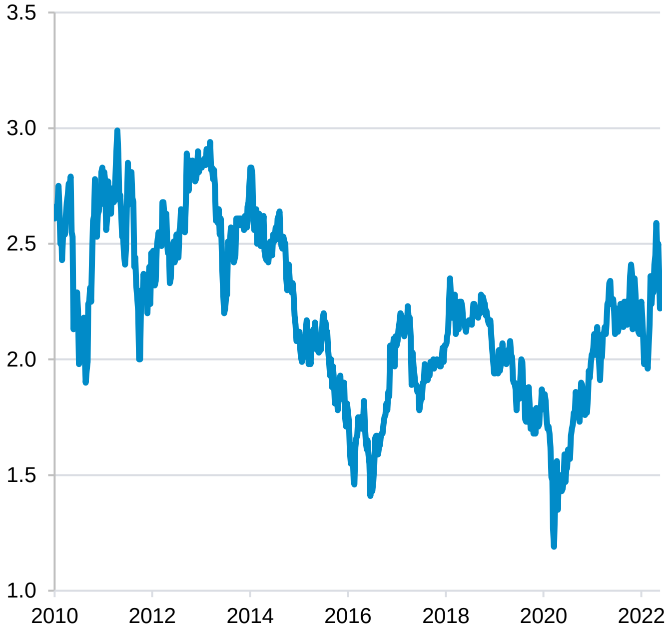
Note: Data prior to 1997 uses GS backcasted breakeven yields.
Source: Fidelity International, Bloomberg, Goldman Sachs, June 2022.

Asset allocation during transition from stagflation towards hard or soft landing

One of the key reasons for the likely switch in FCI tightening leadership is the ceiling for nominal and real yields, given the very high debt burden, which we believe is fast approaching. On the inflation expectations side, the 5Y5Y forward breakeven rate had until recently converged to our higher-for-longer inflation view. While there might still be scope for this rate to challenge its recent highs, ultimately the Fed is unlikely to allow long-term inflation expectations to become de-anchored by letting breakevens rise above 3% (Chart 12). Additionally, we believe that due to substantially higher debt loads, the system cannot take positive real rates for any material length of time. A range of 0.5-1.0 percentage points is likely to be the ceiling for the 5Y5Y forward real rate due to these systemic constraints (Chart 13).

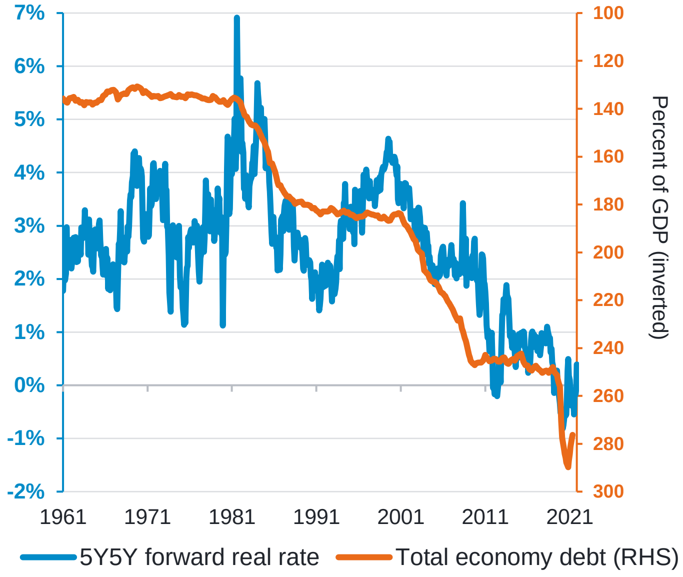
Chart 12: The Fed is unlikely to let long-term inflation expectations de-anchor materially

5Y5Y forward breakeven rate, %



Source: Fidelity International, Refinitiv Datastream, June 2022.

Chart 13: High debt loads likely to put a ceiling on long-term real rates



Note: Real yield data prior to 1997 uses GS backcasted breakeven yields.

Source: Fidelity International, Refinitiv Datastream, Goldman Sachs, June 2022.

Looking at market corrections over the last 50 years that were driven by sharp rises in the 5Y5Y forward real yield (Table 4 and Chart 14), we find the following:

- The average peak-to-trough fall for the S&P 500 was 32%. The current drawdown is 15.4% (as of 26th May), suggesting further equity weakness might be possible.
- The average change over each period in the 2Y yield was 1.37%, further illustrating how substantial the nearly 2% rise that has already taken place this year is.
- The average trough-to-peak of the 5Y5Y forward real yield was just over 2%, while the median change was 1.5%, meaning the current episode is in line with the historical experience and further increases our conviction on the ceiling for long-term real rates.

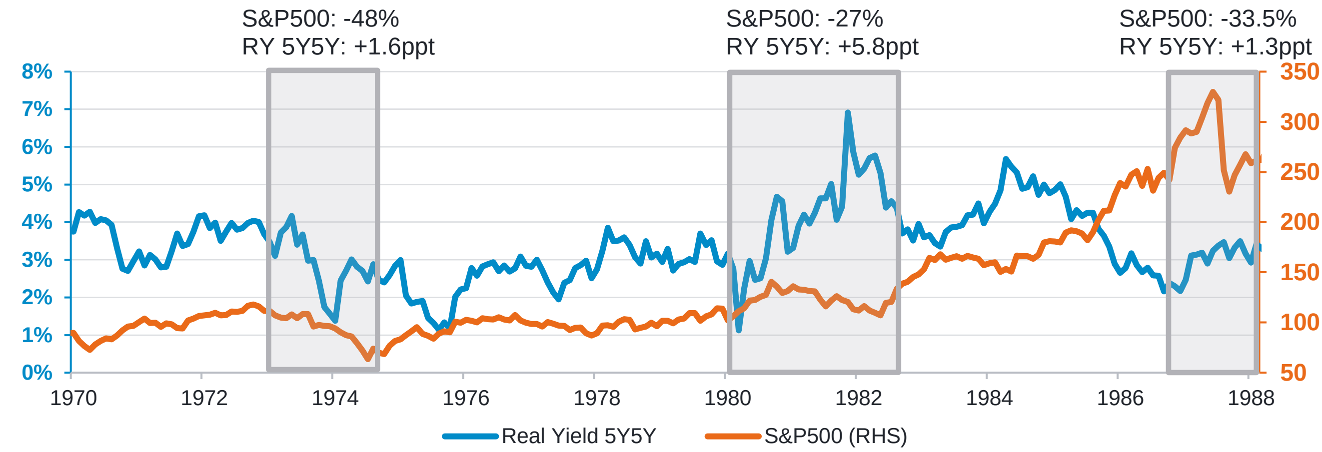
Table 4: Equity fall so far is mild by historical standards given the sharp rise in real yields

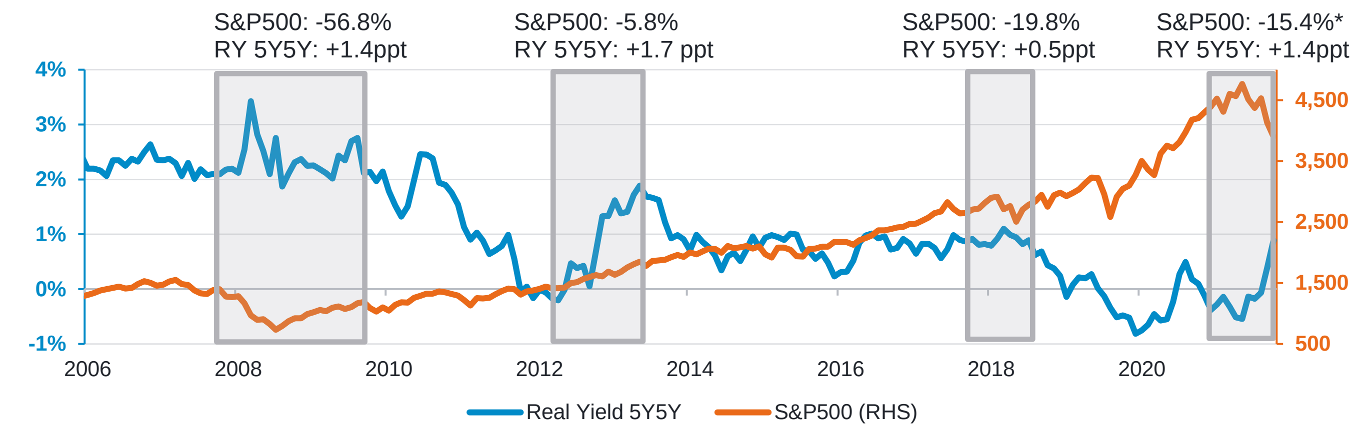
S&P 500					RY 5Y5Y Fwd.		US 2Y yields				
Period	Peak to trough	No. of days	Period start	Period end	Trough to peak change	No. of days	Level at start	level at end	Change (ppt)	Inflation (CPI %YoY)	US Public debt o/s as % of GDP
1973-74	-48.2%	450	Mar-74	Jun-74	1.6%	92	7.2%	8.1%	0.9%	10.5%	32%
1980-82	-27.1%	444	May-80	Jan-82	5.8%	610	9.5%	14.6%	5.1%	11.3%	35%
1987	-33.5%	73	Feb-87	Oct-87	1.3%	242	6.4%	8.3%	2.0%	3.7%	49%
2007-09	-56.8%	369	Jan-08	Oct-08	1.4%	274	2.5%	1.6%	-0.9%	4.5%	68%
2013-14	-5.8%	34	Nov-12	Dec-13	1.7%	395	0.3%	0.3%	0.1%	1.5%	100%
2018	-19.8%	67	Dec-17	Oct-18	0.5%	304	1.8%	2.9%	1.0%	2.5%	106%
2022*	**-15.4%**	**103**	**Dec-21**	**May-22**	**1.4%**	**151**	**0.7%**	**2.7%**	**2%**	**7.8%**	**127%**
Pre-22 avg.	-31.9%	239.5			2.1%	319.5			1.4%	5.7%	65%

Note: CPI Inflation is the average monthly inflation corresponding to the start and end period, US public debt as % of GDP is the outstanding debt during the year at period end. Real yield data prior to 1997 uses Goldman Sachs backcasted breakeven yields.
Source: Fidelity International, Bloomberg, Haver Analytics, Goldman Sachs, June 2022.

Chart 14: Real yields matter for the S&P 500

Visual study of the relationship between 5Y5Y forward real yield and S&P 500, in periods of rapidly tightening real yields





* S&P 500 drawdown is as of May 26th, with the lowest point so far in this cycle reached on May 19th, at 18.7%.
Note: Annotations in the chart refer to the peak to trough fall in the S&P 500 and the change in the 5Y5Y forward real yield from its trough to peak. Real yield data prior to 1997 uses Goldman Sachs backcasted breakeven yields.
Source: Fidelity International, Bloomberg, Goldman Sachs, June 2022.

The lead/lag relationship between peaks in the 5Y5Y forward real rate and troughs in the S&P 500 shows that the real rate peaks 1 to 6 months before equities trough (Table 5). When inflation tends to surprise significantly to the upside, the lag between the trough in the S&P 500 and peak in the real rate is often longer, suggesting the Fed ends up letting risk markets tighten conditions further in order to tame inflation.

Our macroeconomic outlook, including a base case of recession in Europe and a relatively high probability of a hard landing in the US, points to a continuation of risk-off market action for now. Our analysis of similar episodes over the past five decades reinforces our negative view on risk assets from a tactical asset allocation perspective, but also suggests the risks to holding duration from here are becoming more balanced.

Table 5: Real rates peak 1-6 months before S&P 500 troughs

Lag between peak in 5Y5Y fwd. RY and trough in S&P 500

Period	Lag (in months)	Inflation Surprise (%)*
1973-74	3	7.5
1980-82	6	7.0
1987	1	-2.0
2008-09	4	2.7
2012-13	1	-0.4
2018	2	1.3
2022	**?**	**6.5**
Average	2.8	3.2

* Inflation surprise is calculated as the peak differential between US CPI %YoY and its 10Y MAV between the trough in 5Y5Y forward real yield and the trough in the S&P 500 for each period.

Source: Fidelity International calculations, June 2022.

Still cautious tactically

From a TAA perspective, we remain cautious on equity and credit risk, as key central banks continue to be hostile. The high inflation environment means that the proverbial Fed put is now further out of money compared to de-leveraging based corrections from recent history, which usually occurred against a backdrop of low inflation.

The regime shift both in terms of monetary policy behaviour and key macro variables such as inflation is palpable. Where inflation settles in the medium-term remains an open question. We continue to believe that major central banks will be willing to tolerate higher inflation relative to the past, as prolonged supply chain disruptions, geo-political decoupling, and greenflation, embed themselves as the new drivers of a higher inflation environment in a world carrying very high debt burdens.

Fidelity Global Macro & Strategic Asset Allocation Team

This paper is written by the Global Macro & Strategic Asset Allocation team, which forms a key input into Fidelity Solutions & Multi Asset's investment process. This team conducts rigorous macroeconomic and investment analysis, studying the drivers of markets across time horizons. The team works with Portfolio Managers across tactical and strategic asset allocation, supporting decision-making across the investment process.

Salman Ahmed
Head of Global Macro & SAA

Wen-Wen Lindroth
Lead Cross-Asset Strategist

Marc Miron
Multi Asset Graduate

Stefan Rusev
Senior SAA Strategist

Max Stainton
Global Macro Strategist

Anna Stupnytska
Global Macro Economist

Research Specialist Team

Mohd Tariq Azim
Macro Research Specialist

Ashray Ohri
Macro Research Specialist

Kapil Sethi
Associate CMA/SAA Research Specialist

Naveen Yadav
Associate CMA/SAA Research Specialist

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