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Inflation watch: persistence and expectations

We remain of the view that the policy-induced recession we are forecasting will be highly disinflationary. However, prolonged periods of elevated inflation can lead to greater persistence if firms and households start placing more weight on past inflation rather than central bank targets when forming their expectations. A “sticky inflation” scenario would lead to a higher ‘fair value’ for yields than in our base case.

Key takeaways

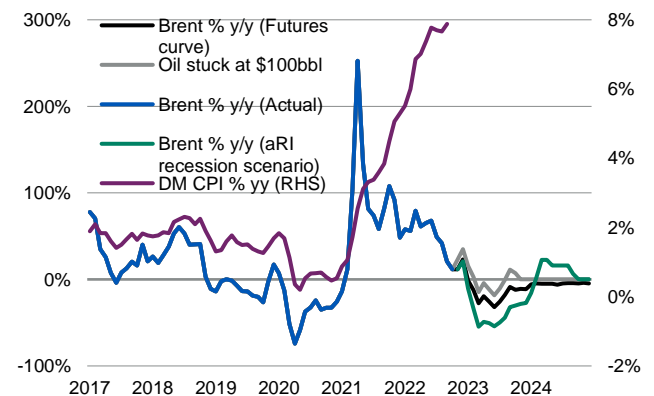
- Although the softer October US inflation print triggered a bond market rally, the speed with which underlying inflation will moderate through 2023 remains very uncertain.
- Stable medium-term inflation expectations signal that markets still have faith in central banks’ ability and willingness to tame inflation.
- However, long periods of elevated inflation can alter price setting behaviour, as firms and households increasingly assume that high inflation will persist.
- Forecasting these behavioural changes in real time is difficult, so we maintain our base case that a policy induced recession will prove very disinflationary.
- But we have added a new ‘sticky inflation’ scenario, in which inflation comes down much more gradually amidst the recession and policy rates have a higher peak and higher trough.
- In this scenario, front-end bonds will have to reprice to higher yields over the next few months, while the fair value for bond yields across the curve would still be pulled down in H2 2023, albeit to a higher terminal level.
- We expect bond prices to be volatile as market participants remain sensitive to short-term news about future inflation and the consequences for policy.

Peak US inflation mostly a goods story

The US October inflation print provided some hope that inflation pressures have finally peaked. Core and headline prints were well below market expectations and fuelled a sharp rally in Treasuries on the expectation that the Fed had greater room to “pivot” to a looser policy stance sooner.

Some of the post pandemic inflationary drivers are indeed starting to unwind. The Ukraine war amplified the earlier commodity price shock adding political risk premia to existing supply constraints. However, even with elevated levels of oil and gas prices, the base effects on inflation are unwinding. And in a recession, energy prices will likely fall much further and be a larger disinflationary force (Figure 1).

Figure 1: Strong energy base effects



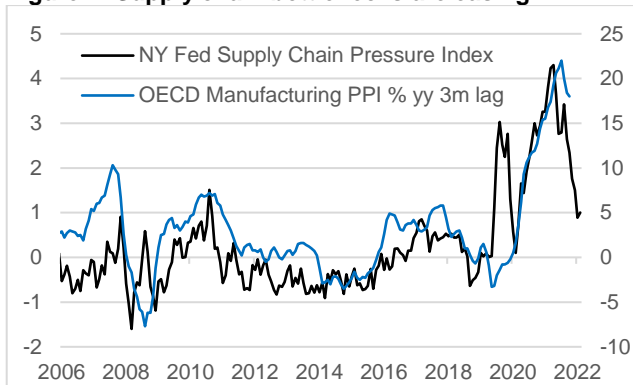
Source: Bloomberg, abrdn Research Institute, November 2022



Scarcity of critical intermediate inputs such as semi-conductors disrupted a broad range of products through 2021 and into 2022. This, and the strength of post-pandemic goods demand, pushed core goods prices to multi-decade highs (Figure 2). But here too, inflationary forces are moderating, and in cases like used cars, deflating, as supply chains are repairing and demand rotates towards services.

However, services inflation is proving much stickier. Bottlenecks have intensified across many countries over the past 6 months, as pent up demand has pushed up against labour shortages. Vacancy and quit rates remain elevated and indicate a much tighter labour market than otherwise implied by the unemployment rate.

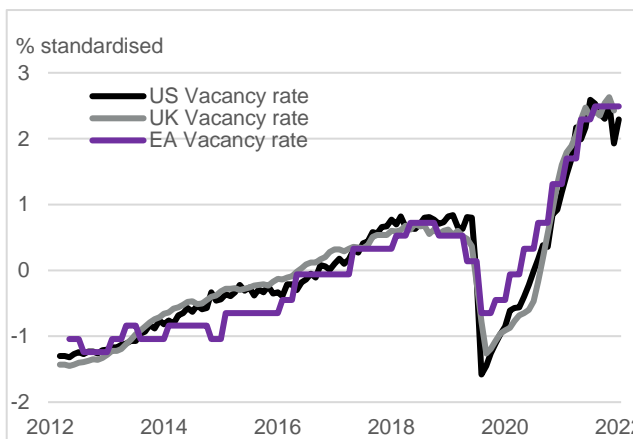
Figure 2: Supply chain bottlenecks are easing



Source: Haver, NY Fed, abrdrn Research Institute, October 2022

The labour force participation rate also remains below pre-pandemic norms, largely for structural reasons. Population aging is causing workers to exit the labour market. Immunocompromised individuals are reluctant to return to service sector work. And sectoral and geographic demand and supply mismatches appear to have increased.

Figure 3: The labour market is still very tight



Source: Haver, BLS, ONS, SOEC, abrdrn Research Institute, September 2022

Meanwhile, although house prices have now peaked and private rents are growing more slowly, it will take some time before these shifts in the housing market will be reflected in owners' equivalent rent.

The upshot is that it is the evolution of service sector inflation that holds the key to how quickly US inflationary pressures will dissipate over the next 1-2 years. And though this section has focused on US inflation dynamics, variations of these same themes are playing out across other advanced and emerging economies too.

Expectations are critical to the inflation outlook

In economic theory, inflation expectations play an important role in determining future inflation. But economists dispute how much weight to put on backward and forward looking information.

For those looking for more benign signals, bond market implied expectations have stayed closely anchored to central bank targets in most economies. For example, 5y5y forward breakevens are currently at 2.59% and 2.29% for the US and Eurozone respectively.

And central bankers have mostly been keen to emphasise this anchoring when arguing that only a modest amount of economic pain will be required to return inflation to their targets.

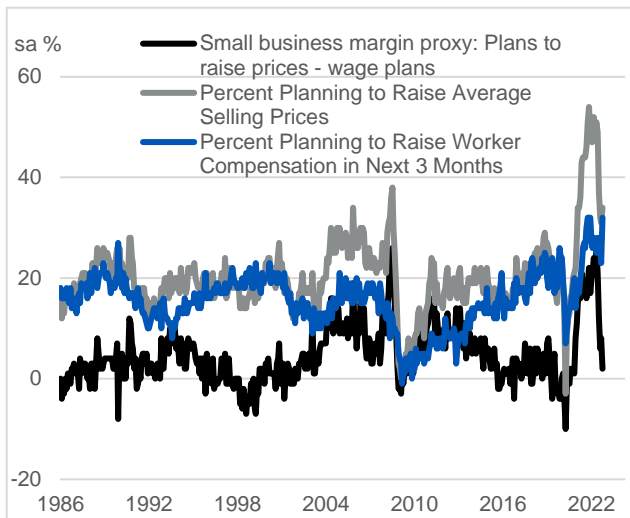
Nevertheless, there is some evidence that firms and households consider past inflation when setting their expectations for the future, and that this weight increases the longer inflation remains elevated. This serves to increase the amount of economic activity that must be sacrificed to lower inflation and prevent expectations from becoming de-anchored.

A theory of sticky inflation

In a recent speech, BoE MPC member Catherine Mann set out the theoretical channels through which these effects might operate. In the first instance, firms face adjustment costs to raising prices, or what economists refer to as 'menu costs'. An example would be a mobile phone contract with a price that only adjusts once per year. This can make prices stickier because firms will only consider bearing the costs of changing prices if the adjustment is sufficiently large



Figure 4: Cost passthrough versus margin squeeze



Source: Haver, NFIB, abrdn Research Institute, November 2022

In some stages of an inflation surge, firms may accept a degree of margin squeeze and absorb some wage and input costs (Figure 4). But if the firm anticipates continued rapid cost increases then the optimal decision will be to raise prices by more than is required to offset previous cost increases.

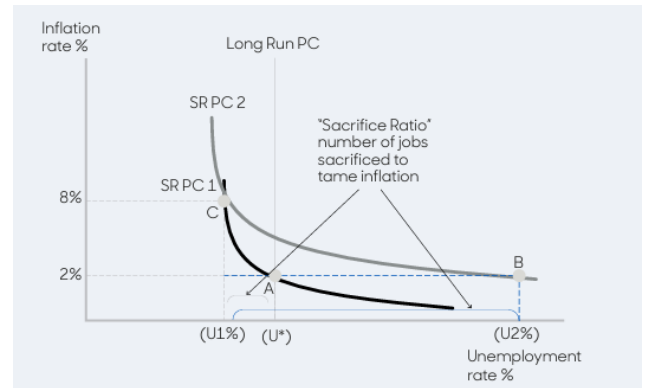
Indeed, the greater the uncertainty around how fast costs are rising, the greater the incentive to overshoot when hiking prices to cushion against future increase in input costs. There may also be a degree of coordination between firms as they keep up with competitors even if marginal costs have stabilised. This process can drive inflation higher for a period of time even if demand conditions and input costs remain stable.

Meanwhile, firms maybe quicker to raise than lower prices, as they face downward wage and price rigidity. Firms and workers are unwilling to cut wages, so price levels rarely fall on aggregate and the disinflationary process is limited even through a recession. *Forbes 2021* finds evidence for a kinked or non-linear Phillips Curve where inflation is less responsive to unemployment or other slack measures during recessions (Phillips curve is flat), but more responsive when output is above potential and unemployment is low (Phillips curve becomes steep).

Sticky inflation means more economic pain

The stylised chart below illustrates how the shape of the Phillips curve can determine the “sacrifice ratio” or the number of jobs that may need to be lost in the process of taming inflation. At point C the inflation has accelerated to 8% during the course of the pandemic, having averaged around 2% prior to the pandemic. Assume that following the initial spike in unemployment during lockdowns, the combination of fiscal and monetary stimulus have pushed unemployment well below U^* .

Figure 5: The Phillips Curve – why it matters



Source: abrdn Research Institute, November 2022

If Point C is on the steeper portion of the black Phillips Curve SRPC1, policy makers only have to tighten policy enough to bring the economy back to point A. The “sacrifice” to return to 2% is an increase in unemployment, but the magnitude of this adjustment is lessened by the steepness of the Phillips curve at this point.

However if the Phillips Curve has shifted up, to the grey curve SRPC2, then a central banker’s task becomes much harder as many more jobs will be lost in the process to reset expectations and bring inflation back to 2%. Indeed a deep recession would likely be required like occurred in the early 1980s, though that followed a decade of core inflation above today’s levels.

Another feature of this framework is that inflation expectations change over time, with individuals and firms moving from backward looking behaviour to forward-looking anticipation of policy and output. There is evidence of switching between the two as one rule starts to outperform the other (Cornea-Madeira et al. 2019). When shocks drive inflation away from target for extended periods of time, firms and households can become more backward-looking in their expectations formation.

Even if long term expectations remain stable and central bank target credible, persistent elevated inflation can generate a higher degree of backward looking behaviour and in turn feed into greater persistence in higher inflation outcomes. Monetary policy is critical here, as the expected impact on domestic slack, or recession fears, can feed into aggregate inflation expectations and behaviour.

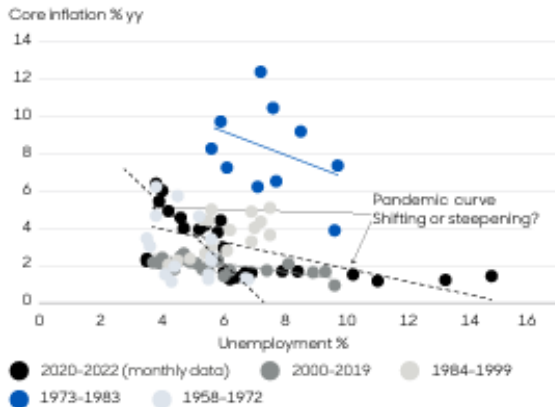
As we discussed in "The great policy trade off" this supports the idea that the Phillips Curve is non-linear but can also shift. During the 1970s the Fed underestimated the impact of excessively loose policy on inflation via an increase in expectations. The 70s backdrop of labour market regulations, globalisation and policy regime were very different to the current environment. Nonetheless expectations still need to be managed.

Figure 6 illustrates how the relationship between inflation and domestic slack shifted outward, so that for each level of



unemployment, inflation was much higher (blue dots). This led to the decade lost to stagflation and required the aggressive monetary tightening response of the Volcker era in order to regain credibility and control over inflation.

Figure 6: A shift or steepening of Phillips Curve?



Source: Haver, abrdn Research Institute, November 2022

The black dots of 2020 to 2022 represent the impact of the pandemic and war so far. The shape of the curve raises the question whether we are simply on the steeper part of the Phillips curve or whether a prolonged period of high inflation has increased the risk of repeating the 1970s scenario.

A highly uncertain inflation outlook

There are three main explanations for why underlying inflation today is so far above the levels implied by normal measures of economic and labour market slack.

1. The unemployment rate has become a poor measure of economic slack in the presence of very high vacancy rates.

2. The natural rate of unemployment has increased by more than forecasters think, as labour market matching has become less efficient.
3. Supply-chain bottlenecks may have temporarily steepened the Phillips curve or pushed the economy to a steeper part of the current Phillips curve.
4. The Phillips curve has shifted out, as it did during the 1970s as 'true' inflation expectations have shifted higher in response to high realised inflation over the past 18 months.

In our base case, explanations 1, 2 and 3 all play a role and help justify why we think a recession is likely, but then also why inflation should be very responsive to that recession. In this scenario, bond valuations are very attractive at current levels.

However, because we think there is possibility that explanation 4 is also relevant, we have devised a new scenario in which policy rates have to increase by more to tame inflation, and then inflation proves less responsive to the recession itself. As a result, the policy rate does not return to the effective lower bound over the next two years.

In this scenario, the front-end of bond curves will likely have to reprice for higher yields over the coming months, we will have to wait longer for yields across the curve to fall, and when they do, it will be to a higher trough.

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