Inflation in central sectors with rigid prices: a granular measure of underlying inflationary pressures

Insights

Not all inflation is created equal. By placing greater weight on inflation in sectors with rigid prices and in central positions in the economy, this novel measure aims to better capture the broad-based inflationary pressures monetary policy can and should address, in pursuit of the existing remit.

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Inflationary pressures can arrive in many different forms. The price of petrol may jump after an interruption to global energy supply. The cost of a haircut may rise because wages and demand are increasing domestically. The two changes might contribute equally to headline inflation, but they need not call for the same monetary policy response.

That distinction lies behind one of the hardest questions in central banking: which inflationary pressures should policymakers respond to, and which should they look through?

Looking through a price rise does not deny its effects on households, or assume that it will quickly disappear. Instead, it means judging that monetary policy cannot, or should not, offset the initial movement. Some relative prices need to change following a shift in demand or supply. Attempting to suppress those changes may require an unnecessarily large contraction in activity. This reflects the broader notion that some price increases are the economy's way of adjusting to real changes in scarcity. A poor potato harvest may raise prices of potato chips; meanwhile, ongoing technological progress implies that prices of computer chips should continue to fall. Such relative price changes perform an important economic function in the face of changing conditions, redirecting demand and resources across the various sectors that make up the economy.

Since monetary policy only has one main instrument, 'Bank Rate' for the Bank of England, it can't deliver price stability in all sectors. Instead, monetary policy can only shift all sectoral prices in the same direction ('down' in case of a tightening). This makes it optimal for monetary policy to, at least partially, look through shocks to relative prices. The monetary policy maker should simply allow relative prices to adjust towards their efficient levels. Absent such relative price changes the economy would 'over-utilise' the sector hit by the adverse shock, which implies an inefficient use of resources that would put upward pressure on that sector's real marginal costs, contributing to aggregate 'overheating'.

Inflationary pressures driven by aggregate overheating require more attention. They may reveal that demand is pressing against the economy's productive capacity, or that an initially isolated shock is spreading through supply chains and becoming embedded in wider price and wage-setting behaviour. Given that such inflationary pressures are broader based, monetary policy may need to – and can – offset these.

The challenge is that both kinds of inflation appear in the same headline number. A central bank therefore needs to look beneath aggregate inflation and ask where price pressures are emerging, how persistent they are likely to be, and what they reveal about underlying economic conditions.

Sectoral data to the rescue

In this post we will expand on Box C of the **July 2026 Monetary Policy Report** and show how sectoral inflation patterns can help. We will argue why policymakers may wish to pay more attention to inflation in sectors where prices are normally rigid, and in sectors that occupy a central position in the economy's production network. Inflation in those sectors likely contains a stronger signal on broad-based marginal-cost pressures, which monetary policy should address.

These insights trace back to **Rubbo (2023)**, who developed a multi-sector version of the standard New Keynesian model. An important characteristic of a production network is that some prices take on a highly central role, because the associated goods or services are important inputs across sectors – energy being one example (**Dhingra and Page (2023)** for an earlier articulation of this point for the UK). These 'network central' prices tend to constitute input costs to many other (often downstream) firms across sectors. Consequently, whenever network central prices rise, it pushes up marginal costs across multiple sectors. Since increases in these central prices do bear a close relationship to the economy's aggregate marginal production costs, and the associated aggregate output gap, monetary policy should respond to inflationary pressure in 'network central' sectors that provide inputs to many others.

Along similar lines, monetary policy should be more responsive to inflation in sectors normally characterised by more rigid prices (**Aoki (2001)**). Inflation in flexible-price sectors doesn't tell us much about the output gap: when prices are fully flexible, they will adjust to ensure actual output equals potential output. Any observed price movements in those sectors likely reflects efficient changes in relative prices, which monetary policy should accommodate. But inflation in rigid-price sectors does bring welfare losses: firms in those sectors are constrained in their ability to adjust prices (think about a firm having to pay a menu cost to change prices or being unable to reset prices due to being locked into a fixed-term contract). For such firms, surprise inflation is highly distortive as they struggle to keep up with changes in the aggregate price level. In addition, a given amount of inflation in a rigid-price sector is a stronger signal of marginal cost pressure (because more rigid prices imply a flatter Phillips Curve, implying that a given amount of inflation signals more overheating).[1]

Rigid and central

Given the above logic, **Rubbo (2023)** proposes a reweighted version of headline CPI inflation, where the reweighting gives greater influence to:

a. inflation in sectors that have more rigid prices, as inflation in those sectors is a stronger signal of real marginal costs, with consequent price distortions damaging welfare (as opposed to merely reflecting efficient movements in relative prices);[2] and

b. inflation in sectors that play a more central role in the production network, as inflation-induced distortions in those sectors are amplified throughout economy. One can think of inflation in more central sectors as the common component of inflation: that portion of inflation across sectors that's squarely pointing in the same direction. Although monetary policy is a blunt force (with Bank Rate as its single instrument), it can shift prices in a single direction, meaning monetary policy makers can (and should) offset the common component of inflation.

How does this compare with the traditional approach to inflation targeting? The latter can be characterised as primarily being based on time: 'look through shocks that will unwind before the lagged effect of monetary policy kicks in; therefore, focus on responding to second-round effects.' In contrast, the 'rigid-central' approach, which is particularly appealing when the monetary transmission lag to inflation is relatively short,[3] is based on costs: 'respond to inflation where it's most costly', which is in more rigid-price sectors (where firms struggle more to keep up with aggregate inflation) that are also central in the production network (meaning that inflation-induced distortions are amplified).

To calculate a UK rate of 'rigidity-centrality-weighted (RC) inflation' we proceed by reweighting CPI at a granular level.[4] We use the COICOP 4 classification, which distinguishes between 85 different subcomponents of CPI. The weights in our RC index give greater prominence to more rigid prices (a. above) and to prices in sectors that are more 'central' to the economy's network structure (b. above).

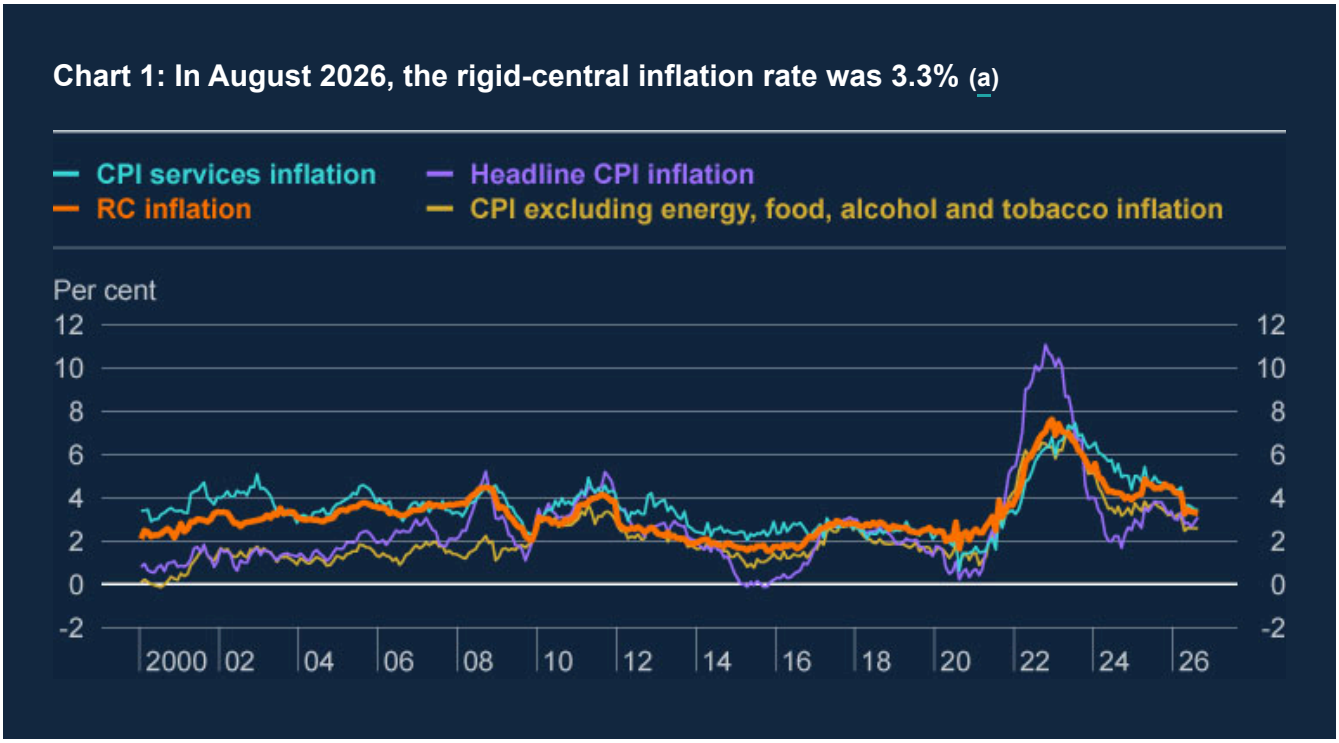
While there is no unique, objective way to determine the exact degree of price flexibility at the subcomponent level, we use the Office for National Statistics (ONS) microdata made available by **Davies (2021)** to get to this question. For every CPI item for which data are available, we filter individual price quotes to ensure that the same item has been recorded in consecutive months in the same retail outlet. Drawing on the pre-Covid sample (2000–19) we then calculate the average probability that a given item changes price over the course of a year, and we aggregate those probabilities up at the COICOP 4 class level.[5]

To determine which subcomponents of headline CPI are the most central in the UK's production network, we use the 2023 version of the **ONS input-output tables**. These are presented using the statistical Classification of Products by Activity ('CPA') but using the **ONS's conversion table**, we can map CPA sectors to COICOP definitions to construct appropriate weights for each COICOP 4 class. The resulting so-called 'Domar weights' represent the sales share of each sector in overall GDP. As in **Rubbo (2023)**, we then combine the Domar weights with the rigidness weights and normalise them to sum to 1. This delivers our final RC weights.

Chart 1 shows the resulting RC inflation rate alongside the headline CPI inflation rate and other popular measures of ‘underlying’ inflation. The latest RC inflation outturn, for August 2026, sits at 3.3%; it has come down significantly from the post-Covid highs and has, to date, not shown any significant pickups following the recent rise in energy prices.

Under certain assumptions **Rubbo (2023)** shows that navigation by the rate of RC inflation is an appealing strategy for a flexible inflation targeting central bank that tries to balance inflation stabilisation against stabilisation of real activity.[6] Compared to CPI inflation, RC inflation bears a closer relationship to aggregate real marginal costs. This, in turn, implies that RC inflation better mirrors the degree of ‘overheating’ or ‘slack’ in the economy, ie, that it better reflects the output gap. Intuitively, one can think of navigation by RC inflation as automatically equipping the monetary policy maker with a shock-dependent rule: ‘fully look through efficient changes in relative prices, but aggressively offset inflation arising from real marginal cost pressures associated with a positive output gap’.

Chart 1: In August 2026, the rigid-central inflation rate was 3.3% (a)



Source: Bank calculations.

(a) The **underlying weights used to construct RC inflation** are available.

Rigid-central inflation's ability to reflect the output gap

To test whether the UK rate of RC inflation indeed better reflects the output gap, we start from the following reduced-form Phillips Curve (also used in **Barnichon and Shapiro (2024)**):

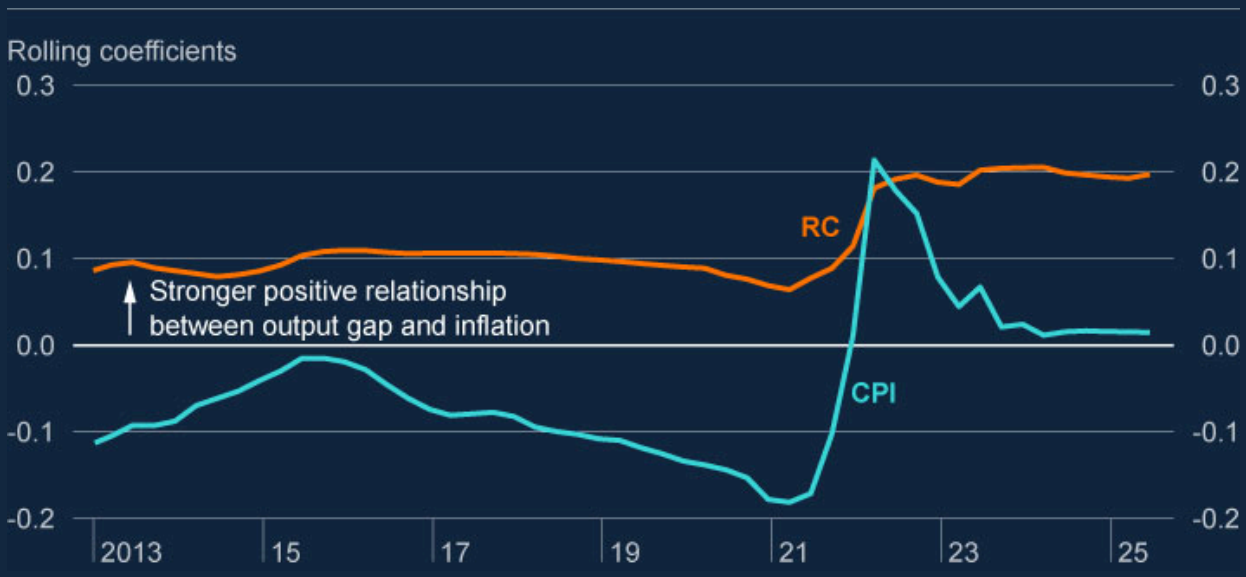
$$\pi_{t+h} = \gamma\pi_{t-1} + \kappa\tilde{y}_t + \theta_1 z_t + \theta_2 z_{t-1} + \eta_{t+h}$$

Here, π is the rate of inflation, $\tilde{y}$ represents the Bank's latest output gap estimate, z is a vector of controls,[7] and η the regression residual; 'h' captures the assumed lag structure (how long does it take for changes in the output gap to affect inflation?); our baseline uses $h = 4$ quarters, but results are robust to using other reasonable values. We estimate this equation recursively, on a rolling basis, meaning that displayed estimates for (say) 2019 Q1 only use data from – or prior to – that quarter.

When estimating the above equation using headline CPI inflation, our estimate for κ (the slope of the Phillips Curve) typically obtains a counterintuitive negative sign, that is moreover unstable over time and across lag structures, as illustrated by Chart 2's aqua line. This suggests that the output gap is not a strong driver of headline CPI inflation, for example due to the prevalence of supply-side shocks.

But as Chart 2's orange line illustrates, using our RC inflation metric consistently leads to an intuitive, positive sign on the coefficient capturing the slope of the Phillips Curve. Moreover, using RC inflation gives a better regression fit and yields coefficients that are relatively stable over time. This provides some validation for the applied weighting procedure (which is not an exact science; recall footnote 5) and corroborates Rubbo's claim that the RC inflation measure is more strongly reflective of the output gap than headline CPI inflation. This is appealing given a reality in which output gap estimates are revised over time, with real-time misperceptions of the output gap having contributed to monetary policy mistakes at times (**Orphanides (2001)**; **Nelson and Nikolov (2001)**). Since the RC inflation rate is available in real time, and hardly subject to any subsequent revisions, it can be expected to give a more reliable, encompassing policy signal on first reading.

Chart 2: Rolling estimates of the Phillips Curve slope have a counterintuitive (negative) sign when using headline CPI inflation, but the intuitive (positive) sign using RC inflation



Note: The chart shows results of the rolling reduced-form Phillips Curve exercise for year-ahead inflation (h = 4). It plots how the recursively estimated coefficient on the output gap (taken to be the July 2026 Monetary Policy Report estimate) evolves over time. The model is first estimated on the initial 16 quarters (from 1997 Q2, so the coefficient path begins in 2001 Q2) and then is re-estimated on an expanding window that grows by one quarter each step. The results are largely consistent for other horizons.

Source: Bank calculations.

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1. As an added benefit, paying more attention to inflation in sectors with more rigid prices can also be seen as a proxy for paying more attention to inflation expectations – the logic being that firms that reset their prices less frequently are more forward looking. A dislodging of inflation expectations can, at times, be a concern, but is not well-captured in the standard New Keynesian model.
2. **Atlanta Fed (2010)** applies this idea to US inflation, while **ECB (2025)** does so for the eurozone.
3. Whether this is true or not, remains an open question. While some studies find evidence consistent with changes in the stance of monetary policy taking 2–3 years to reach its full impact (eg, **Cloyne and Hürtgen (2016)**), more recent evidence – based on the so-called 'high-frequency' approach to monetary policy shock identification – tends to find much quicker transmission to inflation (**Cesa-Bianchi et al (2020)**; and **Braun et al (2025)**).

4. Note that this is a departure from **Rubbo (2023)**, who conducts her analysis at the producer price index (PPI) level, driven by two factors. First, UK data limitations prevent us from carrying out the analysis at the PPI level. Second, when it comes to policy relevance, the Bank of England's remit explicitly refers to CPI inflation.

5. When plotting our estimate of price flexibility at the sectoral level against the volatility of inflation in each sector, we obtain a positive relationship – which is intuitive. For sectors where we lack microdata to gauge the degree of price flexibility, we use the associated linear line of best fit to impute price flexibility. We end up doing this for electricity, gas, cars, passenger transport, insurance and financial services not elsewhere classified. In addition, we follow **Rubbo (2023)** in setting the degree of flexibility at its median value for sectors with regulated prices (education, water supply and sewerage collection). As this discussion illustrates, measuring the degree of price flexibility is challenging and not an exact science. We aim to continue improving along this dimension and have already refined our methodology relative to Box C of the **July 2026 Monetary Policy Report**. The impact on the RC inflation metric is quite minor though and we have found the RC inflation series to be rather stable across different approaches to measuring price flexibility.

6. These assumptions include the absence of real wage rigidities (as discussed in **Blanchard and Gali (2007)**) and the way in which price rigidness is modelled (firms being able to do so at random time intervals, as opposed to them being able to reset prices upon paying some menu cost; **Caratelli and Halperin (2026)**). Interestingly, relaxation of both assumptions calls for paying explicit attention to nominal wage growth, which tends to be an important driver of marginal production costs in especially the service sector.

7. The vector of controls z includes the direct contribution of energy prices to inflation as well as food inflation. These variables not only control for cost-push factors (leaving us with a 'core' measure of demand-driven inflation), but – together with lagged inflation π_{t-1} – also affect inflation expectations, which are known to be important in determining inflation dynamics (for instance, **Anesti et al (2025)**).

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