Paying the price
How the inflation surge has reshaped the British economy

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Summary

Next week will bring news that inflation returned close to the 2 per cent target in April for the first time since July 2021. This is an important psychological point after nearly three years of above-target inflation. During that time inflation hit its highest level in more than 40 years, peaking at 11.1 per cent in October 2022, and leaving prices around 15 per cent higher than if inflation had consistently remained at 2 per cent. This is the equivalent of eleven years of ‘normal’ inflation in just three, and means that higher prices – if not higher inflation – will remain with us in the months and years ahead. The increase in the UK consumer-price level has been by far the largest in the G7, and larger than all but two of the 23 rich countries for which the OECD produces comparable data. Politicians will argue about whether this fall in inflation means the UK has ‘turned a corner’; and financial-market participants will debate what this means for monetary policy. But a more important question concerns how this huge shock has reshaped the economy around us. So in this briefing note we take a step back and ask how the inflation surge has changed Britain.

The surge in inflation has come with a rise in the cost of essentials...

Although we’ve undoubtedly had a huge rise in overall prices, not all price rises have been equal, with the relative cost of essentials rising, creating particular hardship for lower-income families. The largest shock has been to energy prices, the wholesale price of which increased by a factor of ten at their peak, compared with 2021 levels. This rightly triggered large-scale Government support which limited the rise in retail prices to around 130 per cent. Wholesale prices have since come down, but imply retail energy prices that will be around 40 per cent higher than in 2021 by the end of this year. Meanwhile, food prices have risen by around a third more than the rise in the overall price level. Lower-income families spend much more on such essentials – those in the second income decile spend 50 per cent more on energy and food than those in the ninth income decile. This means lower-income families have experienced the worst of the inflation: at its peak, the rise in the price level was around 12 per cent higher for those in the second-income decile, compared with the ninth. All this has led to an alarming rise in wider measures of hardship. For example, food banks in the Trussell Trust network distributed 3 million emergency food parcels in the UK in 2022/23, a 50 per cent increase compared with 2019/20.

The surge in inflation has eroded the value of earnings, but, again, this has not happened uniformly, with lower-paid workers taking less of a hit. The post-pandemic period has been miserable for real wage growth – by March 2024, an average earner was paid around £790 per year less in real terms than at the start of the inflation shock in Q1 2021, a fall of
2.3 per cent. For those at the 10th percentile of hourly pay, however, wages rose in line with prices between 2021 and 2023, helped by a minimum wage which almost kept pace with inflation in those years, along with tougher hiring conditions among lower-paying jobs. By contrast, between 2021 and 2023, workers at the 90th percentile of hourly pay saw their wages fall by 3.7 per cent per year in real terms. Waiters, chefs, bar staff, and nursery staff have seen the among the largest hourly wage rises between 2021 and 2023; whereas lawyers, university lecturers, and IT professionals have had some of the largest falls. While high inflation and tight hiring conditions have conspired to mean faster pay growth in some parts of the private sector, public-sector workers have not fared as well with average weekly earnings falling 5.9 per cent between Q1 2021 and March 2024, compared with a 1.6 per cent fall in the private sector.

Other elements of families’ income have responded very differently to the rise in inflation. While the real value of wages has fallen, benefits have been uprated in line with inflation. In April this year, benefits increased by 6.7 per cent, meaning the basic rate of Universal Credit increased by £300 a year for a single person, and £900 for a couple with two children (although the withdrawal of crisis-support measures means that total annual support in 2024-25 will be £685 lower in real terms than it was last year for a single person receiving Universal Credit). In aggregate, annual real per-person benefit income increased by around £60 between 2021 and the end of 2023. Another key component of income – that from savings – has increased sharply as interest rates have risen from ultra-low levels. In aggregate, annualised savings income has increased by around £40 billion, at least in cash terms, and this is highly concentrated among older and richer households.

All this means that while lower-income families have had the worst of the inflation, their incomes have been protected in relative terms. And while workers have seen their wages hit, some with significant savings have seen their incomes actually boosted through the cost of living crisis.

...which has affected our spending behaviour in surprising ways

Taking all of these factors together, real household disposable income per head was 1.1 per cent below its pre-pandemic level by the end of last year. In the face of a hit to incomes from a period of higher-than-expected inflation, we might expect families to borrow more and run down savings to maintain levels of spending through the cost of living crisis. But the reality has been very different. Real per-person consumption has actually fallen by far more than incomes – down by 4.7 per cent over the same period. In the face of fast rising prices and falling incomes, households have actually saved £54 billion more (and consumed £54 billion less) in 2023 than if saving had returned to its 2019 rate. This is far from the stereotype of spendthrift British consumers, but continues
a period of deleveraging on the part of UK households who have cut consumer debts by the equivalent of £48 billion, or around £1,700 per household, since the start of the pandemic.

This is in stark contrast to the US experience, where real consumption per head is around 8 per cent above its pre-pandemic level. It’s true that strong household income growth is the most important driver of the different experiences on both sides of the Atlantic, accounting for around seven-tenths of the US consumption rise. But, unlike households in the UK, France and Germany, US households have been saving less than before the pandemic – with the saving ratio down 2 percentage points between Q4 2019 and Q3 2023, compared to a 3 percentage point rise in the UK over the same period.

So how have families changed their consumption in response to the huge rise in the cost of essentials? To some extent, they have cut back on essentials themselves. Real consumption of gas and electricity per head has fallen by as much as 11 per cent since Q1 2022; and, more worryingly, real consumption of food has fallen by 7 per cent. But these cutbacks have not been large enough to offset rising prices. In cash terms, per capita spending on food and energy rose 14 per cent and 72 per cent respectively between Q1 2022 and Q1 2023 – outstripping the 9 per cent nominal growth in per capita disposable income over the same period. So families have cut spending elsewhere, and particularly on goods. For example, real-terms spending on household appliances fell 18 per cent between Q1 2022 and Q4 2023. ONS data on card spending tells similar story, with a 13 per cent fall in delayable spending over the same period. As the cost of living crisis has eased, and essential spending has declined in cash terms, households have not reversed their cuts to durable goods consumption but rather spent more on services: the fall in essential spending since Q1 2023 (1.2 percentage points) has been almost entirely spent on getting out and going abroad, with the share of household spending on hospitality and air fares up by 1.1 percentage points.

And the rise in interest rates has hit private and public balance sheets

The rise in household saving and the fall in consumer debt should help to strengthen family finances, but household balance sheets haven’t improved for everyone. In fact, aggregate wealth is down. The key reason for this is a big shift in asset prices, which has been the flipside to a huge rise in interest rates. Real long-term interest rates are up 4 percentage points since 2021, reversing nearly a decade of falls. With 80 per cent of household wealth tied up in interest-sensitive pensions and housing, we estimate that £2.1 trillion has been wiped off their value. This change has disproportionately fallen on older households, reducing intergenerational inequality. This is because the impact of a 10.3 per cent fall in real mortgage debts helps younger families, while a 7 per cent fall in real house prices disproportionately affects older people who tend to have more gross
housing wealth. That fall in real debts, however, comes with a sting in the tail: the cost of servicing them has increased, with annual mortgage repayments up by an average of around £2,450 for those re-mortgaging in 2023.

Meanwhile, confounding hopes that high inflation would help the Government reduce public debt levels, the cost of living crisis has come with another jump in public debt. This has been in sharp contrast to previous periods of high inflation. Public sector net debt as a share of national income fell by 11 percentage points in the 1950s and 7 percentage points during the oil shocks of the 1970s and early 1980s. This should not be surprising: high inflation boosts nominal GDP (the denominator in the debt-to-GDP ratio) and results in higher tax receipts. But underlying debt has risen by 6 percentage points of national income between 2021-22 and 2023-24. Although higher inflation has helped bring debt down through the denominator effect, this has been outweighed by three factors. The first of these is the Government spending large amounts on support for households: measures introduced in 2022-23 cost more than £50 billion in that year alone. On top of that, nominal GDP has grown relatively slowly compared to CPI inflation. This has added to the stock of debt through the CPI-linked indexation of welfare costs and higher public sector pension costs. And since the 1980s the UK has acquired a large stock of inflation-linked debt which increases in value in line with the Retail Prices Index, reducing the extent to which it is possible to ‘inflate away’ the debt stock. Looking ahead, higher interest rates will make it even more difficult to get debt falling. All this means this high inflation phase has harmed, rather than improved, the Government’s fiscal position.

**The inflation surge will cast a long shadow over our economy**

Although it is definitely good news that the headline inflation rate is normalising, we have still experienced a huge inflation shock, the largest in at least two generations. Big changes in overall prices – and even bigger changes in the relative price of energy and food – remain with us. This means we now need to spend more on essentials, or consume less, than we used to. In this way, this tumultuous period of price change has reshaped our living standards. Understanding the distribution of these effects is essential, as the impact has varied according to family circumstances and spending habits. But overall falls in income, and even bigger falls in consumption, mean that the vast majority of families will have seen living standards fall. Looking ahead, OBR forecasts imply that GDP will be around 2 per cent lower by the end of next year than was expected before the cost of living crisis, the equivalent of a £1,900 per household hit to GDP in today’s prices. This is another unwelcome economic blow to living standards, extending Britain’s long period of stagnation. This, plus the increased strain on the public finances, mean that the inflation surge will cast a shadow over our economic circumstances and political debate for years to come.
With inflation returning towards the 2 per cent target, now is the time to consider how high inflation has reshaped our economy

Headline inflation is set to return close to the 2 per cent target. The Bank of England’s latest forecast is for CPI inflation to fall to 2.1 per cent in April 2024 (Figure 1), with a big monthly fall driven by lower energy prices as the Ofgem price cap falls from £1,928 in Q1 2024 to £1,690 in Q2. This will bring inflation to within touching distance of target – and well within 1 percentage point of it – meaning that the Bank of England will no longer have to write open letters explaining why inflation is so high. But it also means inflation is back to ‘normal’ levels, re-entering the range in which it has been for two out of every three months on average since the Bank of England was made independent in 1997.

![FIGURE 1: Inflation is set to return close to the 2 per cent target in April](image)

CPI inflation, outturns with Bank of England and OBR forecasts: UK

We should not underestimate the scale of the achievement in bringing inflation down so quickly. Having peaked at 11.1 per cent in October 2022, its highest level in more than 40 years, inflation has now fallen at its fastest rate for nearly 50 years. The fall to around 2 per cent has been achieved in less than three years since inflation first went above target in the summer of 2021, and around two years after Russia’s invasion of Ukraine sent energy prices shooting up.

This is also an important moment politically. The Government is likely to seize the opportunity to claim that its ‘plan is working’ with opposition parties likely to question the extent to which the Government can claim credit. Meanwhile, financial-market
participants will obsess about what this means for Bank of England rate decisions and the outlook for asset prices.

But a more interesting question concerns how the inflation surge has changed the economy around us. As shown in Figure 2, the UK has had one of the largest bursts of inflation among rich countries – with the price level rising 22 per cent since the start of 2021. This level is around 15 per cent above that implied by constant 2 per cent inflation, the equivalent of around eleven years of ‘normal’ inflation in just three. Given the sheer scale of this shock, higher prices – if not inflation – are set to be with us for the foreseeable future.

![FIGURE 2: The UK has had one of the largest rises in the price level among rich countries over the past three years](image)

Change in the headline CPI price level since March 2021: OECD advanced economies

SOURCE: ONS, Consumer Price Inflation; BLS, Consumer Price Index for All Urban Consumers: All Items in U.S. City Average; Eurostat, Euro area (changing composition) – HICP – Overall index; and OECD, Consumer price indices (CPIs) – Complete database.

Six ways in which the inflation surge has changed the British economy

So in this briefing note we take a step back and consider how this period of higher inflation has changed our economy, focusing on its impact on how much we pay for things, our living standards and what this all means for private and public finances. Below we set out six ways in which the economy has changed, starting with relative prices.
1. There has been a massive rise in the price of essentials

Despite a huge rise in the overall price level, the cost of some items has risen by much more than others.

The most significant change in this context is a colossal rise in the price of energy. As shown in Figure 3, wholesale electricity and gas prices increased sharply following Russia’s invasion of Ukraine in February 2022, increasing by roughly a factor of ten at the peak compared with 2021 levels. This rightly triggered large-scale Government support in the form of the Energy Price Guarantee (EPG) which capped the rise in retail energy prices to around 130 per cent, protecting families from the most extreme price rises.\(^1\) Wholesale prices have since come down, as market conditions have stabilised, but gas prices are still around 50 per cent higher than in 2021, with electricity up around 30 per cent.\(^2\) This means retail energy prices are likely to remain above those seen before the rise in inflation for the foreseeable future, with forecasts for Ofgem’s price cap implying that retail energy prices will remain around 40 per cent above pre-invasion levels to the end of 2024.\(^3\)

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**FIGURE 3: Energy prices peaked at 10 times early-2021 levels**

Dual fuel typical price cap level, and gas and electricity forward delivery contract average price, lagged five months: GB

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Future energy prices are very uncertain, but they are likely to be significantly higher than before the inflation surge for the foreseeable future. The long-term future of energy prices will be determined by geopolitical forces as well as progress in the transition to net zero. For now at least, the key point is that, while energy prices have fallen significantly, current market pricing implies that they will remain above pre-invasion levels into the medium term. This means that higher-cost energy will be with us into the medium term, if not longer. As we will see below, this seismic shift in everyday costs has profound implications for the size and shape of overall demand and our overall living standards.

The other epicentre of the inflation surge has been food prices. As shown in Figure 4, food prices have risen by around a third more than the rise in the overall price level. To a large extent this reflects what is happening with energy – transport costs and energy are key inputs to the overall price of food. But it also reflects the indirect impact of Russia’s invasion which cut off key supplies of some crops – most obviously wheat – as well as reducing the supply of fertiliser to farmers around the world.

All this means that lower-income families have had the worst of the inflation and increased hardship from the higher cost of essentials. Figure 5 shows two measures of how inflation has varied across the income distribution during the inflation surge. Both Consumer Price Index inflation (CPI, the headline measure of inflation and the target

Resolution Foundation
for the Bank of England) and Household Cost Index (HCl, a measure of the costs that households face day to day) show that, at its peak, inflation was much higher for those on low incomes. Based on the HCl, at its peak, the rise in the price level was around 12 per cent higher for those in the second-income decile, compared with the ninth. The key driver of this difference is the greater share of essentials in the basket of those on low incomes: families in the second income decile spend 50 per cent more on food and energy than those in the ninth. All this has led to an alarming rise in wider measures of hardship. For example, food banks in the Trussell Trust network distributed 3 million emergency food parcels in the UK in 2022/23, a 50 per cent increase compared with 2019/20.

FIGURE 5: Those on low incomes have seen the worst of the price rises
The difference in inflation for households in the ninth income decile and those in the second based on the Consumer Prices Index and Household Cost Index: UK


2. The surge in inflation has eroded the value of earnings with lower-paid workers taking less of a hit on average

The pain of higher prices must be divvied up between wages and profits. Both workers and firms want to avoid lower incomes: workers push for higher wages and business try to protect profits by raising prices. This tussle has sparked a fierce debate about whether workers should acquiesce to falls in real wages, and whether ‘greedflation’ is driving prices higher.4 As shown in Figure 6, while profits have been volatile recently, profit

4 For a discussion of this process, see: G Lorenzoni & I Werning. Inflation is Conflict. NBER Working Papers 31099.
margins have remained reasonably stable in aggregate and have in fact fallen since the start of the cost of living crisis, suggesting firms have shared the pain with workers. This is what we would expect to happen: an important determinant of the balance between profits and wages is the respective bargaining power of workers and firms, and there was nothing particular about the inflation shock that significantly changed this.

**FIGURE 6: In aggregate, firms have taken their fair share of pain**

Aggregate profit margin of private corporations: UK

The labour market has been tighter than normal for much of the inflation shock period, meaning it would have been especially surprising for the profit share to rise. It is easier for workers to push for pay rises when hiring conditions are tough. However, because employers make pay-setting decisions relatively infrequently, wage pressure takes effect with a lag. This has created a roller-coaster ride of real wage changes during the inflation shock as wages have adjusted to prices with a delay both on the way up and way down.\(^5\)

Real earnings initially fell by 5 per cent in the first 12 months of the inflation shock (from April 2021), as inflation of 9 per cent outpaced nominal earnings growth of 4 per cent. Nominal wage growth then accelerated in 2022 amid record-high vacancies, peaking at

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\(^5\) Average pay can also rise in response to pay for new hires rising – either directly (via new hires’ contribution to the average) or indirectly (as job moves prompt employers to raise pay for existing workers).
7.8 per cent in summer 2023, the fastest rate since the early 1990s. On the way down, earnings growth was again slower to normalise than inflation, leading to a return to real earnings growth from spring 2023. However, despite a return to growth, at the start of 2024 the level of real average weekly earnings remains 2.3 per cent lower than the start of the inflation shock.

But this overall picture hides a variety of experiences for workers. To be clear, most workers have emerged from the inflation shock as losers, but the earnings of low-paid workers in the private sector have done comparatively well, protected by both tight hiring conditions and a rising minimum wage.

In the private sector, high inflation and tight hiring conditions fed into higher pay growth – peaking at 8.2 per cent in June 2023. Government policy on public-sector wages did not follow suit, which is why private sector workers have done much better than their public-sector counterparts. By March 2024, average weekly earnings in the private sector were 1.6 per cent below their level at the onset of the inflation shock (Q1 2021), but 5.9 per cent lower in the public sector (see Figure 7). It’s likely that this gap will have to narrow over time in order to avoid recruitment and retention problems in the public sector.

FIGURE 7: Real earnings in the public sector have been the worst affected by the inflation shock

Real (CPI-adjusted) regular average weekly pay compared to Q1 2021: GB

NOTES: ‘Regular pay’ excludes bonuses and arrears.
SOURCE: ONS, Average Weekly Earnings, and Consumer Prices Index.

6 G Thwaites, Unemployment hits a record low but pay is still falling in real terms, Resolution Foundation, May 2022.
8 Most public-sector jobs saw pay frozen in cash terms in 2021 and 2022, and then in 2022 and 2023 public sector pay review bodies recommended increases which were lower than pay growth in the private sector, P Brione & B Francis-Devine, Public Sector Pay, House of Commons Library, January 2024.
The other big difference in earnings growth is across the pay distribution. In the ONS’s Annual Survey of Hours and Earnings (ASHE) there is a ‘progressive’ shape to earnings growth between 2021 and 2023 (the latest data), with growth faster at the bottom of the pay distribution than at the top (see Figure 8). At the 10th percentile of hourly pay, wages held their value between 2021 and 2023 despite the inflation shock (growth was exactly zero), while across the rest of the distribution the real value of earnings fell – most steeply at the top of the earnings distribution – for example, workers at the 90th percentile of hourly pay saw their wages fall at a rate of 3.7 per cent per year in real terms.

**FIGURE 8:** Most workers have seen real pay falls during the inflation shock, but the lowest earners have fared best

Annualised real-terms (CPI-adjusted) growth in pay between April 2021 and April 2023 across the distribution: UK

![Graph showing real-terms growth in pay between April 2021 and April 2023 across the distribution.](source)

Part of this is down to the minimum wage: between April 2021 and April 2023, the adult rate minimum wage rose by almost as much (16.9 per cent) as prices (18.4 per cent), meaning those on the lowest hourly rates of pay were well protected from the inflation shock. In this regard the pattern of the last few years is a continuation of a longer trend – the minimum wage has led to ‘progressive’ hourly wage growth throughout its history. But it’s not just a minimum wage story. First of all, the minimum wage generally only affects wage growth in the bottom third or so of the hourly wage distribution, and the ‘progressive’ shape to wage growth continues beyond that. Second, a similar pattern is observed in the weekly pay distribution, where the bottom of the distribution is made up of workers on low hours, not necessarily on low hourly rates of pay.

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9  N Cominetti et al., Low Pay Britain 2023, Resolution Foundation, April 2023.
So what else has been driving the progressive wage growth that we have seen during the inflation shock? It seems tougher hiring conditions among lower-paying jobs are also playing a role. The job vacancy website Indeed collects data on wage growth in their online job adverts, but they also monitor the number of clicks per advert, which can be used as a measure of hiring conditions facing employers. In Figure 9 below we plot cumulative pay growth since 2020 for the 28 occupations for which Indeed have both pay and clicks data. Lower paying occupations are shown in red, others in blue, and, as with the ASHE data, there is a clearly ‘progressive’ pattern. But we can also estimate the contribution to pay growth from the occupation-specific changes in job seeker interest (a measure of tightness in that labour market), which suggests that many low-paying occupations (including jobs in cleaning, production, loading and stacking, and hospitality) saw faster pay growth than would have been the case if job seeker interest had grown in line with other jobs (this is shown on the vertical axis). It’s also striking that many higher-paying jobs saw the opposite – lower pay growth thanks to strong job seeker interest. This is most notably the case for Software/Development jobs, where job seeker interest rose very substantially, which we estimate lowered cumulative 2020-2024 pay growth by 8 percentage points.

FIGURE 9: Low-paid occupations have seen faster pay growth since 2020, and this is partly because interest in those jobs among job seekers has been weaker

Cumulative pay growth in posted job adverts, and the estimated contribution from occupation-specific changes in clicks per advert: UK, April 2020 to February 2024

NOTES: Data on pay and changes in clicks per job available for 28 occupations only. Changes in clicks per job by occupation normalised by Indeed to overall changes in clicks per job (i.e. overall time trend removed). Estimate of contribution from occupation-specific hiring conditions based on comparing actual pay growth with predicted pay growth after a panel regression with occupation and time fixed effects. Wage levels available as hourly pay for some occupations and annual salaries. ‘Low-paying’ defined as occupations where pay in April 2023 was at least 25 per cent below the median in 2023 Annual Survey of Hours and Earnings. SOURCE: RF analysis of Indeed dataset on median pay and changes in clicks per job in posted job adverts, by occupation by month, April 2020 to February 2024.
If the effect of occupation-specific hiring factors is removed in the Indeed data, there is still a progressive shape to earnings growth across occupations since 2020, but the slope is less steep. This suggests that occupation-specific hiring conditions and the minimum wage have both contributed to faster pay growth for low paid workers.

3. Other elements of families’ income have responded very differently to the rise in inflation

So, while those on lower incomes experienced the worst of the inflation, it is likely that wage growth compensated for this to some degree. But what about other components of income? Here there have been very different responses to the surge in inflation.

One key piece of good news is that Government support measures during the cost of living crisis, as well as the eventual uprating of benefits in line with inflation, has helped to support living standards during the inflation surge. Benefits are a key component of income for many: indeed, there are 11 million people in working-age households where earnings make up less than half of household income, with benefit income the main other component. This is particularly true for poorer working-age households, with those in the bottom fifth of the income distribution getting a little over half their income from the labour market, compared to almost 94 per cent among the richest fifth.

As inflation has risen, the value of these benefits has fallen in real terms. This is because benefits are uprated with a lag – increasing in April in line with the previous September’s CPI inflation rate. In April this year, many benefits increased by 6.7 per cent. This meant the basic rate of out-of-work Universal Credit rose by £300 a year for a single person, and £900 for a couple with two children. This process is shown in the Figure 10 which uses national accounts data on components of income to show how increases in benefit income have contributed to growth in overall real income per person. This data suggests that, in aggregate, per person benefit income increased by around £60 per person between 2021 and the end of 2023.
It is worth keeping in mind that while benefits have, in net terms at least, helped to support families in the face of real-terms falls in earnings, the withdrawal of some crisis support measures will mean that income has been volatile for those on welfare. For example, the lump-sum Cost of Living Payments, that helped poorer households through the huge rise in energy prices, have now come to an end. Take all these changes together and total annual support in 2024-25 will be £685 lower in real terms than it was last year for a single person, and £110 lower for a couple with two children receiving Universal Credit.  

The upshot of all this that the incomes among the poorest half of the distribution have been somewhat more protected in relative terms by progressive pay changes and the welcome decision by the Government to continue to protect benefit levels from the rise in inflation.

Meanwhile income from savings has increased sharply. The rise in interest rates that has come with high inflation has directly boosted the interest income that households
earn on their savings. Between Q4 2021 and Q4 2023, annualised income from savings interest increased by around £40 billion, with this income concentrated among the richest households, at least in cash terms.\textsuperscript{12} This has outweighed the rise in debt repayments over the same period.\textsuperscript{13}

4. Families have increased saving during the cost of living crisis – a surprising reaction to high inflation and very different to the US

Faced with falling real incomes, one might expect families to save less or borrow more, in an attempt to maintain pre-existing levels of real-terms consumption through the cost of living crisis. Indeed, the OBR made this a key part of its forecast for spending in the aftermath of Russia’s invasion of Ukraine.\textsuperscript{14} But the reality has been quite different with UK households saving more, not less. As shown in Figure 11, real per capita household disposable income is 1.1 per cent below its pre-pandemic level (from Q4 2019 to Q4 2023). Absent any change in the rate of saving, we would have expected to see consumption fall by the same amount. But real per capita consumption has fallen much more – down 4.7 per cent over the same period, as households have saved more, and consumed less, of their disposable income.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{chart.png}
\caption{In aggregate, household consumption has fallen by more than incomes since before the pandemic – reflecting a higher rate of saving}
\end{figure}

NOTES: Income and consumption are converted to Q4 2023 prices using the household expenditure implied deflator.
SOURCE: RF analysis of ONS, Economic accounts.

\textsuperscript{13} S Pittaway, The Macroeconomic Policy Outlook Q1 2024, January 2024.
\textsuperscript{14} See paragraph 2.53 of Office for Budget Responsibility, Economic and fiscal outlook, March 2022.
This is a significant increase in saving. In the final three months of 2023, UK households saved 6.0 per cent of disposable income.\(^{15}\) This is nearly double the rate of saving in the first quarter of 2022 (3.2 per cent) and four times as much saving as before the pandemic (1.5 per cent in 2019). On this measure, Q4 2023 saw the highest rate of saving outside of the pandemic in more than three decades (since Q2 1993). And, as a result of the recent rise in saving, UK households consumed £54 billion less in 2023 (in Q4 2023 prices) than if the saving ratio had returned to its 2019 average.

This is far from the stereotype of spend-thrift British consumers that were a key driver of growth in the run up to the financial crisis. But this does continue a period of deleveraging on the part of UK households who have cut consumer debts by the equivalent of £48 billion, or around £1,700 per household since the start of the pandemic.\(^{16}\)

**FIGURE 12: US households have increased consumption rapidly since before the pandemic, due to a combination of strong income growth and less saving**

Change in private consumption per capita from Q4 2019 to Q3 2023, plus contributions from changes in disposable income and saving: various countries

NOTES: Consumption is private final consumption expenditure, which covers the combined household and non-profit institutions serving households (NPISH) sector; disposable income is for the combined household and NPISH sector. The total change in per capita consumption is decomposed by first calculating the impact of changing disposable incomes, and then changing the saving ratio. Changes are up to Q3 2023, rather than Q4 2023, due to data availability.

SOURCE: RF analysis of ONS, Economic accounts; OECD, Quarterly National Accounts and Quarterly Sector Accounts.

\(^{15}\) Here, saving is measured as gross saving – i.e. the difference between consumption and disposable income – as a share of disposable income. Unlike the headline saving ratio, this ‘adjusted’ saving ratio does not capture the change in households’ pension entitlements, which is deducted before arriving at disposable income.

\(^{16}\) F Odamtten & S Pittaway, In too deep? The impact of the cost of living crisis on household debt, Resolution Foundation, February 2024.
It is also a stark contrast to the US experience. As shown in Figure 12, US households are on a different track to their counterparts in major European economies. As of Q3 2023, real per capita consumption had risen to 8 per cent above its pre-pandemic level in the US. Strong disposable income growth is the most important driver of this rise, accounting for around seven-tenths of the increase. But, unlike households in the UK, France and Germany, US households have been saving less than before the pandemic – with the saving ratio down 2 percentage points between Q4 2019 and Q3 2023, compared to a 3 percentage point rise in the UK over the same period.

**FIGURE 13:** The household saving rate has tended to fall in countries where economic growth has bounced back strongly after the pandemic

Average annual growth in GDP per capita from Q3 2021 to Q3 2023, and change in the adjusted household saving ratio from 2019 to 2023: selected OECD countries

This variation in saving behaviour is likely to reflect a number of factors, including differences in consumer sentiment across countries, and the distribution and liquidity of any remaining pandemic savings. However, looking across advanced economies, there is a clear correlation between recent rates of economic growth and levels of saving relative to pre-pandemic norms. As shown in Figure 13, the majority (six out of eight) of OECD countries that have seen GDP per capita grow by at least 1.5 per cent in recent years have also seen an increase in their saving ratio.

NOTES: Savings are defined as the difference between private final consumption and household and non-institutional household sector real disposable income (RDI). The saving ratio is savings as a proportion of RDI. Data is up to Q3 2023, rather than Q4 2023, due to data availability – except for Norway where data is for Q2 2023. The 2023 saving ratio is the average over the year to date. Countries shown are all OECD members with available data.

SOURCE: RF analysis of OECD, Quarterly National Accounts and Quarterly Sector Accounts; ONS, Economic accounts.

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years – a group that includes the US – are saving a smaller share of income than on the eve of the pandemic. By contrast, nearly all of their slower-growing peers (10 out of 12) have seen their saving ratios rise. The causation here isn’t obvious: it could be that strong spending has spurred economic growth, or rapid growth has boosted confidence and reduced saving. But, whatever the underlying relationship, the cross-country data suggests that the UK’s sluggish post-pandemic recovery is closely tied to its recent rise in saving.

So, if British households haven’t cut saving during the cost of living crisis, what have they done to absorb the higher cost of essentials?

FIGURE 14: British households have cut back on food and energy, but not enough to stop higher prices from pushing up spending in cash terms

Change relative to Q1 2022 in per capita household consumption of food and energy in chained volume measures (left panel) and current prices (right panel): UK

To an extent, they have cut back on essential goods. Figure 14 shows the change in real and nominal per capita consumption of food and energy relative to Q1 2022, the last quarter before the first big increase in the energy price cap and the point at which food inflation began to accelerate (see Figure 3 and Figure 4). Since Q1 2022, real-terms consumption of gas and electricity fell by as much as 11 per cent as families turned down their heating in the face of higher prices. More worryingly, real consumption of food has fallen by 7 per cent. But these cutbacks were not large enough to fully offset rising prices. In cash terms, per person spending on food and energy rose 14 per cent and 72 per cent respectively between Q1 2022 and Q1 2023 – outstripping the 9 per cent growth in per capita disposable income over the same period.

18 This excludes OECD countries where comparable data is not available.
With higher saving and spending on essentials rising faster than incomes, households have had to accommodate this by spending less elsewhere. Figure 15 shows the change in households’ share of expenditure on different goods and services through the cost of living crisis. By Q1 2023, the share of households’ overall spending going to food, utilities and fuel had risen by 2.5 percentage points (from 17.1 per cent to 19.7 per cent). Most of this rise was offset by less spending on durable goods, often things that could be considered luxury or delayable purchases. For example, real-terms spending on household appliances fell 18 per cent between Q1 2022 and Q4 2023. ONS data on card spending tells a similar story, with an 11 per cent fall in delayable spending over the same period.19

FIGURE 15: More expensive essentials have squeezed out spending elsewhere, mainly on luxury goods
Change in shares of nominal household consumption relative to Q1 2022, by product category: UK

As the cost of living crisis has eased, and essential spending has declined in cash terms, households have not reversed their cuts to durable goods consumption. Instead, most of the fall in essential spending has been offset by more spending on services. In fact, the fall in essential spending since Q1 2023 (-1.2 percentage points) has been almost entirely spent on getting out and going abroad: the share of household spending on hospitality and air fares is up 1.1 percentage points.

19 ONS, UK spending on credit and debit cards.

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5. But higher saving hasn’t translated into better balance sheets for households

The rise in household saving and the fall in debt should help to strengthen family finances, but these haven’t improved for everyone with overall household wealth falling in aggregate in the period of the inflation surge. This is because these factors adding to household wealth have been outweighed by a second major economic shift – the rise in long-term real interest rates since late 2021 (Figure 16). This is the flipside to big falls in the prices of financial assets which make up much of household wealth, especially pensions, and it represents a significant break with the trends of the past 30 years during which household wealth surged from around three times GDP in the early 1980s to over seven times GDP on the eve of the pandemic. This long-term wealth surge occurred despite the UK’s notoriously low savings ratio, driven overwhelmingly by large ‘passive’ gains in the form of rising asset values.20

**FIGURE 16: Markets are pricing a permanent return to pre-financial-crisis interest rates**

Real and nominal 10-year forward rates derived from UK government bonds

Interest rates matter because they are a powerful driver of household wealth. Almost £4 in every £5 of household wealth is accounted for by pensions and housing. Both of these forms of wealth are sensitive to long-term real interest rates. In the case of pensions, falling interest rates reflect rising government and corporate bond prices, which are the

main asset behind pensions. House prices are sensitive to mortgage interest rates, with falling rates allowing people to take on more debt: as interest rates have declined in recent decades, house prices have risen, meaning UK households got wealthier while saving very little.

This trend of rising wealth was thrown into reverse as inflation began to increase, from late 2021. Long-term interest rates rose sharply in early 2022 in the UK and elsewhere as central banks around the world raised rates to combat rising inflation. But the rise in longer-term rates was larger than the anticipated rise in inflation such that real long-term yields also increased.

The rise in real interest rates is puzzling with an apparent asymmetry in the relationship between inflation and long-term real interest rates: while real interest rates increased in tandem with higher inflation, they have not declined as the inflation shock has eased. This implies that investors currently expect policy interest rates to be permanently tighter even though there is no obvious reason why the recent inflation shock might have triggered such a reappraisal. Whatever the underlying cause, the prospects for future interest rates (and asset prices more generally) remain incredibly uncertain.

The rise in long-term real interest rates has been around 4 percentage points, taking place in a matter of months, and reversing nearly a decade of falls. This has had a stark impact on households’ wealth. As shown in Figure 17, our projection suggests that household wealth, having increased to over 800 per cent of GDP during the pandemic, fell to around 650 per cent of GDP by early 2023, its lowest level for a decade and some £2.1 trillion below its pandemic peak. The most significant driver of this sharp fall was a reduction in the value of UK household holdings of government debt, typically the dominant asset behind pension funds. Despite the scale of the fall, households tend to be insulated from feeling its immediate effects. Since the falling value of wealth reflects increases in the yield on the underlying assets, as discussed above the income received by the holder of any given bond is unchanged. By extension, falls in the cash value of pension wealth do not imply any reduction in pensioners’ incomes.
Despite the large wealth effects of higher interest rates having a limited immediate effect on living standards, this shift matters a lot for intergenerational inequality. At higher rates of return, younger working age people will find it easier to acquire sufficient pension assets to fund their retirement. Consequently, the rise in long-term real interest rates, if sustained, represents a significant reversal of the key trend that has driven rising intergenerational inequality over recent decades.

The impact of the inflation surge on household balance sheets has been more complicated when it comes to housing. Higher inflation has reduced the real value of mortgage debt – indeed, outstanding mortgage debt increased by 3.6 per cent in nominal terms over the two years from Q4 2021, a fall of 10.3 per cent in inflation adjusted terms, to stand at £1.6 trillion in Q4 2023. This represents a drop in mortgage debt from around 65 per cent of GDP to 60 per cent, an improvement in household balance sheets to the tune of 5.7 per cent of GDP. However, the fall in real mortgage debt comes with a sting in the tail in the form of higher annual mortgage repayments, which increased by an average of around £2,450 for those re-mortgaging in 2023.

\[21\] M Broome, I Mulheirn & S Pittaway, Peaked interest?: What higher interest rates mean for the size and distribution of Britain’s household wealth, Resolution Foundation, July 2023.
But at the same time, rising interest rates have put downward pressure on real house prices. Between Q4 2021 and Q4 2023, nominal prices increased by around 7 per cent, representing a 7 per cent fall in real terms over the period and 8 per cent below their real-terms peak in Q3 2022. As a share of national income, housing wealth has consequently fallen from 330 to 317 per cent between Q4 2021 and Q4 2023. This reduction in gross housing wealth is more than double the positive impact of inflation on outstanding debt (see Figure 18). The combined effect represents a £304 billion deterioration in real net housing wealth over the two years to the end of 2023.

These are of course aggregate effects and the net impact of interest rates on the value of housing and inflation on the debts secured against it have varied significantly according to household circumstances, especially by age group. The erosion of debt has tended to benefit younger homeowners, albeit it has been accompanied by a painful rise in mortgage interest rates for most. The impact on house values has disproportionately affected older people who tend to have more housing wealth. Nevertheless, these effects have not been large enough fully to offset the rise in wealth experienced by older households in recent years.22

FIGURE 18: The reduction in housing wealth as a result of inflation and higher interest rates has been larger than the impact of inflation on mortgage debt
Cumulative change in real gross housing wealth and outstanding mortgage debt as a proportion of GDP relative to Q4 2021: UK

NOTES: UK gross housing wealth is calculated by estimating the total stock of UK dwellings multiplied by average house price.
SOURCE: ONS, UK National Accounts, House Price Index, CPI index and House building UK; Department for Levelling Up, Housing & Communities; Dwelling stock estimates; StatsWales, Dwelling stock estimates and New dwellings completed; Scottish Government, Housing statistics; Northern Ireland Land & Property Services; Land & Property Services.

Despite falls over the past two years, house prices appear substantially overvalued at current interest rates. Higher interest rates have increased the cost of finance more than four-fold since late 2021, with the interest rate charged on a typical two-year fixed rate mortgage at 75 per cent loan to value rising from around 1.5 per cent to around 5 per cent. Rents have also been rising rapidly and are likely to continue to track nominal wage growth, by Q1 2024 they stood slightly below their pre-pandemic levels in real terms.\textsuperscript{23} In the long run, we would expect the cost of financing a house purchase to move in line with the cost of renting a house, suggesting that house prices remain significantly over-valued and that further falls are possible unless long-term real interest rates fall from current levels.\textsuperscript{24}

6. And in contrast to past experience of high inflation, public debt has risen during the inflation surge

It is not just household balance sheets that have deteriorated through this period – the Government has also taken a hit, confounding any hopes that high inflation would help manage elevated debt levels down. This is perhaps surprising as the opposite has happened during previous periods of high inflation. As shown in Figure 19, the UK’s net debt fell by 11 percentage points following the outbreak of the Korean War in the early 1950s and 7 percentage points following the oil-price shock of the 1970s. This makes sense given high inflation boosts nominal GDP (the ‘denominator’ of the debt-to-GDP ratio) and results in higher tax receipts. But instead, over the cost of living crisis underlying public sector net debt has risen by 6 percentage points of national income. While this might pale in comparison to the rises in debt seen during the financial crisis (28 percentage points) and the pandemic (9 percentage points), it remains at odds with the UK’s previous experience of inflation crises.

\textsuperscript{23} C Pacitti, Through the roof: Recent trends in rental-price growth, Resolution Foundation, April 2024.
\textsuperscript{24} For more on the relationship between interest rates, rental yields and house prices, see: D Miles & V Monro, UK house prices and three decades of decline in the risk-free real interest rate, Economic Policy, 36, pages 627-684, 2021.
So why has this time been different? Part of the answer is that we have had the ‘wrong’ type of inflation. Inflation tends to reduce debt when it is domestically driven because the effect of higher earnings and nominal GDP growth (inflation in the price of domestically-produced goods and services) on revenues more than offsets the increase in the Government’s costs, for example higher welfare payments which are linked to consumer price inflation. That was the case in the 1970s but, during the cost of living crisis, CPI inflation is set to have outstripped average earnings growth and the GDP deflator by 0.2 and 4.6 percentage points respectively between 2022-23 to 2024-25. This means nominal GDP (the ‘denominator’ of the debt-to-GDP ratio) has grown slowly, while high CPI inflation added to debt through much higher indexation of welfare costs over the cost of living crisis, as well as higher costs associated with public sector pensions.25

But this is not the whole story. The Government has also (rightly) spent a lot supporting the households through the cost of living crisis. The collection of measures announced,
including the Energy Price Guarantee Scheme and cost of living payments, cost over £50 billion in 2022-23 alone. On top of that, the UK’s large stock of inflation-linked liabilities has increased in value in line with the Retail Prices Index, adding to Government debt. These costs have been particularly high (interest payments related to index-linked debt added £68 billion to borrowing in 2021-22) given the UK now has a much higher stock of ‘index-linked’ debt than during previous episodes of high inflation – around a fifth of the UK’s debt was index-linked in 2021-22 (£479 billion).

FIGURE 20: High long-term rates mean expensive debt interest costs look here to stay

Change in central government net debt interest (including the effects of the APF), by component: UK, 2019-20 to 2028-29

Taking these factors together, the short-term effect of the cost of living crisis has been a deterioration of the Government’s balance sheet. This will reduce the Government’s future room for manoeuvre. But perhaps more concerning for policy makers is that the rise in interest rates has also made it much more challenging to reduce the UK’s debt-to-GDP ratio. That’s because long-term rates add directly to the Government’s debt interest bill. As shown in Figure 20, debt interest costs are set to nearly triple from their pre-pandemic level of £39 billion to £110 billion by 2028-29. While some of this is due to the combined legacy of the pandemic and cost of living crisis leaving the Government with a much larger debt stock (adding £30 billion to debt interest by 2028-29), debt interest is forecast to be £36 billion higher by 2028-29 compared to 2019-20 as a result of higher Bank rate and long-term interest rates. These high debt-interest costs make it much harder for the Government to put the debt-to-GDP ratio on a sustainable path,
and achieve their stated fiscal goal of debt falling. While the Government could afford to spend an average of 1.6 per cent of GDP more in non-interest spending than it received in taxes over the 2010s with debt still falling, by 2028-29 the Government would have to run a surplus of 1.3 per cent of GDP for debt to fall, primarily due to the pressures of higher interest rates.

The period of high inflation looks set to cast a long shadow over the UK economy

Although it is definitely good news that the headline inflation rate is normalising, we have still experienced a huge inflation shock, the largest in at least 40 years. There is good news on the way in the form of more downward pressure from energy prices. This should, over time, put downward pressure on the prices of a broader range of goods and services and help to normalise the domestic price pressures. But the profound shifts in the price of essentials are not likely to completely unwind given energy prices remain above 2021 levels. So big changes in overall prices – and even bigger changes in essentials – will be with us for the foreseeable future.

The surge in inflation has reshaped our living standards. Sustained increases in the cost of essentials mean we either need to spend more on them, or consume less. It is important to understand the distribution of these effects, as the impact has varied according to family circumstances and spending habits. Those on low incomes have experienced the worst of the inflation shock, but the uprating of benefits in line with inflation has helped to protect incomes at least to some extent. But overall falls in income will mean that the vast majority of families will have seen living standards fall. Looking ahead, OBR forecasts imply that GDP will be around 2 per cent lower by the end of next year than was expected before the cost of living crisis, the equivalent of £1,900 per household hit to GDP in today’s prices. So, as well as reshaping prices and spending habits, the inflation surge looks set to leave us with a sustained economic hit. This, combined with an even more strained public-finance position, mean that the inflation surge will cast a shadow over our economic circumstances and political debate for years to come.
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