A key upside risk to the medium-term outlook for inflation stems from the possibility that a further period of above-target inflation could lead to persistently elevated inflation expectations. According to the Bank/GfK NOP survey, households’ expectations for inflation over the next year have risen markedly. This article focuses on the factors which may have driven the increase, drawing on the results of some additional questions included in the February 2008 survey. It concludes that while the latest increases in households’ inflation expectations could be consistent with recent macroeconomic data, increases in households’ perceptions of current inflation may also have played some role. The article also summarises the public’s attitudes to interest rates and the conduct of monetary policy.

Introduction

The monetary policy objectives of the Bank of England are to maintain price stability and subject to that, to support the Government’s economic policy, including its objectives for growth and employment. As part of its price stability objective, the Bank of England is tasked with achieving an inflation target of 2%, as measured by the annual change in the consumer prices index (CPI).

Monetary policy is likely to be most effective if people understand and support this goal. To that end, the Bank uses a variety of methods to raise public awareness of its monetary policy objective. For example, the Monetary Policy Committee (MPC) explains its interest rate decisions in the minutes of its monthly meetings, supplemented each quarter by the publication of the Inflation Report. In addition, MPC members explain their decisions in appearances before parliamentary committees and in speeches, media interviews and regional visits. The Bank also promotes the objective of price stability through its range of educational material for schools and the general public.

It is easier for monetary policy to achieve its objective of price stability if households and businesses believe that policymakers will do so — ie that inflation expectations remain close to the target in the medium term. Inflation expectations play a key role in a number of household and business decisions. First, inflation expectations are important for wage negotiations. Employees care about their real purchasing power — the quantity of goods and services that they can buy.

If inflation is expected to be higher, employees may bargain for higher nominal wage growth to maintain their standard of living. Second, inflation expectations play a key role in households’ saving decisions. For a given level of nominal interest rates, higher expected inflation implies a lower expected real rate of return on saving. That would tend to make spending today more attractive relative to saving. Finally, businesses need to make a judgement on the likely path of the prices of other goods that they may be competing with, so that they can judge the likely demand for their product. If they expect the prices of other goods to be higher, that may prompt them to raise their own output prices.

A key risk for monetary policy makers is that inflation expectations move persistently away from the 2% inflation target. If that occurred, and those expectations became built into future wages and prices, there is a risk that inflation would remain away from the target for longer. Assessing that risk is difficult, not least because inflation expectations cannot be observed directly. But a number of measures — such as surveys of households, businesses and economists, as well as those derived from the prices of financial market instruments that are linked to inflation — can act as a guide. One survey the MPC looks at is the Bank/GfK NOP Inflation Attitudes Survey. This article discusses the latest results from this survey in more detail. The first section discusses the latest trends in households’ inflation perceptions and expectations.

The second section summarises the public’s attitudes to interest rates and the conduct of monetary policy.

The Bank/GfK NOP survey

The Bank/GfK NOP survey, which was commissioned by the Bank in 1999, assesses the general public’s perceptions of inflation over the past year, expectations for inflation over the next year, views on interest rates and knowledge of the monetary policy framework. The survey is conducted every February, May, August and November, and usually samples around 2,000 individuals. Every February, however, the survey is more comprehensive, asking a longer list of questions to around 4,000 people.

Interpreting the results of the questions on inflation perceptions and expectations is not straightforward. First, the Bank/GfK NOP survey does not ask about people’s views on a specific measure of inflation. Rather, it asks about the evolution of prices of ‘goods and services’. This is designed to reflect a concept of inflation the general public are likely to be familiar with, rather than any specific measure of inflation (such as the CPI inflation rate). As a result, it is not clear which official measure of inflation, if any, should correspond most closely to the survey responses.

Second, the Bank/GfK NOP survey asks respondents for their expectations of inflation over the next year. Given the lags inherent in the transmission mechanism of monetary policy, there will be times when CPI inflation moves away from the target in the near term. For example, the MPC’s projection, presented in the May 2008 Inflation Report, was for CPI inflation to rise further during the remainder of 2008, before subsequently falling back to settle around the 2% target in the medium term. As a result, an increase in this short-term measure of inflation expectations does not necessarily imply an increase in medium-term inflation expectations. But if higher near-term inflation expectations were to feed through into higher wages and prices, that would pose an upside risk to the inflation outlook in the medium term.

Recent trends in public attitudes to inflation

Over the past year, the general public’s perceptions of current inflation and their expectations of inflation over the next year have both increased materially. In May 2008, the median individual’s perception of the current level of inflation was 4.9%, the highest rate since the survey began in November 1999 (Chart 1). The median respondent’s expectation for annual inflation in a year’s time was 4.3%, also a series high.

These increases in the median measures of perceptions and expectations were accompanied by a significant change in the distribution of responses across households. Compared to November 2005, just before the Bank/GfK NOP measure of inflation expectations began to rise, the proportion of respondents who expected inflation to be above 5% in the year ahead rose from 10% to around 35% (Chart 2).

As already discussed, this rise in near-term inflation expectations does not, by itself, provide sufficient evidence to judge whether inflation expectations will remain persistently above target in the medium term. Assessing that risk requires an understanding of what has driven the rise in near-term expectations.

---

(1) Measures of inflation expectations derived from financial market instruments are explicitly linked to RPI inflation. But given the time-varying wedge between RPI and CPI inflation, and the fact that market-based measures are influenced by changes in risk premia and idiosyncratic market factors, these are also difficult to interpret. The article by Joyce, Sorensen and Weeken on pages 157–66 of this Bulletin, discusses ways of extracting policy-relevant information from financial market instruments.

(2) For a discussion of how these median measures are estimated, see the box on page 209 of the 2007 Q2 Quarterly Bulletin.
inflation expectations. To that end, the next section examines how households' inflation expectations are formed, drawing on the results of some additional questions included in the February 2008 survey (see the box above).

**What drives households' inflation expectations?**

There are many factors that could shape households' inflation expectations. If households are forward looking, understand the transmission mechanism of monetary policy and believe that the monetary policy framework is credible, then their medium-term inflation expectations should be equal to the inflation target. But, as discussed earlier, owing to the lags inherent in the transmission mechanism of monetary policy, inflation can deviate from the target in the near term, sometimes quite markedly. If monetary policy remains credible, such that households believe inflation will be at target in the medium term, forward-looking households’ near-term inflation expectations could increase, without necessarily posing longer-term risks to the inflation outlook. But if expectations remain elevated for a prolonged period, that could pose upside risks to inflation in the medium term.

Over the period when households’ inflation expectations have been rising, both the MPC and external professional forecasters have also been revising up their one year ahead inflation projections. As a result, it may be unsurprising that households’ near-term inflation expectations have picked up. For example, between February 2007 and May 2008, the MPC’s central projection for CPI inflation one year ahead increased by over 1 percentage point, while the households’ measure rose by 1.5 percentage points (Chart 3).

### Chart 3 Revisions to the inflation outlook one year ahead

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Median household’s inflation expectations, one year ahead</th>
<th>MPC central projection for CPI inflation, one year ahead</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>+0.5</td>
<td>+0.5</td>
</tr>
<tr>
<td>Aug</td>
<td>+0.5</td>
<td>+0.5</td>
</tr>
<tr>
<td>Nov</td>
<td>+1.0</td>
<td>+1.0</td>
</tr>
<tr>
<td>Feb</td>
<td>+1.0</td>
<td>+1.0</td>
</tr>
<tr>
<td>May</td>
<td>+1.5</td>
<td>+1.5</td>
</tr>
<tr>
<td>Total since February 2007</td>
<td>+1.5</td>
<td>+1.5</td>
</tr>
</tbody>
</table>

Sources: Bank of England and Bank/GfK NOP survey.

The rise in households’ inflation expectations in the most recent quarter was somewhat larger than the rise in the MPC's...
central projection for inflation. There are various reasons why that may be so. For example, the MPC’s central projection is for a specific measure of inflation (CPI), whereas households are asked about prices of goods and services in general.

Alternatively, the greater rise in households’ inflation expectations may relate to the elevated level of perceptions of current inflation. If households form their inflation expectations in a backward-looking way, high perceptions of current inflation might be expected to push up on their inflation expectations. According to the Bank/GfK NOP survey, the median household’s inflation perceptions and expectations began to rise at the same time (Chart 1). And analysing the individual survey responses over the past year confirms that there is a close link between the two. Chart 4 plots each respondent’s perceptions of current inflation against their expectations for inflation over the next year, with the width of each bubble corresponding to the proportion of respondents holding that view. The largest bubbles lie on the 45° line, with around half of the survey respondents since May 2007 reporting that they expected inflation over the next twelve months to be the same as they perceived it to have been over the past twelve months. If rates of inflation increase further, as the MPC expects, then inflation perceptions may themselves pick up further.

In practice it may be that some people are forward looking, while others are more backward looking or use rules of thumb to form their inflation expectations. In order to interpret the changes in measures of inflation expectations correctly, it is important for the MPC to understand whether, on balance, households are more forward looking or backward looking. Furthermore, it is also important to know how this balance may change in light of economic developments. For example, Brazier et al (2006) present a model in which the proportion of people who use backward-looking rules of thumb to form their inflation expectations rises when actual inflation moves away from the target. They find that such a change in the way people form their expectations can lead to an increase in the volatility of inflation.

One of the additional questions posed in the February 2008 survey asked respondents what factors were most important in forming their expectations. The results suggested that households’ inflation expectations over the next year were influenced by a number of factors (Chart 5). Some households put weight on factors such as the strength of the British economy, the level of interest rates and the inflation target. But almost half of the respondents reported that their past perceptions of inflation, both in recent periods and over a longer term, played a ‘very important’ role in forming their inflation expectations. This result suggests that, in order to understand changes in households’ inflation expectations, it is important to understand what drives changes in households’ perceptions of current inflation.

What drives households’ perceptions of current inflation?

When aggregated, movements in households’ perceptions of current inflation ought to be related to movements in the official inflation data. Since February 2007 official measures of inflation have moved in different ways (Chart 6). For example,
both CPI and RPIX inflation fell during the middle of 2007, but have since picked up again, while RPI inflation fell in the first half of 2007 and has since remained broadly constant. These differences partly reflect the way these measures of inflation are calculated, and partly the composition of the indices. By contrast, households’ inflation perceptions have picked up over this period, from 2.9% in February 2007 to 4.9% in May 2008.

This section discusses three factors that might account for the divergence between official measures of inflation and households’ perceptions of current inflation: differences in households’ experiences of inflation; recent price changes, particularly for frequently purchased items; and discussions in the media.

(a) Differences in households’ experiences of inflation

Different households are likely to experience different rates of inflation. That partly reflects the fact that the inflation rates of different items vary considerably. For example, petrol prices have risen by around 20% over the past year, while the price of audio-visual equipment has fallen by around 15% over the same period. Furthermore, expenditure patterns will differ markedly from household to household, for example with factors such as age, income and household size. Combined with the dispersion in individual inflation rates, that is likely to mean that households can experience markedly different inflation rates.

The aggregate RPI, RPIX and CPI data are based on the changes in the price of a basket of goods and services, designed to reflect the expenditure pattern of the representative household. By contrast, the Bank/GfK NOP estimate of inflation perceptions is a median measure. As a result, changes in the survey measure of perceptions of current inflation might not necessarily relate directly to changes in the official inflation data.

(b) Recent price changes

It is possible that, when reporting their perceptions of current inflation, households put more weight on those price changes that they have observed recently. In that case, three-monthly (as opposed to annual) inflation rates may be more useful in explaining households’ perceptions of inflation. One way to assess this is to use a simple regression technique to estimate the relationship between recent price changes and survey measures of inflation perceptions. These regressions take the form:

\[ \pi_t^v = \alpha + \beta_1 \pi_t + \beta_2 \pi_{t-1} + \beta_3 \pi_{t-2} + \beta_4 \pi_{t-3} + \varepsilon_t \]  

where \( \pi_t^v \) is the Bank/GfK NOP median inflation perception over the past year at time \( t \), \( \alpha \) is a constant, \( \pi_t \) is a seasonally adjusted measure of three-month changes in prices at time \( t \), and \( \varepsilon_t \) is an error term. The swathe in Chart 8 shows the range of fitted values from three such regressions, which use the three-month change in CPI, RPI and RPIX to try to explain changes in households’ inflation perceptions. The results show that recent inflation rates can explain some, but not all, of the pickup in inflation perceptions, suggesting that other factors are also playing a role.

One explanation may be that households place more weight on the price changes of certain, more frequently purchased goods and services. For example, Driver and Windram (2007)

---

1. For example, the CPI index is not directly influenced by changes in house prices, and the RPI index includes the effect of mortgage interest payments. Information on how the official measures of inflation rates are calculated can be found at

2. The right-hand side variables in equation (1) are based on the three-month change in CPI, RPI and RPIX inflation in the month before the Bank/GfK NOP survey was taken.

3. These three-monthly inflation rates can also explain more of the recent pickup in inflation perceptions than the equivalent annual inflation rates.
showed how the Bank/GfK NOP measure of perceptions of current inflation was better correlated with food and energy price inflation than with the aggregate CPI measure. And the responses to one of the additional questions in the February 2008 survey confirmed that food, transport and energy prices were particularly important in determining households’ perceptions of current inflation (Chart 9).

In recent months there have been significant increases in oil, wholesale gas and food prices — the inflation rates of these goods have been significantly above their historical averages (Table A). As a result, the particularly rapid inflation rates of these goods may have had a disproportionate impact on households’ perceptions of current inflation.

### Chart 8 Explaining Bank/GfK NOP perceptions with three-monthly inflation rates

![Graph showing range of fitted values and median perceptions of inflation over the past year](chart8)

**Sources:** Bank/GfK NOP survey and Bank calculations.

(a) The swathe shows the difference between the maximum and minimum fitted values from three regressions (of median perceptions of current inflation on current and past lags of three-monthly changes in CPI, RPI and RPIX) at each point in time.

### Chart 9 Factors cited as ‘very important’ in forming households’ perceptions of inflation over the past year(a)

![Bar chart showing percentage of respondents citing various factors](chart9)

**Source:** Bank/GfK NOP survey.

(a) Based on an additional question asked in the February 2008 survey. Respondents could select more than one option.

(b) For example, mortgage payments or rents.

### Table A Food, fuel, household energy and CPI inflation

<table>
<thead>
<tr>
<th></th>
<th>Annual change</th>
<th>Three-monthly change(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>April 2008</td>
<td>Average since 2003</td>
</tr>
<tr>
<td>CPI inflation</td>
<td>3.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Foods and non-alcoholic drinks (10.6%)²</td>
<td>6.6</td>
<td>2.3</td>
</tr>
<tr>
<td>Fuels and lubricants (3.2%)²</td>
<td>18.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Electricity, gas and other fuels (3.1%)²</td>
<td>8.3</td>
<td>10.4</td>
</tr>
</tbody>
</table>

**Sources:** ONS and Bank calculations.

(a) Based on CPI indices which have been seasonally adjusted by Bank staff.

(b) The figures in parentheses show the 2008 weights in the CPI basket.

### (c) Discussions in the media

Around a quarter of respondents to the February 2008 survey cited media reports as being a ‘very important’ factor influencing their perceptions of current inflation (Chart 9). Increased media coverage could, by encouraging the spread of information, lead to a better understanding of inflation, and better anchored expectations (Carroll (2001)). But rising media coverage of recent and prospective changes in inflation could also have contributed to the rise in households’ perceptions of current inflation.

Over the past year there has been an increase in the number of articles discussing energy, food and house prices (Chart 10). These prices were all cited by some households as being ‘very important’ in forming their perceptions of current inflation. This increase in the number of news stories about the inflation rates of these individual items could explain part of the rise in aggregate inflation perceptions.

### Chart 10 Media discussions of price changes(a)

![Graph showing number of headlines](chart10)

**Source:** © 2007 Factiva, Inc. All rights reserved.

One drawback of this type of analysis is that looking at the total number of stories does not distinguish between articles that refer to prices rising as opposed to falling. Chart 11 shows that, excluding articles discussing house prices, the number of articles referring to rising prices fell back in the early part of 2007, before picking up again towards the end of 2007 and into 2008. That pattern is similar to the profile for CPI and RPIX inflation over that period. By contrast the number of articles referring to falling prices is little changed compared to a year ago. So it remains plausible that media discussions of rising prices have continued to influence households’ perceptions of current inflation, at least to a degree.

Conclusion on inflation expectations

The Bank/GfK NOP measure of households’ inflation expectations rose to a series high in May 2008. This increase in inflation expectations could be consistent with recent macroeconomic data, which have prompted the MPC and other forecasters to revise up their expectations of inflation one year ahead. However, there is evidence to suggest that a significant proportion of households appear to form inflation expectations on a backward-looking basis — around half of the respondents over the past year reported inflation expectations that were in the same range as their perceptions of current inflation. Since 2007, reported perceptions of current inflation have increased by more than can be explained by movements in the official headline inflation measures. This may reflect differences in individual households’ inflation experiences, households putting greater weight on more recent price changes (eg the increases in household energy costs), or an increase in media reporting on food and energy price inflation.

Households’ perceptions of current inflation and expectations of inflation one year ahead are also likely to affect their attitudes to interest rates and satisfaction with the Bank. The remainder of this article considers these in turn.

Attitudes to interest rates

The Bank/GfK NOP survey assesses the extent to which households are aware of changes in interest rates, by asking ‘how would you say interest rates on things such as mortgages, bank loans and savings have changed over the past twelve months?’ Historically, the net balance of respondents who reported that they had perceived interest rates to have risen over the past year has moved in a similar way to the annual changes in the effective (average) borrowing and savings rates facing households. For example, the net balance picked up during 2006; remained little changed in 2007; and subsequently fell back, to lower levels in February and May 2008 (Chart 12). That suggests that households have a reasonably good understanding of how interest rates have changed over the past year.

The survey also asks respondents how they expected interest rates on mortgages, bank loans and savings to change over the next year. On balance, households have never predicted a fall in interest rates. But previous Bank analysis (Driver and Windram (2007)) has suggested that households are nonetheless reasonable judges of future turning points in interest rates. Between February 2007 and February 2008 there was a large fall in the net balance of households expecting interest rates to rise (Chart 13). That is consistent with financial market participants’ expectations for official interest rates, which were also revised down over that period. However, the net balance expecting rates to increase over the next year picked up again in May 2008. That may reflect the increase in the general public’s inflation expectations.
The survey also asks respondents what path for interest rates they think would be best for the British economy (Question 7) and for themselves personally (Question 8). Over the past year there has been a marked increase in the proportion of respondents who believe that it would be best for the economy if interest rates were lower. The results to Question 8 also suggest that the majority of respondents who expressed a view thought that it would be best for them personally if rates were lower.

Question 10 asks respondents if they would prefer higher interest rates to try to keep inflation down or lower rates and higher inflation, and is now only posed in the February surveys. In February 2008, the proportion of respondents who preferred higher rates fell to 52%, the lowest rate since May 2000. But there was also a significant rise in the proportion of respondents who replied that they had ‘no idea’. That may reflect heightened uncertainty among some households about how the recent developments in financial and energy markets are likely to affect the economic outcomes they care most about — such as prices, employment and output growth.

Attitudes to monetary policy and satisfaction with the Bank

The Bank/GfK NOP survey includes a series of questions assessing the general public’s understanding of the inflation-targeting regime. For example, Question 3 asks whether Britain’s economy would be stronger or weaker as a result of higher inflation. Since 2005, the proportion of respondents who thought that higher inflation would make the economy weaker started to increase, reaching 70% in May 2008, up from an average of around 55% during 2007 (Chart 13). The relationship between perceptions of inflation over the past year and the perceived impact of a higher inflation rate on the British economy (shown in Chart 14) suggests that households may think that a given increase in inflation has a larger effect when their perceptions of current inflation are elevated. Alternatively, households might find it easier to identify with the costs of higher inflation when they have just experienced a higher inflation rate.

Question 14 asks whether participants are satisfied with the way the Bank of England is doing its job to set interest rates in order to control inflation. Over the past few years, the majority of respondents have been satisfied with the Bank. But since 2005, the net balance of respondents satisfied with the Bank has been falling gradually, and is now at its lowest level since February 2000 (Chart 14).

There are several possible explanations for the fall in the satisfaction balance. Historically, those households who have reported higher perceptions of inflation or perceived rises in
interest rates, have been, on average, less satisfied with the Bank (Chart 16). Interestingly, respondents who perceive inflation to be less than 1% reported the highest level of satisfaction with the Bank, suggesting that households are more concerned about high inflation than about low inflation. So the fall in the net satisfaction balance since 2005 may at least in part reflect the pickup in interest rate and inflation perceptions over that period. But concerns about the economic and financial outlook may also have played a role.

**Conclusion**

The results of the Bank/GfK NOP surveys show that households’ inflation expectations have risen significantly since February 2007. So long as people still expect the MPC to meet the 2% CPI target over the medium term then the monetary policy implications of higher short-term inflation expectations are limited. But if any of the recent increase in inflation expectations were built into higher wages and prices, inflation could persist above the target for longer.

The latest rise in households’ inflation expectations could be consistent with recent macroeconomic data, which have prompted economic forecasters, including the MPC, to revise up their near-term inflation projections. However, there is some evidence to suggest that a significant proportion of households appear to form inflation expectations on a backward-looking basis. Households’ perceptions of current inflation have also picked up sharply over the past year, and by more than can be explained by movements in the official headline inflation measures alone. That divergence may be partly explained by differences in individual households’ experiences of inflation, the price rises of particular, frequently purchased items such as food and energy, and an increase in media discussions of rising prices.

The net percentage balance of respondents reporting higher interest rates over the past year fell. That was consistent with the profile of annual changes in the household effective borrowing and savings rates. Between February 2007 and February 2008, the net balance expecting higher interest rates over the next year fell sharply. But in the May 2008 survey the net balance bounced back slightly. Nonetheless, the majority of respondents thought that it would be best for the economy if interest rates were lower.

Although the majority of respondents continued to report that they were satisfied with how the Bank of England is setting interest rates to meet the inflation target, the net balance who were satisfied declined further over the past year. Part of that decline may reflect higher households’ inflation perceptions over that period, although some part of it may reflect concerns about the near-term economic outlook.

**References**


