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The financial position of British households: evidence from the 2017 NMG Consulting survey



The financial position of British households: evidence from the 2017 NMG Consulting survey

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- The balance sheet positions of households have improved significantly since the financial crisis but the survey points to a modest deterioration over the past year.
- Estimates from the survey suggest that the 0.25 percentage point increase in Bank Rate in November 2017 will have only a limited impact on the proportion of households with high debt-servicing ratios, and only around 2½% of households with a mortgage will need to take action.
- The decision in June 2016 to leave the European Union is still influencing households' outlook; views on both the general economy and their own finances have become slightly more pessimistic over the past year.

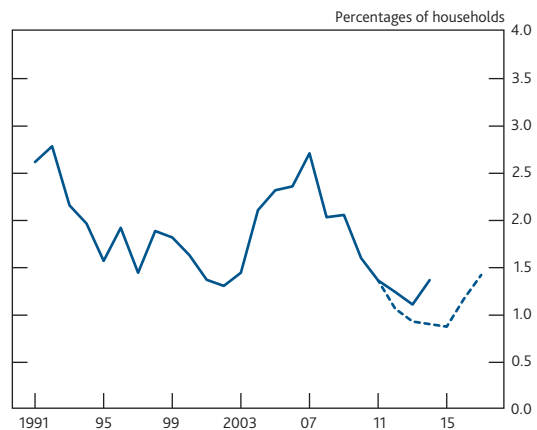
Overview

At its November 2017 meeting, the Bank of England's Monetary Policy Committee (MPC) voted to increase Bank Rate for the first time since July 2007. The September 2017 NMG Consulting survey of households, whose results were shown to the MPC prior to their November policy decision, sheds light on the conditions of households' balance sheets just before this change in monetary policy.

Since the financial crisis, household balance sheet positions have improved significantly. The latest survey points to a slight deterioration in household balance sheet metrics over the past year, but these measures remain some way from previous peaks. For example, the share of households with a mortgage debt-servicing ratio (DSR) above 40% of income, — a DSR often associated with a higher risk of repayment difficulties — has risen over the past year. But that share remains around a historically low level (**summary chart**).

Changes in Bank Rate can influence household spending through a number of channels. To the extent that increases in Bank Rate feed through to retail interest rates, they affect household disposable income by raising payments on existing debts and deposits. The NMG survey provides evidence on this cash-flow effect and suggests that only around 2½% of households with a mortgage will need to take action (for instance by spending less or working more hours) following the rate increase.

Summary chart Proportion of households with mortgage DSRs at 40% or above^(a)



Sources: British Household Panel Survey/Understanding Society (BHPS/US), NMG Consulting survey and Bank calculations.

(a) Data in dashed line from 2011 onwards are based on responses to the NMG Consulting survey (2011 to 2017). Data in solid line are calculated using BHPS (1991 to 2008) and US (2009 to 2014). See footnotes to Chart 2 for further details.

The decision to leave the European Union in the June 2016 referendum is still influencing households' economic outlook. Views on both the general economy and households' own finances have become slightly more pessimistic over the past twelve months. Expectations about nominal income growth, however, have reverted back to pre-referendum levels.

Introduction

The NMG Consulting survey is a biannual household survey commissioned by the Bank of England. The motivation for the survey is to gather timely disaggregated data on households' finances and to investigate topical policy issues where information from other sources is more limited.

The latest survey was conducted between 6 and 26 September. It covered 6,018 households and was carried out online. The survey contained questions on a number of topics including: the latest developments in balance sheet positions; the hypothetical impact of higher interest rates; and households' views on the general economy, their own financial situation and their future spending decisions.

The financial situation of households has generally improved over the past decade. More recently, robust employment growth has supported household incomes. But the depreciation of sterling following the vote to leave the European Union (EU) in June 2016 has raised inflation and squeezed real incomes. In November 2017, the Monetary Policy Committee (MPC) judged it appropriate to tighten modestly the stance of monetary policy in order to return inflation sustainably to the target.

The latest NMG survey of households was carried out in September before the recent MPC decision. The survey results were presented to the MPC prior to their decision, and were previewed in the box on pages 18–21 of the November 2017 *Inflation Report*. Household-level data allow analysis of how different groups have been affected by economic events in the recent past and how they may respond to alternative future scenarios. This assessment is important for both monetary and financial stability. From a monetary policy perspective, it is important to understand how aggregate spending might be affected by households' finances as well as their expectations of future income, credit conditions, inflation and interest rates. For financial stability, changes in indebtedness and income can alter the resilience of household balance sheets, affecting the likelihood that shocks are amplified through, for example, arrears on debt or sharp contractions in spending.

The article begins by providing an overview of the latest developments in household balance sheets and a summary of indicators of financial distress. This sets the backdrop for an assessment of the likely cash-flow effect of the recent rise in Bank Rate. Next, it investigates how households view the outlook for the general economic situation and their own personal finances. The article also contains two boxes: the first summarises the methodology behind the NMG survey, including an analysis of possible sample selection issues; the second considers the reaction of renters to changes in accommodation costs.

Developments in household balance sheets

In aggregate National Accounts data, household debt grew a little faster than income over the year to 2017 Q2, with consumer credit continuing to grow faster than secured credit. Despite this recent rise, the stock of household debt relative to household incomes, at around 135%, remains lower than at its peak and the costs of servicing this debt have fallen relative to income partly due to current low levels of interest rates.

In the latest NMG survey, average household incomes and the average outstanding mortgage balance increased by slightly more than in aggregate data (see the box on pages 4–5 for a broader comparison of the NMG survey with aggregate trends). The average unsecured balance, however, remained broadly flat at around £8,000. As in last year's NMG survey, the latest survey does not appear to pick up the continuing strength in consumer credit, as recorded in the official data. Therefore any conclusions relating to consumer credit — and therefore total household debt — should be interpreted with caution.

Two key indicators for analysing the sustainability of household balance sheets are the debt to income (DTI) and debt-servicing ratio (DSR) of households. The latter is the proportion of pre-tax income spent on loan repayments (both capital and interest). During the financial crisis, households with higher levels of mortgage debt relative to income cut spending more sharply than other consumers. Survey data also suggest that the proportion of households experiencing repayment difficulties can rise sharply if a household has a mortgage DSR above 35%–40%.⁽¹⁾

Since the financial crisis, the percentage of households with high mortgage DTIs and DSRs (**Charts 1 and 2**) had been gradually falling, but in recent surveys there were signs from some indicators that this improvement was coming to an end. The latest survey points to a slight deterioration in household balance sheet metrics over the past year.

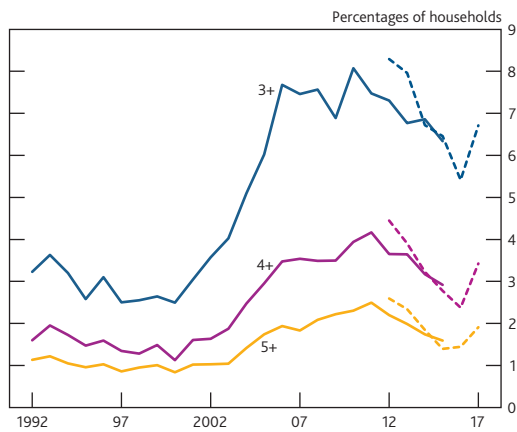
The proportion of households with high mortgage debt to income multiples has increased (**Chart 1**). Around 3½% of all households reported an outstanding mortgage debt of more than four times their current household income. This was the highest level reported since the 2013 H2 survey but some way below the peak recorded in 2012.

A similar trend was reported for households with high total debt to income multiples. But these movements should be interpreted with caution.⁽²⁾

(1) See 'The FPC's approach to addressing risks from the UK mortgage market', June 2017 *Financial Stability Report*; www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2017/june-2017.pdf.

(2) There are two reasons for caution when interpreting the time series of total debt over time. First, the NMG data does not appear to detect the recent strength in consumer credit. Second, the survey was adapted in 2016 H2 to remind respondents that transactional credit card balances should not be reported, reducing unsecured balances.

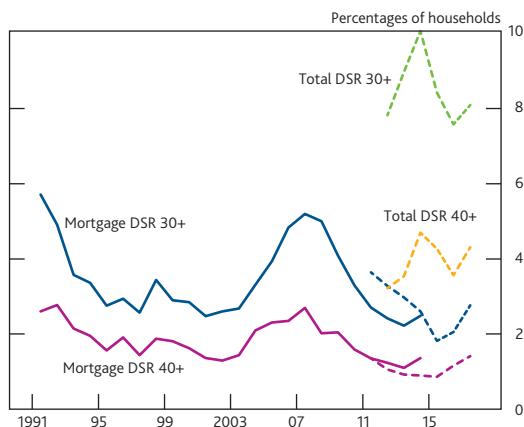
Chart 1 Distribution of mortgage DTIs^{(a)(b)}



Sources: Living Costs and Food (LCF) Survey, NMG Consulting survey and Bank calculations.

(a) Ratio of outstanding mortgage debt to pre-tax annual income.
 (b) Data in solid lines up to 2015 are based on responses to the LCF Survey. LCF Survey data are on a financial-year basis up until 2015–16, shown in the chart as 2015. Data in dashed lines from 2012 onwards are based on responses to the NMG Consulting survey. NMG data are from the H2 surveys only. NMG data before 2015 have been adjusted for a change in the income definition.

Chart 2 Distribution of DSRs^{(a)(b)}



Sources: British Household Panel Survey/Understanding Society (BHPS/US), NMG Consulting survey and Bank calculations.

(a) Mortgage DSR calculated as total mortgage payments as a percentage of pre-tax income.
 (b) Data in dashed lines from 2011 onwards are based on responses to the NMG Consulting survey (2011 to 2017). Data in solid lines are calculated using BHPS (1991 to 2008) and US (2009 to 2014). NMG data are from the H2 surveys only. NMG data before 2015 have been adjusted for a change in the income definition.

The proportion of households with mortgage DSRs at or above both 30% and 40% cut-offs has also increased further since last year (**Chart 2**). This follows an annual increase reported in the 2016 H2 survey. As the number of households involved is small, each annual increase in mortgage DSRs at 40% or above is not statistically significant.⁽¹⁾ But the total increase since 2015 H2 is statistically significant. That proportion nevertheless remains close to its historical low, partly due to current low levels of interest rates as well as the fall in aggregate mortgage debt to income over the past decade.

The increase in households reporting high DSRs is in part due to higher average indebtedness reported in the 2017 H2 survey. This higher average indebtedness means that

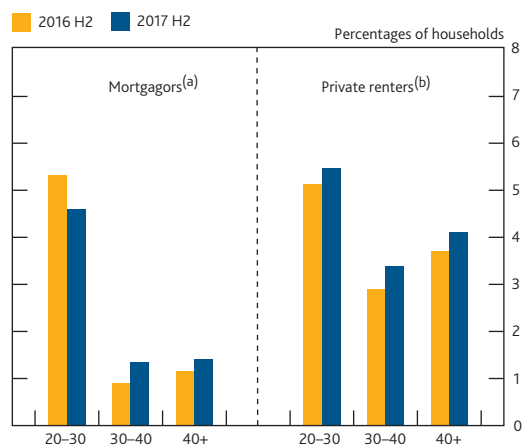
if households experience an unexpected loss of income (for instance, due to a loss of employment), this is more likely to move them to a high DSR. Evidence from a subgroup of returning respondents supports this conclusion.

Including unsecured debt repayments, the tail of households with total DSRs at or above both 30% and 40% has increased, although again estimates based on consumer credit should be interpreted with caution.

The rise in the percentage of households with high mortgage DTIs and DSRs could have been in part driven by the selection of respondents to the survey. But the recent deterioration in household balance sheets is likely to be broadly representative of trends in the wider population. This is discussed in more detail in the box on pages 4–5, which provides an overview of sampling in the NMG.

There has also been a slight rise in the proportion of private renters with high rental service ratios (RSRs), which broadly mirrors the trend for those with high mortgage DSRs (**Chart 3**). As explained in Bunn *et al* (2016), it is possible to compare RSRs and mortgage DSRs, but the two are not exactly equivalent. Rents factor in maintenance costs for landlords and mortgage repayments reflect only the cost of the share of the property financed with a mortgage, not the deposit. This may partly explain why there are a much higher number of renters with a RSR above 30% compared with the number of mortgagors with a DSR above 30%.

Chart 3 Mortgage DSRs and RSRs



Sources: NMG Consulting survey and Bank calculations.

(a) Calculated as mortgage DSR for mortgagors as in **Chart 2**.
 (b) RSRs calculated as total rental payments as a percentage of pre-tax household income.

⁽¹⁾ The null hypothesis tested was: the percentage of households with a mortgage DSR at 40% or above in 2017 H2 is less than in 2016 H2. A significance level threshold of 10% was used to reject (or not reject) the null hypothesis.

Survey method

Introduction and methodology

The latest NMG survey was carried out online between 6 and 26 September, covering 6,018 households in Great Britain. The survey has been carried out biannually since 2014, with the field work taking place in April and September. The survey was conducted annually, usually during September, between 2004 and 2013.

The survey has been run online since 2012, following pilots in 2010 and 2011. Before that, it was face-to-face.

Moving the NMG survey online facilitated the introduction of a panel element where the same households were asked to respond to successive surveys. Just over half of the respondents to the latest survey had completed a previous survey. Unless otherwise stated, this article reports results from the full set of cross-sectional data.

The NMG survey has a number of advantages relative to other household surveys. It is more timely than other surveys, such as the ONS Wealth and Assets Survey, for which results are typically only available around two years after the survey was carried out; it may be better at measuring financial distress if online respondents are more willing to disclose sensitive information about their finances; and it contains questions on topical policy issues that are not often available in other surveys.

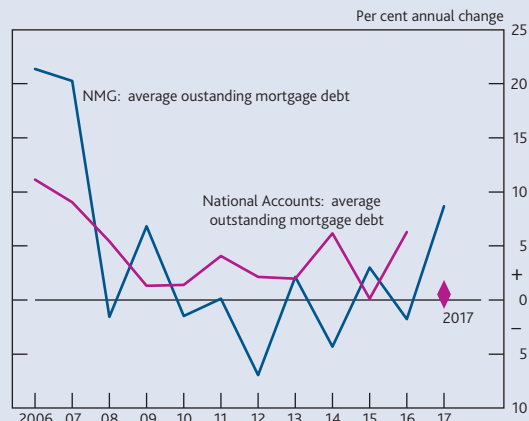
A drawback of the NMG survey is that there may be a greater risk of selection into the survey based on unobservable characteristics than is the case for some other household surveys. The survey is weighted to be representative of the age, gender, region, housing tenure and employment status distributions of Great Britain. However, because the sample is drawn from the Research Now panel used by the survey provider rather than the population as whole (which is typically the case for surveys conducted by the ONS, and more recently the Financial Conduct Authority's Financial Lives Survey) there may be a risk that certain types of people are more likely to respond. The NMG survey data nevertheless follow broadly similar trends to the aggregate data and other surveys in most respects, and so are still likely to be a useful source of information on distributional issues given the advantages described above.

Sample selection and survey results

Household surveys tend to sample a relatively small proportion of the population and therefore can be more volatile than the aggregate data. For instance, in the latest NMG survey, the average mortgage debt balance was 8½% higher than in the 2016 H2 survey — rising to a level of just over £90,000 — compared with only a small rise in average

outstanding aggregate mortgage debt in the National Accounts (**Chart A**). This contributed to a rise in average mortgage debt to income estimated in the survey.

Chart A Measures of outstanding mortgage debt balances: NMG^(a) and National Accounts^{(b)(c)(d)}



Sources: DCLG, EHS, NMG Consulting survey, ONS, UK Finance and Bank calculations.

- Defined as the annual change in average (mean) outstanding mortgage debt among all mortgagors in the survey since 2006 H2. Data shown are H2 surveys only.
- Annual change in average outstanding mortgage debt in the aggregate National Accounts. Outstanding mortgage debt is divided by an estimate of the total number of UK households with an outstanding mortgage. This estimate is calculated by scaling the number of households from the English Housing Survey (EHS) by the total number of UK households from Department for Communities and Local Government (DCLG) and multiplying the number of mortgagors in the EHS. Data in the magenta line are based on annual changes from Q4 of each year between 2006 and 2016.
- The pink diamond uses DCLG's forecast for total number of UK households in 2017 and assumes the proportion of mortgagors in 2016 (29.0%) is maintained in 2017 to estimate the number of households in the United Kingdom with an outstanding mortgage. Total outstanding mortgage debt as of 2017 Q2 is used in the numerator.
- Outstanding mortgage debt is adjusted to exclude outstanding buy to let mortgage debt at each period. Data on outstanding buy to let mortgage debt is accessible from UK Finance.

Differences in the annual change of average mortgage debt between the NMG survey and the National Accounts are common⁽¹⁾ (**Chart A**). However the latest difference is reasonably large and comes after a period during which the survey has tended to underreport the growth in outstanding mortgage debt. Therefore the latest survey may have sampled more indebted households and overstated the annual change in the wider population. This may have contributed to the rise in the number of households with high mortgage DSR and DTI multiples in the latest survey (**Charts 1 and 2**).

As well as possibly overstating the latest annual increase in mortgage debt, sample selection in the latest survey may have also overstated the change in financial distress metrics since the 2016 H2 survey.

One example of this is the proportion of households in mortgage arrears. Mortgage arrears in the NMG survey have been persistently higher than the official UK Finance data since the question was introduced in the 2014 H2 survey. However in the latest NMG survey, reported mortgage arrears increased compared with a gradual fall in arrears in the UK Finance data in the same period.⁽²⁾ Therefore sample selection has likely

(1) For further details on how the NMG compares with aggregate data see Anderson *et al* (2016).

(2) Although the definition of arrears is slightly different in the NMG survey and the UK Finance data, the two sources are expected to show similar trends.

contributed to the reported annual change in mortgage arrears, and potentially other subjective measures of financial distress.

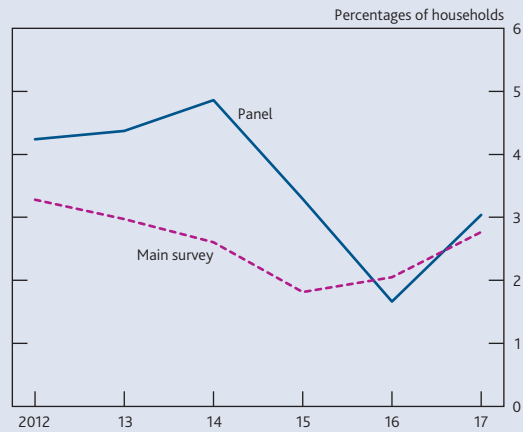
The latest NMG survey has continued to understate the growth in consumer credit compared with the aggregate data. For instance, the average outstanding unsecured balance reported was around £200 lower than in 2014 H2, whereas total consumer credit outstanding has grown at around 10% per year in the aggregate data over the same period. The average reported outstanding balance has fallen despite a rise in the percentage of households who reported having either an outstanding personal loan or car finance deal. This suggests the discrepancy between the NMG and aggregate data is likely due to continued underreporting of total consumer credit from respondents rather than sample selection. This underreporting may have affected some households' total DTI multiples and total DSRs.

Using the NMG's panel data set to analyse household balance sheet trends

One way to determine how much of an effect sample selection has had in the main survey is to use the subsample of returning respondents in the latest survey, also known as the panel. Although the sample in the panel is smaller than in the main survey, it is not affected by new respondents entering the survey and potentially influencing the balance sheet results.

Household balance sheet performance in the panel follows a similar pattern to the main survey (Chart B). After several years of a declining trend in the percentage of highly indebted households, this trend has reversed in the past year. This evidence suggests that while sample selection has played a limited role in the main survey overall, the rise in households with high DSRs⁽¹⁾ is broadly representative of trends in the wider population.

Chart B Households with a mortgage DSR at 30% or above^(a)



Sources: NMG Consulting survey and Bank calculations.

(a) Mortgage DSR calculated as total mortgage payments as a percentage of pre-tax income. Results from the panel data set are only for respondents who returned in the 2017 H2 survey.

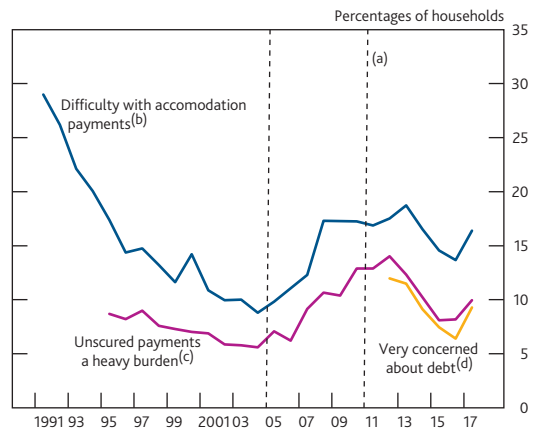
(1) The same trend was observed for households in the main survey and panel with a mortgage DTI above four.

The higher servicing ratios associated with renters do not necessarily translate into higher risks to financial stability. Renters do not pose direct credit risk to banks if they struggle to pay their rent.⁽¹⁾ In addition, private renters are much more likely to move house when faced with an increase in housing costs (see the box on pages 10–11). This added flexibility means households in the private rental sector with high RSRs are less likely to adjust spending as sharply as highly indebted mortgagors for a given increase in housing costs or loss of income.

Beyond measures of the distribution of debt across households, subjective measures of vulnerability can also be useful indicators of the financial position of households, as they can incorporate household perceptions of their circumstances.⁽²⁾ However, the precise level of these measures should be interpreted with caution given their subjective nature.

Subjective indicators of financial distress support the recent reversal of improvements in household balance sheets. A higher proportion of households reported that they: had difficulty with their mortgage or rent payments; were very concerned about their current levels of debt; or had unsecured debt payments that were a heavy burden (Chart 4). The numbers of households reporting distress on these metrics is

Chart 4 Measures of financial distress



Sources: BHPS, NMG Consulting survey and Bank calculations.

(a) Data from 2011 onwards are from the online NMG survey. NMG data are from the H2 surveys only. Data from 2005 to 2010 are from the face-to-face NMG survey. Data from 1991 to 2004 are from the BHPS. Data from the BHPS and face-to-face NMG surveys have been spliced to match the online NMG survey results.

(b) Proportion of households reporting that they have difficulty with accommodation payments.
 (c) Proportion of households reporting that they find unsecured debt repayments to be a heavy burden.
 (d) Proportion of households reporting that they are very concerned about their current level of debt.

(1) Rental arrears could, however, affect the ability of leveraged buy-to-let landlords to meet mortgage payments.
 (2) For further details on survey measures of household vulnerability from the NMG survey and the Financial Conduct Authority's (FCA's) Financial Lives Survey 2017, see the box on pages 19–20, *Financial Stability Report*, November 2017; www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2017/november-2017.pdf.

now similar to 2014 H2. The increase in reported financial distress is evident for both mortgagors and private renters. Those who have both a mortgage and consumer credit reported the sharpest increase in distress.

Impact of higher interest rates

The Bank considers the macroeconomic effects of small changes in interest rates, which are relevant for monetary policy. It also considers the impact on the tail of vulnerable households and how borrowers could be affected by more significant changes in interest rates, which is important for identifying potential risks to financial stability. The rest of this section considers evidence from the NMG survey on both in turn.

Monetary policy

On 2 November 2017, the MPC raised Bank Rate from 0.25 to 0.5%. Changes in Bank Rate can influence household spending, and thereby demand, through a number of channels. To the extent that increases in Bank Rate feed through to retail rates, increases in the return on savings and the cost of borrowing can make it less attractive to spend today, and encourage households to save for the future. They can also affect household disposable income: savers will see the interest they are paid on their deposits increase, whereas borrowers will see the amount they have to pay on their debts rise. The effect of this cash-flow channel depends on how savers adjust their spending in response to these income changes relative to borrowers.

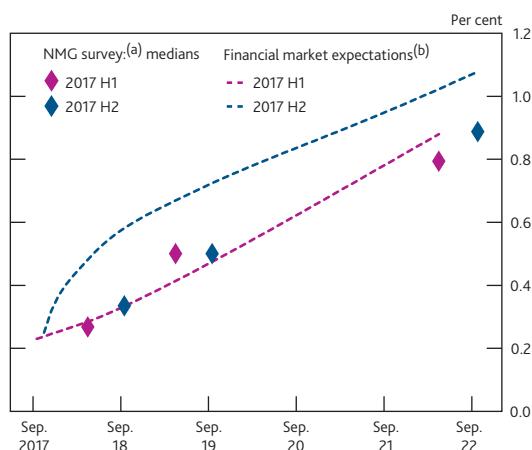
How households respond to a change in Bank Rate will depend in part on whether they had anticipated the change ahead of time. For instance, households who had not anticipated the change may react more by cutting back on their spending or reducing their demand for consumer credit.

While the increase in Bank Rate was largely anticipated by financial markets, household expectations of Bank Rate in the latest NMG survey were on average about 0.2 percentage points below the market curve⁽¹⁾ (Chart 5). This is not a very large gap historically, however, and the discrepancy may have at least partly arisen due to the survey's timing. Market expectations of interest rates rose following the MPC minutes released on 14 September 2017, half way through the NMG survey fieldwork that took place between 6 and 26 September.

Indeed, households who were surveyed after 14 September had slightly higher Bank Rate expectations than those surveyed before that date.⁽²⁾ Households' lower expectations may also reflect the fact that they take longer than financial markets to adjust their views.⁽³⁾

The rise in Bank Rate may have come as more of a surprise to high mortgage DSR households as their expectations for

Chart 5 Households interest rate expectations

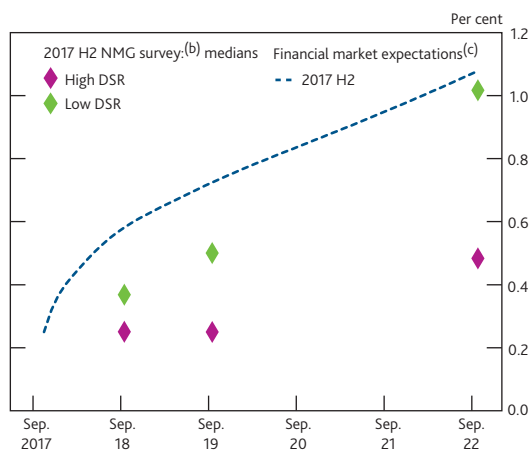


Sources: NMG Consulting survey and overnight index swap (OIS) data.

- (a) Question: 'The level of interest rates set by the Bank of England (Bank Rate) is currently 0.25%. At what level do you expect that interest rate to be in each of the following time periods (1 year, 2 years, 5 years)?'.
 (b) Financial markets expectations averaged over the period of the respective NMG survey.

Bank Rate appeared to be below those of other households. Their expectations were 12 basis points below at a one-year horizon, with the difference widening to around 50 basis points at the five-year horizon (Chart 6).

Chart 6 Households interest rate expectations by mortgage DSR group^(a)



Sources: NMG Consulting survey and OIS data.

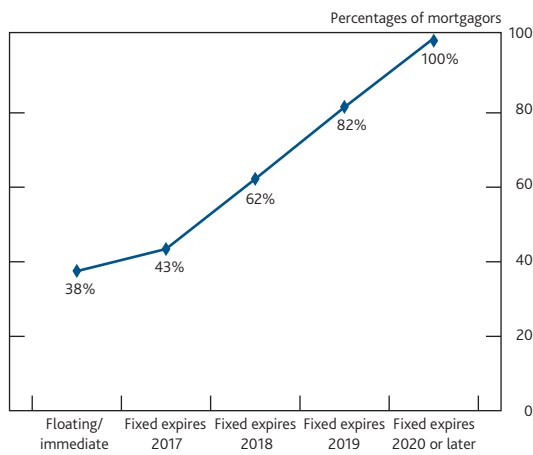
- (a) High DSR households are defined as those with a mortgage DSR equal to and above 40%; low DSR households are those with mortgage DSRs below 40%.
 (b) Question: 'The level of interest rates set by the Bank of England (Bank Rate) is currently 0.25%. At what level do you expect that interest rate to be in each of the following time periods (1 year, 2 years, 5 years)?'.
 (c) Financial markets expectations averaged over the period of the respective NMG survey.

For those with existing debt, the extent to which payments — and therefore disposable income — change mechanically in response to a rise in Bank Rate depends on the type and

- (1) The market curve is estimated as the average of the overnight index swap (OIS) rates for the period in which the survey was conducted. Forward curves constructed in this way are likely to reflect a measure close to the mean expectation of Bank Rate of financial market participants. The MPC conditions its quarterly forecasts on this overnight index swap rate curve.
- (2) Households surveyed after the release of the minutes on average expected Bank Rate to be 6 basis points higher at the one-year horizon and 7 basis points higher at the five-year horizon.
- (3) Consistent with this interpretation, the Markit Household Finance Index showed that households' expectations of the timing of the first increase in Bank Rate had moved forward between the September and the October survey.

maturity of the existing contract. Around a third of households have a mortgage on their home. Some of these households will see their mortgage rate change quickly, but for many the effect of the rise in Bank Rate will be gradual. In the most recent NMG survey, 38% of respondents with a mortgage were on a floating rate contract, with a further 5% on a fixed-rate contract expiring this year. This suggests that 43% of NMG mortgagors will experience a change to their interest payments by the start of 2018, rising to 62% by the start of 2019 (Chart 7).⁽¹⁾ Moreover, not all of these changes will involve an increase in payments; past falls in interest rates mean that some households will move onto lower interest rates when their fixed deals expire.

Chart 7 Cumulative proportion of mortgagors likely to see a change in their mortgage rates^{(a)(b)}



Sources: NMG Consulting survey and Bank calculations.

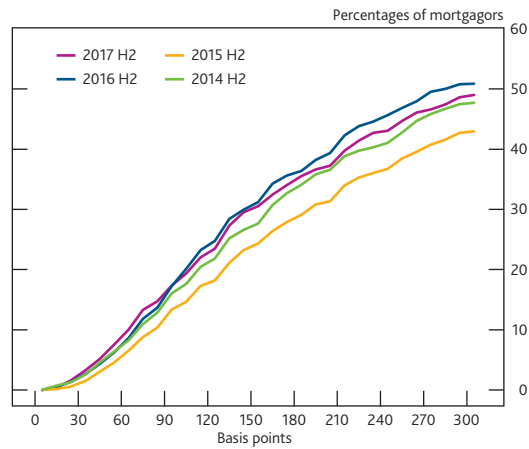
(a) Question: 'What type of interest rate is being paid on the mortgage or loan?'.
 (b) Question: 'When does your fixed interest rate deal expire?'.

When households' mortgage payments eventually rise, there may be an impact on their spending or other behaviour (for instance they may work longer hours or request a change to their mortgage). Chart 8 shows the proportion of mortgagors who would be required to take such an action in response to any given rise in their interest payments according to the latest survey.

Following a 25 basis point increase in their mortgage rate, only 2½% of mortgagors would need to take action to find the extra money, rising to 7½% for a 50 basis point rise. These proportions are similar to the levels reported in 2014 and 2016, and are low as a percentage of all households.

Even if not forced to find extra money to meet their repayments, households' spending behaviour may adjust in response to changes in the interest rates they face. The aggregate cash-flow effect of a change in Bank Rate depends on how households with outstanding debt and savings deposits react to higher rates of interest by adjusting their spending patterns.

Chart 8 Mortgagors who would need to take an action in response to an interest rate rise for a given interest rate^{(a)(b)}



Sources: NMG Consulting survey and Bank calculations.

(a) Question: 'About how much do you think your monthly mortgage payments could increase by for a sustained period without you having to take some kind of action to find the extra money eg cut spending, work longer hours, or request a change to your mortgage?'.
 (b) The answers to this question were then converted into an interest rate rise using data on each household's outstanding mortgage.

Previous NMG surveys have found that borrowers tend to cut back more on spending when their repayments rise than savers increase their spending when the returns on their savings deposits increase. The latest NMG data confirm these results. When weighted by net borrowing, the marginal propensity to consume (mpc) of borrowers was found to be substantially higher than that of savers⁽²⁾ (Table A). This means that for every £1 increase in debt repayments, the average household with debt would reduce their consumption spending by 40 pence.

Table A Headline mpc estimates from NMG^(a)

Household type	2014 H2	2015 H2	2016 H1	2017 H1	2017 H2
Borrowers ^(b)	51%	48%	47%	43%	39%
Savers ^(c)	9%	10%	8%	n.a. ^(d)	7%

Sources: NMG Consulting survey and Bank calculations.

(a) Net savers are defined as those whose savings deposits are larger than their mortgage and secured debt holdings, and net borrowers are those who hold more debt than savings. Respondents with both no outstanding debt and no savings deposits are excluded.
 (b) For borrowers, this is calculated from the questions: 'If your monthly [mortgage payments/payments on all your secured loans] were to increase for a sustained period by £x [which is calculated automatically from software as the payment under a 2 percentage points higher rate] from tomorrow due to higher mortgage interest rates, how do you think you would respond?' and 'How much would you reduce your monthly spending by if your monthly [mortgage payments/payments on all your secured loans] were to increase for a sustained period by £x from tomorrow?'.
 (c) For savers, this is calculated from the questions: 'If the monthly interest you receive on your savings were to increase for a sustained period by £z [which is calculated automatically from software as the payment under a 2 percentage points higher rate] from tomorrow due to higher interest rates on savings, how do you think you would respond?' and 'How much would you increase your monthly spending by if the monthly interest you receive on your savings were to increase for a sustained period by £z from tomorrow?'.
 (d) The question was not asked to savers in the 2017 H1 survey.

(1) Similar numbers are obtained when the share of households on a floating-rate mortgage and on a short fixed contract are calculated using the FCA Product Sales Data, which includes all owner occupier mortgages in the United Kingdom.
 (2) Between 2014 H2 and 2017 H2 mpc's are reported to have got slightly smaller. This is likely to be due to changes in methodology. Namely, in 2017 an extra response option was introduced for borrowers when asked how they would respond to a hypothetical increase in their interest payments: 'pay less than required'. This change could have mechanically lowered the number of households who chose 'spend less' as their likely response.

To estimate the size of the cash-flow effect of monetary policy on consumption, it is possible to use the mpcs from **Table A** and apply them to the aggregate data on debt and deposits held by households. This yields an impact on total household consumption of between 0.5% and 0.6% in response to a 1 percentage point change in interest payments. However these numbers are based on the average household. Households' propensity to adjust their spending may also depend on their balance sheet positions and the distribution of debt. Changes in the number of vulnerable households (as discussed in the previous section) could therefore amplify consumption responses to changes in interest rates.

Although the aggregate cash-flow effect of higher interest payments on consumption is estimated to be negative using this approach, the actual impact could be affected by two factors. First, 84% of households with a fixed-rate mortgage also have money in savings deposits. Given the lag before their mortgages will change, these households may raise their consumption from the higher returns on their savings deposits before their mortgage repayments increase, provided that deposit rates adjust quickly to higher rates. Second, the mpcs calculated in **Table A** are based on a hypothetical 2 percentage point increase; an eventual 0.25 percentage point increase in mortgage rates may result in a proportionally smaller reduction in spending if consumption responds in a non-linear way to larger increases in mortgage repayments.

Financial stability

An increase in interest rates, especially when not accompanied by an increase in incomes, can raise the proportion of households with high DSRs, which can have implications for financial stability as these households can experience greater repayment difficulties.

Only 1.4% of households currently report a mortgage DSR at 40% or above in the NMG survey. Even assuming full and immediate pass through of the 25 basis point rise in Bank Rate to all mortgage rates, this increases the share with DSRs of 40% or above only slightly, to 1.5% of households.

It would probably take a rise of more than 150 basis points before this proportion returned to its pre-crisis average of just under 2%, under the conservative assumption of no associated rise in nominal incomes. And the Bank's 2017 annual cyclical scenario stress test ensures the banking system has enough capital to withstand an increase of the proportion of households with DSRs at or above 40% to around 3.2%, as incomes fall and interest rates rise at the same time.

Additionally, the NMG survey suggests that households with a mortgage DSR above 40% are likely to see their mortgage rate change more slowly on average. Compared to households with a lower DSR, households with a mortgage DSR above 40% are more likely to be on a fixed-rate mortgage, and have longer-maturity fixed-rate mortgages on average. Only 52%

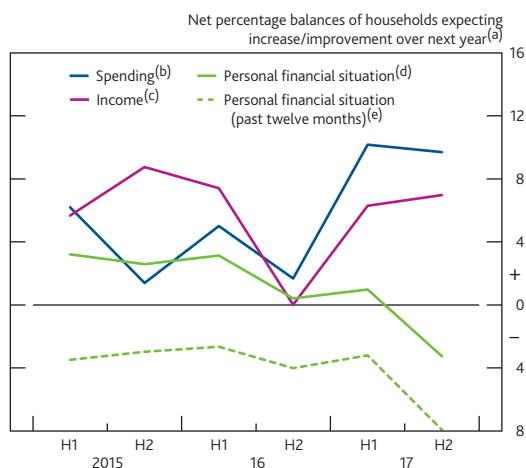
of NMG respondents with a high mortgage DSR will have seen a change to their mortgage by the start of 2019, compared with 63% of households with a low mortgage DSR.

Households' outlook

The NMG survey contains several questions about how households perceive their financial outlook and the general macroeconomic situation. Since 2016 H2 the questionnaire has also asked about the respondent's view on the effects of Brexit.

Chart 9 shows households' expectations about their own economic situation, which have tended to be more positive than their view on the general economy⁽¹⁾ (**Chart 10**) in the past. For the first time in the past three years, the net balance of households expecting an improvement in their financial position turned negative. This has moved broadly in line with households' assessment of their personal financial situation over the past twelve months, which suggests recent experiences have helped shape future expectations. One explanation for the deterioration in these backward and forward looking indicators is the sharp slowing in real income growth, following the fall in sterling.

Chart 9 Expectations about household spending, income and financial situation



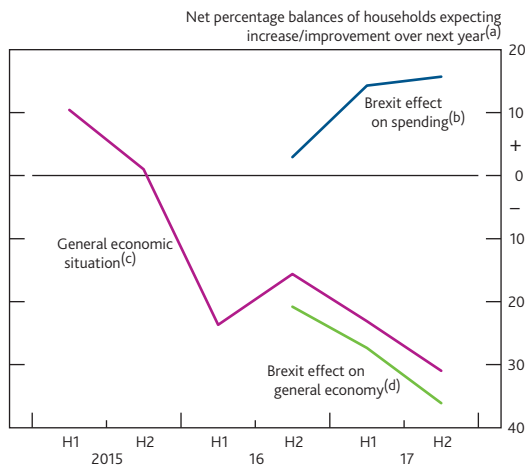
Sources: NMG Consulting survey and Bank calculations.

- (a) Net percentage balances calculated as the difference between the per cent of respondents expecting an improvement/increase over the next 12 months and those expecting a deterioration/fall. Percentages are calculated excluding those who stated 'prefer not to state' or 'don't know'.
- (b) Question: 'How do you expect your household to change its spending over the next 12 months? Please exclude money put into savings and repayment of bank loans'.
- (c) Question: 'Over the next 12 months, how do you expect your total household income (before anything is deducted for tax, National Insurance, pension schemes etc.) to change?'.
- (d) Question: 'How do you expect the financial position of your household to change over the next twelve months?'.
- (e) Question: 'How has the financial situation of your household changed over the last 12 months?'.

Consistent with the view that recent economic performance has shaped future expectations, both the 2017 H1 and 2017 H2 surveys reported a year-on-year rise in the net

(1) This is true not only in the NMG but also other consumer confidence surveys such as the GfK UK consumer confidence survey carried out on behalf of the European Commission.

Chart 10 Expectations for the general economic situation and the effect of Brexit



Sources: NMG Consulting survey and Bank calculations.

- (a) Net percentage balances calculated as in **Chart 9**.
 (b) Question: 'How do you expect the vote for Brexit to affect your household's spending over the next 12 months?'.
 (c) Question: 'How do you expect the general economic situation in this country to develop over the next 12 months?'.
 (d) Question: 'How do you expect the vote for Brexit to affect the general economic situation of this country over the next 12 months?'.

balance of households expecting to increase spending over the coming year. This is likely to represent a nominal effect, rather than an increase in spending once adjusted for the rise in price inflation. This is also supported by both a rise in household inflation expectations in the latest survey and a pickup in expectations of nominal income growth since the 2016 H2 survey.

The difference between the number of respondents with a positive view on Brexit and those with a negative view has fallen slightly between 2017 H1 and 2017 H2, and is now broadly balanced. More specific questions on the effect of Brexit on both household spending and future expectations are shown in **Chart 10**. The number of respondents who expect Brexit to increase their spending in the next twelve months has gone up, in line with the evolution of households' general spending expectations. This has run parallel to a decline in households' assessment of the effects of Brexit on the UK economy.

The responses to a more comprehensive question on expectations about the general economic situation have declined quite sharply since 2016 H2, with a net balance of -30 reported in the latest survey (**Chart 10**).

Overall, the trend reported in **Chart 10** suggests that views on the effect of Brexit have slightly changed over the past year. This has had an adverse effect on future expectations. As future expectations relating to changes in households' finances and incomes can affect spending growth, it is likely that growth in more discretionary spending items will remain subdued, even if nominal spending growth holds up (**Chart 10**). This is consistent with the Bank's forecast for subdued real aggregate consumption growth in the November 2017 *Inflation Report*.

Conclusion

The latest NMG survey points to a slight deterioration in household balance sheet metrics over the past year. The proportion of households with high mortgage DTI multiples has increased, but is still some way below the peak in 2012. The share of households with a mortgage DSR above 40% of income has also risen but remains at a historically low level, at 1.4%. The rise in the percentage of households with high mortgage DTIs and DSRs may be, in part, caused by sampling issues. But evidence from a subgroup of returning respondents suggests that the slight deterioration in household balance sheet metrics is broadly representative of trends in the wider population.

The impact of the recent rise in Bank Rate on the amount that borrowers have to pay on existing debts is likely to be modest, passing through to households gradually. The NMG survey suggests that 43% of NMG mortgagors will experience a change to their interest payments by the start of 2018, and 62% will experience a change by the start of 2019. Households with a mortgage DSR above 40% are likely to see their mortgage rates change more slowly on average. Compared to households with a lower DSR, households with a mortgage DSR above 40% are more likely to be on a fixed-rate mortgage, and have longer-maturity fixed-rate mortgages on average. Following a 25 basis point increase in their mortgage rates, 2½% of mortgagors would need to take action, rising to 7½% for a 50 basis point rise. These proportions are similar to the levels reported in previous NMG surveys.

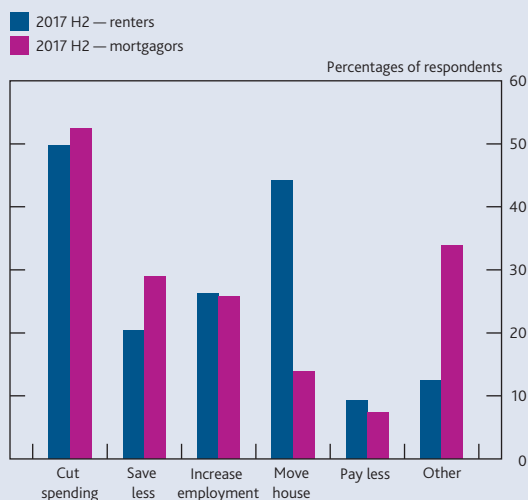
For the first time in the past three years, the net balance of households expecting an improvement in their financial position turned negative. This fall has moved broadly in line with households' negative assessment of their personal financial situation over the past twelve months. And the responses to a question on expectations about the general economic situation have declined sharply since the EU referendum result. Households' expectations of income and spending have both increased since last year, which likely reflects the rise in cost of living following the depreciation of sterling.

Is the reaction of renters to changes in accommodation costs different from mortgagors?

The private rental sector has increased in size over the past decade and now accounts for 20% of the housing stock in England. The NMG survey has tended to focus on the effect of interest rate pass-through onto mortgagors (and net savers) in recent years. New questions were added in the 2017 H2 survey to analyse how households in the private rental sector might react to increases in their rental payments.

Compared with mortgagors, renters appear a little less likely to cut spending after a rise in housing costs; renters are also less likely to simply absorb a rent rise by saving less (**Chart A**). This is not surprising, given that private tenants tend to have less in savings deposits than mortgagors on average. Private tenants are also slightly more likely to 'pay less than the required amount on one or more debt obligations'. This is consistent with the finding that private tenants are more likely to be in financial distress than mortgagors.

Chart A Mortgagors^(a) and private renters^(b) expected responses to a rise in accommodation costs^{(c)(d)}



Sources: NMG Consulting survey and Bank calculations.

- (a) Question: 'If your monthly mortgage payments were to increase for a sustained period by *Ex* [which is calculated automatically from software as the payment under a 2 percentage points higher rate] from tomorrow due to higher mortgage interest rates, how do you think you would respond? Please assume your income would not be any higher unless you take action to increase it'. Households were allowed to select up to three options.
- (b) Question: 'If your monthly rent payments were to increase for a sustained period by *Ex* [which is calculated automatically from software as the payment under a 15% monthly increase] from tomorrow, how do you think you would respond? Please assume your income would not be any higher unless you take action to increase it'. Households were allowed to select up to three options.
- (c) Other includes request financial help, request a mortgage change (for mortgagors only) and other miscellaneous responses.
- (d) The 15% increase in the NMG survey question was calibrated by Bank Staff to match the increase in monthly mortgage payments generated by a 200 basis points interest rate increase, averaging across several representative products with different outstanding terms, loan values and interest rates.

More than half of private renters would not cut back spending following a rent increase, compared with slightly less than half of mortgagors when faced with higher mortgage repayments.

The average (mean) marginal propensity to consume, which matters for aggregate effects, was estimated to be 41% and 44% for renters and mortgagors respectively. This implies that renters may be somewhat less sensitive than mortgagors to higher housing costs, especially as there may be a time lag between landlords experiencing an increase in their mortgage repayments and this being passed onto private tenants. The impact on household consumption from an increase in mortgage rates could therefore be lower in an economy with more private renters.

Private renters are much more likely to move house when faced with an increase in rental payments, compared with mortgagors when faced with an increase in their mortgage repayments (**Chart A**). Nearly half of renters would look to move house, compared with around 15% of mortgagors. This probably reflects the lower costs of moving for renters compared with mortgagors. Private renters with a rental service ratio above 40% are also much more likely to move house than mortgagors with a debt-servicing ratio above 40%.

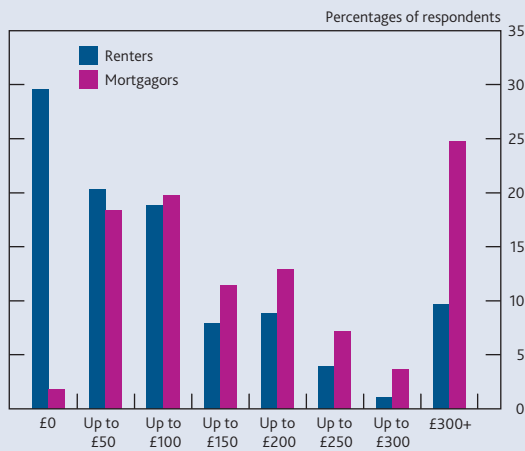
Although renters are much more likely to move house and slightly less likely to cut spending than mortgagors, in practice this will depend on the magnitude and speed of the increase in rents. For example, when answering a related question on how easy it would be to find alternative (cheaper) accommodation when faced with a very sharp rise in their rental payments, around 50% of renters who would look to move in **Chart A** stated that it would actually be 'very difficult' or 'virtually impossible' to move house in the next twelve months.⁽¹⁾

The proportion of renters who would have to take some kind of action to afford any increase in rental payments is also significantly higher than the equivalent share of mortgagors (**Chart B**). As renters, on average, tend to save less each month and have lower household incomes than mortgagors, fewer households in this sector will be able to simply absorb a rent increase by saving less. Therefore in a hypothetical situation where monthly rents and mortgage repayments were all to rise by the same amount for all households, renters could be affected by more, given their lower income and savings.

While there is a predictable link between monetary policy and mortgage payments, the pass-through of interest rates to rents depends on the proportion of landlords with mortgages and their ability to pass on higher mortgage costs to tenants.

(1) The equivalent share of mortgagors who would find it 'very difficult' or 'virtually impossible' to move house in the next twelve months difficult was also around 50%.

Chart B The increase in accommodation costs mortgagees^(a) and private renters^(b) could afford without taking action^(c)



Sources: NMG Consulting survey and Bank calculations.

- (a) Question: 'The interest payment on mortgages is often linked to the official interest rate set by the Bank of England. If the rate was to increase, your monthly payments would also increase. About how much do you think your monthly mortgage payments could increase by for a sustained period without you having to take some kind of action to find the extra money eg cut spending, work longer hours, or request a change to your mortgage?'
- (b) Question: 'Approximately how much more rent, if any, could you pay a month (above what you already pay) for a sustained period without you having to take some kind of action to find the extra money eg cut spending, work longer hours, or move house?'
- (c) Taking action is assumed to capture all responses other than 'save less' see **Chart A** on page 10.
- (d) Each category is inclusive of the maximum payment. For example 'up to £50' is equivalent to between £1 and £50.

The extent to which rents increase is likely to depend mainly on economic fundamentals such as the rate of household income growth and CPI inflation, rather than changes in monetary policy. And the extent to which renters are more or less sensitive than mortgagees to these changes in accommodation costs will depend on the magnitude and speed of such changes. A gradual increase in rental payments will allow some households to plan ahead and look to move house when required, rather than cut back on spending. A more rapid increase, however, may force these households to take action by reducing their spending or take up additional employment to prevent entering rental arrears. Therefore the reaction of renters to changes in their accommodation payments may have important implications for monetary policy and financial stability.

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