

Institute for
Fiscal Studies

How does inflation affect different households?

Cormac O'Dea

cormac_o@ifs.org.uk

Motivation

- Inflation has been more topical over the past year than it has been in many years
 - First very high rates of inflation
 - Then the lowest rates of inflation seen for over half a century
- The aim of today's lecture is to understand:
 - difference between the various rates of inflation that are used
 - what exactly reported inflation measures and what it doesn't measure
- Focus on the distribution of inflation
 - The distribution of inflation matters for many purposes: not just the average
 - I show inflation has varied lately by household characteristics, e.g. tenure, income and age etc.

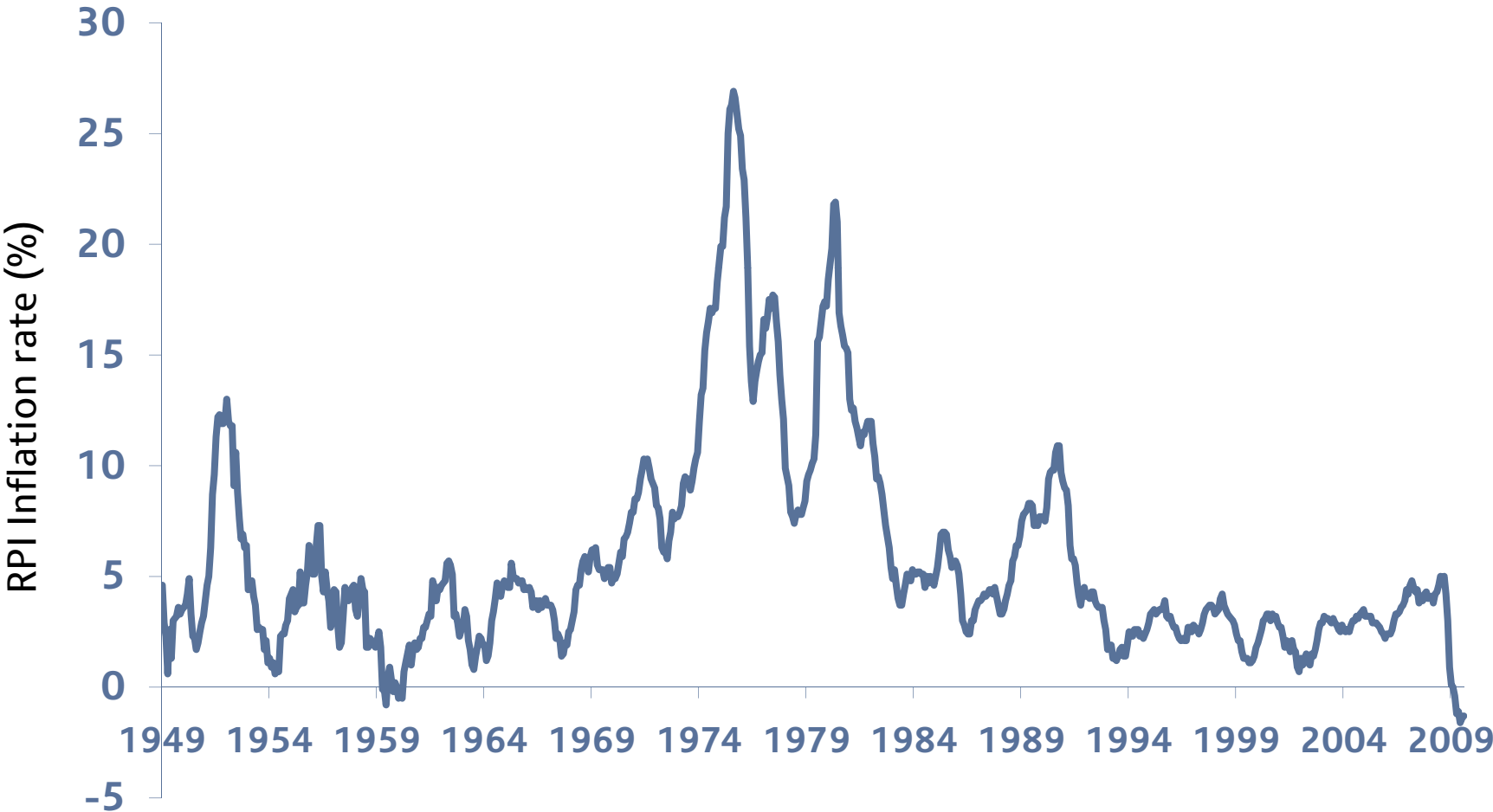
Plan

- What is inflation?
 - Different inflation measures and their uses
 - How is inflation calculated?
 - Why has inflation fallen so much recently?
- Key results:
 - Variation in inflation rates across different groups
 - The changing distribution of inflation
 - Longer-term averages

What is inflation?

- Inflation: measure of how much prices have changed
 - Normally over a year
 - Lower inflation: prices rising less quickly
 - Inflation below zero – prices falling on average ('deflation')
- Retail Prices Index (RPI)
 - Long-established traditional measure; roots in 'household' inflation
 - Historical beginnings in 1914: food price inflation
 - Known as RPI since 1956; current structure in place since 1987
 - Excludes richest 4% of population and benefit-reliant pensioner households
 - Used mainly for statutory uprating of some benefits and tax thresholds
- Consumer Prices Index (CPI)
 - Main macroeconomic inflation measure, 'official' headline measure
 - Bank of England target for price stability: CPI 2% \pm 1%
 - Europe-wide consistency, allows international comparisons
 - Excludes many housing payments

60 years of RPI inflation rates



Source: ONS

The last 10 years in focus

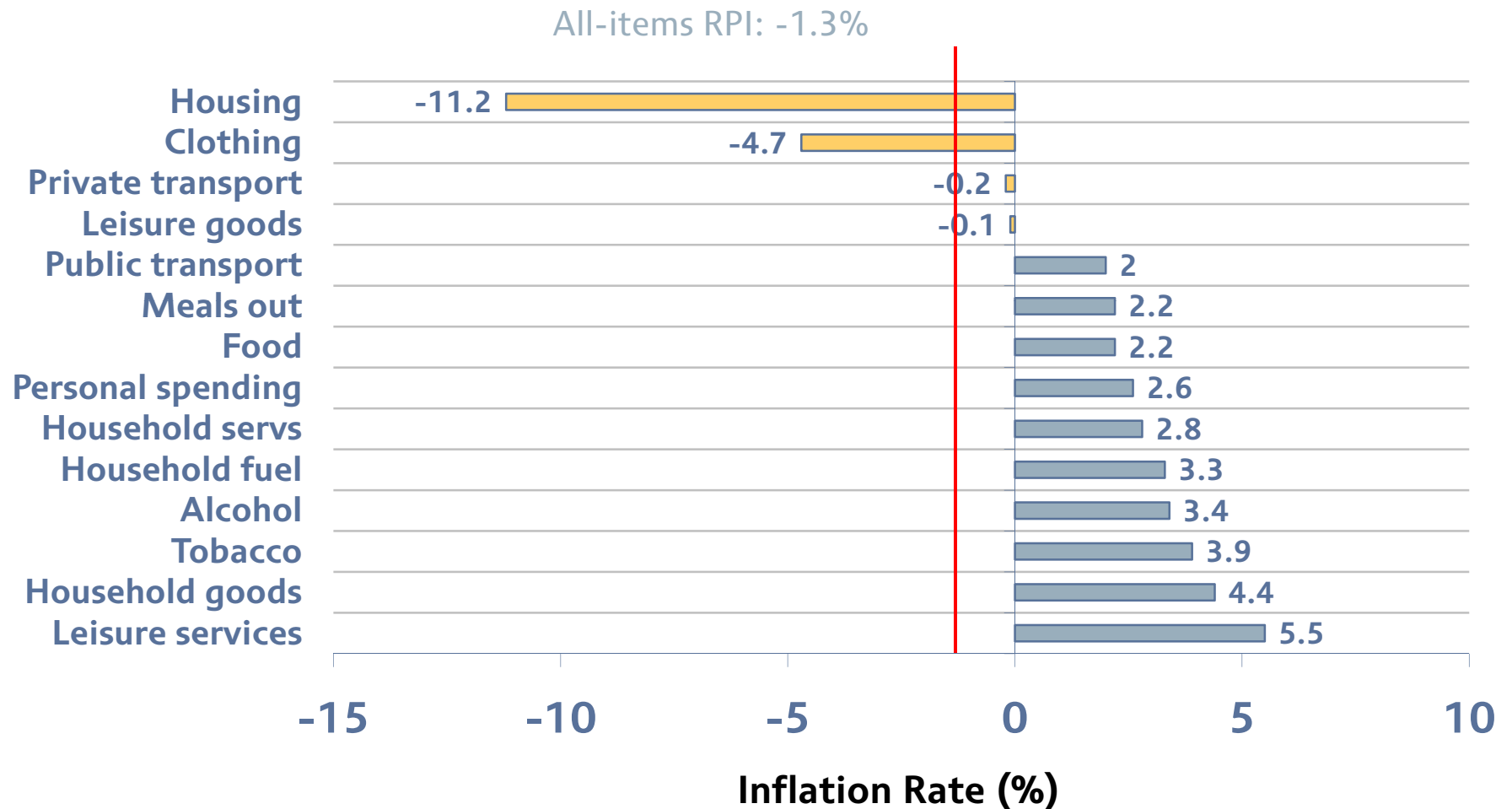


Source: ONS

Calculating inflation

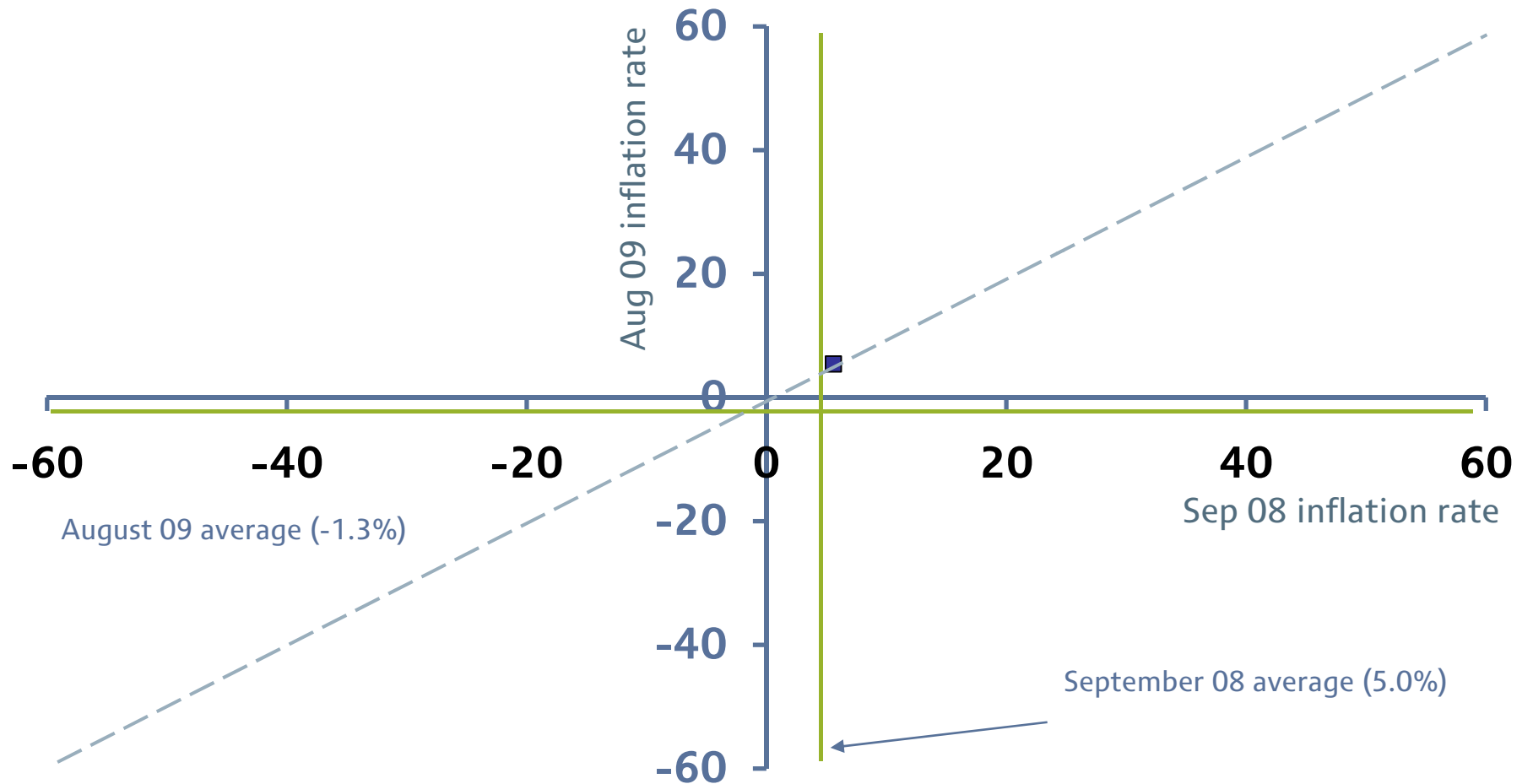
- Different measures all essentially calculated in same way
 - Define a **‘basket’** of goods and services
 - choose items to go into the basket that represent different categories of spending
 - 78 different categories in current RPI (e.g. bread, UK holidays, motor fuel, beer)
 - each category given a weight depending on how significant a share of spending it is on average
 - basket changes each year as spending patterns change
 - 2008: in – fruit smoothies, USB memory sticks; out – CD singles, microwaves
 - Collect sample of **prices** for these items
 - in total around 120,000 prices collected each month
 - prices from randomly sampled retailers (high street, local, specialist, online)
 - Compare prices today to prices a year ago
 - defines an inflation rate for each item
 - combined into a rate for each of the 78 categories
 - from this, calculate overall RPI as a weighted average using the basket weights

RPI Annual Inflation Rates: August 2009

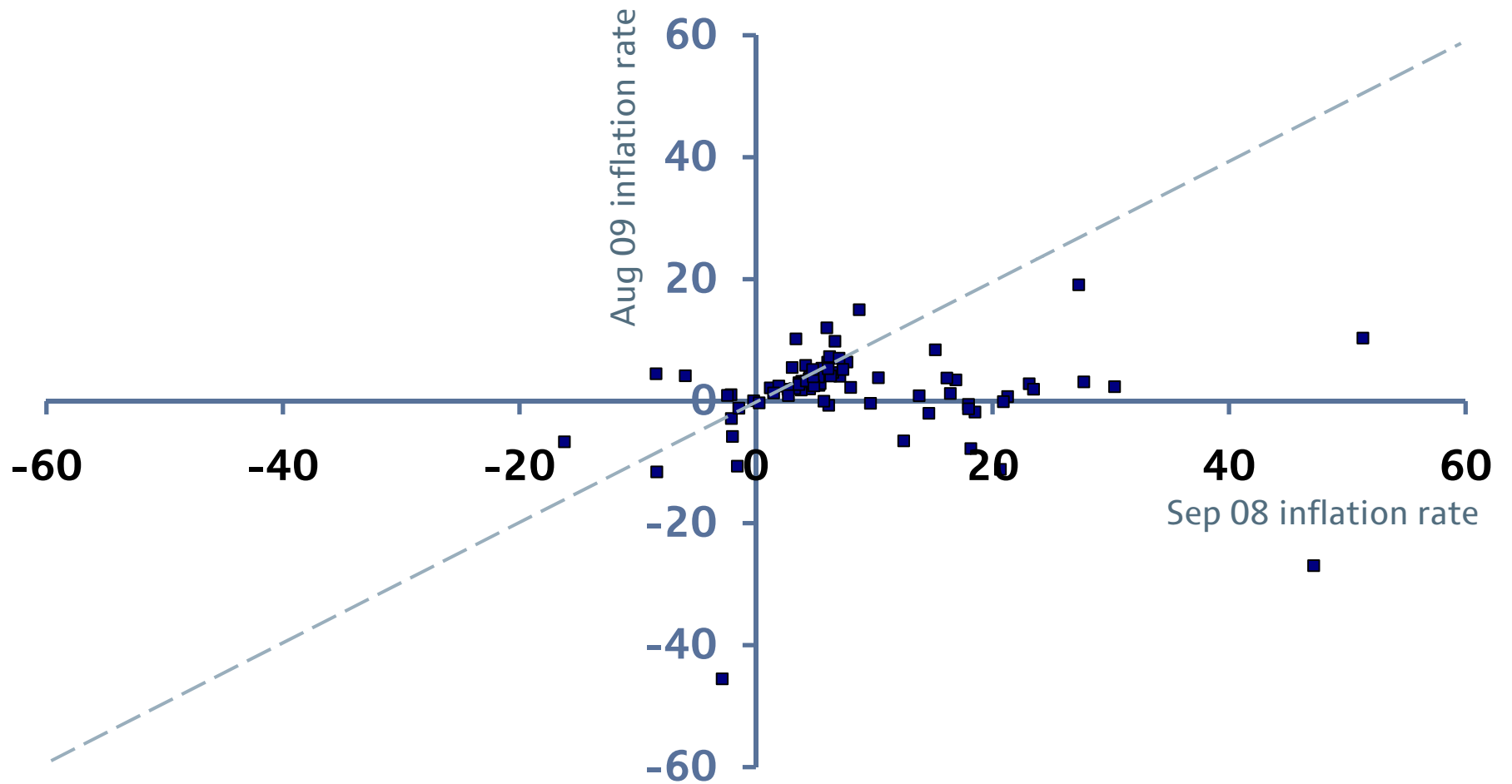


Source: ONS

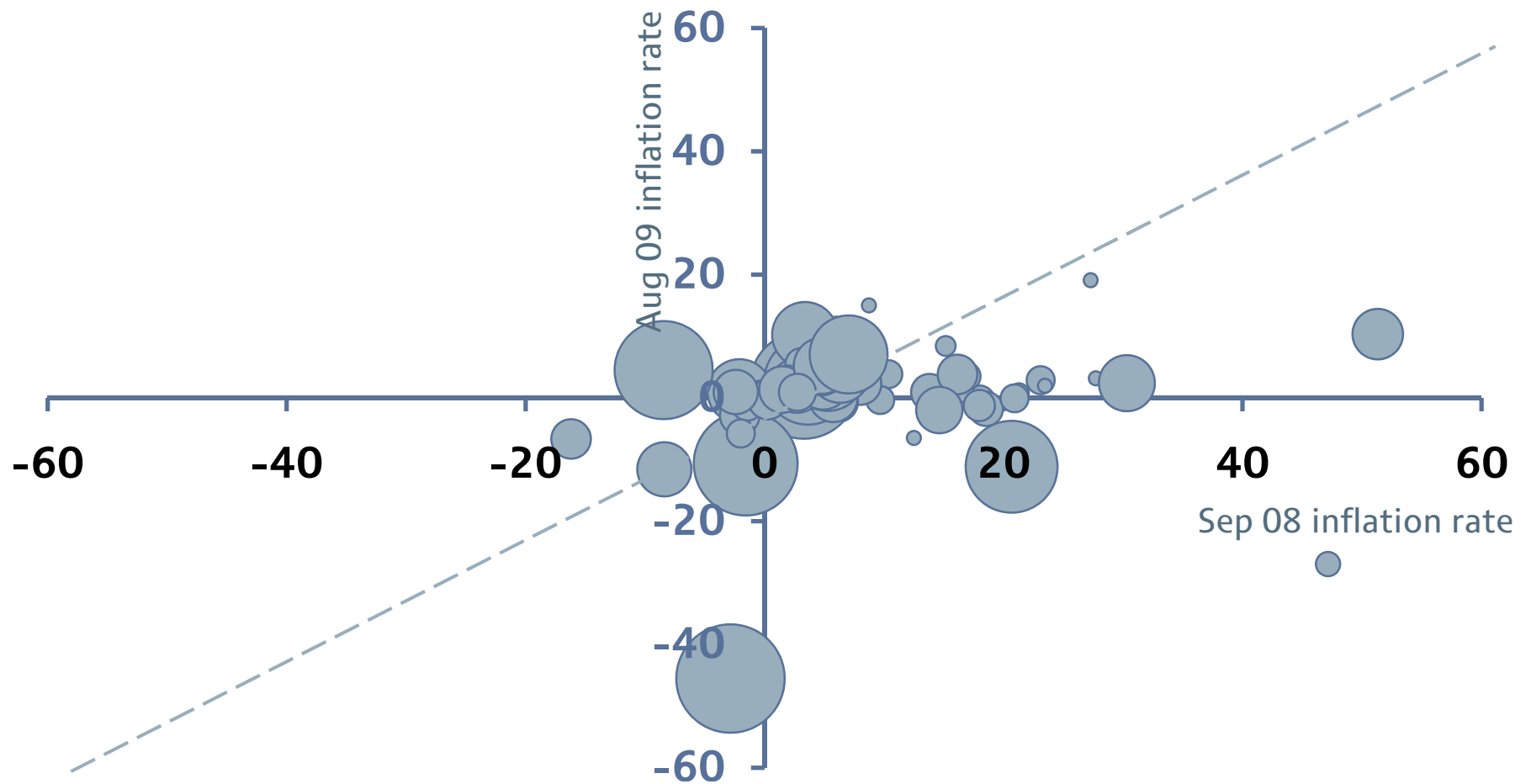
Why has RPI inflation come down so rapidly?



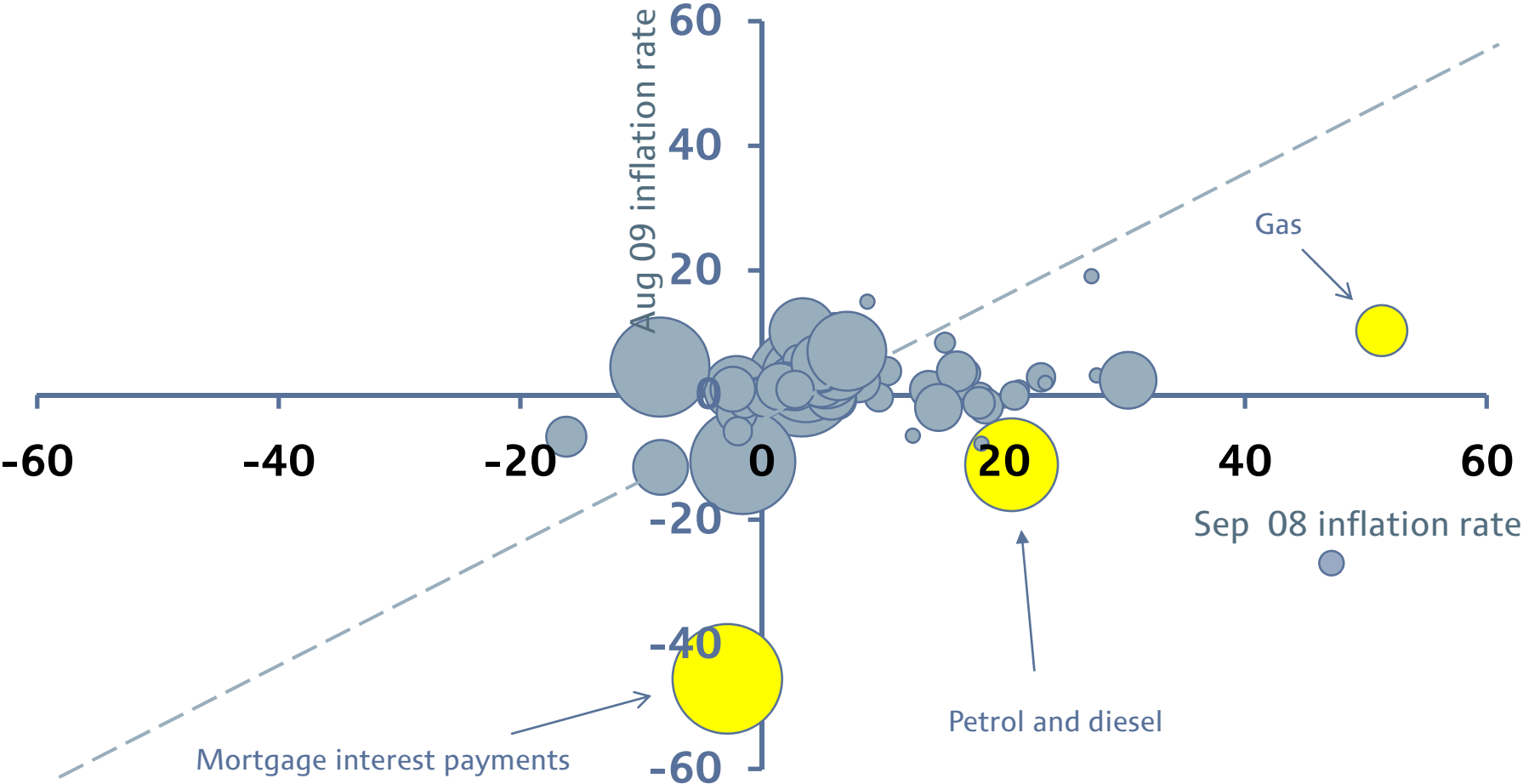
Why has RPI inflation come down so rapidly?



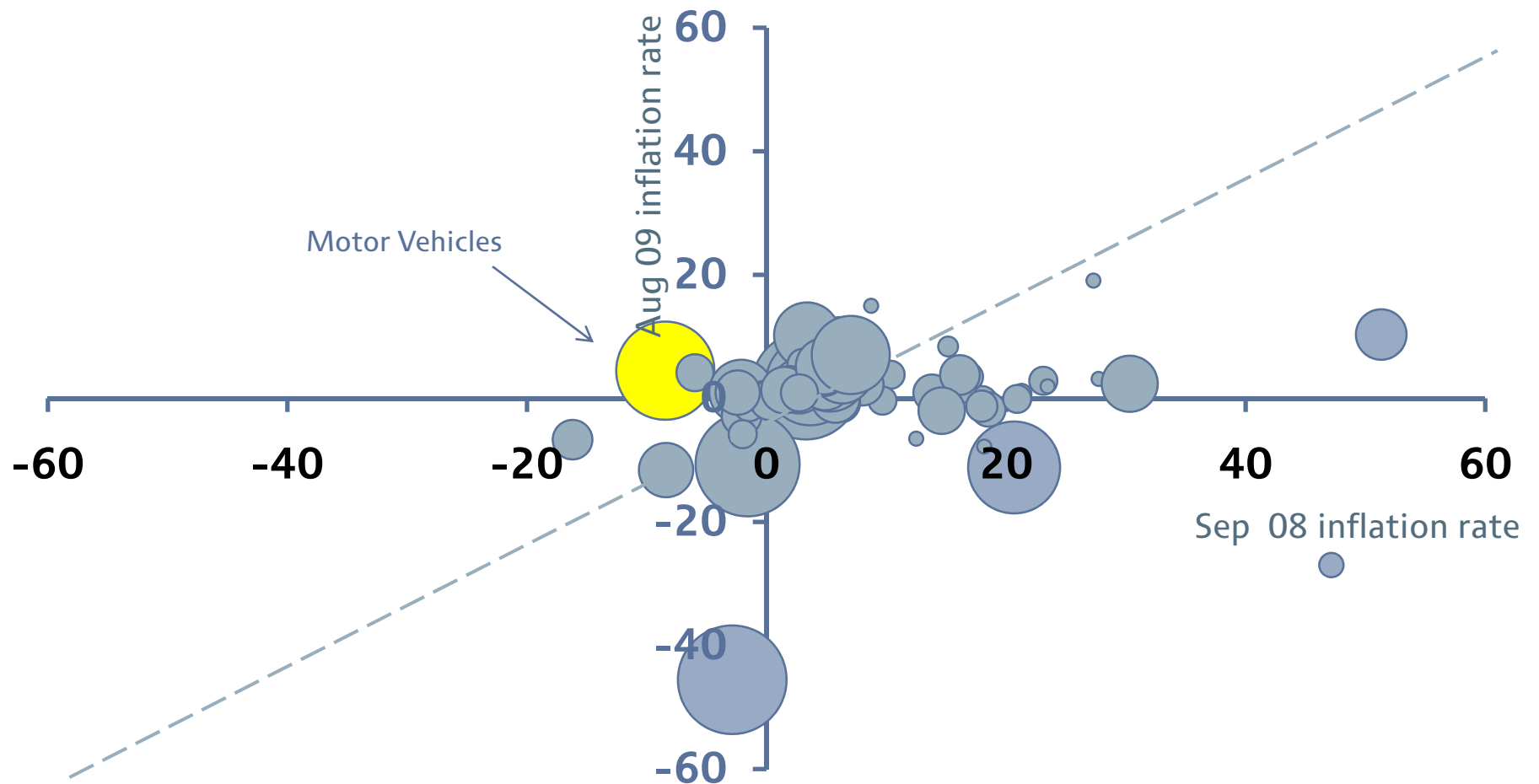
Why has RPI inflation come down so rapidly?



Why has RPI inflation come down so rapidly?



Why has RPI inflation come down so rapidly?



‘Average’ and ‘household’ inflation

- Official measures only ever supposed to be averages
- Different households have different inflation rates
 - All households would face same inflation rate if:
 - all had same spending patterns
 - or all items had the same inflation rate
 - Neither is true
 - No one household has same spending patterns as the ‘average basket’
 - Different household needs, housing tenure, tastes and preferences, incomes, etc.
 - Different items have very different inflation rates
- Households that spend more on goods with high inflation have higher inflation rates than average
- Use data from surveys of expenditures coupled with inflation data to calculate inflation rates for many households

Calculating household-level inflation rates

- Data from the UK Expenditure and Food Survey
 - Nationally representative survey
 - Detailed spending patterns of c. 6,500 households per year
 - Work out household spending on the categories that make up the RPI
 - gives individual household ‘weights’ for each category in place of the RPI averages
 - Apply these household weights to the RPI inflation data from ONS
 - Focus on RPI as a broad measure of inflation with a long time-series
 - Gives household-specific inflation rate
 - Find average rate across different household groups and examine variation in inflation

Some data and measurement issues

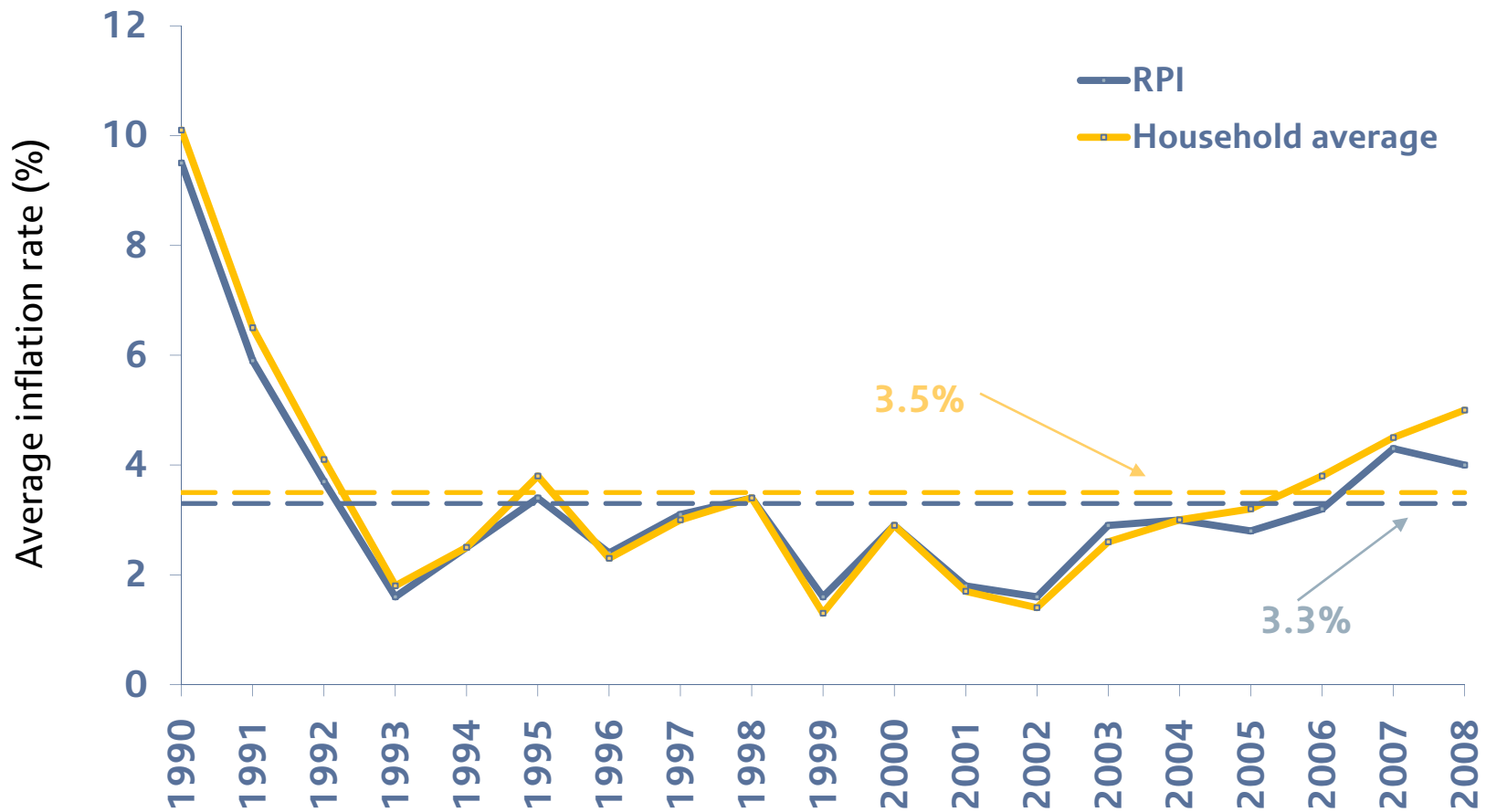
- Inflation rates depend on household spending patterns
 - households may face different inflation rates for each category too
 - but don't have data on this
- Do **not** expect our average across households to match RPI
 - we include all households in survey, even those excluded from RPI
 - we do not include housing 'depreciation' (one of the 78 items)
 - how you define an 'average' matters ... will come back to this!

Mortgage interest payments

- Inflation rate for mortgage interest payments down to -45%
 - Drives variation in average inflation across groups in many cases
 - large part of spending for mortgagees
 - also impacts other results (income, age) correlated with tenure
- RPI samples bank and building society Standard Variable Rates
 - May overstate average fall in inflation for households with mortgages
 - households on fixed rates will not have enjoyed large reductions in payments yet
 - but will move onto SVRs lower than they otherwise would have been
 - so ‘timing’ of inflation rates may be wrong if not the level
 - important example of our assumption that all households face same inflation rates
 - RPI effectively assumes all households on variable rates; our approach consistent

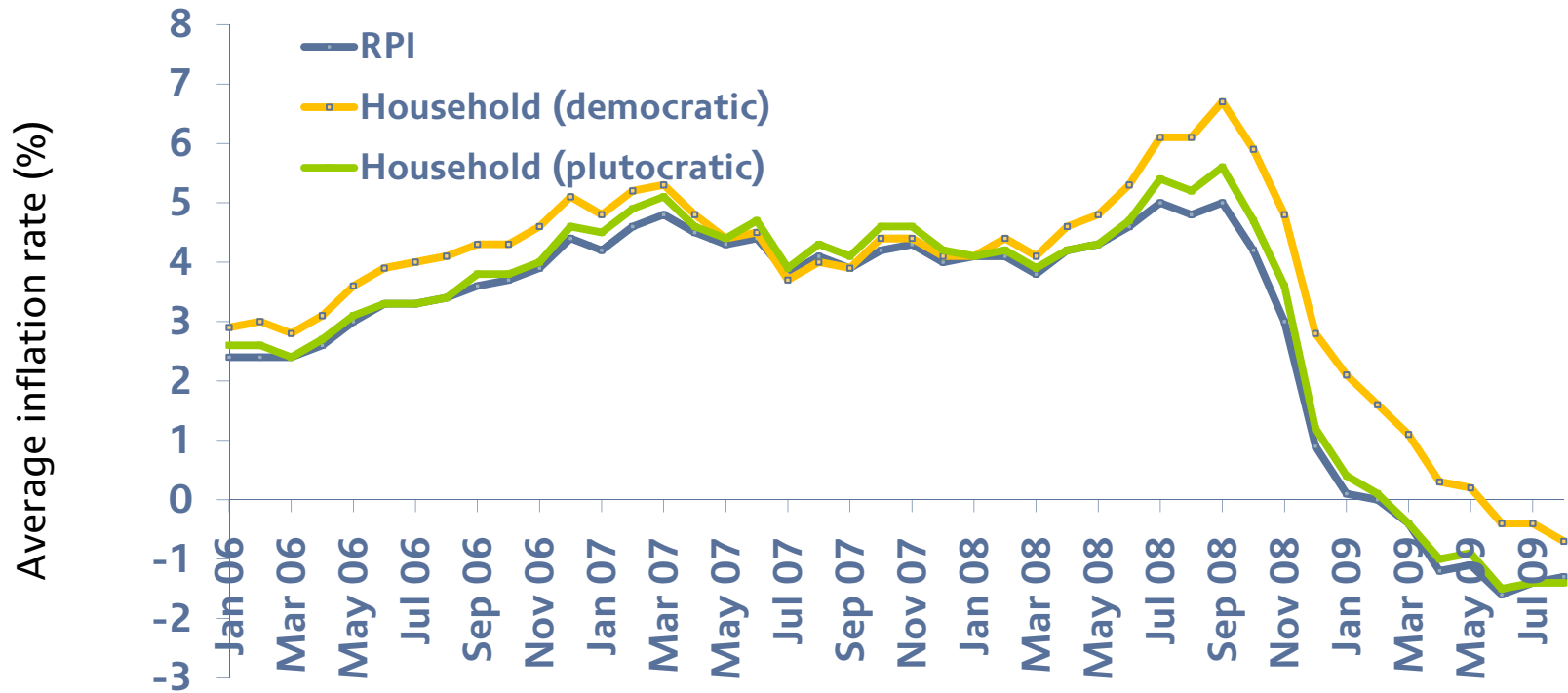
Comparing household and ONS average inflation

Figures tend to be similar over long-term

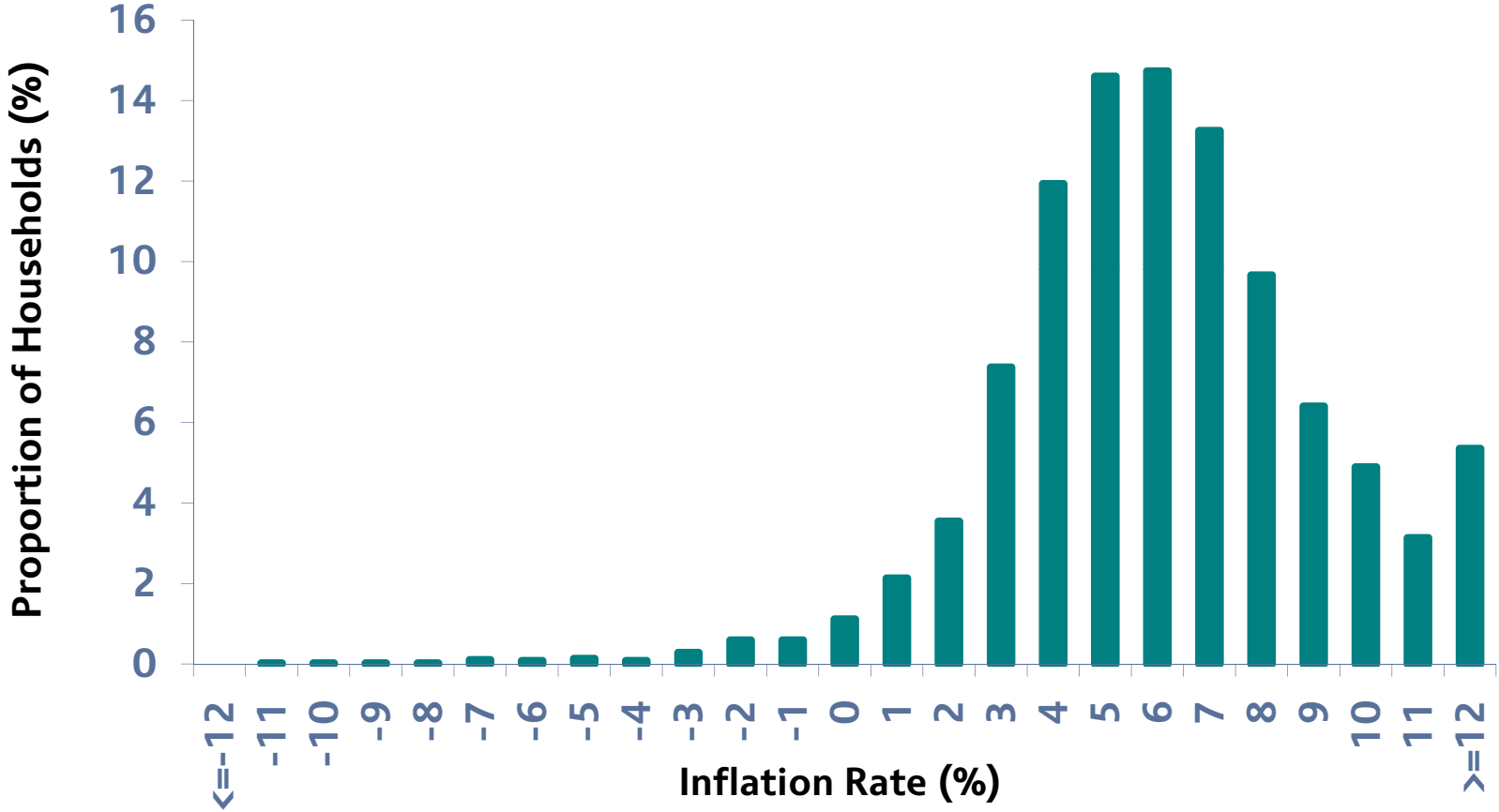


Comparing household and ONS average inflation

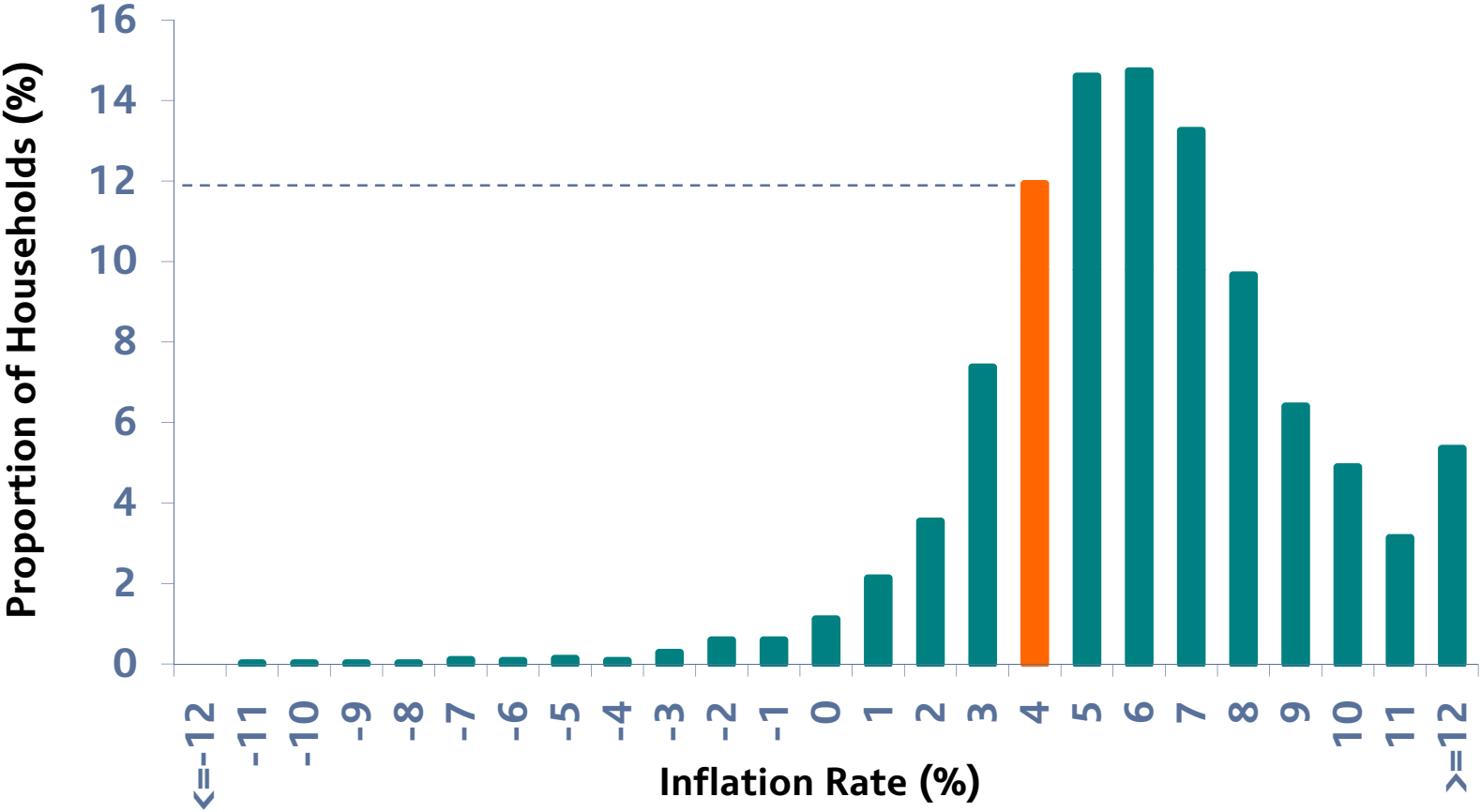
Recent differences appear to be driven by differences across rich & poor



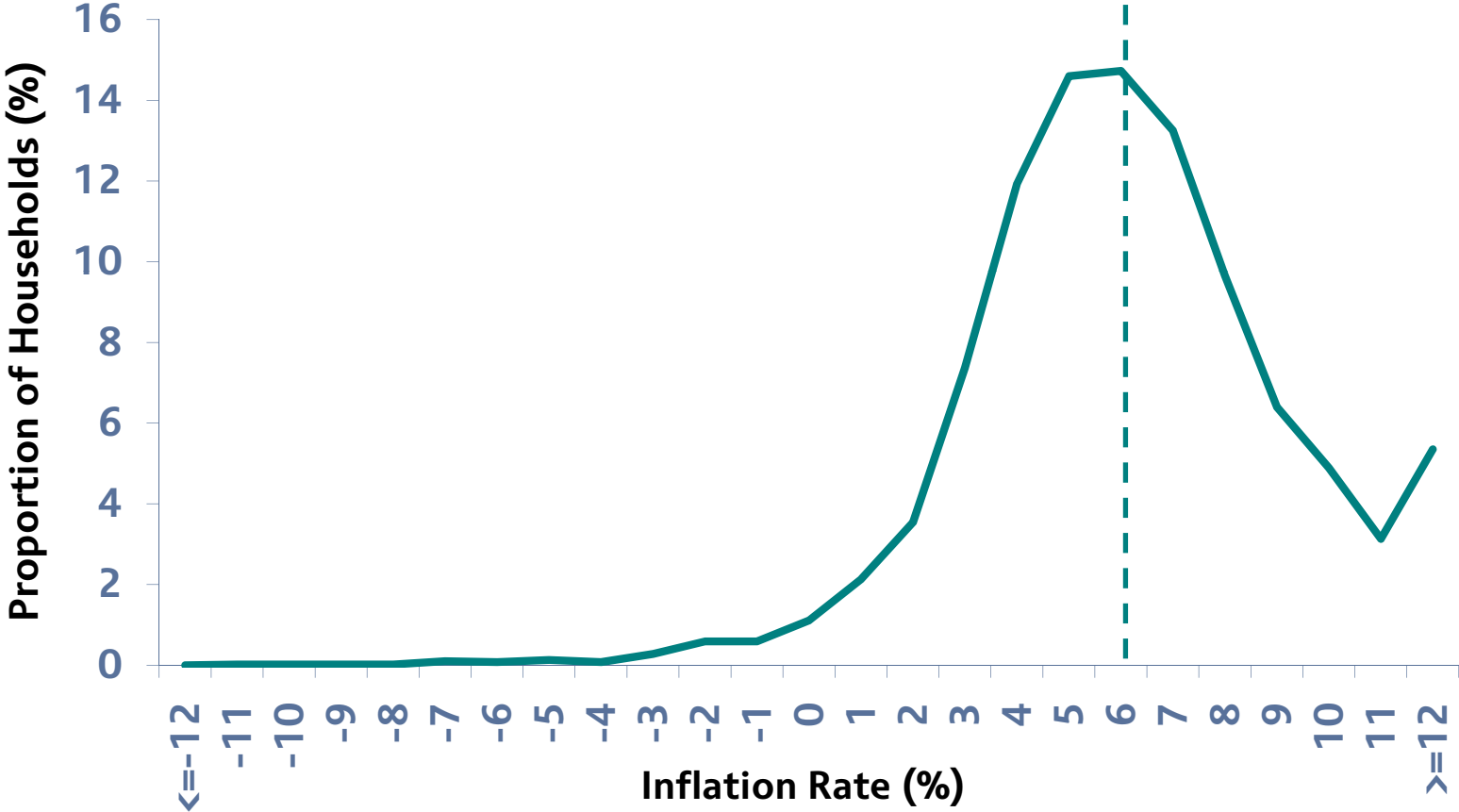
Distribution of Inflation, Sep 2008



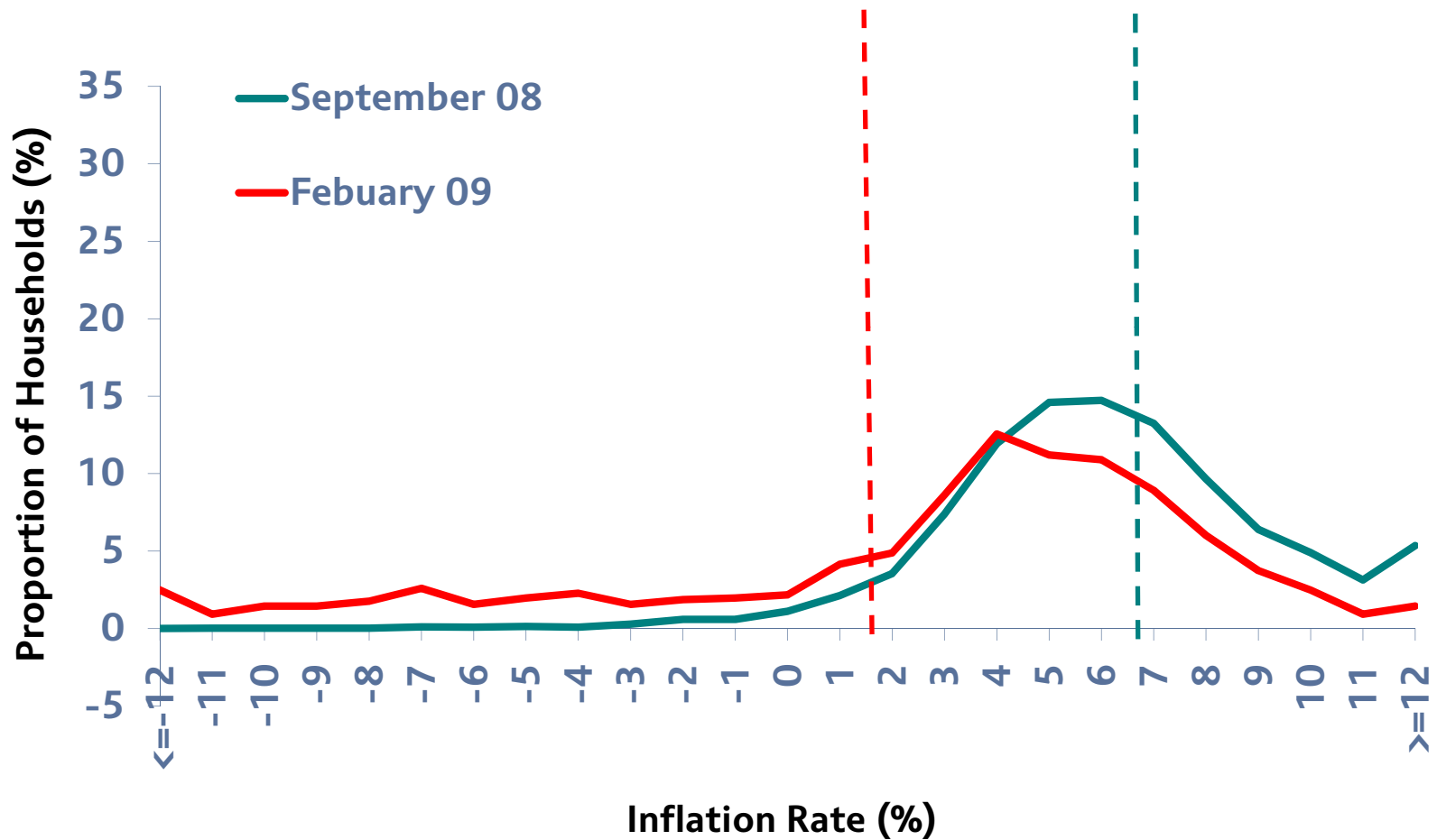
Distribution of Inflation, Sep 2008



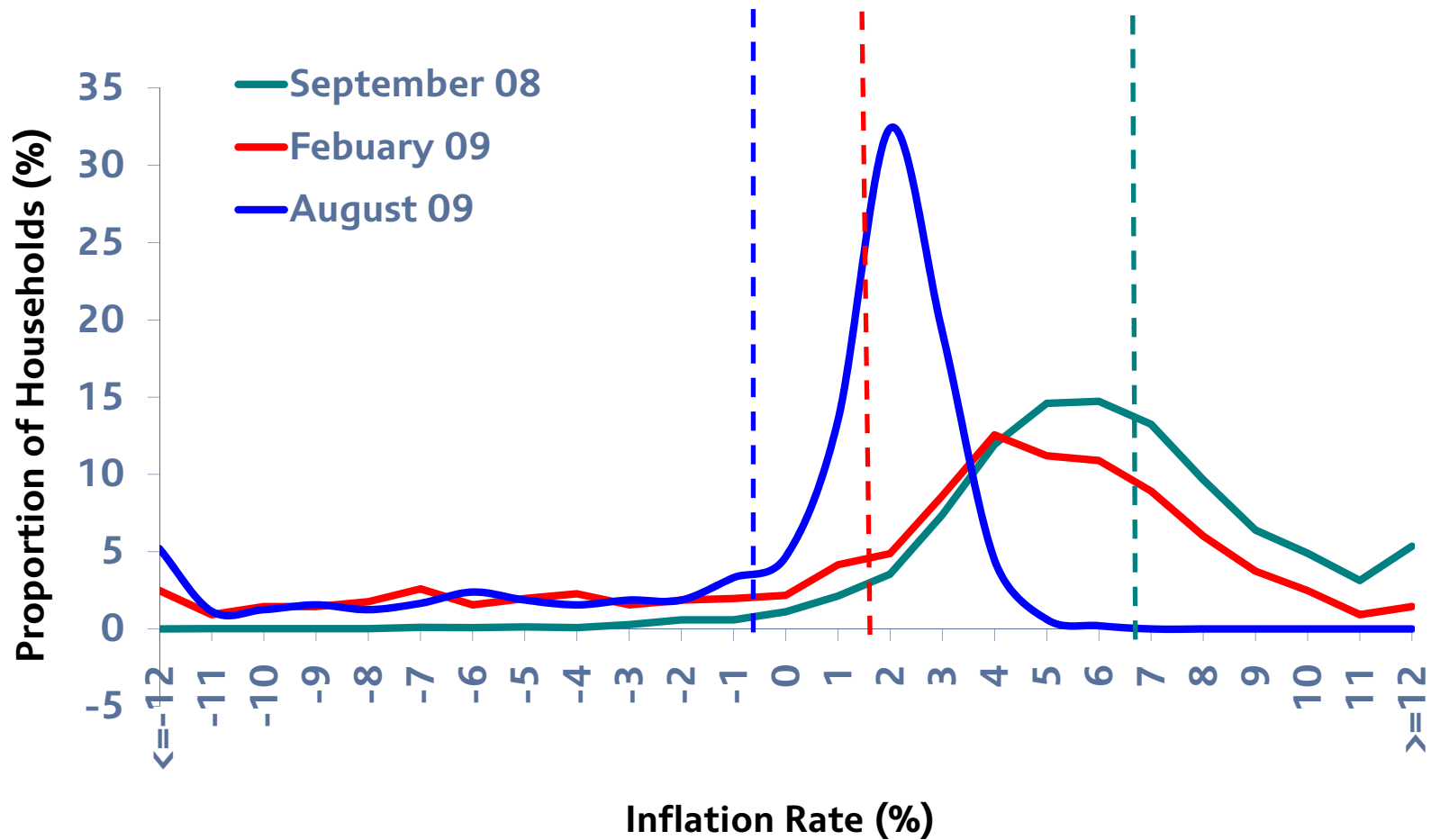
Distribution of Inflation, Sep 2008



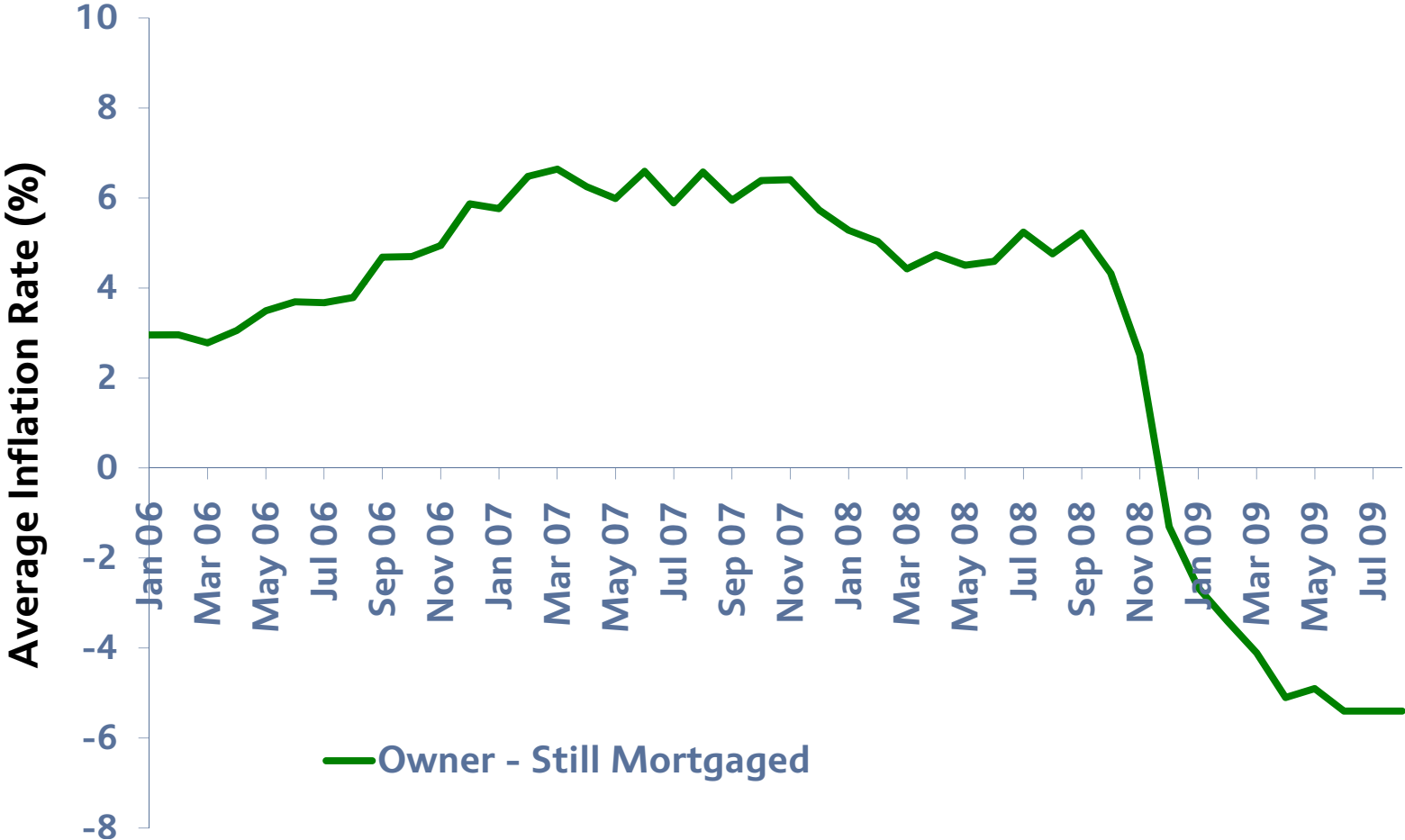
Distribution of Inflation, Sep 2008- Jan 2009



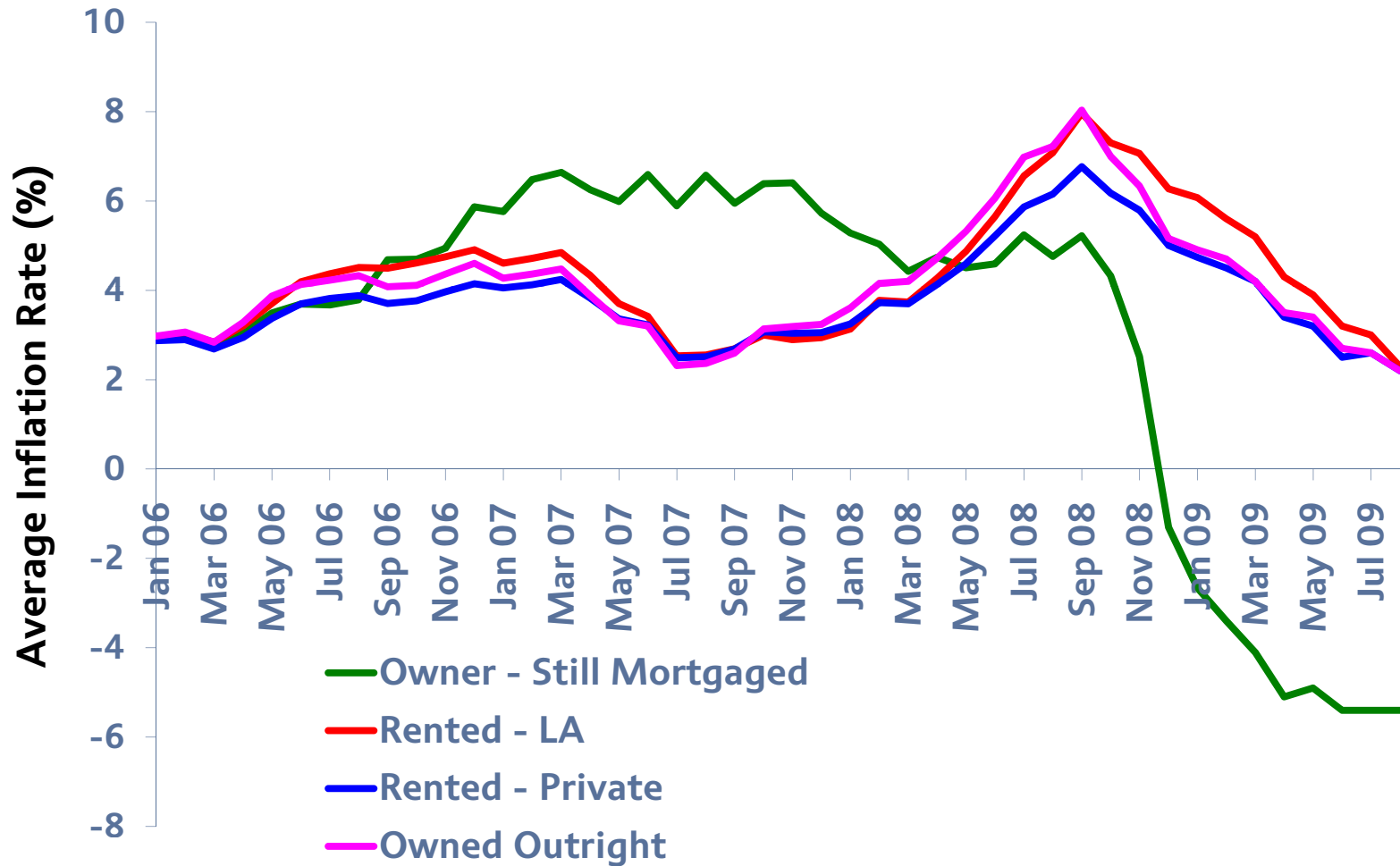
Distribution of Inflation, Sep 2008- Jan 2009



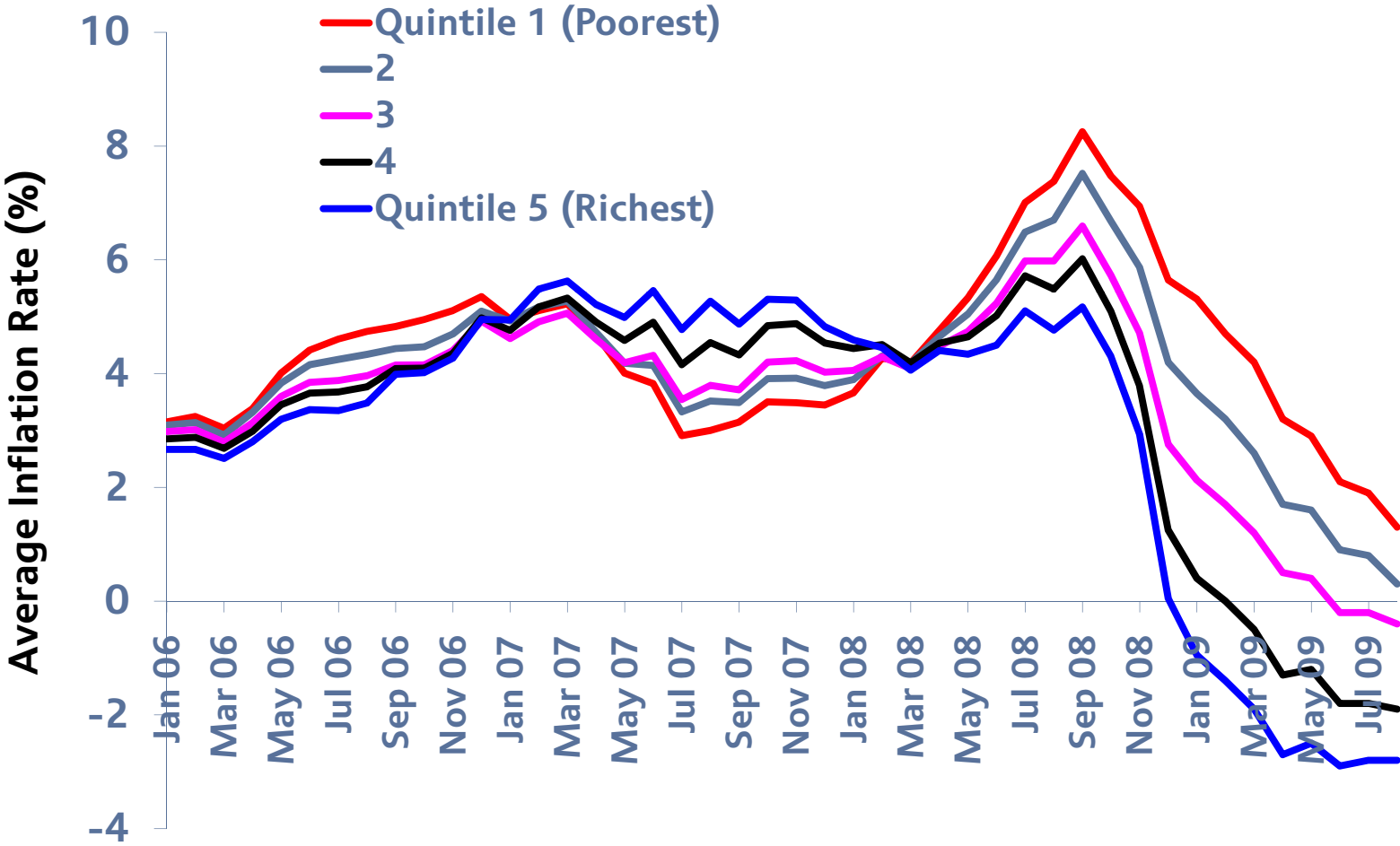
Those with mortgages have seen a steep fall in inflation in recent months....



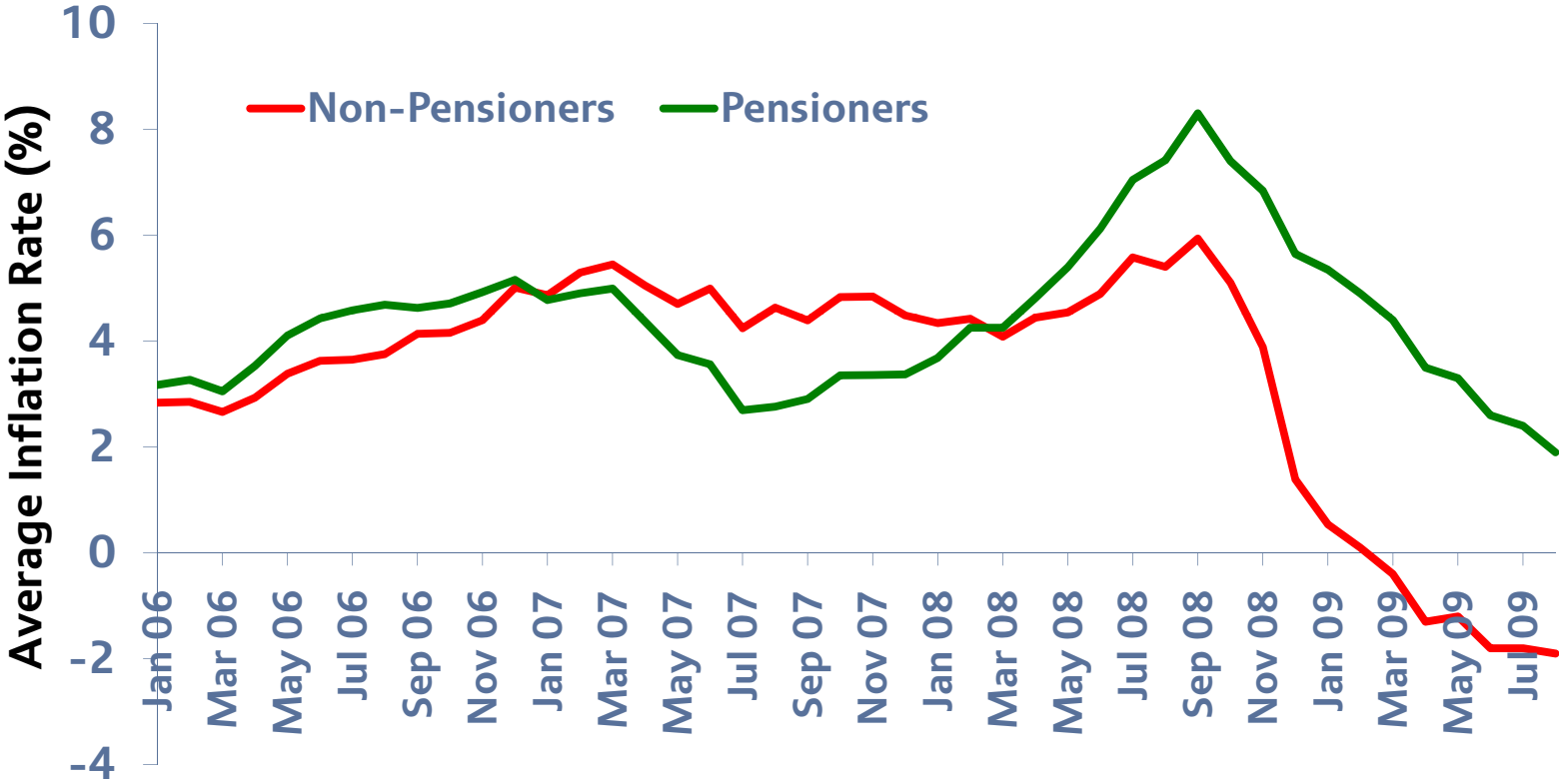
...while those in other types of housing have seen more moderate falls....



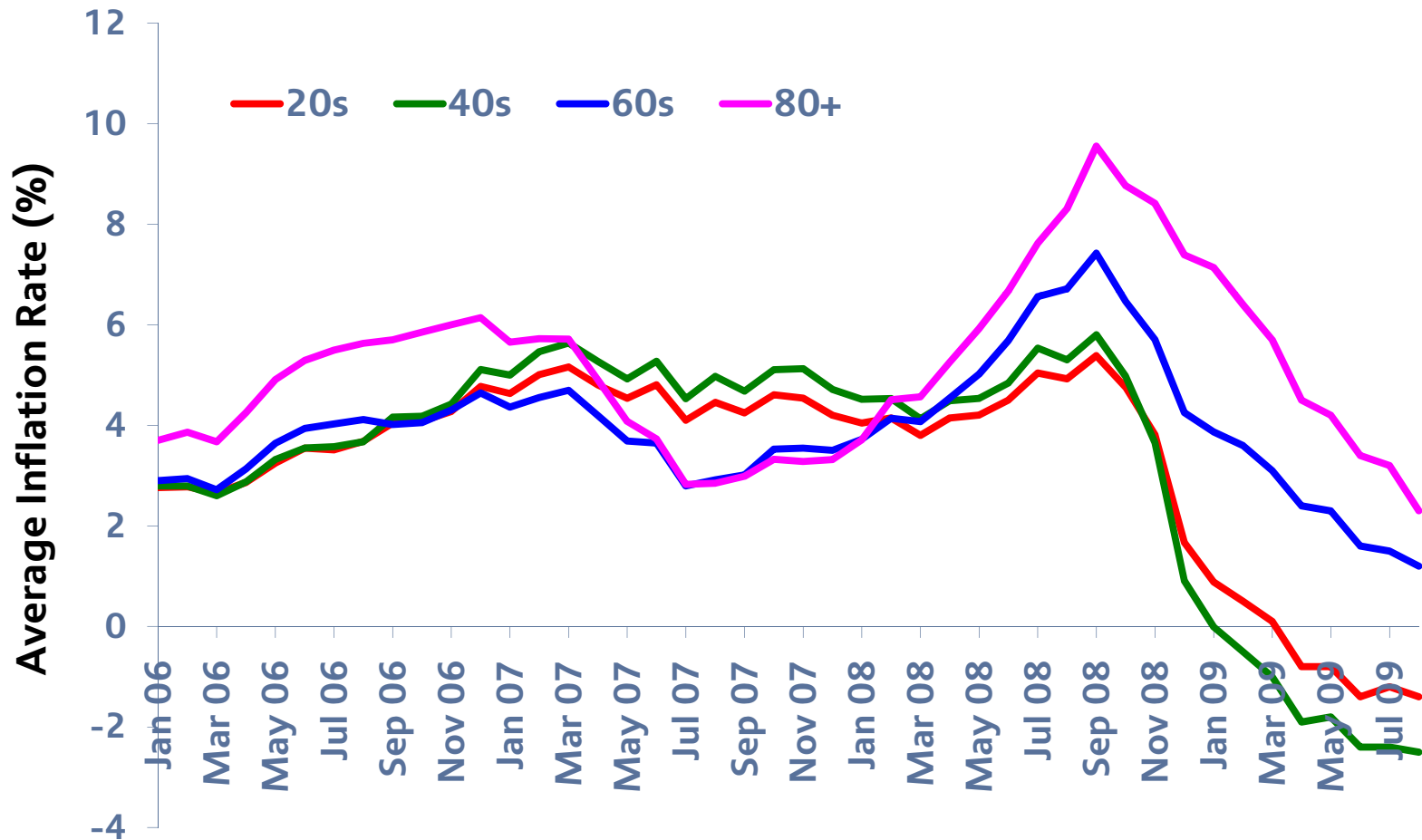
Poorer Households are currently experiencing substantially higher inflation than richer ones....



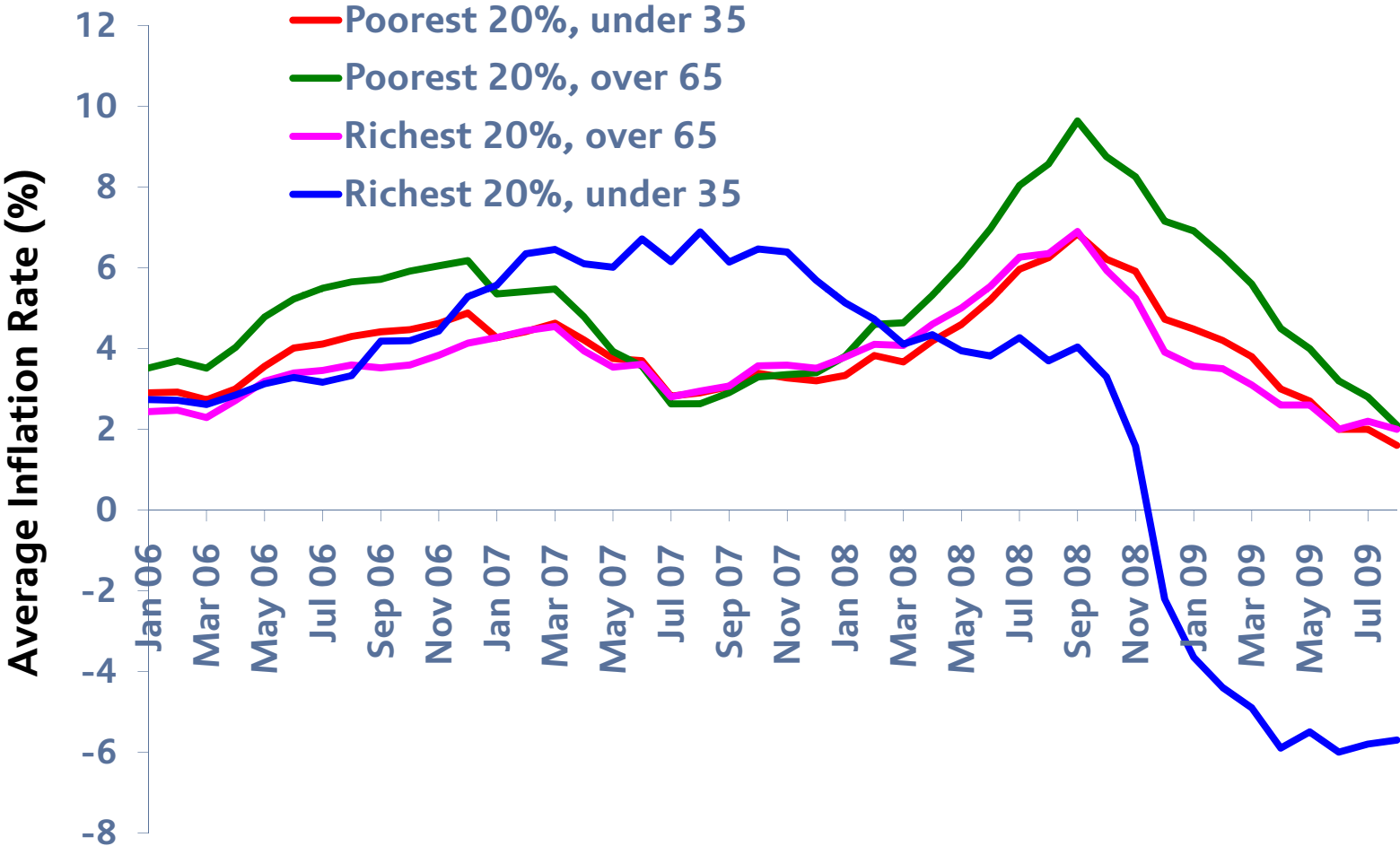
Pensioners, on average, currently have higher inflation rates than non-pensioners...



...and those over 80 currently have particularly high average rates...



The old poor currently have particularly high rates of inflation, while the young rich have particular low rates...



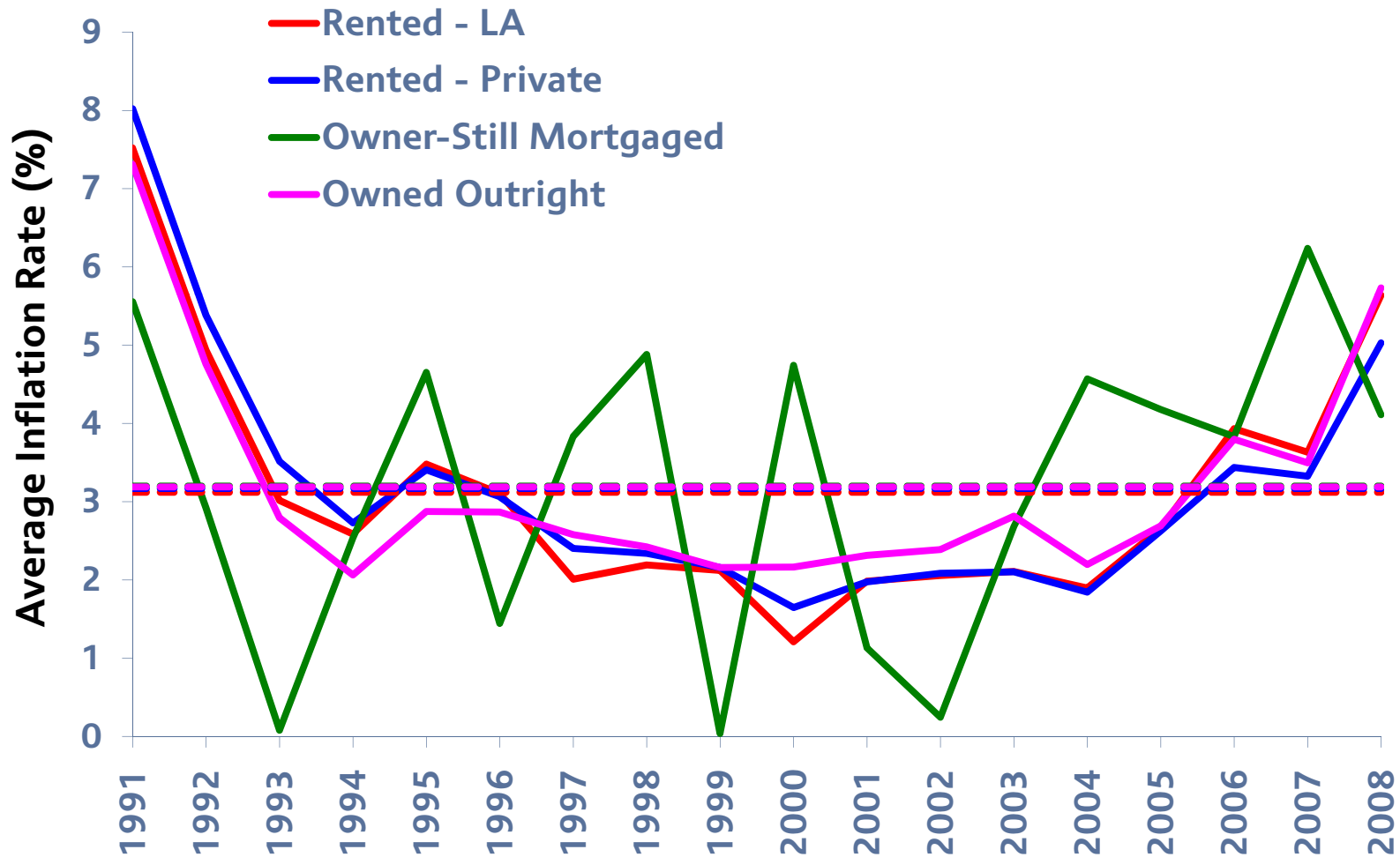
Indexation of Benefits and Tax Thresholds

- The September inflation numbers are used for uprating tax thresholds and certain benefits
 - The basic state pension is uprated by the greater of RPI inflation and 2.5%
 - Many other benefits are usually either uprated in line with the RPI or the Rossi Index (RPI excluding housing costs)
 - Budget 2009 stated that if RPI is negative in September, there will be no cash reductions in these benefits or in tax thresholds
 - Could involve a real increase **for some**

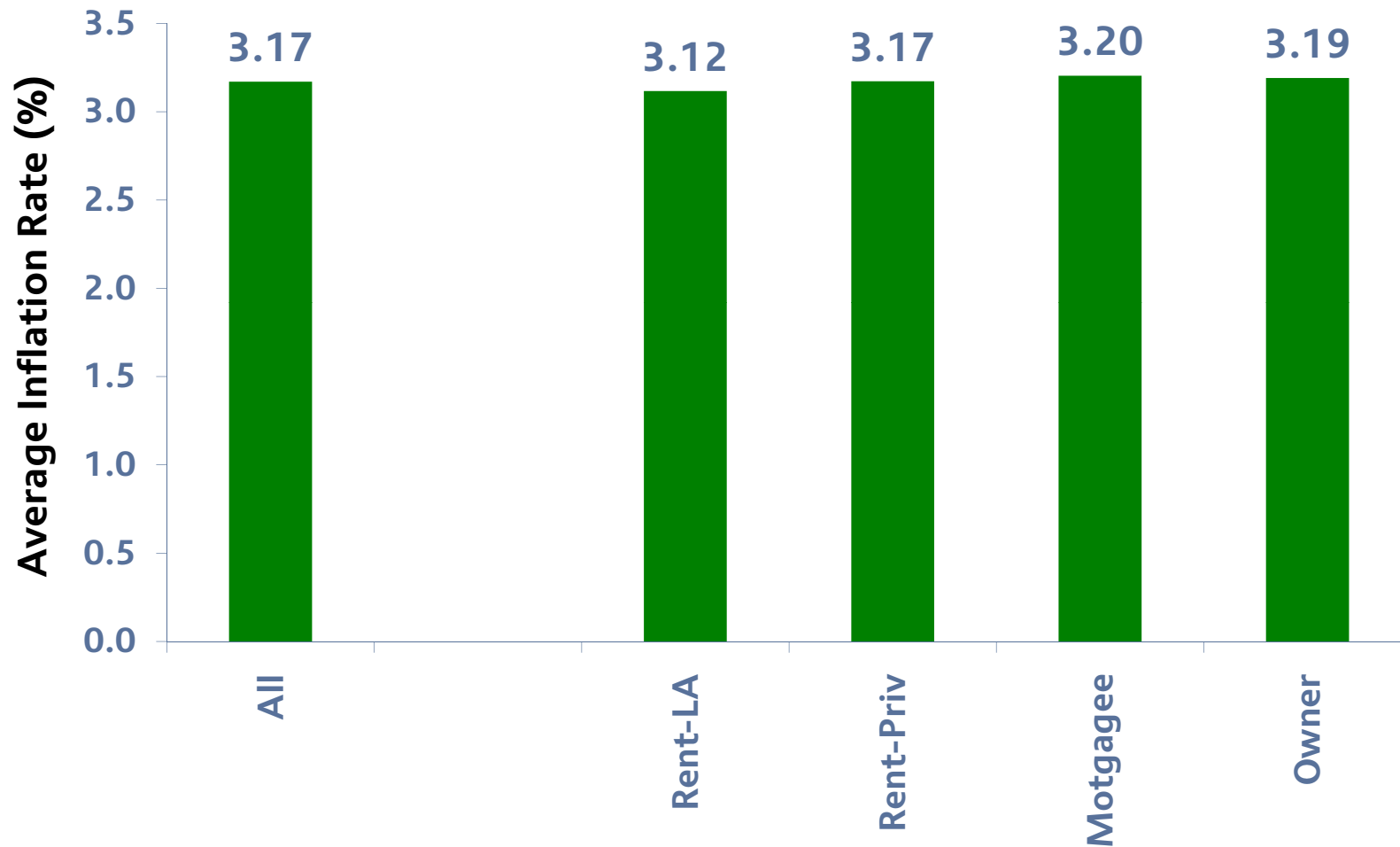
Outlook

- RPI inflation could rebound over the next few months
 - Average of most recent independent forecasts for Q4 2010 is 2.6%
- Mortgage Interest Rates cannot go much lower
 - Current collapse in RPI is inflation largely driven by lower mortgage interest
 - These prices are unlikely to fall much further
- Effect of Exchange Rates
 - Fall in the value of Sterling puts upward pressure on inflation, and vice versa

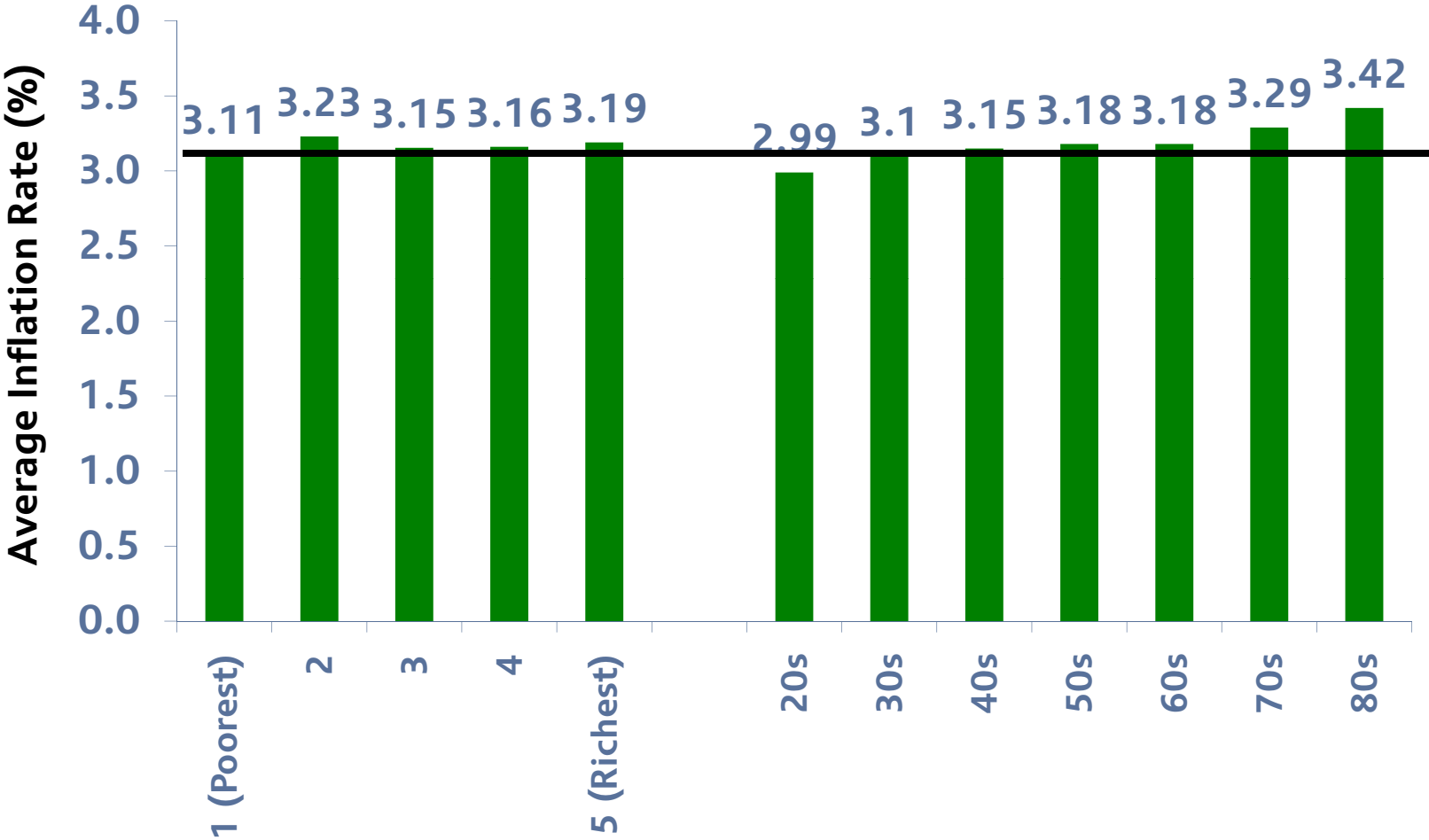
Crucially, many of these differences cancel out over the longer term...



Average inflation rates since 1991, by housing tenure



Average inflation rates since 1991, by Income and Age



Summary

- Published inflation rates are simply averages.
- Behind these averages, there is variation in households rates as different households have different spending patterns

Higher Inflation, on Average

- Renters, owners-outright
- Older households
- Poorer households
- Single Adult Households

Lower Inflation, on Average

- Those with mortgages
- Younger households
- Richer households
- Couples

- Currently most of this is driven by mortgage interest payments. Many who have the lowest inflation now had the highest inflation in 2007
- Differences in the average rate of inflation over a longer time period tend to be less dramatic than those at any one point in time