The Future Size and Composition of the Private Rented Sector
An LSE London project for Shelter
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Table of Contents

Executive Summary

The brief

Current forecasts suggest that perhaps one in four households in England and maybe one in three in London might be living in the private rented sector by 2025. However there has been little attempt to identify which household types are likely to be most affected.

Our brief was both to fill this gap and to look somewhat further ahead. Shelter asked us to 'produce plausible modelling, forecasting how many privately renting households there will be in England in 2028, what their demographic composition will be and what proportion of each demographic group will be privately renting.' The findings would be used to provide an evidence base from which to discuss how policy towards the private rented sector might better serve the full range of households likely to be living in the sector.

Our approach

We undertook a statistical analysis both at national level and for London separately. The analysis had four distinct stages:

> Stage 1: Looking back at the trends in the proportion of households in the private rented sector by household type;

> Stage 2: Clarifying the macroeconomic and housing-market variables that help determine these proportions;

> Stage 3: Regressing the observed proportions of households in private renting on these explanatory variables to identify their impact on tenure patterns by household type;

> Stage 4: Creating forward-looking scenarios based on possible macroeconomic, housing market and supply conditions.

Using the results from these four stages, we projected the trends in the proportion of each household type under each of the scenarios.

It is important to note that the resultant estimates are NOT predictions but rather a means of understanding how the system might respond to changing circumstances

Looking back

In both England and London, the groups with the largest proportions of households in the private rented sector are young and multi-adult households. More than four out of five multi-adult households and almost half of all single-person households are in the private rented sector (Table E1). The biggest difference between England as a whole and London is the high and very rapidly increasing proportion of couples with one child renting privately in London - which now exceeds the proportion of lone-parent households with one child. This pattern is not fully replicated across the country although the largest *increases* since 2005 have been seen among households with children.

In England, rates of change across household groups seem to have been fairly consistent over the whole period. In London, for most groups the largest increases were in the period before 2012.

Since then the rate of increase has slowed for some groups, especially young single-person households.

Table E1: Proportion of private tenants by household type and period, 2005-2017 - groups with the highest proportions

	Pre-recession	*Recession & aftermath*	*Recovery*	*Latest observation*
England	around 2005 to around 2007	around 2008 to around 2012	around 2013 to 2017 Q2	2017 Q2
Multi ≤ 34	75.9	76.8	81.2	82.0
Singles ≤ 34	32.6	42.3	47.9	48.6
Couples ≤ 34	29.5	41.6	48.7	48.4
Lone parents 1 child	20.3	29.3	34.5	32.9
Couples 1 child	11.7	19.3	23.9	23.6
London				
Multi ≤ 34	80.5	79.2	84.9	85.1
Singles ≤ 34	38.1	47.8	47.8	49.8
Couples ≤ 34	47.6	55.0	59.6	58.7
Couples 1 child	18.1	28.2	32.4	37.9
Lone parents 1 child	16.5	24.5	31.2	31.0

Independent variables

The core variables we used to predict changes all related to households' capacity to enter owner-occupation. Other potential variables more directly related to the private rented sector, such as the number of Buy to Let mortgages, proved not to be significant. It was not possible to include a measure of private rents as data are not available for the full period of analysis.

Since owner-occupation is considered the preferred tenure for most households, we assume that the proportion of households in the PRS is, broadly speaking, a function of what might be called the '3 As' (*Affordability*, *Accessibility* and *Availability*) for owner-occupiers and that this will apply in particular for first-time buyers. These '3 As' refer to the income required to afford owner-occupation; the ease of obtaining a mortgage; and changes in the supply of housing.

Affordability can be expected to affect those who have relatively low incomes/capacity to pay to buy a housing asset. This applies to households with, especially younger, children as well as those early on in their careers. It also affects those who want to live in higher priced areas.

Accessibility is more affected by households' capacity to raise a deposit and to obtain a mortgage. This is more difficult for those starting out in their careers, those in uncertain jobs and those who do not benefit from family funding. In terms of household types, it is likely to be easier for working couples and less easy for those with children because they have other commitments.

Availability relates to the increase in housing supply as compared to the increase in the number of households looking for a home.

The regression results were consistent with our expectations of the impact on the proportions of households in the PRS. They yielded a formula that could be used to project the proportion of each household type living in the PRS based on the expected future values of the independent variables. These values will vary depending on the macro-economy, the housing market and housing policy.

Scenarios

To take account of the different ways the future may develop we identified three alternative growth trajectories: *balanced*, *weak* and *robust*. We produced two alternative versions of the robust trajectory, giving **four scenarios**.

Under the *balanced scenario* we assume economic growth and related variables will be basically in line with current government projections – i.e., inflation will stabilise but economic growth will be slow, and there will be some increase in interest rates. The mortgage market will continue to ease slowly and house price increases will be relatively limited, but income multipliers (house price/earnings) will worsen slightly as income growth is limited. Housing output will rise slowly from current levels.

The *weak scenario* reflects lower economic growth but also slightly lower inflation and house price increases. However lower rates of income growth mean the income multiplier still worsens. Interest rates will increase for macroeconomic reasons and the mortgage market will become a bit tighter. Housing output will fall somewhat and does not recover over the projection period.

The two robust scenarios reflect a more optimistic view of the economy with higher economic growth, and therefore both higher inflation and more rapid increases in house prices as well as higher interest rates. Taking these factors together, income multipliers remain relatively constant. Migration policy reduces population pressure, and housing policy is successful in raising the rate of new completions in line with government objectives. *Robust scenario a* assumes completions at 300,000 while *robust scenario b* has them at 250,000 pa,

Projections: the overall size of the PRS sector

Figure E1a shows the projections for the sector as a whole under these different scenarios. The weak scenario shows the proportion of households in the PRS rising by more than 25%, to 24.6% in England. Under the balanced scenario, it falls by around 5% in the early years and then stabilises at around 17.9%. The robust scenarios show a very rapid decline in the PRS. Assuming the higher level of supply it falls to just over 10%, while with lower levels of new supply the decline is to 13.1%.

The pattern in London (Figure E1b) is rather less responsive to the different scenarios.   Under the weak scenario the proportion of households in the PRS continues to rise to 31.6% in 2028. Under the balanced scenario there is some small decline until 2022 and then the proportion increases slightly, back to current levels. Under the robust scenarios it declines to around 18.1% in 2028 with the higher supply assumptions, while under the somewhat lower supply assumption the decline is limited to 20.8%.

Figure E1a: Trends in the proportion of households in the PRS over the next decade: 4 scenarios, England.
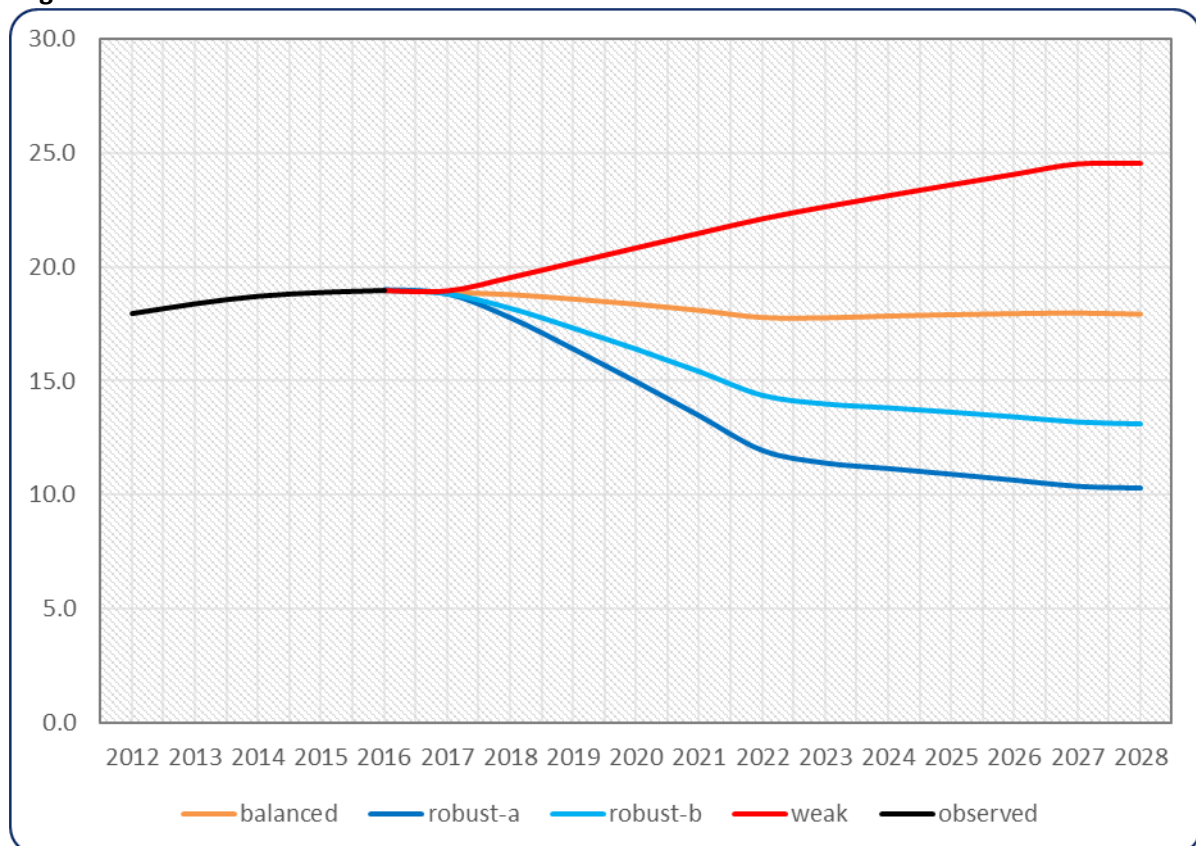
Figure E1b: Trends in the proportion of households in the PRS over the next decade: 4 scenarios, London.
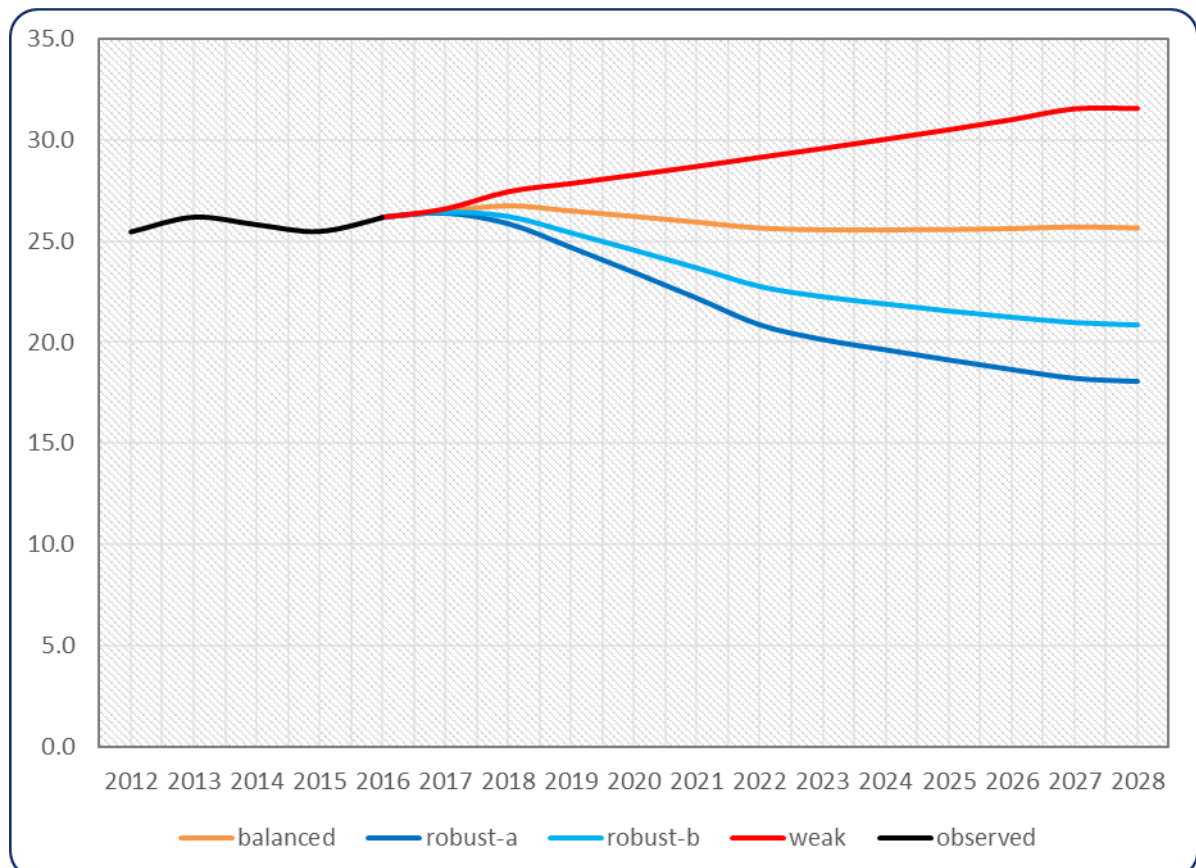
Projections by household type

While the biggest changes in the proportions of household types in the private rented sector to date have been among young singles and multi-adult households, looking to the future these trends seem to be working through further to those aged 35 and older, especially households with children.

In England overall under the *balanced* scenario, patterns vary but the changes are generally very small. A few household types see increasing proportions in the PRS but for most household types, the proportion decreases at least in the early years. Under the *weak* scenario, the proportions in the PRS rise for almost all household types - although the increase is lowest for those that already have high proportions living in the PRS in 2017. The PRS proportions of most family households rise more steeply, although from a lower base. In the *robust* scenarios on the other hand there are much bigger reductions in the proportions of family households in the private rented sector, although these slow after 2022.

In London the patterns are a bit more varied, with some reductions in the proportions in the private rented sector even under the *weak* scenario. In general, proportions are relatively stable among those with no children, but rise among family households. Under the *balanced* scenario there are still some rises among singles and childless multi-adult households aged 35-64, but the proportions in the PRS fall for almost all other categories over the whole decade. Under the *robust* scenarios the proportions in private renting among groups without children mainly fall markedly. However among most of those with children the effect is less significant. The groups who appear to benefit least from better conditions are single parents with two or more children, and older multi-adult households with no children.

The four figures below provide some summary information to help clarify the relative impact of different scenarios for England and for London. Figures E2a and b, which reflect the weak scenario, demonstrate that across the country families of all types would suffer most as a result of a negative macroeconomic and housing market. Those without children appear to be far less affected. The pattern in London differs somewhat from the country as a whole, with more limited changes for all types of household.

Figure E2a: Trends in the proportion of different household groups living in the PRS England: weak scenario
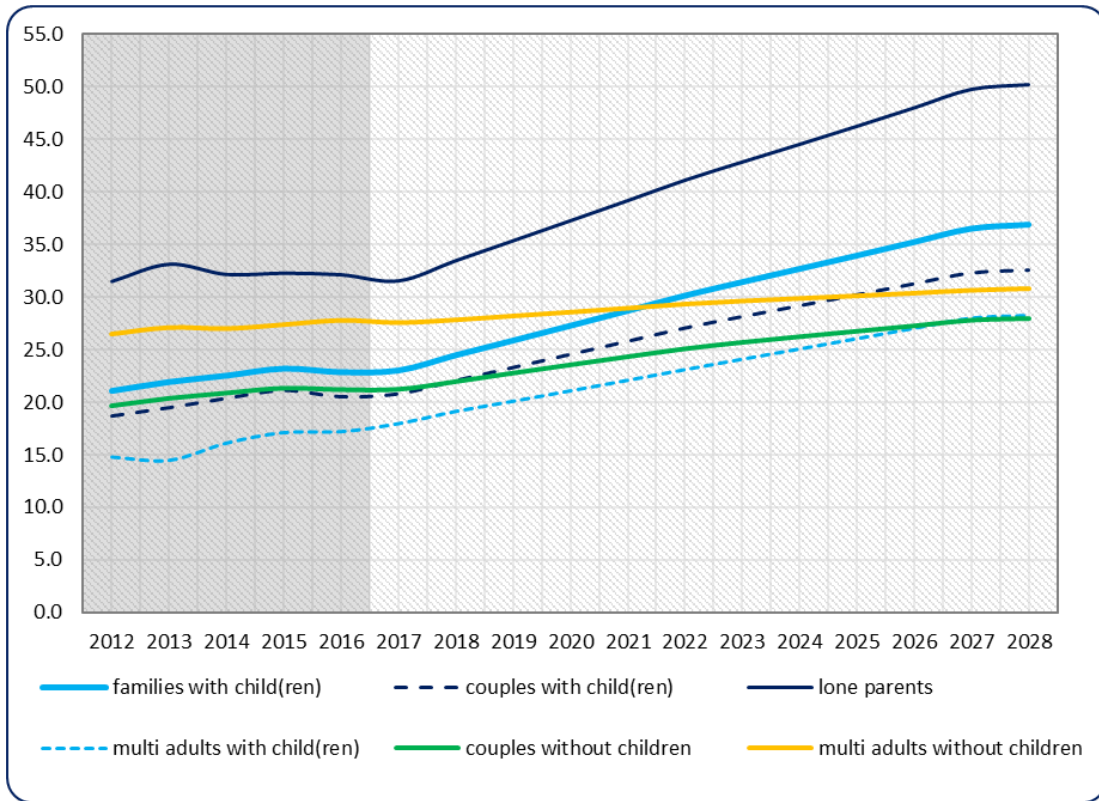
(shaded area covers observed data)

Figure E2b: Trends in the proportion of households of given types that are living in the PRS London: weak scenario.
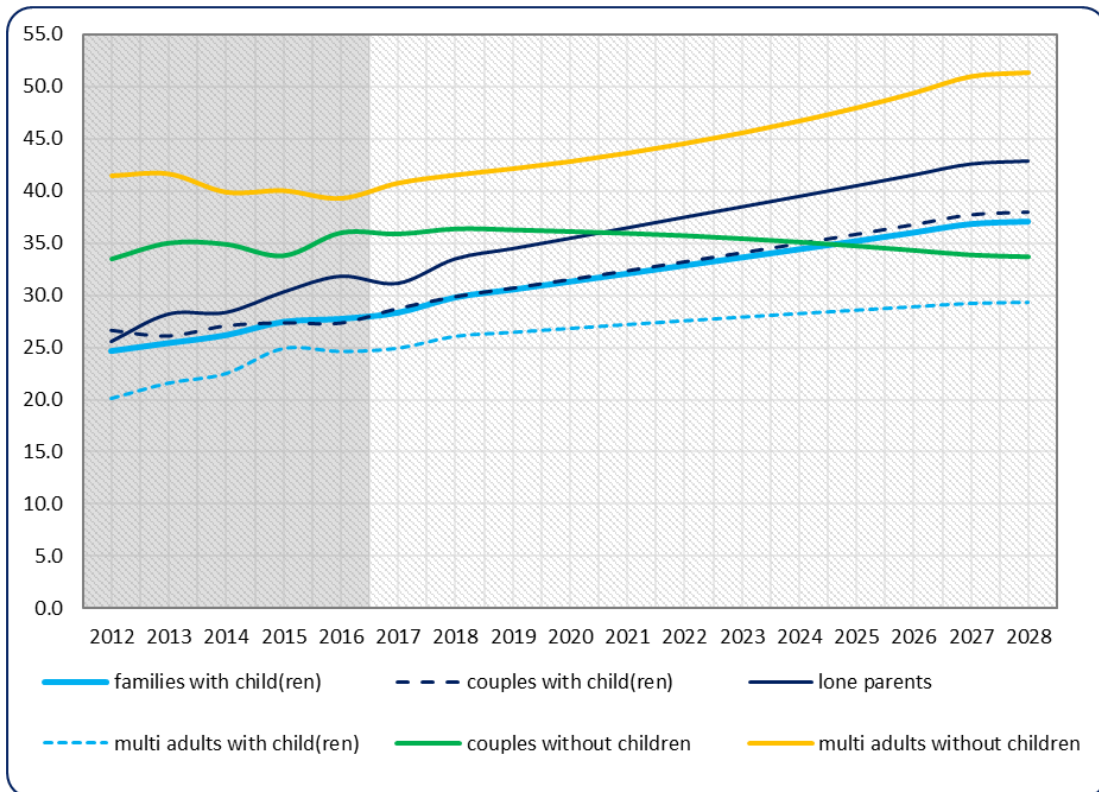
(Shaded area covers observed figures)

In Figure E3a, which reflects *robust scenario a,* with the lower rate of supply success, there are declines in the proportion of households in the PRS for all the main household types in England. The smallest falls are among multi-adult households without children. This may reflect the extent to which such households are anyway more likely to choose to rent privately.

In London (Figure E3b) the proportion of couples without children falls faster than for other groups, while in the country as a whole the decline is similar to family households. This again is likely to be associated with the extent to which being in the PRS is a matter of choice or constraint.

Figure E3a: Trends in the proportion of households of given type that are living in the PRS England: robust-a scenario

Note: Shaded area covers observed figures.

Figure E3b: Trends in the proportion of households of given type that are living in the PRS London: robust-b scenario
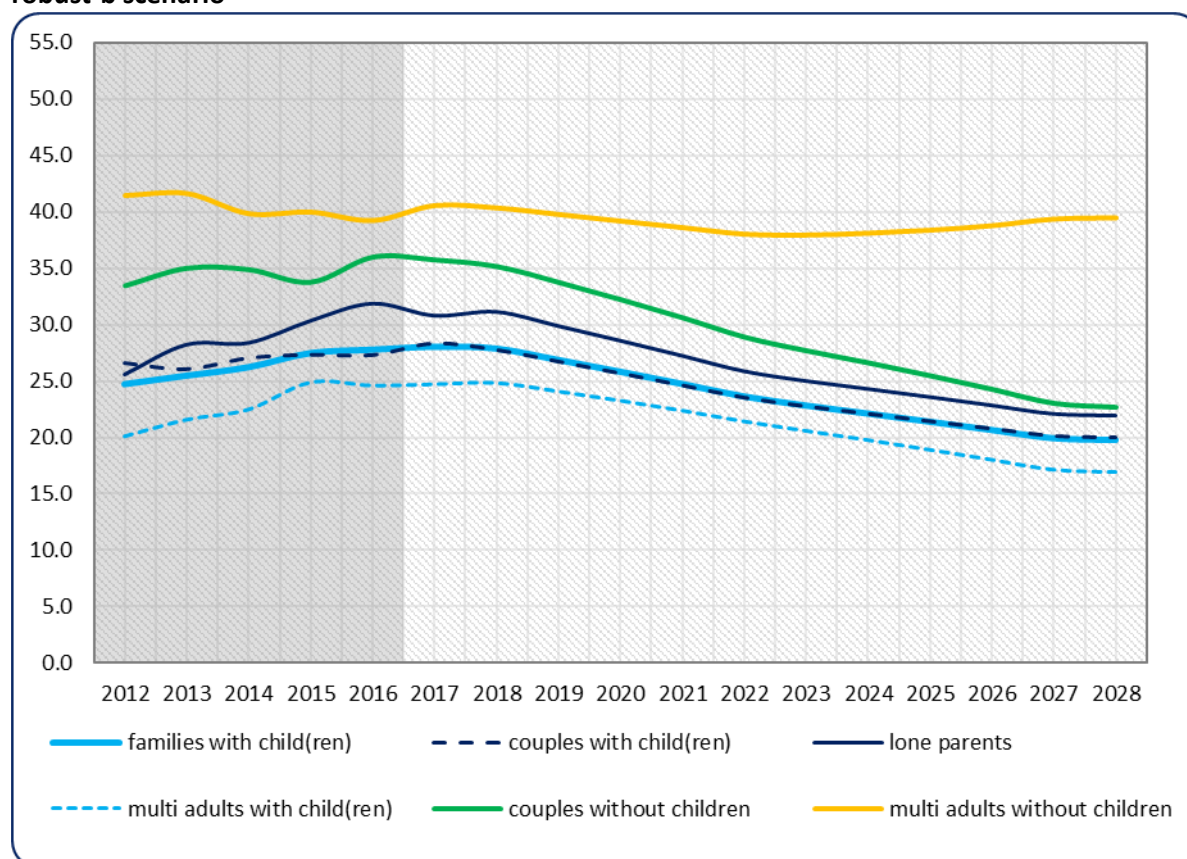
Note: Shaded area covers observed figures.

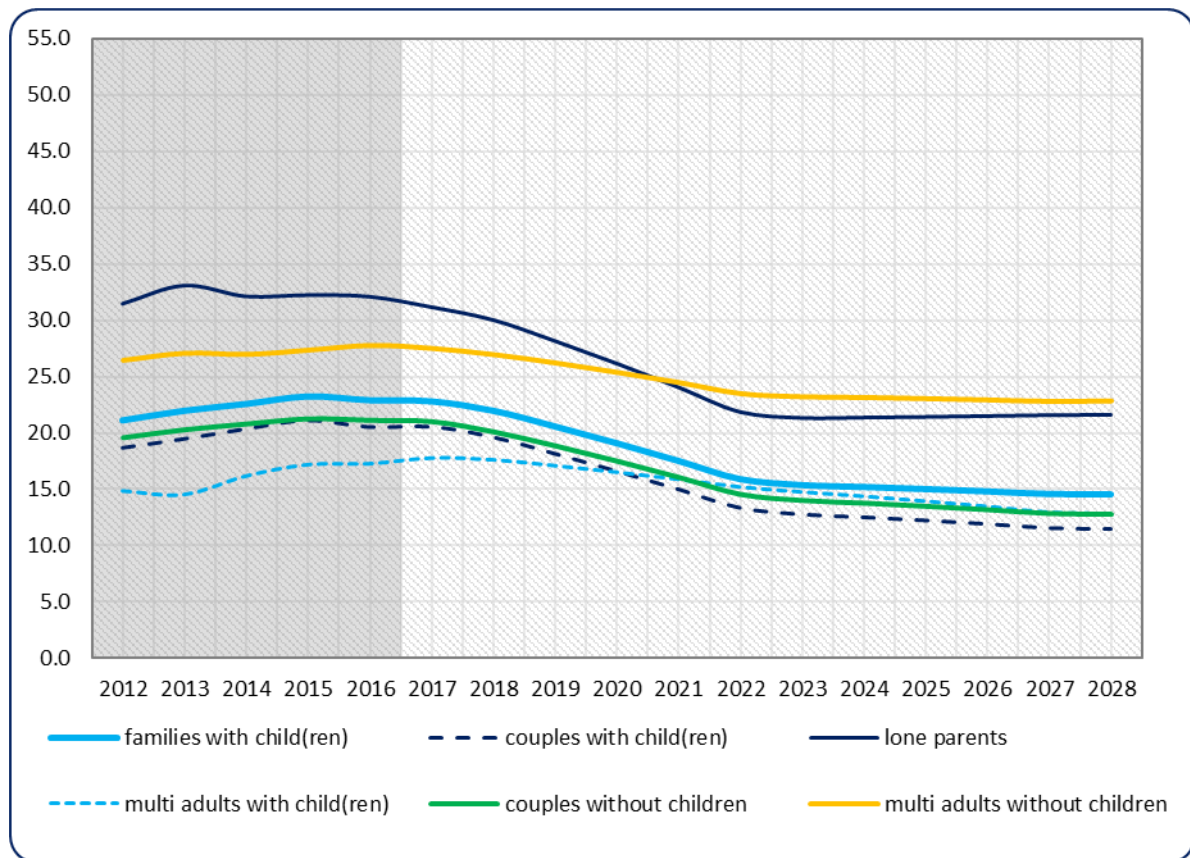Another important issue is that changes in the *proportions* of a particular household type are linked to changes in the *numbers* in each household type. Of particular importance here is that the numbers of both young, single-person households and young, multi-person households increased until the turn of the century in both England and London. Thereafter, however, the number of single-person households declined very significantly, while at the same time the number of multi-adult households continued to increase consistently through to 2028. The impact in London is particularly strong. At the turn of the century, the number of single-person households in London was around 50% more than that of multi-adult households. By 2028 the numbers in the two groups taken together will have declined and multi-adult households will be in the majority - with around 90% more multi-person than single-person households.

Finally, we did not separately model the possibility of a significant increase in the output of social housing. If social sector supply were to increase more than proportionately to overall supply, the majority of any additional lettings would probably go to households in temporary accommodation, many of whom are in the private rented sector; to concealed households; and to private tenants. If on the other hand the additional housing were in the private sector the majority of households would also come from the PRS. So, in terms of totals, the tenure of new completions would probably make little difference to the proportion of households in the PRS.

Conclusions
The analysis points to four important conclusions. First, varying macroeconomic and housing market (especially supply) conditions can have very significant impacts on the proportions and types of households living in the private rented sector. Since the turn of the century most of these factors have tended to increase the proportions of all types of household renting privately. The patterns of

change are surprisingly similar in London and the country as a whole, but of course changes start from a higher level in London. Importantly the rate of increase has generally been higher among family households.

Second, looking to the future perhaps the most likely scenario is actually that there will be very little change. We are already seeing the size of the sector stabilise for most household types and if the economy and housing market improve only slowly, stability seems the most likely outcome. But it should also be remembered that the same factors are affecting household formation and therefore the numbers of households in total, and particularly the numbers of single person and multi-adult households.

Third, while many of the past trends have been similar between London and the rest of the country, future scenarios suggest that the scale of the PRS in London is much less responsive to changes (especially positive changes) in the determining variables than in the country as a whole. This in the main reflects the scale of the affordability crisis in London but equally suggests that if constraints on entry into owner-occupation are reduced in the future, owner-occupation could start to grow quite rapidly in the rest of the country, particularly among family households.

Finally, were the economy to improve more rapidly than most current forecasts suggest, the most likely effect would be a significant increase in the numbers of those trying to form separate households. This in turn would put greater pressure on both prices and rents, especially in London. Higher prices and rents would themselves further modify tenure decisions.

1. Introduction: the project

Our brief was 'To produce plausible modelling, forecasting how many privately renting households there will be in England in 2028, what their demographic composition will be and what proportion of each demographic group will be privately renting.' The findings constitute an evidence base from which to discuss how policy towards the private rented sector might better serve the full range of households likely to be living in the sector.

2. Existing projections

There have been various attempts to project the size and composition of the private rented sector, as part of more general studies of tenure change. One example is *Housing in Transition: Understanding the dynamics of tenure change*, a report by the Cambridge Centre for Housing and Planning Research (CCHPR) for Shelter and the Resolution Foundation in 2012 which was co-authored by two members of the current team (Whitehead et al, 2012). That report was based on data from the English Housing Survey together with a detailed analysis of the dynamics of tenure trends. It examined the potential for changes in the overall tenure mix based on different scenarios about the macroeconomy. The projections suggested that by 2025 the private rented sector was likely to house about 22% of all households in England and could accommodate 35% or more of all households in London. It also suggested that the number of families with children accommodated in the PRS might double over the same period.

PwC's 2015 *UK housing market outlook: the continuing rise of Generation Rent* was fundamentally an examination of how house prices and owner-occupation might change, and the consequential impacts on the numbers of households in the private rented sector (PwC, 2015). It suggested that most younger households would be in private renting by 2025 and that the overall proportion of private tenants in the UK could be almost 25%. The main reasons for this growth were to do with affordability, demographic change and constraints on housing supply.

A 2016 review of the impact of tax changes and other factors on the supply of privately rented housing, notably Buy to Let, included projections of the scale of the PRS under different scenarios (Scanlon et al, 2016). That report suggested that the private rented sector in England would be around 20-22% by 2020 and might be as high as 25% by 2025.

Most recently, in late 2017, the Resolution Foundation published a cohort analysis as part of their intergenerational workstream. Their report suggested that if current trends continued, the rate of owner-occupation among millennials was unlikely to reach 50% until they were age 45 or even older (Corlett and Judge, 2017).

3. Our approach

Our approach differs from earlier projections in that it concentrates not so much on the changing scale of the private rented sector overall but rather on what happens to each of the major household types within that total. It also differs in that the approach directly measures the size of the sector and its components by household type rather than as a residual from estimates of other tenures, notably owner-occupation. We do however recognise that many of the major determinants of the growth (or otherwise) of the private rented sector are macroeconomic and housing-market variables which impact on a household's capacity to enter owner-occupation. Other important factors include demographic change (both shifts in population and household type) as well as the scale of social housing provision.

We have adopted a similar approach to the one we used in 2012: we define four forward looking economic scenarios that help to determine likely private rented sector outcomes. As in the 2012 research, the more optimistic the scenario the less likely are most types of household to be private tenants. However by examining the impact on each household type separately we achieve a more nuanced understanding of the impact of different determining variables.

Also, as in 2012, we look at England as a whole and then at London separately. This is because London has both a different demographic make-up and a different tenure structure with private renting a much larger proportion of the total. Also many of the problems in the sector -- and indeed in the housing market in general -- are more pronounced in London.

The statistical analysis involves four distinct stages:

> Stage 1: Looking back at the trends in the proportion of households in the private rented sector by household type;

> Stage 2: Clarifying the explanatory variables which help to determine these proportions;

> Stage 3: Regressing the observed proportions of households in private renting on these determining variables;

> Stage 4: Creating a set of forward-looking scenarios.

Using the results from these four stages, we project the trends in the proportion of each household type under each of the scenarios. Finally we bring out some of the implications of our analysis.

It must be remembered that these scenarios and indeed the projected trends are just what they say they are. They are NOT predictions but rather a means of understanding how the system might respond to changing circumstances. Also and importantly, after 2022 there are very few detailed projections of macroeconomic variables, so we have chosen rather 'steady' assumptions.

4. Statistical analysis

We conducted our statistical analysis in four sequential stages, listed above. The data source was the Labour Force Survey household version.

Stage 1: Trends in the proportions of private tenants by household type

First, we grouped household into categories by the relationship of the adult(s) and the number of dependent children. Then, we divided households *without* dependent children into three types by the age of the household reference person (HRP). This resulted in fifteen household types (see Table 1):

- Nine groups without children, categorised by age of HRP
    - Three age groups of single person households
    - Three age groups of childless couples
    - Three age groups of multi-adult households
- Six groups with children—categorised by number of children but *not* by age of HRP
    - Couples with one child and more than one child
    - Lone parents with one child and more than one child
    - Multi-adult households with one child and more than one child

We examined twelve of these types, omitting childless households with HRPs over 65 (Singles 65+, Couples 65+ and Multi 65+) where there has generally very little variation in the proportions accommodated in the private rented sector.

Drawing on the tenure patterns for each of the twelve household types, we estimated biannual seasonally adjusted PRS proportions (12-month or four-quarter moving average ending in Q2 and Q4 respectively) from Q4 2005 to Q2 2017.

Table 1: Household types and definitions

number of dependent children		relationship of adult(s) in household			
	HRP age	**Single**	**Couple**	**lone parent**	**other multi/unrelated**
0	≤34	Singles ≤ 34	Couples ≤ 34		Multi ≤ 34
	35-64	Singles 35-64	Couples 35-64		Multi 35-64
	≥65	Singles 65+	Couples 65+		Multi 65+
1			Couples 1 child	Lone parents 1 child	Multi 1 child
2+			Couples 2+ children	Lone parents 2+ children	Multi 2+ children

The following two tables set out average PRS proportions by household type from Q4 2005 to Q2 2017 for England and London respectively[1]. The tables are divided into three sub-periods: *pre-recession* (approximately 2005-2007), *recession and aftermath* (2008-2012), and *recovery* (2013 to present).   The latest figures available, for the second quarter of 2017, are also shown.

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[1] For detailed trends for each household type for the period 2005-2017, see tables in Section 5.

Table 2: Proportion of private tenants by household type and period, 2005-2017: England

	Pre-recession	*Recession & aftermath*	*Recovery*	*Latest observation*
	around 2005 to around 2007	around 2008 to around 2012	around 2013 to 2017 Q2	2017 Q2
Singles ≤ 34	32.6	42.3	47.9	48.6
Singles 35-64	13.9	17.4	20.9	22.0
Couples ≤ 34	29.5	41.6	48.7	48.4
Couples 35-64	6.1	8.7	11.8	12.1
Couples 1 child	11.7	19.3	23.9	23.6
Couples 2+ children	8.1	12.4	18.1	18.4
Lone parents 1 child	20.3	29.3	34.5	32.9
Lone parents 2+ children	16.3	25.5	29.6	28.6
Multi ≤ 34	75.9	76.8	81.2	82.0
Multi 35-64	7.4	9.7	11.8	11.8
Multi 1 child	8.1	11.6	14.6	15.2
Multi 2+ children	9.4	14.0	18.4	20.8

Source: Authors' estimates based on Quarterly Labour Force Survey (Household). Note: See Annex.

The figures for England as a whole (Table 2) suggest that:
- Very high proportions of younger households are living in privately rented accommodation. The latest figures indicate that multi-adult households aged 34 or under were the household type with the highest proportion in the PRS (82.0%), singles under age 35 were second (48.6%), and couples under 35 third (48.4%).
- Since 2005 the proportions living in the PRS have increased for *all* household types, albeit by different magnitudes. The greatest increases since the pre-recession and recovery period were among young couples (the proportion in the PRS grew by 19.2 percentage points); young singles (15.3 points); and lone parents with 1 child (14.1 points).
- The proportion of couples with one or more children living in the PRS has more than doubled since 2005, although the absolute change was not as great as for some other household types.
- Multi-adult households aged 35-64 saw the smallest expansion (4.4 points), followed by young multi-adult households (5.4 points) and couples aged 35-64 (5.7 points).
- The latest data suggest that growth has generally slowed and for one or two groups the proportions living in the PRS have even declined.

Table 3 sets out the figures for London. The pattern is generally similar, although starting from a higher base:
- The three household types with the largest proportions living in the PRS were the same as those in England: young multi-adult households (85.1%), young couples (58.7%) and young singles (49.8%).
- Importantly, the proportion of young childless couples in the PRS was more than 10% higher in London than in England as a whole. In London, couples with one child and childless couples aged 35-64 were also much more likely to be in the PRS than nationally (by 14.3 and 10.3 percentage points respectively).
- Since 2005, the proportion of couples with one or more children in the PRS has more than doubled in London, as in the rest of the country. As a result, more than a third of households with one child in London were living in the PRS in 2017. Comparing the pre-recession to the recovery period, the largest rise was among lone parents with one child (by 14.8 percentage

points), followed by lone parents with 2+ children and couples with one child (each by 14.3 points).

- Lone parents with one child, singles aged 35-64 and lone parents with 2+ children were slightly *less* likely to live in the PRS in London than nationally, although the differences were not significant (-1.9, -1.8 and -1.0 points respectively).
- Compared to 2005, higher proportions of all household types are now living in the PRS-- except for young multi-adult households, where the proportion in the PRS declined marginally but only from the pre-recession to the recession period.[2]
- The smallest increases were among young multi-adult households (4.4 points), singles aged 35-64 (5.9 points) and multi-adult households aged 35-64 (6.3 points).

Table 3: Proportion of private tenants by household type and period, 2005-2017: London

	Pre-recession	*Recession & aftermath*	*Recovery*	*Latest observation*
	around 2005 to around 2007	around 2008 to around 2012	around 2013 to 2017 Q2	2017 Q2
Singles ≤ 34	38.1	47.8	47.8	49.8
Singles 35-64	15.4	18.3	21.3	20.2
Couples ≤ 34	47.6	55.0	59.6	58.7
Couples 35-64	12.0	16.1	21.4	23.1
Couples 1 child	18.1	28.2	32.4	37.9
Couples 2+ children	11.2	18.4	24.2	22.8
Lone parents 1 child	16.5	24.5	31.2	31.0
Lone parents 2+ children	12.4	22.6	26.7	27.6
Multi ≤ 34	80.5	79.2	84.9	85.1
Multi 35-64	12.4	16.1	18.7	19.6
Multi 1 child	12.5	17.2	24.0	24.1
Multi 2+ children	12.0	16.6	22.4	24.1

Source & note: As for Table 2.

Thus in both England and London, the largest groups in the private rented sector are young and multi-adult households, but across the country the largest *increases* since 2005 have been seen among households with children. Importantly, in England the rate of change seems to have been fairly consistent over the whole period, but in London for most groups the largest increases were in the period before 2012. Since then the rate of increase has slowed for some groups, including notably young singles.

Stage 2: Independent variables

Having looked at the patterns of different household types in the PRS, we then assessed the variables that might help explain these variations.

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[2] One possibility is that many mortgaged owners in the 'singles under 35' and 'couples under 35' categories took in lodgers during the recession period, which would have raised the owner-occupation rate for 'multi-adult households under 35'.

Since owner-occupation is considered to be the preferred tenure for most households, we assume that the proportion of households in the PRS is, broadly speaking, a function of what might be called the '3 As' (Affordability, Accessibility and Availability) for owner-occupiers and that this will apply in particular for first-time buyers. These 'As' refer to the income required to afford owner-occupation; the ease of obtaining a mortgage; and changes in the supply of housing. In mathematical notation, the proportion of households in the PRS *(P)* can be represented as follows[3]:

$$P = f(Affordability, Accessibility, Availability)$$

Affordability is likely to affect both those who have relatively low incomes/capacity to pay to buy a housing asset. This applies to households with, especially younger, children as well as those early on in their careers. It also affects those who are looking to live in higher priced areas.

Accessibility relates more to households' capacity to raise a deposit and to obtain a mortgage. This is more difficult for those early on in their careers and those in uncertain jobs; and more generally those who cannot benefit from family funding. In terms of household types, it is likely to be easier for couples who both work and less easy for those with children who have other commitments.

Availability on the other hand relates more to increases in the supply of housing as compared to increases in the number of households looking for a home. This is likely to vary regionally.

Each of these elements is quite complex; also they interact with one another. Data limitations mean that we must define each element quite simply.

Any relationship to household types can also only be indicative, in part because the three As may directly impact on household types and not just on tenure choice. Thus for instance worsening affordability is likely to mean fewer single person and more multi-adult households, as well as fewer households overall.

We examined a large number of potentially relevant datasets within which we identified a number of potential explanatory (independent) variables consistent with this general framework. We rejected other potential measures particularly because of multicollinearity problems[4] but also because of data quality. We selected a final list of four variables:

> ***IM***: the income multiplier for first-time buyers (mortgage amount / income).

> ***LTV***: the average loan-to-value ratio for first-time buyers (mortgage amount / house price).

> ***MIR***: 2-year variable mortgage interest rate (for 75% LTV) [5].

> ***COM/POP***: The ratio of permanent dwelling completions (*COM*) to the population aged 20 to 64 years in the preceding period (*POP*).

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[3] We tested another model in which the dependent variable was the proportion of mortgaged owners, rather than the proportion of households in the private rented sector *P.* PRS proportions were then calculated as the residuals after removing outright owners and social tenants. This is the traditional approach when the private rented sector was much smaller and more clearly residual. However the sector is now larger and more mainstream and the results using this method were less robust.

[4] A situation where several independent explanatory variables are closely correlated, so that some are redundant when explaining *P.*

[5] There were several options for mortgage interest rates. MIR appeared to have the fewest multicollinearity problems.

The first variable reflects affordability among those entering owner-occupation; the second the deposit required and therefore accessibility; the third directly affects affordability but is modified by the deposit requirement; while the final variable provides a measure of new supply. It is important to note that these variables were chosen to reflect our qualitative understanding of the factors affecting tenure choice, but also to limit bias arising from multi-collinearity. This problem arises from the fact that many independent variables are affected by the same macroeconomic pressures. Annex 2 describes the main alternative measures which were tested.

Higher levels of three of the variables that contribute to the '3 As' can be expected to be associated with lower proportions of households living in the PRS. The impact of the mortgage interest rate variable is rather less certain as it reflects changes in economic growth as well as direct payments.

All variables are seasonally adjusted indices, not absolute numbers or levels. Annex 1 contains detailed definitions, measurement units, data sources and notes. All the variables were measured biannually and seasonally adjusted using 12-month or four-quarter moving averages.

Table 4: Trends in the independent variables: England

	Pre-recession	*Recession & aftermath*	*Recovery*	*Latest observation*
	2005 to around 2007	around 2008 to around 2012	around 2013 to present	2017 Q2
Income multiplier	3.3	3.3	3.5	3.7
Loan-to-value (%)	89.9	80.2	82.0	83.5
Mortgage interest rate (% p.a.)	5.0	3.8	2.2	1.5
Ratio of completions/population	5.5	4.0	4.0	4.8
Completions (000s; p.a.)	166.0	125.0	128.0	153.0
Population (mn)	30.0	31.0	32.0	32.0

Sources & notes: See Annex.

Tables 4 and 5 set out the average values of these variables for the three sub-periods since 2005, for England and London respectively. The tables show that:

- The income multiplier has risen fairly consistently over the period and is higher in London than in England.
- The mortgage interest rate has fallen steadily.
- The average LTV dived in the recession and afterwards. It has since risen somewhat but not to the level seen before the crisis. In London, the fall was far greater and thereafter has remained fairly stable.
- The ratio of completions to population declined as a result of cutbacks in housing output while population has continued to rise. Taken together it is still much lower than pre-recession across England but has recovered to pre-crisis levels in London.

Table 5: Trends in the independent variables: London

	Pre-recession	*Recession & aftermath*	*Recovery*	*Latest observation*
	2005 to around 2007	around 2008 to around 2012	around 2013 to 2017 Q2	2017 Q2
Income multiplier	3.5	3.5	3.9	4.0
Loan-to-value (%)	89.2	76.1	75.0	75.0
Mortgage interest rate (% p.a.)	as England			
Ratio of completions/population	4.3	3.8	3.7	4.3
Completions (000s; p.a.)	20.9	19.6	20.5	24.1
Population (mn)	4.8	5.1	5.5	5.6

Sources & notes: See Annex.

Stage 3: Regressing the proportions of households in the PRS on the independent variables

In order to examine the explanatory power of the variables set out in table 5, we regressed the proportions living in the PRS for each household type over time on the values of the variables. The regression took the following form (here simplified):

$$P_{it} = X_{it}\beta + \varepsilon;$$

where:

P: proportion of households in the PRS
X: the values of each variable
B: variable coefficient (ie scale of impact)
ε: random error terms

Subscripts i and t indicate household type and time period respectively.

More details of the statistical approach are given in Annex 1.

Table 6 sets out the expected impact of the four chosen variables on the size of the sector. Column 2 shows the conditions under which a change in the independent variable is expected to lead to an increase in the size of the PRS. Only one sign is ambiguous: that for the impact of a rise in mortgage rates. This is because such rises are often triggered by improvement in the economy -- which of themselves may lead to an increase owner-occupation. The projected impact of the income multiplier and the loan-to-value ratio are straightforward. Within the supply side variable it is possible that both completions and population could move together (the most likely scenario), or that completions could rise while population falls (possible in some circumstances but not experienced in England in living memory), or that completions fall while population rises (which did indeed occur but only for a short period immediately after the financial crisis). Overall the prediction must be that a positive ratio will increase availability and therefore reduce the proportion of households in the PRS.

Table 6: Changes in explanatory variables in relation to changes in the proportion of households in the PRS

Variable	Hypotheses: Expected change in variable associated with rise in % of households in PRS	Statistical measure: impact of increase in variable on % of households in PRS
Income multiplier	IM increases	Increases size of PRS
Loan-to-value (%)	LTV decreases	Reduces size of PRS
Mortgage interest rate (% p.a.)	MIR direct effect increases but increase also related to economic growth so offsetting effect	Economic impact dominates so reduces size of PRS
Ratio of completions/population	COM/POP decreases	Increases size of PRS

The regression results are consistent with our expectations of the impact on the proportions of households in the PRS. They suggest that over the estimation period the impact of the mortgage interest rate has been dominated by changes in macroeconomic growth rather than the direct effect of changes in interest rates. They also show that the pattern is unambiguously consistent across almost all household types. Further details appear in Annex 1.

Stage 4: Creating a set of future scenarios

Our regression analysis yielded a formula that can be used to project the proportion of each household type living in the PRS into the future. The inputs for the formula are the hypothetical future values of the independent variables. These values depend in part on expectations about economic and demographic change which are themselves uncertain. We therefore first examined projections from the main macroeconomic and housing forecasts provided by the Bank of England, OBR and other experts together with their commentaries. From this information we estimated the likely ranges of values for the relevant macroeconomic variable. We then take these together with variable specific information to provide high, medium and low estimates of each variable and bring these together under three broad trajectories for economic growth: *balanced, weak* and *robust*. We specified two versions of the robust trajectory, giving four scenarios overall.

The scenarios - an overview

Under the **balanced** scenario we assume economic growth and related variables will be basically in line with current government projections with inflation stabilising but slow economic growth and some increase in interest rates. The mortgage market will ease slightly and house price increases will be relatively limited but income multipliers worsen slightly. New housing completions rise somewhat from current levels (we use completions because of data availability although net new supply will be higher because of change of use etc).

The **weak** scenario reflects lower economic growth but also slightly lower inflation and house price increases -- however lower rates of income growth mean the income multiplier worsens. Interest rates still increase and the mortgage market becomes a bit tighter. Completion rates fall somewhat and do not recover over the projection period.

The **robust** scenarios reflect a more optimistic view of the economy with higher economic growth, and therefore both higher inflation and more rapid increases in house prices as well as higher interest rates. Taking these factors together, income multipliers remain relatively constant. Migration policy reduces population pressure and housing policy is seen to be successful in raising

the rate of new completions in line with government objectives. **Robust scenario a** assumes completions at 300,000 pa, while **robust scenario b** has them at 250,000.

Of course there are many other ways in which the scenarios could have been created but the intention is to provide a coherent set of pictures of how macroeconomic variables relate to one another and to housing market variables. The housing supply assumptions are however policy determined - but the comparison between the different scenarios makes it possible to assess the impact of varying levels of success.

The scenarios in detail

First Both the Bank of England and the OBR make detailed projections of general *inflation* up to 2022:

- *OBR (2017)* expects CPI inflation to have peaked at around 2.7% in late 2017 and then fall to around the BoE target level of 2% by 2019 and to remain steady until 2022 (the end point of their forecast).
- *BoE (2017a)* predicts the similar trend but at a slightly higher level (around 0.2 percentage points) over the same period.
- Both forecasts suggest that imported inflation, which might occur as a result of sterling deprecation after Brexit is likely to be limited.

Predictions around **house prices** and *incomes* tend to be interlinked:

- Private forecasters expect house price inflation over the next decade will be around 2.5 to 4% per annum (e.g. PwC2017, Savills & Business Insider, 2017), with the variation related to incomes.
- OBR (2017) forecasts house price inflation at 2.9% p.a. over the next three years and 3.3% for 2021 and 3.6% for 2022.
- In the same report, OBR expects increases in wages & salaries to be similar to house price growth in 2017 and below this by 0.1 to 0.3 points until 2022.

Finally, the OBR expects the *Bank Rate* to rise slowly from its historically low level of 0.25%, raised to 0.5% in November 2017 to around 1.35% in five years' time.

In all cases there is additional commentary which has also been taken into account. Table 7 sets out our range of expectations for the four main macroeconomic variables.

Table 7 Estimates based on macroeconomic forecasts.

	Inflation	*Income growth*	*House price inflation*	*Bank rate*
Mid **(balanced** scenario)	Around 2.1%	0.1 - 0.3% below house price inflation	Around 3.3%	1.25%
High **(robust** scenarios)	Around 2.5%	Similar to house price inflation	Around 4%	2.0%
Low **(weak** scenario)	Around 2.0%	0.4% or more below house price inflation	Around 2.5%	0.75%

The scenarios themselves incorporate these estimates into projections for each of the four main variables.

First-time buyers' loan-to-value ratio (LTV)

Baseline information was drawn from the views of the Bank of England (BoE) Prudential Regulation Authority on mortgage LTVs in credit risk assessment (BoE 2017b), and the most recent LTV data from UK Finance, which incorporated the Council of Mortgage Lenders last year. According to the BoE, the proportion of outstanding mortgages (for both FTBs and existing owners) with LTVs above 70% has fallen to 21% — well below the 35% share observed before the financial crisis. This suggests that lenders may be able to increase LTVs during the projection period.

UK Finance data show that on average, recent LTVs for first-time buyers have been around 83% in England and 75% in London, while the equivalent ratios for all new mortgages have been around 75% and 72% in England and London respectively. From this evidence we conclude that average FTB LTVs could increase over the projection period to 90%, which was the average both in England and London in the pre-recession period. The LTV values for the three scenarios are given in Table 8 below.

Table 8: LTV projections and their descriptions

LTV projections	description
middle level (*balanced* scenario)	• From the latest levels (83.5% in England; 75% in London), gradually increase to 87.5% (England) and 85% (London) over the next decade
high level (*robust* scenarios)	• From the latest levels gradually increase to 90% over the next decade
low level (*weak* scenario)	• From the latest level, gradually decrease to 75% (England) over the next decade. • Remain at 75% over the projection period (London).

Income multiplier for first-time buyers (IM)

Increases in income multipliers could be associated with either favourable or unfavourable situations for first-time buyers. Were mortgage providers to become less cautious, income multipliers could rise, benefiting first-time buyers. On the other hand, income multipliers might also increase if house prices rose faster than first-time buyer incomes—an unfavourable situation for FTBs.

We looked first at regulation of lenders. In 2017 the Bank of England's Financial Policy Committee required that no lender should extend more 15% of its mortgage loan portfolio at loan-to-income ratios of 4.5 or more. This is part of the regulator's effort to improve mortgage asset quality since the financial crisis (BoE, 2017c).

In terms of the current position, the most recent data from UK Finance show that average income multipliers for both FTBs and all new mortgages are around 3.6 in England and 4.0 in London. These figures are below the Bank of England's threshold of 4.5, suggesting there is some room for multipliers to increase during the projection period.

This evidence suggests we can expect income multipliers to rise in most cases. The values for the three main scenarios are set out in Table 9 below.

Table 9: Immigration projections and their descriptions

IM projections	description
middle level (**balanced** scenario)	• From the latest observed levels (3.65 in England and 4.0 in London), gradually increase to 4.0 in England and 4.5 in London over the next 10 years
low level (**robust** scenario)	• Maintain current levels both in England and London
high level (**weak** scenario)	• From the latest observed level, gradually increase to 4.1 in England and 4.6 in London over the next 10 years

Two-year variable mortgage interest rate for 75% LTV (MIR)

Since late 2016, the average two-year variable mortgage interest rate has been below the general inflation rate measured by RPIX (Retail Price Index excluding mortgage payments). A similar pattern was seen occasionally in the aftermath of the crisis, but we see this as an anomalous situation. This implies mortgage interest rates can be expected to rise. As interest rates are significantly determined internationally, we therefore assume that even under the weak scenario, mortgage interest rates will increase to around 4%.

Table 10: Mortgage interest rate projections and their descriptions

MIR projections	description
middle level (**balanced** scenario)	• From the latest observed level (1.5%), gradually increase to 5% over the next 10 years
high level (**robust** scenarios)	• From the latest observed level, gradually increase to 6% over the next 10 years
low level (**weak** scenario)	• From the latest observed level, gradually increase to 4% over the next 10 years.

The BoE's Financial Policy Committee requires mortgage lenders to assess affordability using a stress test that assesses whether borrowers could still afford their mortgage if Bank Rate were to rise by 3 percentage points over the first five years of the loan (BoE, 2017b). We take this additional margin into account in the robust scenarios (Table 10).

The final variable relates to supply and takes account of completions and working age population.

Population aged 20 – 64 years (POP)

We drew baseline information from ONS Population Estimates, using the 2016-based version with future EU migration variant for England and the 2014-based version for London, as the 2016-based version was not yet available at the time of scenario creation. According to the estimates with our adjustments, the population aged 20-64 will follow a gradually rising trend over the projection period in both England and London, albeit with a marginal decline from 2022 to 2028 in England. These population projections form the starting point for all three trajectories.

Neither version fully incorporated the potential impact of Brexit. However, the 2016-based projection sets out an alternative estimate with 50% reduced EU migration for England. We used this alternative to project the post-Brexit population with the smallest increases. Additionally, we assume that any labour and skill gaps in the house building sector associated with a reduction in EU migration would be filled by domestic labour, non-EU migration and/or improvement in the sector's

productivity. Table 11 sets out our assumptions about how population will evolve taking these factors into account.

Table 11: Population projections and their descriptions

POP projections	Evolution of population aged 20-64 from March 2019 - 2028[*]
medium increase (***balanced*** scenario)	• 50% reduction in future EU migration for the first five years from Brexit, rate of reduction slowing to 25% over the following five years
low increase (***robust*** scenarios)	• 50% reduction in future EU migration over the post-Brexit period
high increase (***weak*** scenario)	• 25% reduction in future EU migration over the post-Brexit period

* for the pre-Brexit period, all four scenarios used the same POP levels drawn from ONS estimates.

Dwelling completions (COM)

The baseline information is drawn from MHCLG Live Table 211, *House building: permanent dwellings started and completed.*

The 2017 Housing White Paper (DCLG, 2017) announced that the UK needed 250,000 new homes every year, and stated that the government would ensure that 1 million homes were built by 2020 and another half a million by 2022. This would require a massive step-change in housing production: over the latest decade or so, the closest we came to achieving that amount was in 2007, when 224,000 homes were built. But more recently the figures have been much lower: in England in the year to Q2, 2017 completions were 153,000 (and 24,000 in London). Although these numbers were well below the government's targets they still represented an increase over earlier years, especially in London.

On the basis of these figures, we assume that in the balanced scenario England would achieve around 200,000 completions by 2022 (80% of the UK target) and London would see 26,000 (13% of the English level), then maintain those levels for the remainder of the forecast period[6].

To achieve the government's objective in terms of net additional new homes, the robust scenarios included increases in line with the government's latest aspirations in dwelling completions of 300k in England by 2022.   We assume that in London the comparable figure will be 39k which while below the aspirations in the draft London Plan is well above current potential (given that permitted development output is not included in this estimate).

Table 12: Projections for housing completions and their descriptions

COM projections	description[*]
middle level (***balanced*** scenario)	• Gradually increase by 2022 to 200,000 p.a. for England and 26,000 (13% of England) for London, and maintain that level
high level (***robust*** scenario a)	• Gradually increase by 2022 to 300,000 p.a. for England and 39,000 for London, and maintain that level
low level (***weak*** scenario)	• Gradually move by 2022 to 150,000 p.a. for England and 19,500 for London, and maintain that level

* for the closest projection period, the three scenarios used the same COM levels, which were estimated from the recent dwelling starts.

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[6] Remembering these are completions, not net new additions which are currently running at higher levels.

The values for completions under the three main scenarios are set out in Table 12. Robust scenario a can be seen as reflecting very considerable political success in that it both achieves the highest housing completions target and allows for some reduction in migration.

Robust scenario b (projections in Table 13) is somewhat less optimistic but perhaps more in line with potential outcomes (Table 13). This scenario allows us to examine how responsive the projected tenure proportions are to changes on the supply side.

Table 13: Additional positive (robust-b): projections for completions and immigration

COM projections	description
high level (*robust* scenario b)	• Gradually increase to 250,000 p.a. for England and 32,500 p.a. for London (13% of England) by 2022, and maintain that level

IM projections	description
low level (*robust* scenario b)	• From the latest observed levels (3.65 in England and 4.0 in London), gradually increase to 3.8 in England and 4.25 in London over the next 10 years

It is important to remember that scenario development inherently involves a large number of assumptions both about variable values and their interaction. They are NOT forecasts, but a structured set of possibilities that allow us to examine the responsiveness of the system to variations in independent variables, and to understand which factor(s) impact most on the scale of the private rented sector.

5. Projection results

Using the coefficients derived in the regression exercise and the projected values of the explanatory indices, we projected the proportions of various types of households in the PRS under our four scenarios (balanced, weak and two versions of robust) over the next decade. We tested twelve variations of the projection model using a range of different alternative variables closely related to the four chosen as our preferred version. These turned out generally to have higher problems of multi-collinearity but to provide little additional evidence. Some variations also included dummy variables for the three stages of the estimation period (pre-recession; recession and aftermath; recovery). One included a specific PRS variable, the number of Buy to Let mortgages, but this had no significant impact. The model definitions can be found in Annex B together with comments about their relative strengths and weaknesses. The results from these models were generally consistent with those in our preferred model but were statistically less robust.

Results from our preferred model (identified as model 1) are set out below - first for the sector as a whole and then by household type. In the main text we use summary figures for household groups to clarify the general picture. Annex 4 provides more detail by setting out the results for all twelve household types. The results from other model results are available on request.

The scale of the overall sector

The main focus of the estimation exercise was to derive results for 12 household types, which did not include older households. In order to assess the *overall* size of the private rented sector we had to make additional assumptions about what would happen among the oldest household groups. We have also combined our estimated proportional changes in the PRS, by household, with the household projection figures; this allows us to talk about both relative and absolute size of the

tenure. It is important to note that while the proportion of families residing in the PRS may fall over time the absolute numbers of households could also rise.

Figure 1 sets out the projections for England under the four scenarios [7]. Under the weak scenario the proportion of households in the PRS rises by more than 25% to 24.6%. Under the balanced scenario it falls by around 5% in the early years and then stabilises at around 17.9%. As noted above, we specified two distinct robust scenarios which differ in terms of expected completions. Under the most robust scenario (which is very optimistic and highly unlikely to occur) the decline in the PRS in England is very significant - to just above 10%. This reflects aspirational levels of output and a particularly strong economy - an extremely unlikely scenario. The rather less robust version (b) shows a decline to 13.1% - but even this includes levels of output not achieved in two generations.

Figure 1: Trends in the proportion of households in the PRS over the next decade: 4 scenarios, England.
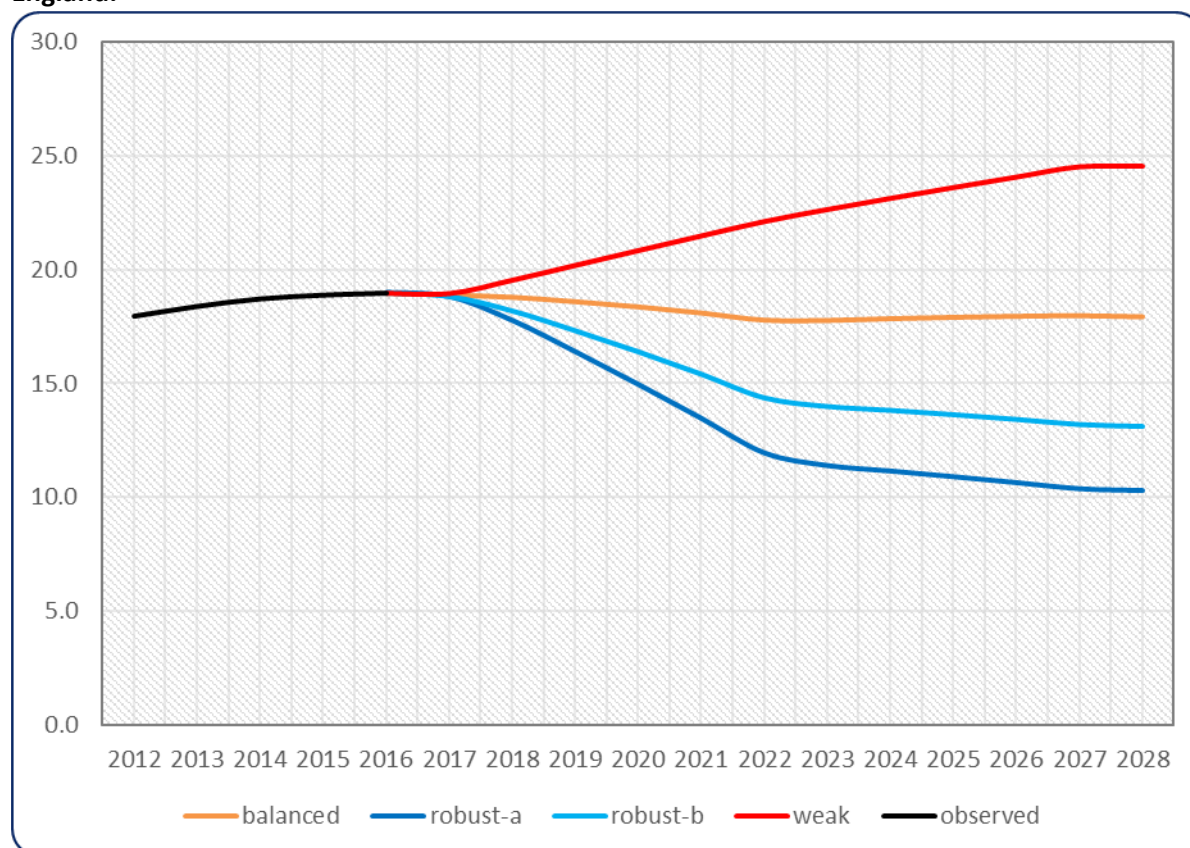
The pattern in London is actually rather less extreme than for the country as a whole - and less responsive to the different scenarios. This is in part because adjustments have already taken place.

Under the weak scenario the proportion of households in the PRS continues to rise to 31.6% in 2028.[8] Under the balanced scenario there is some small decline until 2022 and then the proportion slightly increases, back to 25.6% i.e., roughly current levels. Under the most robust scenario it

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[7] Annex 3 provides the detailed numbers and proportions in the PRS in England and London which lie behind these figures but also go back to 2012.

[8] It should be remembered that social housing completions are treated in an exactly equivalent way to completions in the private sector in the modelling. We discuss the possible effect of a larger proportion of completions being in the social sector in section 6 below.

declines rapidly until 2022 and continues to decline although more slowly down to around 18.1% in 2028. Under the somewhat less robust version the decline is limited to 20.8%.

Figure 2: Trends in the proportion of households in the PRS over the next decade: 4 scenarios, London.
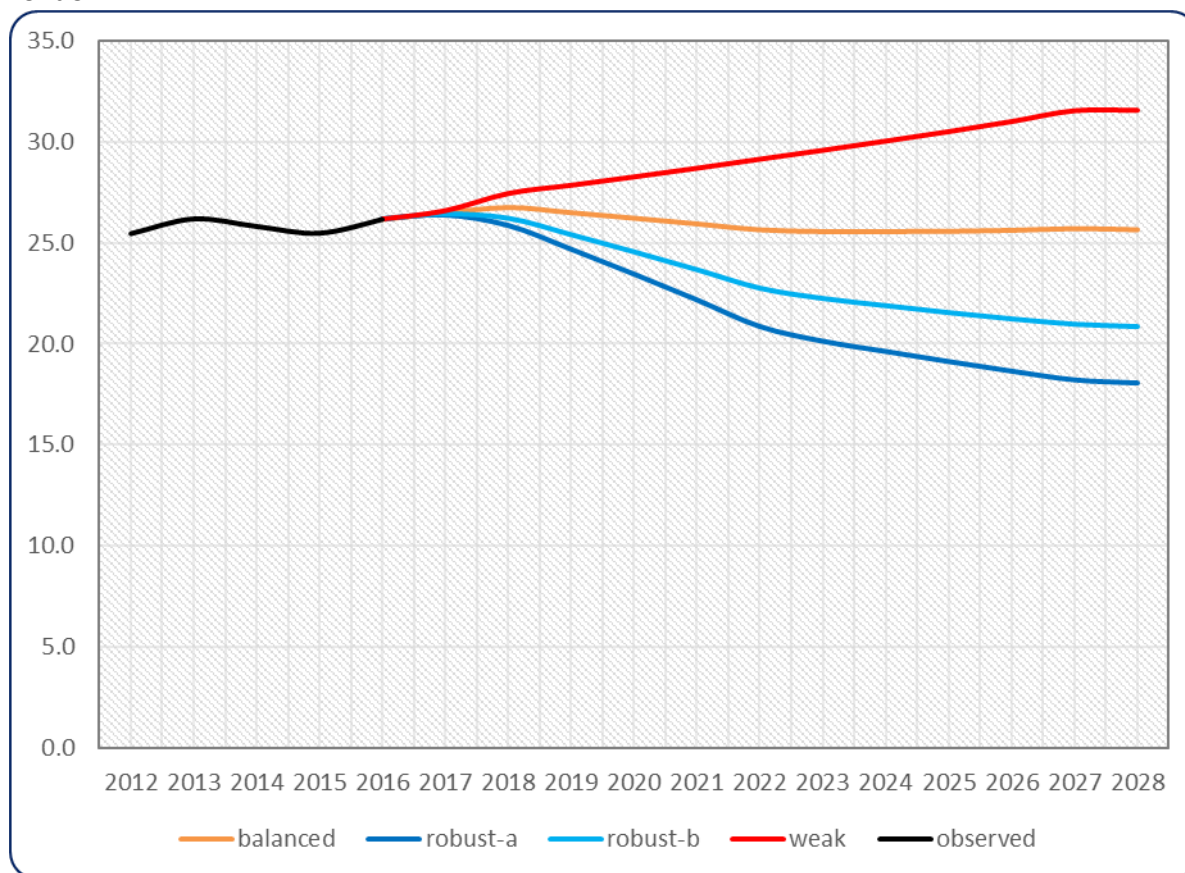
These overall figures show how sensitive the projections are to the scenarios chosen. Importantly though, the balanced scenario - which in many commentators views reflects the most likely macroeconomic trends, suggests a stable picture by which the rapid increase in the scale of private renting seen throughout the early part of the century have slowed to a halt - but does not reverse. The weak scenario, reflecting poor income growth and associated lack of investment, generates continued increases. At the other extreme, ten years of very high output levels together with favourable economic circumstances leads to a rapid decline in private renting in the country as a whole. However in London even this is not enough to generate very large reductions in the scale of the sector.

Projections by household type: England

Figures 3 - 7 show how the proportions of some groups of the main household types change under the different scenarios. It is important to remember when looking at these figures that what they show is the proportion of each household type that is projected to be in the sector under the different scenarios, not the proportion of the sector made up of that household type. More detailed figures in Appendix 4 provide the detailed outcomes for each of the twelve main household types for both England and London.

Under the balanced scenario there is relatively little change in the proportions of each household type over the period. Families with children and especially single parent households do show some increase after 2022 as the supply side tightens, while among couples with and without children there is some limited reduction perhaps reflecting some relative decline in income multiples.

Figure 3: Trends in the proportion of households of given types that are living in the PRS England: balanced scenario
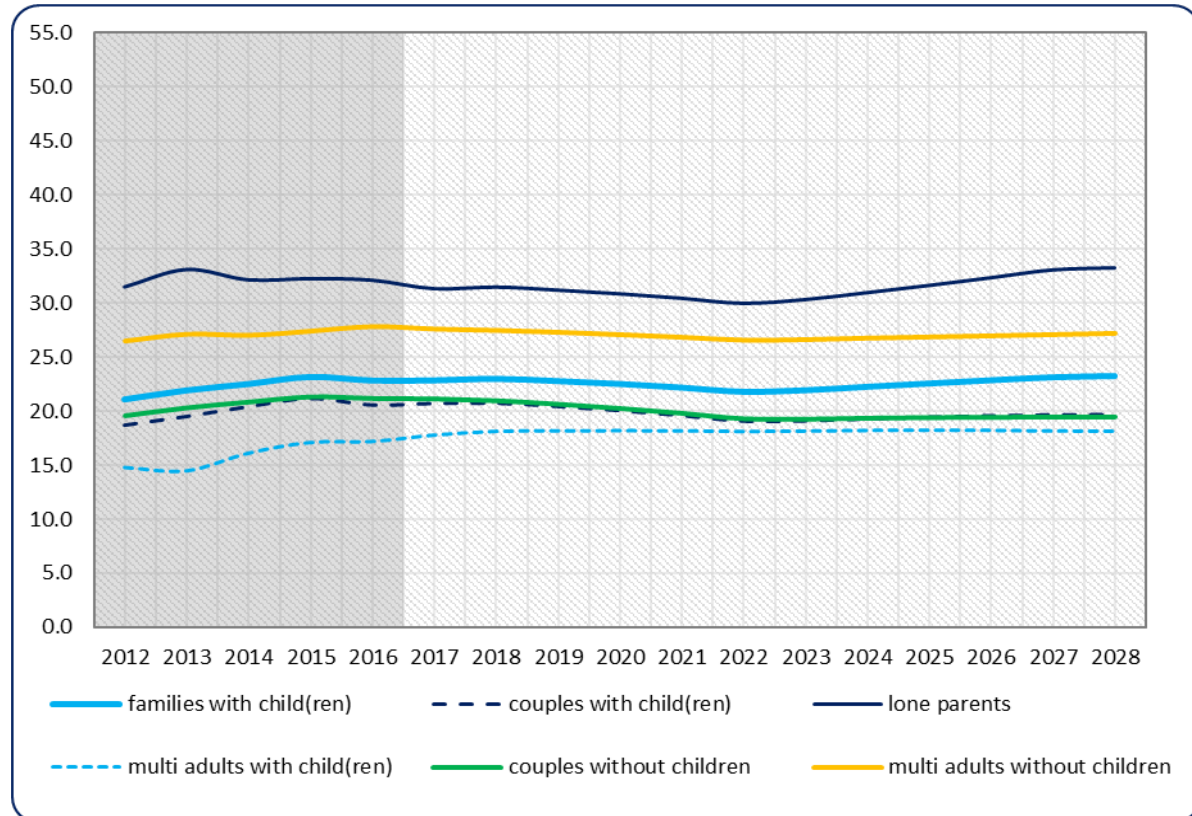
Note: The shaded area covers observed values.

Figure 4: Trends in the proportion of households of given type that are living in the PRS England: weak scenario
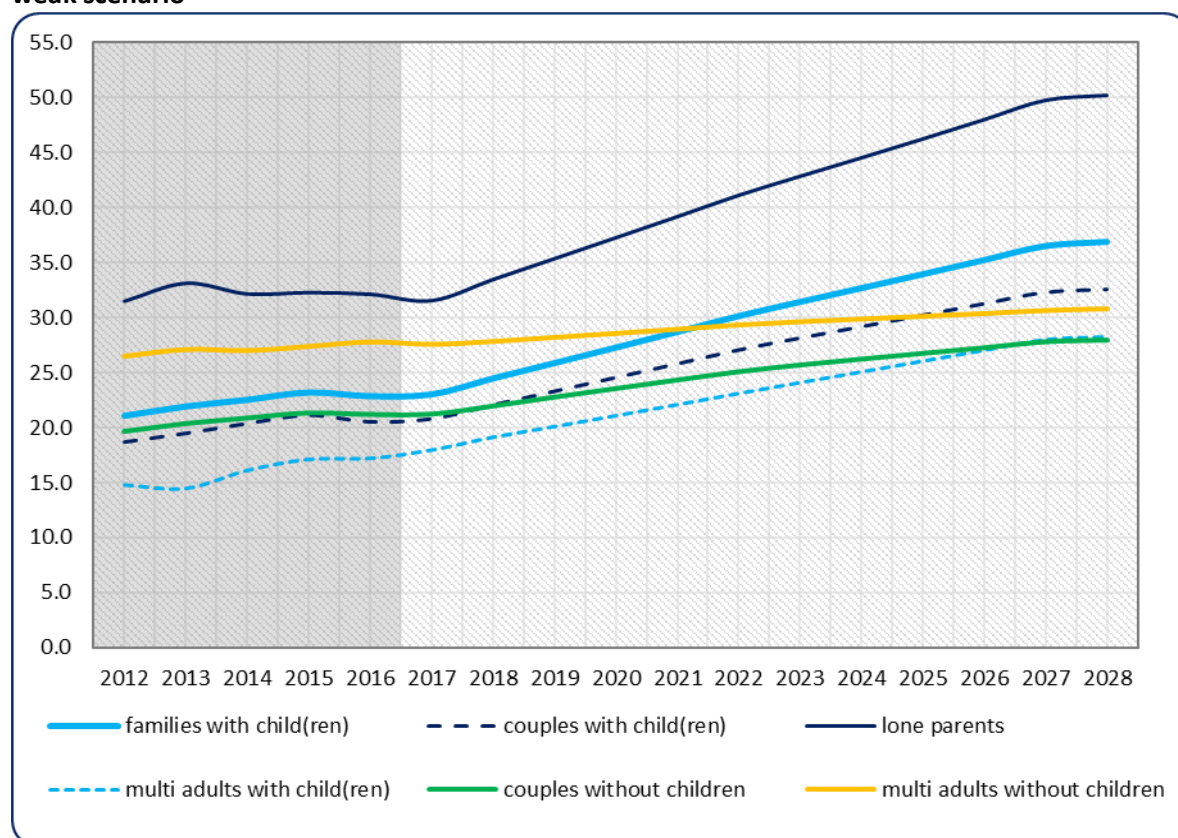
Note: The shaded area covers observed values.

Under the weak scenario all the main household types show some increase in the proportion of households in the PRS. Single parent families again fare the worst with an increase from a little below one third to 50% by 2028. Families with children follow much the same pattern although from a lower base and somewhat slower increases. On the other hand, multi-adults show very little increase.

Under the most robust scenario we see declines in the proportion of households in the PRS for all the main household types. The smallest falls are among multi-adults without children. This may reflect the extent to which such households are more likely to choose to rent privately. The results for multi-adult households with child/children are rather more surprising - but it is a small group and results are less robust. Most of the other groups follow much the same pattern with more rapid falls until 2022 and then slower declines. The rather less optimistic robust scenario shows fundamentally the same pattern but with rather less extreme outcomes[9].

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[9] We also tested the effect of keeping the trend figures for population constant and found that this had little impact on the outcomes from the more robust scenario but somewhat reduced the impact in the less optimistic variation.

Figure 5: Trends in the proportion of households of given type that are living in the PRS England: robust-a scenario

Note: The shaded area covers observed values.

Figure 6: Trends in the proportion of households of given type that are living in the PRS England: robust-b scenario
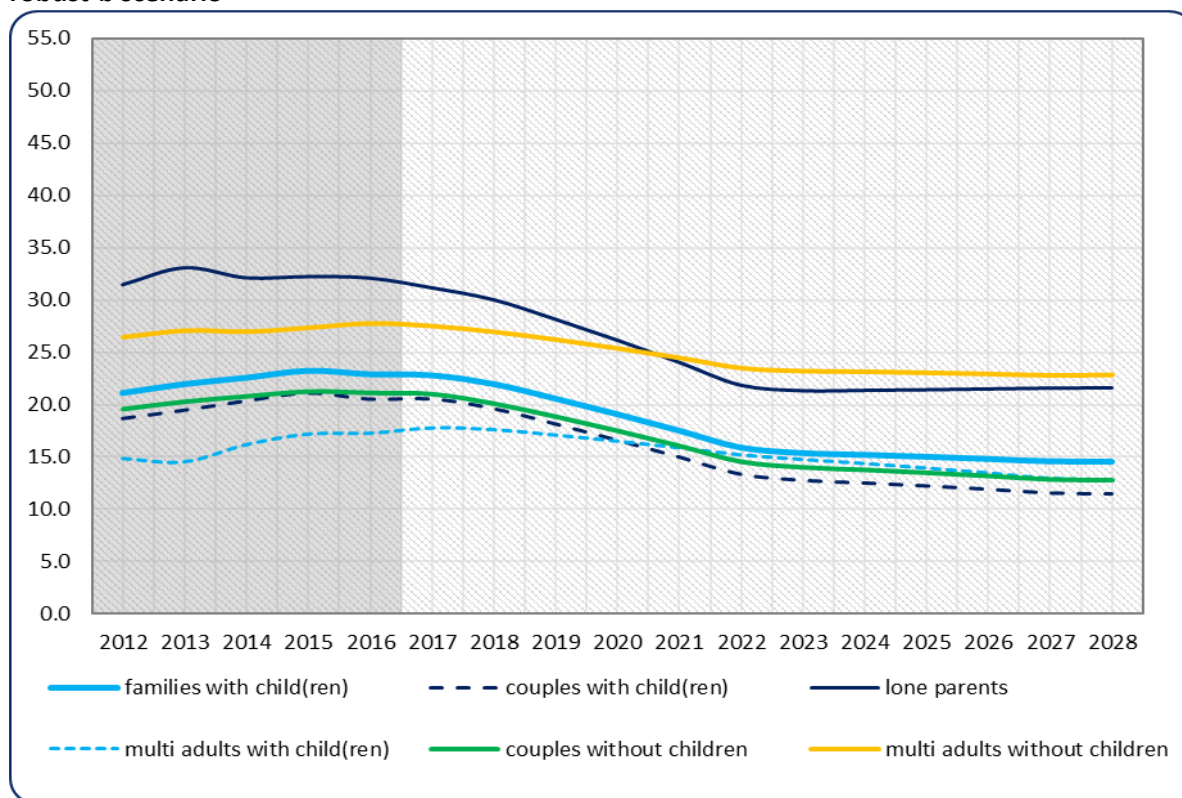
Note: Shaded area covers observed figures.

It is important to recognise that we are here looking at projections of the proportions of each household group for each household group projected to be in the sector. It is also the case that the numbers in each group will change as will the proportion of the total PRS accounted for by each group will change. In particular we note that that the number of young single households declines significantly over the period, while the number of multi-adult households increases more than commensurately. Detailed figures clarifying these changes are provided in Annex 3.

An important issue in understanding the dynamics of change lies in how households are forming. A particularly relevant issue is how the numbers of young people in single-person households has declined while the numbers of multi-adult households - presumably often made up of the missing single person households. This is shown in Figure 7. Before 2000, the numbers of both young single-person households and young multi-adult households in England were increasing. In 2000, there were roughly twice as many single-person households in England as young multi-adult households. The pattern then changes as the numbers of single person households decline. This is almost certainly mainly a matter of affordability - which has worsened consistently since the turn of the century in both the owner-occupied and private rented sectors. By 2028 the numbers in the two groups taken together will have increased a little -- but by then multi-adult households will be in the majority.

Figure 7: numbers of single-adult and multi-adult households to 2039: England
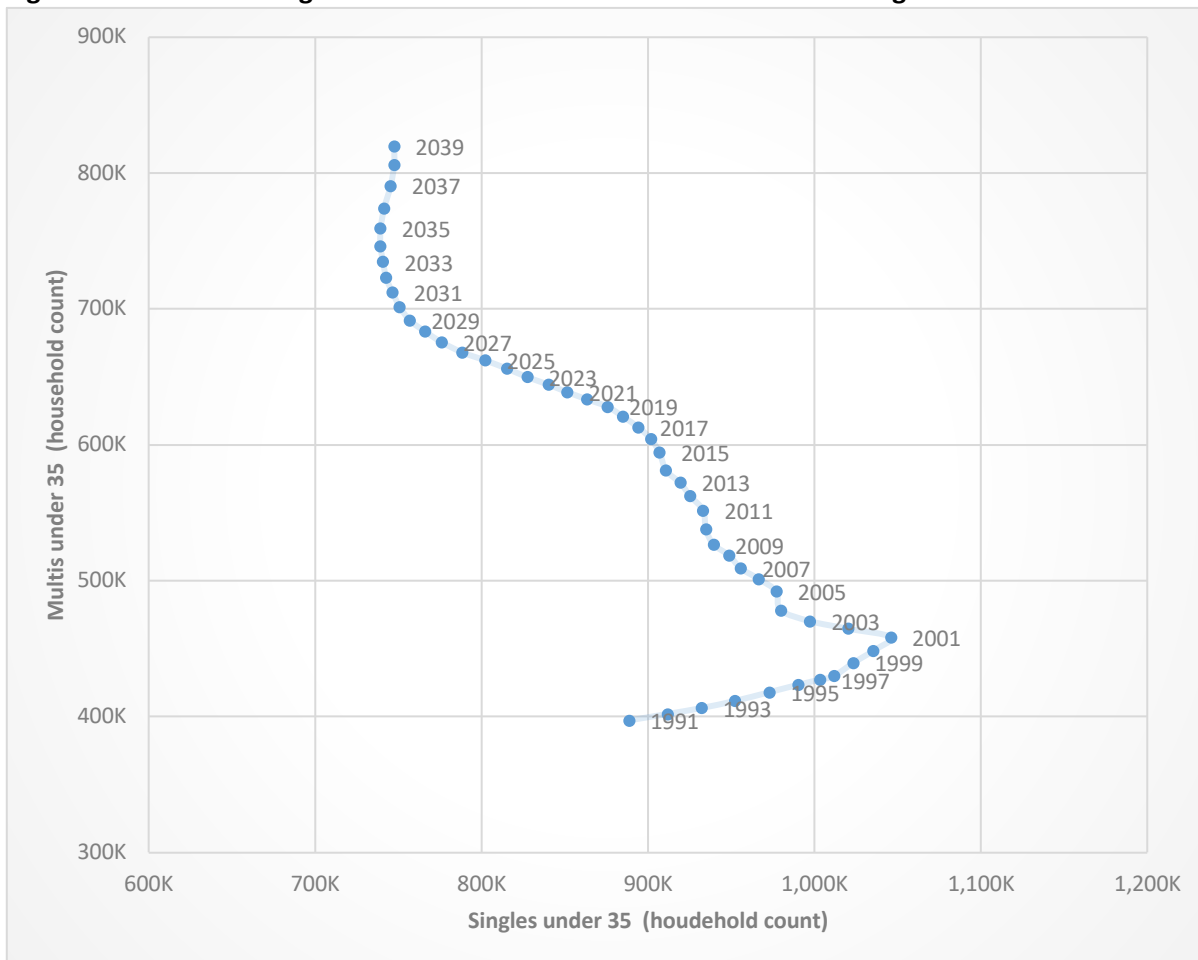
Source: Authors' figure, drawing on DCLG 2014-based Household Projections.

Projections by household type: London

In looking at the London projections, it is important to remember that higher proportions of all household types (sometimes much higher) live in the PRS in London than in England as a whole. Even so the picture across household types is generally similar especially in the balanced scenario. The proportion of single parent households in the sector does increase somewhat after 2022 as does the proportion of families with children although to a lesser extent. The proportion of multi-adult households declines during the same period, but by a very small amount.

Figure 8: Trends in the proportion of households of given type that are living in the PRS London: balanced scenario
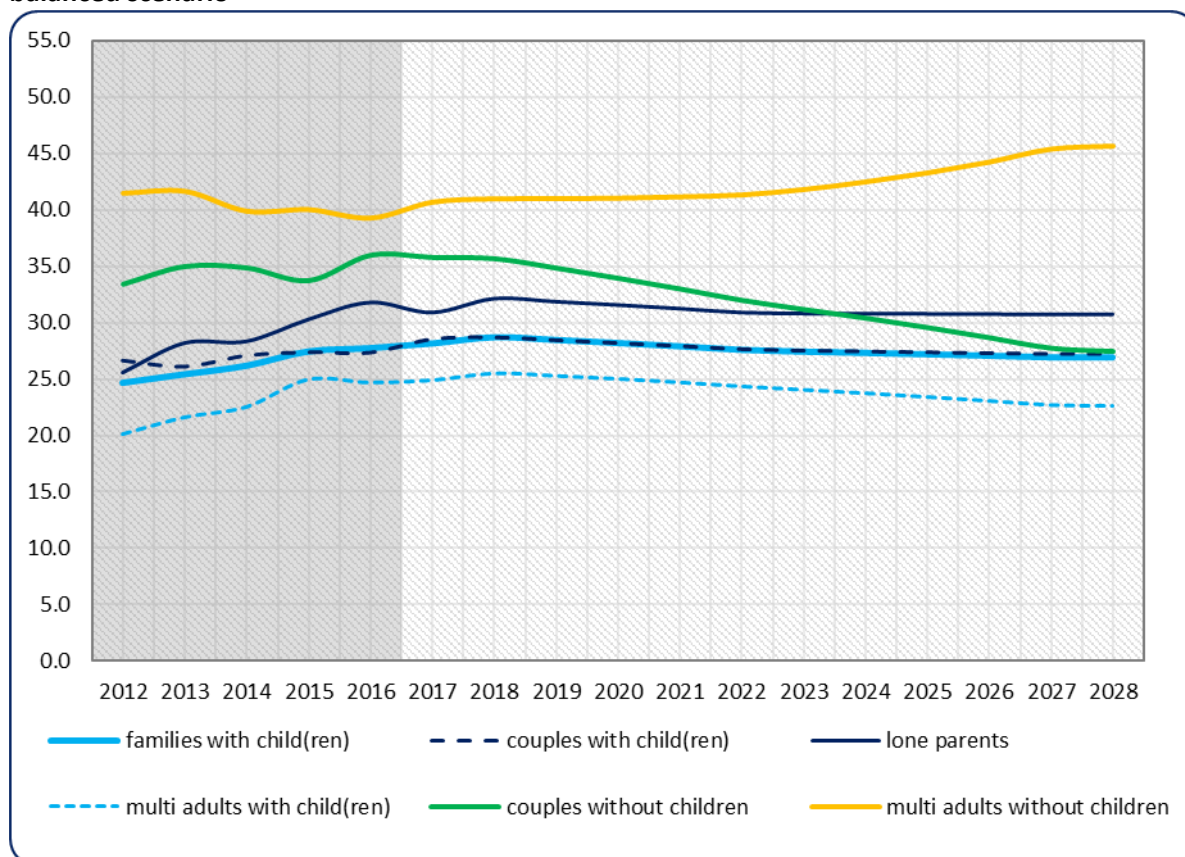
Note: Shaded area covers observed figures.

Under the weak scenario there is not as much movement as for England as a whole. The most significant difference is that the proportion of couple households without children declines while every other major group increases. This is probably an outcome of relative improvements in buying power among this group whose average age is almost certainly increasing. By 2028 half of all multi-adult households without children are in the sector as are nearly 40% of single parents - but this is a lower proportion than in the country as a whole. Overall more than one in three of family households are in the PRS.

Figure 9: Trends in the proportion of households of given type that are living in the PRS London: weak scenario
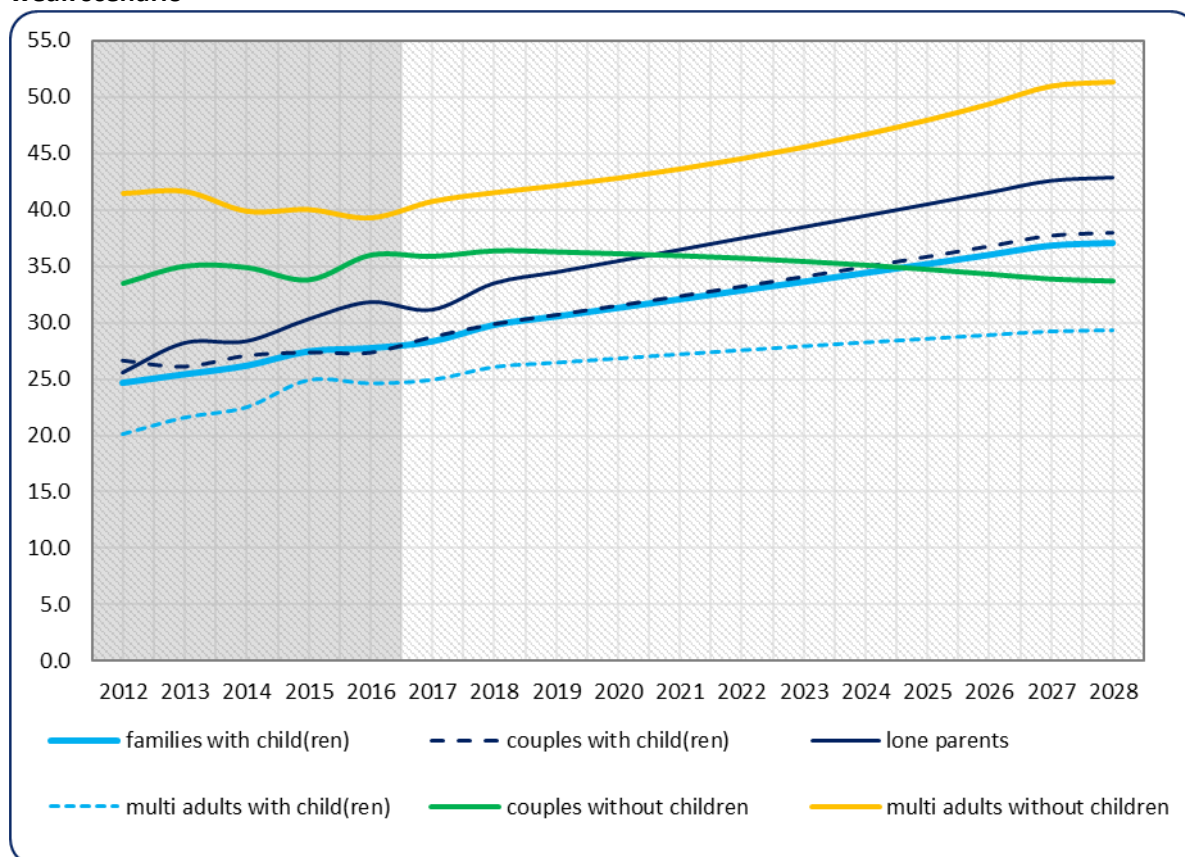
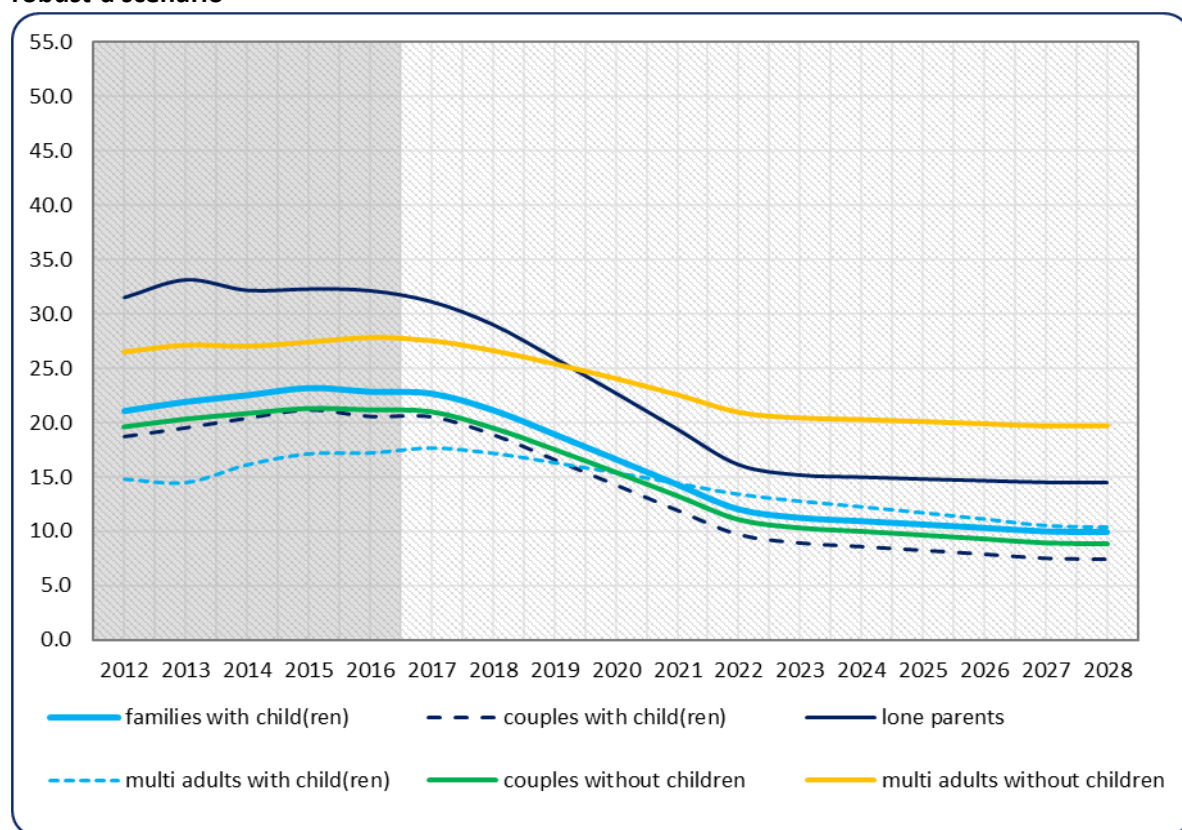Note: Shaded area covers observed figures.

Under the most robust scenario the proportion of multi-adult households in the PRS declines the least while the proportion of couples without children falls the most. This again is likely to be associated with both the extent to which being in the PRS is a matter of choice and increases in the relative capacity to pay among couples without children. Under the less optimistic robust scenario (robust b) the proportion of multi- adult households without children actually increases, while the proportions of the other household types fall considerable less than in the country as a whole. This is mainly to do with supply factors. However the most relevant finding is that the declines in the proportions of households in the sector even under a very robust scenario, are nothing like as dramatic as those for England as a whole, suggesting that supply changes are not great enough to improve access into either owner-occupation or private renting.

Figure 10: Trends in the proportion of households of given type that are living in the PRS London: robust-a scenario
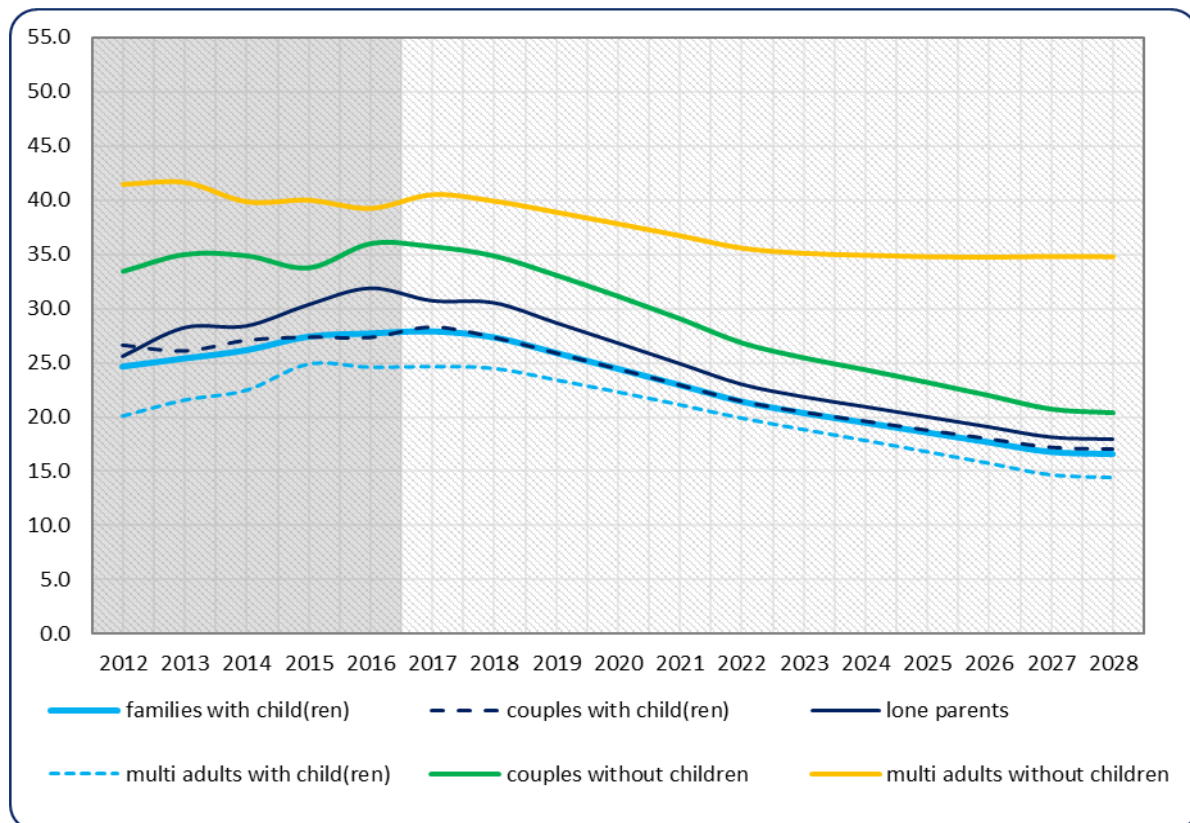
Note:.Shaded area covers observed figures.

Figure 11: Trends in the proportion of households of given type that are living in the PRS London: robust-b scenario
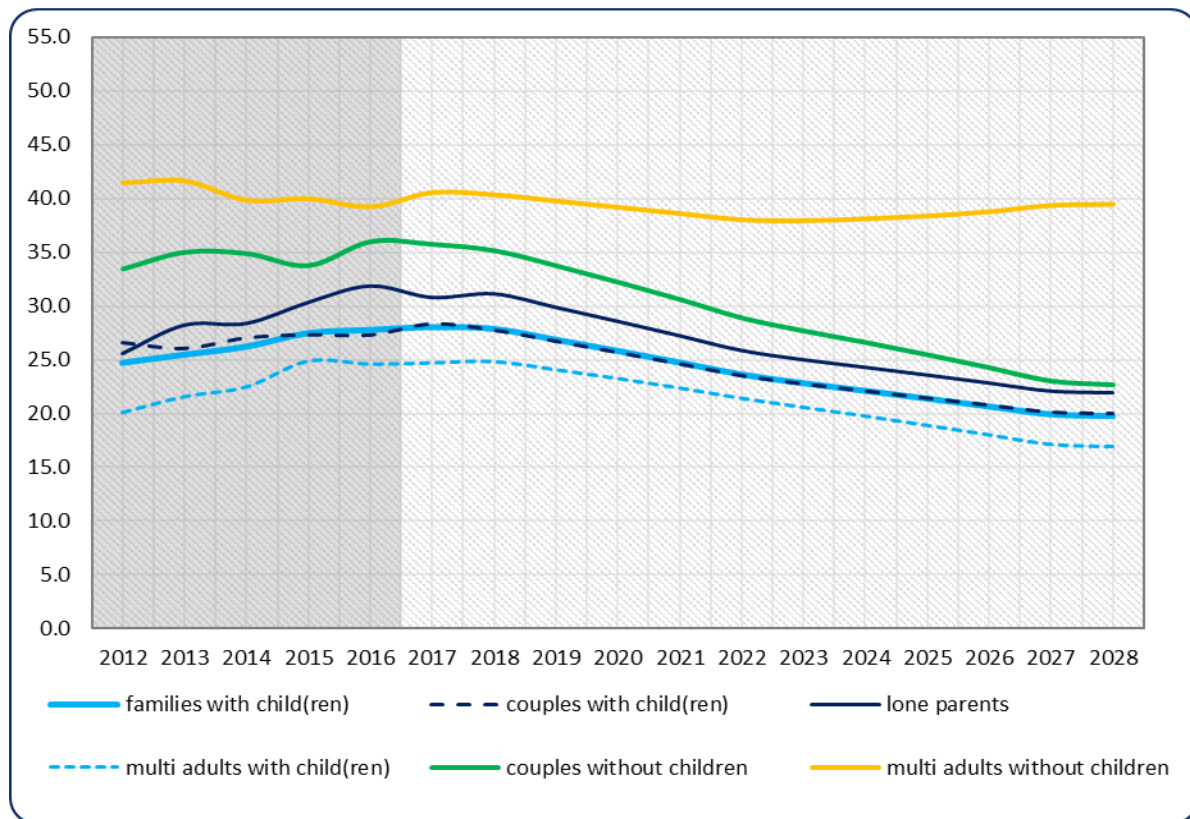
Note: Shaded area covers observed figures.

Figure 12 shows the decline in young single person households and the growth of multi-adult households and is comparable to Figure 7 for England. The picture is slightly less extreme than for England, but only because multi-adult households are already relatively important even at the turn of the century. Before 2000, both young single-person households and young multi-adult households continued to increase as in England as a whole. At the turn of the century, the number of single-person households in London was around 50% more than that for young multi-adult households - as compared to double across the country as a whole. By 2028 the numbers in the two groups taken together have declined (while in England they had increased) and multi-adult households are in the majority - with around 90% more multi-person than single-person households. Moreover the numbers of single-person households continues to decline until 2028 although at a much slower pace.

Figure 12: numbers of single-adult and multi-adult households to 2039: London
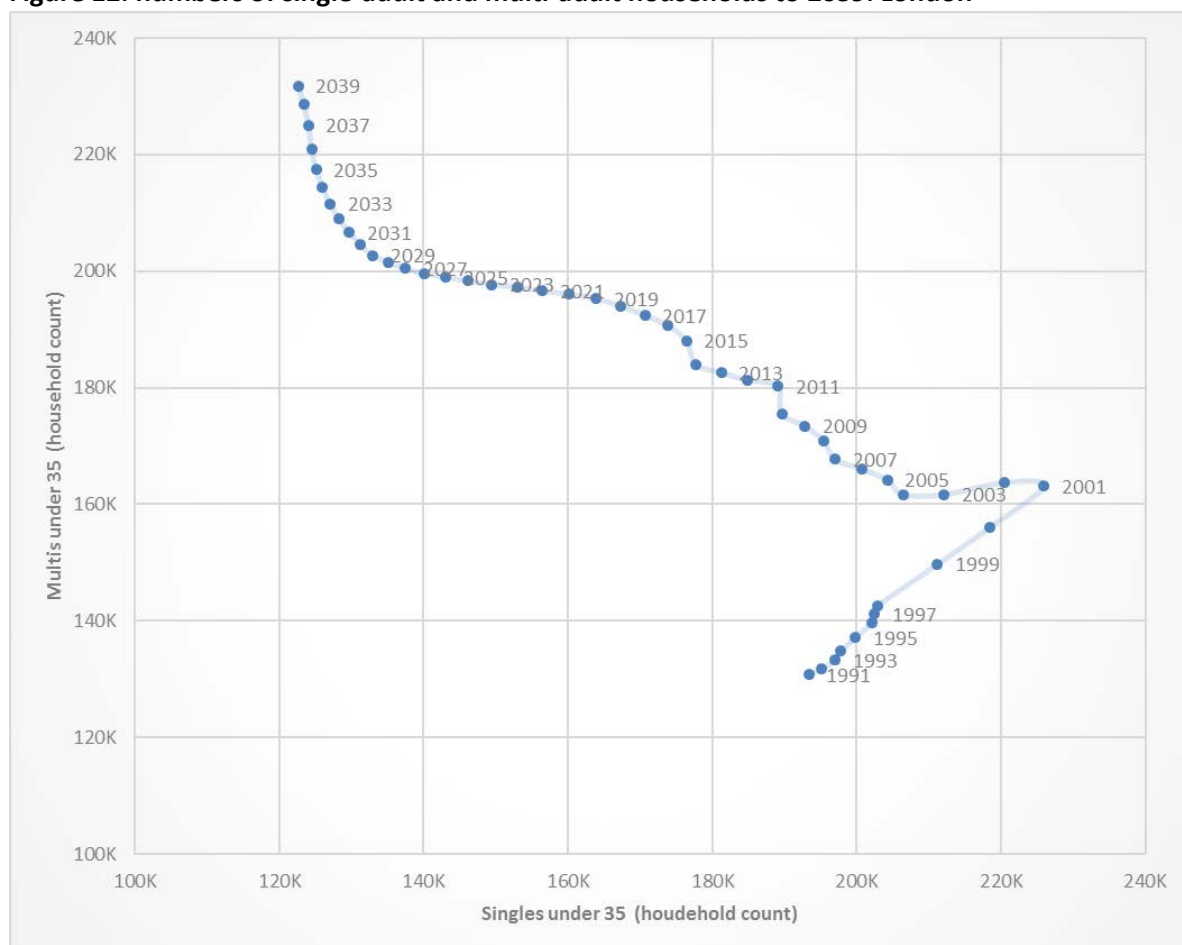
Source: Authors' figure, drawing on DCLG 2014-based Household Projections.

6. Overall findings

The approach

Projections are exactly what the name suggests: they are not forecasts but simply more or less sophisticated forward assessments based on past experience. Methods can range from straight-line projections to econometric approaches that attempt to explain past behaviour and incorporate projected values of determining variables. Here we have generated regression estimates for household types based on experience from 2005 and then projected these forward to 2028 based on four main economic/housing market/demographic scenarios: balanced, weak and two versions of robust.

The emphasis in this project is on the extent to which the various household types - particularly families with children- are likely to rely on the PRS in the next ten years. For that reason we directly estimated the projected changes in the proportions of each household type that would be in the private rented sector by 2028 under each scenario, for England as a whole and for London separately. We also estimated the contributions of each household type to the makeup of the sector as a whole.

We estimated these projections directly rather than as a residual, as has been done in the past. Even so, the determining variables are mainly factors that affect access to owner-occupation rather than factors to do with private renting directly (e.g. rents, buy to let mortgage loans).   We did test some financial variables specific to the private rented sector but they were not significant, and data on private rents are not available for a long enough period to enable us to include a relative cost variable.

It is important to note that we addressed the impact of supply using estimates of total completions - implicitly assuming that an additional private sector unit has the same impact as one in the social sector. If supply increases in the social sector it could be expected that the majority of any additional lettings would go to households in temporary accommodation, many of whom are in the private rented sector, to concealed households and to private tenants. However equally if the impact of additional housing is in the private sector it can be assumed that the majority of households would come from the PRS. In other words in terms of totals the tenure of new completions might make relatively little difference to the proportions of households in the PRS.

Where it would make a difference is in terms of particular household types, especially among lone parent families. Increasing their access to social renting would obviously be highly desirable as the proportion of this group is projected to increase and to be particularly badly hit under a number of the scenarios. Equally, the proportions of families with children could be expected to decline. Large increases in the numbers of social dwellings would undoubtedly modify the projected increases in family numbers but would be unlikely to be enough fully to offset market pressures by 2028.

Overall the projections appear to be relatively consistent and coherent both between household types and between England and London. They should however be treated with care. They are definitely not correct 'to two decimal places' but rather indicate likely trends under different conditions.

Estimates for the total sector

Because we concentrated on twelve major household types (as opposed to the sixteen used in household projections) we were not able to generate a simple projection of the sector as a whole. The projections presented here include additional assumptions about how four categories of households of pensionable age might behave. As these categories are pretty stable we do not regard this as a problem.

Under the balanced scenario, the scale of the sector declines somewhat over the next decade from around 19% to 18% in England as a whole and from 26.6% to 25.6% in London. Under the weak scenario the private rented sector continues to expand, from around 19% to 24.6% in England and from 26.6% to 31.6% in London. Under the robust scenarios the scale of the PRS falls rapidly - reflecting the importance both of a buoyant economy and very rapid increases in housing investment. However the impact on London is very much less than in the country as a whole reflecting the extent of current pressures in the capital. In actuality any significant increase in supply would be as likely to increase the number of households - so pressures would be unlikely to decline in the way projected.

Estimates by household type

While the biggest changes to date have been among young singles and multi-adult households, looking to the future these trends seem to be working through to those aged 35 and older, and in particular having a disproportionate impact on households with children.

In England overall under the **weak scenario**, the proportions in the PRS of almost all household types rise - although the increase is least for those that already have high proportions in the PRS in 2017. The PRS proportions of most family households rise more steeply though from a lower base. Under the **balanced scenario**, patterns vary but the changes are generally very small. A few household types see increasing proportions in the PRS but for most, the proportion decreases at least in the early years. In the **robust scenarios** on the other hand there are much bigger reductions in the proportions in the private rented sector, although these slow after 2022.

In London the patterns are a bit more varied, with some reductions in the proportion in the private rented sector even under the **weak scenario**. In general, proportions are relatively stable among those with no children but rise among family households. Under the **balanced scenario** there are still some rises among singles and childless multi-adult households aged 35-64, but the proportions in the PRS fall for almost all other categories over the whole decade. Under the **robust scenarios** the proportions in private renting among groups without children mainly fall markedly. However among most of those with children the effect is less significant. The groups who appear to benefit least from better conditions are single parents with two or more children and older multi-adult households with no children.

A final piece of analysis shows how the numbers of younger single person households increased until the turn of the century in both England and London but then declined very significantly, while multi-adult households increase consistently through to 2028.

The trends sometimes change around 2022 partly because of the way we specified the completions- per- head-of-population variable: in all scenarios we assume that any improvement in output will be stabilised around 2022.

Overall these figures should only be seen as indicative. They show that the factors affecting the PRS have the potential to be quite volatile. Perhaps the most likely scenario is actually very little change. We are already seeing the size of the sector stabilise for most household types and if the economy and housing market change only slowly, stability seems the most likely outcome. But ten years is a long time - and many unpredicted changes could occur.

7. Conclusions

The analysis points to four important conclusions. First, varying macroeconomic and housing market (especially supply) conditions can have very significant impacts on the proportions and types of households living in the private rented sector. Since the turn of the century most of these factors have tended to increase the proportion of all types of household renting privately. The patterns of change are surprisingly similar in London and the country as a whole, but of course changes start from a higher level in London. Importantly the rate of increase has generally been higher among family households.

Second, looking to the future perhaps the most likely scenario is actually that there will be very little change. We are already seeing the size of the sector stabilise for most household types and if the economy and housing market improve only slowly, stability seems the most likely outcome. But it should also be remembered that the same factors are affecting household formation and therefore the numbers of households in total and particularly the numbers of single person and multi-adult households.

Third, while many of the past trends have been similar between London and the rest of the country, future scenarios suggest that the scale of the PRS in London is much less responsive to changes (especially positive changes) in the determining variables than in the country as a whole. This in the main reflects the scale of the affordability crisis in London but equally suggests that if constraints on entry into owner-occupation are reduced in the future, owner-occupation could start to grow quite rapidly in the rest of the country, particularly among family households.

Finally, were the economy to improve more rapidly than most current forecasts suggest, the most likely effect would be a significant increase in the numbers of those trying to form separate households. This in turn would put greater pressure on both prices and rents, especially in London. Higher prices and rents would themselves further modify tenure choice.

Annex 1 Data sources, notes and definitions

The basic form of the regression equation is set out in the main text, but to be more specific, the variables in the equation were transformed as in the below form to obtain more robust and pragmatic outputs:

$$Ln\left(\frac{P_{it}}{1-P_{it}}\right) = X_{it}\beta .$$

I.e., the dependent variable was converted into a natural log form of P_{it} odds ratio to prevent a theoretical value of P_{it} obtained from the regression results from being negative or over 100%.

The regression was undertaken by a fixed effect model of a panel data analysis – that is, not running a time-series regression for each of the twelve household types, but using a panel dataset (observation points by household type) simultaneously. This is because former needs a longer historical data, which needs information of fairly favourable for home-ownership, say, in 1980s and 1990s. The results, which might be useful for a longer cyclical change in tenure, could underestimate the recent information of UK broken housing market. The other demerit of a time-series analysis would be availability of data to be consistent. Our panel data drawn from Q4 2015 to Q2 2017 (biannually but seasonally adjusted). In order to reflect the recent financial crisis & aftermath and recovery, a dummy variable representing a recovery sub-period were employed in the model, where appropriate.

The summary of data definitions, measurement units and sources are as in Table A1. In order to avoid to avoid a multicollinearity problem (i.e a situation where some explanatory variables are highly related with each other and so part of them are redundant to explain a dependent variable), we carefully examined various options to represent explanatory factors and selected the variables in the table.

Table A1: Variables used: definitions and sources

Variable		Definition*	unit	source
P:	proportion of private tenant households	4-Q average ending in the observation point	%	Labour Force Survey: Household version
IM:	median of first time buyers' income to mortgage loan ratio	4-Q average ending in the observation point	ratio	UK Finance (former Council of Mortgage Lenders)
LTV:	median of first time buyers' mortgage loan to value ratio	4-Q average ending in the observation point	%	UK Finance (former Council of Mortgage Lenders)
MIR:**	sterling 2-yr (75% LTV) variable rate mortgage to household	12-M average ending in the observation point	% p.a.	Bank of England
COM:	Housebuilding: permanent dwellings completed	4-Q rolling sum ending in the observation point	unit	Ministry of Housing, Communities & Local Government
POP:	1-yr earlier population aged 20-64 years	population 1-yr earlier from the observation point. Observation points falling in Q2 used the mid-year estimates; those falling in Q4 used the mid points of immediately before and after mid-years' estimates.	count	Office for National Statistics
D:	dummy variable representing recovery period	takes 1 when the observation point was 2013 or later	dummy	

Note: * Observation points are Q2 and Q4. ** Data for UK. So the same data was used for both England and London.

Annex 2: Alternative models

Variables in the model

	LTV	income multiplier (IM)	mortgage interest rate	house completions	Buy-to-LET	social housing completions	Dummy variable		Notes
							recovery period (i.e. Q2 2013 onwards = 1)	recession and after(i.e. Q2 2008 onwards = 1)	
Model 1	LTV	IM	MIR	completions / pop 20-64yo					multi-collinearity problem (CP): reasonably small
Model 2	1/LTV	1/IM	MIR	completions / pop 20-64yo					CP: reasonably small
Model 3	1/LTV	1/IM	MIR - RPIX	completions / pop 20-64yo					CP: medium (but could be acceptable level). But impt of (MIR-RIX) appeared insignificant
Model 4	1/LTV	1/IM	MIR - CPI	completions / pop 20-64yo					CP: medium. But impactt of (MIR-CPI) appeared insignificant.
Model 5	1/LTV	1/IM	MIR	completions / pop 20-64yo	Buy-to-LET*				CP: large. Impact of BTL appeared insignificant.
Model 5.5	1/LTV	1/IM	MIR	completions / pop 20-64yo			as constant term		CP: medium.
Model 6	1/LTV	1/IM	MIR	completions / pop 20-64yo			as interaction with MIR		CP: medium.
Model 7	1/LTV	1/IM	MIR	completions / pop 20-64yo			as constant term and interaction with MIR		CP: medium.
Model 8	1/LTV	1/IM	MIR	completions / pop 20-64yo				as constant term	CP: medium.
Model 9	1/LTV	1/IM	MIR	completions / pop 20-64yo				as interaction with MIR	CP: medium.
Model 10	1/LTV	1/IM	MIR	completions / pop 20-64yo				as constant term and interaction with MIR	CP: medium.
Model 11	1/LTV	1/IM	MIR	completions / pop 20-64yo		% of SR completion			CP: somewhat high. Impact of social housing appeared strange (Increased PRS %).
Model 12	1/LTV	1/IM	MIR	completions / pop 20-64yo				as interactions with variable	CP: medium. But the interacted variables appeared insignificant.
Model 13	1/LTV	1/IM	MIR	completions / pop 20-64yo				as interaction with comp	CP: medium.

Annex 3: Projections (proportion and count) by household type and scenario

England: PRS %

Table A3.1: Families with child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	21.1	21.9	22.5	23.2	22.9	22.9	23.0	22.8	22.5	22.2	21.8	21.9	22.3	22.6	22.9	23.2	23.3
	0.0	0.8	1.5	2.1	1.8	1.8	1.9	1.7	1.5	1.1	0.7	0.9	1.2	1.5	1.8	2.1	2.2
robust-a	21.1	21.9	22.5	23.2	22.9	22.7	21.2	18.9	16.6	14.3	12.0	11.2	10.9	10.6	10.3	10.0	9.9
	0.0	0.8	1.5	2.1	1.8	1.6	0.1	-2.1	-4.4	-6.8	-9.1	-9.9	-10.2	-10.5	-10.8	-11.1	-11.2
robust-b	21.1	21.9	22.5	23.2	22.9	22.8	21.9	20.5	19.1	17.5	15.9	15.4	15.2	15.0	14.8	14.6	14.5
	0.0	0.8	1.5	2.1	1.8	1.7	0.9	-0.5	-2.0	-3.6	-5.2	-5.7	-5.9	-6.1	-6.3	-6.5	-6.5
Weak	21.1	21.9	22.5	23.2	22.9	23.0	24.5	25.9	27.3	28.7	30.1	31.4	32.7	33.9	35.2	36.5	36.9
	0.0	0.8	1.5	2.1	1.8	1.9	3.4	4.8	6.2	7.6	9.1	10.3	11.6	12.9	14.1	15.4	15.8

Table A3.2: Couples without child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	19.6	20.3	20.8	21.3	21.2	21.1	21.0	20.6	20.3	19.8	19.3	19.3	19.4	19.4	19.5	19.5	19.5
	0.0	0.7	1.2	1.7	1.6	1.5	1.3	1.0	0.7	0.2	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1
robust-a	19.6	20.3	20.8	21.3	21.2	21.0	19.5	17.5	15.4	13.3	11.1	10.3	10.0	9.7	9.3	8.9	8.8
	0.0	0.7	1.2	1.7	1.6	1.4	-0.1	-2.1	-4.2	-6.3	-8.5	-9.3	-9.6	-9.9	-10.3	-10.7	-10.8
robust-b	19.6	20.3	20.8	21.3	21.2	21.0	20.1	18.9	17.5	16.0	14.5	14.0	13.7	13.5	13.1	12.8	12.7
	0.0	0.7	1.2	1.7	1.6	1.4	0.5	-0.7	-2.1	-3.6	-5.1	-5.6	-5.9	-6.2	-6.5	-6.8	-6.9
Weak	19.6	20.3	20.8	21.3	21.2	21.2	21.9	22.8	23.5	24.3	25.1	25.7	26.2	26.8	27.3	27.8	28.0
	0.0	0.7	1.2	1.7	1.6	1.6	2.3	3.1	3.9	4.7	5.5	6.1	6.6	7.2	7.7	8.2	8.4

Table A3.3: Multi adult without child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	26.5	27.1	27.0	27.4	27.8	27.6	27.5	27.3	27.1	26.8	26.6	26.6	26.8	26.9	27.0	27.1	27.2
	0.0	0.6	0.5	0.9	1.3	1.1	1.0	0.8	0.6	0.3	0.1	0.1	0.3	0.4	0.5	0.6	0.7
robust-a	26.5	27.1	27.0	27.4	27.8	27.5	26.6	25.4	24.1	22.6	21.0	20.5	20.3	20.1	19.9	19.7	19.7
	0.0	0.6	0.5	0.9	1.3	1.0	0.1	-1.1	-2.4	-3.9	-5.5	-6.0	-6.2	-6.4	-6.6	-6.8	-6.8
robust-b	26.5	27.1	27.0	27.4	27.8	27.6	27.0	26.3	25.4	24.5	23.6	23.3	23.2	23.1	23.0	22.9	22.9
	0.0	0.6	0.5	0.9	1.3	1.1	0.5	-0.2	-1.1	-2.0	-2.9	-3.2	-3.3	-3.4	-3.5	-3.6	-3.6
Weak	26.5	27.1	27.0	27.4	27.8	27.6	27.9	28.2	28.6	29.0	29.4	29.7	29.9	30.1	30.4	30.7	30.8
	0.0	0.6	0.5	0.9	1.3	1.1	1.4	1.7	2.1	2.5	2.9	3.2	3.4	3.6	3.9	4.2	4.3

Table A3.4: Couples with child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	18.7	19.5	20.4	21.1	20.5	20.7	20.7	20.4	20.0	19.6	19.1	19.1	19.3	19.4	19.6	19.7	19.7
	0.0	0.8	1.7	2.4	1.8	2.0	2.0	1.7	1.3	0.9	0.4	0.4	0.6	0.7	0.9	0.9	1.0
robust-a	18.7	19.5	20.4	21.1	20.5	20.5	18.9	16.6	14.3	12.0	9.7	9.0	8.6	8.3	7.9	7.6	7.5
	0.0	0.8	1.7	2.4	1.8	1.8	0.2	-2.1	-4.4	-6.7	-9.0	-9.7	-10.1	-10.4	-10.8	-11.1	-11.2
robust-b	18.7	19.5	20.4	21.1	20.5	20.6	19.7	18.2	16.6	15.0	13.4	12.8	12.5	12.3	12.0	11.6	11.5
	0.0	0.8	1.7	2.4	1.8	1.9	0.9	-0.5	-2.1	-3.7	-5.3	-5.9	-6.2	-6.4	-6.8	-7.1	-7.2
Weak	18.7	19.5	20.4	21.1	20.5	20.8	22.1	23.3	24.6	25.8	27.1	28.2	29.2	30.2	31.3	32.3	32.6
	0.0	0.8	1.7	2.4	1.8	2.1	3.4	4.6	5.9	7.1	8.4	9.5	10.5	11.5	12.6	13.6	13.9

Table A3.5: Lone parents: % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	31.5	33.1	32.2	32.3	32.1	31.3	31.5	31.2	30.9	30.4	30.0	30.3	31.0	31.6	32.4	33.1	33.3
	0.0	1.6	0.7	0.8	0.6	-0.2	0.0	-0.3	-0.6	-1.1	-1.5	-1.2	-0.5	0.1	0.9	1.6	1.8
robust-a	31.5	33.1	32.2	32.3	32.1	31.1	29.0	25.9	22.7	19.4	16.2	15.2	15.0	14.8	14.7	14.5	14.5
	0.0	1.6	0.7	0.8	0.6	-0.4	-2.5	-5.6	-8.8	-12.1	-15.3	-16.3	-16.5	-16.7	-16.8	-17.0	-17.0
robust-b	31.5	33.1	32.2	32.3	32.1	31.2	30.1	28.2	26.2	24.0	21.8	21.3	21.3	21.4	21.5	21.6	21.6
	0.0	1.6	0.7	0.8	0.6	-0.3	-1.4	-3.3	-5.3	-7.5	-9.7	-10.2	-10.2	-10.1	-10.0	-9.9	-9.9
Weak	31.5	33.1	32.2	32.3	32.1	31.5	33.5	35.4	37.3	39.2	41.1	42.8	44.5	46.2	48.0	49.8	50.2
	0.0	1.6	0.7	0.8	0.6	0.0	2.0	3.9	5.8	7.7	9.6	11.3	13.0	14.7	16.5	18.2	18.7

Table A3.6: Multi adults with child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	14.8	14.5	16.1	17.1	17.2	17.8	18.2	18.2	18.2	18.2	18.2	18.2	18.3	18.3	18.3	18.2	18.2
	0.0	-0.3	1.3	2.3	2.4	3.0	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.4	3.4
robust-a	14.8	14.5	16.1	17.1	17.2	17.7	17.2	16.3	15.4	14.4	13.4	12.8	12.3	11.7	11.2	10.6	10.4
	0.0	-0.3	1.3	2.3	2.4	2.9	2.4	1.5	0.6	-0.4	-1.4	-2.0	-2.5	-3.1	-3.7	-4.3	-4.4
robust-b	14.8	14.5	16.1	17.1	17.2	17.7	17.6	17.1	16.5	15.9	15.2	14.7	14.3	13.9	13.5	12.9	12.8
	0.0	-0.3	1.3	2.3	2.4	2.9	2.8	2.2	1.7	1.0	0.3	-0.1	-0.5	-0.9	-1.4	-1.9	-2.0
Weak	14.8	14.5	16.1	17.1	17.2	18.0	19.2	20.1	21.1	22.1	23.1	24.1	25.1	26.1	27.1	28.0	28.3
	0.0	-0.3	1.3	2.3	2.4	3.2	4.3	5.3	6.3	7.3	8.3	9.3	10.3	11.2	12.2	13.2	13.4

Table A3.7: All households: % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	18.0	18.0	18.0	18.0	19.0	18.9	18.8	18.6	18.4	18.1	17.8	17.8	17.8	17.9	17.9	18.0	17.9
	0.0	0.0	0.0	0.0	1.0	0.9	0.8	0.6	0.4	0.1	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	-0.1
robust-a	18.0	18.0	18.0	18.0	19.0	18.8	17.8	16.4	15.0	13.5	12.0	11.4	11.2	10.9	10.7	10.4	10.3
	0.0	0.0	0.0	0.0	1.0	0.8	-0.2	-1.6	-3.0	-4.5	-6.0	-6.6	-6.8	-7.1	-7.3	-7.6	-7.7
robust-b	18.0	18.0	18.0	18.0	19.0	18.8	18.2	17.3	16.4	15.4	14.4	14.0	13.8	13.6	13.4	13.2	13.1
	0.0	0.0	0.0	0.0	1.0	0.8	0.2	-0.7	-1.6	-2.6	-3.6	-4.0	-4.2	-4.4	-4.6	-4.8	-4.9
Weak	18.0	18.0	18.0	18.0	19.0	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.1	23.6	24.1	24.5	24.6
	0.0	0.0	0.0	0.0	1.0	1.0	1.6	2.2	2.9	3.5	4.1	4.7	5.1	5.6	6.1	6.5	6.6

England: PRS count

Table A3.8: Families with child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	1,358,272	1,429,313	1,484,961	1,542,914	1,533,142	1,548,470	1,574,390	1,577,797	1,577,595	1,571,363	1,558,812	1,582,859	1,617,458	1,648,804	1,677,658	1,703,666	1,715,677
	0	71,042	126,689	184,643	174,870	190,198	216,118	219,525	219,324	213,091	200,540	224,587	259,186	290,532	319,387	345,394	357,406
robust-a	1,358,272	1,429,313	1,484,961	1,542,914	1,533,142	1,536,030	1,447,625	1,309,923	1,164,371	1,012,324	858,556	809,528	793,089	774,472	754,439	732,652	729,602
	0	71,042	126,689	184,643	174,870	177,758	89,353	-48,348	-193,901	-345,948	-499,716	-548,744	-565,183	-583,800	-603,833	-625,619	-628,669
robust-b	1,358,272	1,429,313	1,484,961	1,542,914	1,533,142	1,540,902	1,500,164	1,421,076	1,334,385	1,238,781	1,135,663	1,107,922	1,103,358	1,095,382	1,084,788	1,071,206	1,071,340
	0	71,042	126,689	184,643	174,870	182,630	141,893	62,805	-23,887	-119,490	-222,609	-250,350	-254,913	-262,889	-273,483	-287,066	-286,932
weak	1,358,272	1,429,313	1,484,961	1,542,914	1,533,142	1,558,728	1,673,962	1,789,394	1,909,435	2,031,549	2,154,912	2,266,610	2,373,205	2,478,049	2,581,707	2,684,110	2,718,156
	0	71,042	126,689	184,643	174,870	200,456	315,691	431,122	551,163	673,278	796,640	908,338	1,014,934	1,119,777	1,223,435	1,325,838	1,359,884

Table A3.9: Couples without child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	648,602	663,740	674,707	686,178	679,295	674,986	666,220	652,710	636,569	618,074	597,329	590,435	587,492	582,986	577,205	570,195	562,648
	0	15,138	26,105	37,576	30,693	26,383	17,618	4,108	-12,033	-30,528	-51,274	-58,167	-61,110	-65,616	-71,397	-78,407	-85,954
robust-a	648,602	663,740	674,707	686,178	679,295	670,999	620,186	554,365	484,935	413,532	342,240	315,612	302,981	289,600	275,750	261,354	255,180
	0	15,138	26,105	37,576	30,693	22,397	-28,416	-94,238	-163,667	-235,070	-306,362	-332,990	-345,621	-359,002	-372,852	-387,248	-393,422
robust-b	648,602	663,740	674,707	686,178	679,295	672,633	639,823	596,475	549,676	500,103	448,487	427,625	416,256	403,534	389,743	374,840	367,336
	0	15,138	26,105	37,576	30,693	24,030	-8,779	-52,127	-98,926	-148,499	-200,115	-220,977	-232,346	-245,068	-258,859	-273,763	-281,266
weak	648,602	663,740	674,707	686,178	679,295	677,421	697,177	719,169	739,308	757,822	774,611	786,021	795,075	802,568	808,798	814,025	807,036
	0	15,138	26,105	37,576	30,693	28,819	48,575	70,567	90,706	109,220	126,009	137,419	146,472	153,966	160,196	165,423	158,434

Table A3.10: Multi adult without child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	682,436	704,897	711,263	732,042	753,697	757,036	761,570	763,771	763,581	761,400	757,691	763,024	771,528	779,700	787,830	795,470	802,340
	0	22,461	28,827	49,606	71,261	74,600	79,134	81,335	81,145	78,965	75,255	80,589	89,093	97,264	105,394	113,034	119,904
robust-a	682,436	704,897	711,263	732,042	753,697	755,404	738,282	711,332	678,860	641,019	597,889	586,359	585,750	584,291	582,287	579,254	582,449
	0	22,461	28,827	49,606	71,261	72,968	55,846	28,897	-3,575	-41,417	-84,547	-96,077	-96,685	-98,144	-100,149	-103,182	-99,987
robust-b	682,436	704,897	711,263	732,042	753,697	756,153	748,730	734,935	717,209	695,881	671,277	666,835	669,180	670,687	671,628	671,509	675,873
	0	22,461	28,827	49,606	71,261	73,717	66,294	52,499	34,773	13,445	-11,159	-15,600	-13,255	-11,749	-10,808	-10,926	-6,563
weak	682,436	704,897	711,263	732,042	753,697	757,075	772,431	789,945	806,214	821,642	836,740	849,644	862,170	874,869	887,997	901,100	909,630
	0	22,461	28,827	49,606	71,261	74,639	89,995	107,509	123,778	139,206	154,304	167,208	179,734	192,433	205,562	218,665	227,194

Table A3.11: Couples with child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	723,455	759,938	800,634	834,758	815,592	825,925	833,032	827,288	819,037	806,952	791,028	795,967	806,301	813,987	819,333	821,947	821,398
	0	36,484	77,180	111,304	92,138	102,470	109,577	103,834	95,582	83,498	67,573	72,513	82,846	90,532	95,878	98,493	97,943
robust-a	723,455	759,938	800,634	834,758	815,592	818,919	759,446	672,847	583,581	492,882	403,855	373,668	361,195	347,377	332,570	316,538	312,085
	0	36,484	77,180	111,304	92,138	95,465	35,992	-50,608	-139,874	-230,572	-319,600	-349,787	-362,260	-376,077	-390,885	-406,916	-411,369
robust-b	723,455	759,938	800,634	834,758	815,592	821,717	790,104	736,925	679,982	618,832	554,653	533,331	524,572	513,434	500,266	484,762	480,127
	0	36,484	77,180	111,304	92,138	98,262	66,650	13,471	-43,472	-104,623	-168,802	-190,123	-198,882	-210,020	-223,188	-238,693	-243,327
weak	723,455	759,938	800,634	834,758	815,592	831,049	887,881	945,058	1,003,974	1,063,147	1,122,189	1,173,285	1,220,440	1,265,740	1,309,443	1,351,310	1,360,162
	0	36,484	77,180	111,304	92,138	107,595	164,426	221,604	280,520	339,692	398,734	449,830	496,985	542,285	585,988	627,855	636,708

Table A3.12: Lone parents: count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	478,092	514,686	510,857	522,817	530,304	527,767	541,663	549,032	555,565	560,472	563,605	581,628	605,017	628,583	652,730	677,438	691,023
	0	36,593	32,764	44,725	52,212	49,675	63,570	70,939	77,473	82,380	85,512	103,536	126,924	150,490	174,638	199,345	212,931
robust-a	478,092	514,686	510,857	522,817	530,304	523,959	499,154	456,473	409,241	357,806	303,849	291,708	293,444	294,918	296,432	297,797	301,357
	0	36,593	32,764	44,725	52,212	45,867	21,061	-21,619	-68,852	-120,287	-174,244	-186,384	-184,648	-183,175	-181,661	-180,295	-176,735
robust-b	478,092	514,686	510,857	522,817	530,304	525,427	516,993	495,661	471,055	442,583	410,546	408,602	416,951	425,036	433,216	441,350	448,168
	0	36,593	32,764	44,725	52,212	47,335	38,900	17,568	-7,037	-35,509	-67,546	-69,491	-61,142	-53,057	-44,876	-36,742	-29,925
weak	478,092	514,686	510,857	522,817	530,304	531,191	575,710	621,953	670,637	721,030	772,872	821,621	869,712	918,404	967,988	1,018,561	1,042,264
	0	36,593	32,764	44,725	52,212	53,099	97,618	143,860	192,544	242,937	294,779	343,529	391,620	440,312	489,896	540,469	564,172

Table A3.13: Multi adults with child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	156,725	154,689	173,470	185,339	187,246	194,778	199,695	201,477	202,994	203,939	204,179	205,263	206,141	206,235	205,595	204,281	203,256
	0	-2,035	16,745	28,614	30,521	38,053	42,971	44,753	46,269	47,214	47,455	48,539	49,416	49,510	48,870	47,556	46,531
robust-a	156,725	154,689	173,470	185,339	187,246	193,152	189,025	180,603	171,549	161,636	150,852	144,152	138,450	132,177	125,438	118,317	116,160
	0	-2,035	16,745	28,614	30,521	36,427	32,300	23,878	14,824	4,911	-5,872	-12,572	-18,275	-24,548	-31,287	-38,408	-40,565
robust-b	156,725	154,689	173,470	185,339	187,246	193,758	193,068	188,490	183,348	177,366	170,464	165,989	161,835	156,912	151,306	145,094	143,045
	0	-2,035	16,745	28,614	30,521	37,033	36,343	31,765	26,623	20,641	13,739	9,264	5,111	188	-5,419	-11,630	-13,680
weak	156,725	154,689	173,470	185,339	187,246	196,487	210,371	222,383	234,824	247,373	259,851	271,704	283,053	293,905	304,276	314,239	315,729
	0	-2,035	16,745	28,614	30,521	39,763	53,647	65,658	78,099	90,648	103,127	114,979	126,328	137,180	147,551	157,514	159,004

Table A3.14: All households: count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	4,010,156	4,149,125	4,272,945	4,356,443	4,422,790	4,446,450	4,466,848	4,462,602	4,446,618	4,417,641	4,376,763	4,411,031	4,468,339	4,520,589	4,569,337	4,613,142	4,637,458
	0	138,969	262,789	346,287	412,634	436,294	456,692	452,446	436,462	407,485	366,607	400,875	458,184	510,433	559,181	602,986	627,302
robust-a	4,010,156	4,149,125	4,272,945	4,356,443	4,422,790	4,423,095	4,217,970	3,930,934	3,619,200	3,286,852	2,942,438	2,831,360	2,795,375	2,755,214	2,712,564	2,665,940	2,665,956
	0	138,969	262,789	346,287	412,634	412,939	207,814	-79,222	-390,956	-723,304	-1,067,718	-1,178,796	-1,214,781	-1,254,941	-1,297,591	-1,344,216	-1,344,200
robust-b	4,010,156	4,149,125	4,272,945	4,356,443	4,422,790	4,432,462	4,322,760	4,155,774	3,968,215	3,760,357	3,535,638	3,471,470	3,458,079	3,438,454	3,414,191	3,383,705	3,388,353
	0	138,969	262,789	346,287	412,634	422,306	312,604	145,618	-41,940	-249,799	-474,518	-538,686	-552,077	-571,702	-595,965	-626,451	-621,803
weak	4,010,156	4,149,125	4,272,945	4,356,443	4,422,790	4,463,122	4,646,625	4,847,586	5,049,027	5,249,544	5,449,563	5,627,197	5,796,670	5,964,236	6,131,201	6,296,653	6,352,962
	0	138,969	262,789	346,287	412,634	452,966	636,469	837,430	1,038,871	1,239,388	1,439,407	1,617,041	1,786,514	1,954,080	2,121,045	2,286,497	2,342,806

London: PRS %

Table A3.15: Families with child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	24.7	25.5	26.2	27.5	27.8	28.2	28.7	28.5	28.2	27.9	27.6	27.5	27.3	27.2	27.1	27.0	27.0
	0.0	0.8	1.5	2.8	3.1	3.5	4.0	3.8	3.5	3.2	2.9	2.8	2.6	2.5	2.4	2.3	2.3
robust-a	24.7	25.5	26.2	27.5	27.8	28.0	27.4	26.0	24.5	23.0	21.5	20.4	19.5	18.6	17.7	16.8	16.6
	0.0	0.8	1.5	2.8	3.1	3.3	2.7	1.3	-0.2	-1.7	-3.2	-4.3	-5.2	-6.1	-7.0	-7.9	-8.1
robust-b	24.7	25.5	26.2	27.5	27.8	28.0	27.9	26.9	25.8	24.7	23.6	22.8	22.1	21.4	20.6	19.9	19.7
	0.0	0.8	1.5	2.8	3.1	3.3	3.2	2.2	1.1	0.0	-1.1	-1.9	-2.6	-3.4	-4.1	-4.8	-5.0
Weak	24.7	25.5	26.2	27.5	27.8	28.4	29.8	30.5	31.3	32.1	32.8	33.6	34.4	35.2	36.0	36.8	37.0
	0.0	0.8	1.5	2.8	3.1	3.7	5.1	5.8	6.6	7.4	8.1	8.9	9.7	10.5	11.3	12.1	12.3

Table A3.16: Couples without child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	33.4	35.0	34.9	33.8	36.0	35.8	35.7	34.9	34.0	33.0	32.0	31.2	30.4	29.6	28.7	27.8	27.5
	0.0	1.6	1.4	0.3	2.6	2.4	2.2	1.4	0.5	-0.4	-1.4	-2.2	-3.0	-3.8	-4.7	-5.6	-5.9
robust-a	33.4	35.0	34.9	33.8	36.0	35.7	34.9	33.1	31.1	29.1	26.8	25.5	24.4	23.2	22.0	20.7	20.4
	0.0	1.6	1.4	0.3	2.6	2.3	1.4	-0.4	-2.3	-4.4	-6.6	-8.0	-9.1	-10.2	-11.5	-12.7	-13.0
robust-b	33.4	35.0	34.9	33.8	36.0	35.7	35.2	33.7	32.2	30.6	28.9	27.7	26.6	25.4	24.2	23.0	22.6
	0.0	1.6	1.4	0.3	2.6	2.3	1.7	0.3	-1.2	-2.8	-4.6	-5.8	-6.9	-8.0	-9.2	-10.5	-10.8
Weak	33.4	35.0	34.9	33.8	36.0	35.9	36.4	36.3	36.1	35.9	35.7	35.4	35.1	34.7	34.3	33.8	33.7
	0.0	1.6	1.4	0.3	2.6	2.4	2.9	2.8	2.7	2.5	2.3	2.0	1.7	1.3	0.8	0.4	0.2

Table A3.17: Multi adult without child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	41.4	41.6	39.9	40.0	39.3	40.7	40.9	41.0	41.0	41.1	41.3	41.8	42.5	43.2	44.2	45.3	45.6
	0.0	0.2	-1.6	-1.4	-2.2	-0.8	-0.5	-0.5	-0.4	-0.3	-0.1	0.3	1.0	1.8	2.8	3.9	4.2
robust-a	41.4	41.6	39.9	40.0	39.3	40.5	39.9	38.9	37.8	36.8	35.6	35.1	35.0	34.8	34.8	34.9	34.8
	0.0	0.2	-1.6	-1.4	-2.2	-0.9	-1.5	-2.5	-3.6	-4.7	-5.8	-6.3	-6.5	-6.6	-6.7	-6.6	-6.6
robust-b	41.4	41.6	39.9	40.0	39.3	40.6	40.4	39.8	39.2	38.6	38.1	38.0	38.2	38.4	38.8	39.4	39.5
	0.0	0.2	-1.6	-1.4	-2.2	-0.9	-1.1	-1.7	-2.2	-2.8	-3.4	-3.5	-3.3	-3.0	-2.6	-2.1	-2.0
Weak	41.4	41.6	39.9	40.0	39.3	40.7	41.5	42.1	42.8	43.6	44.6	45.6	46.7	48.0	49.4	51.0	51.4
	0.0	0.2	-1.6	-1.4	-2.2	-0.7	0.1	0.7	1.4	2.2	3.1	4.1	5.3	6.5	8.0	9.6	9.9

Table A3.18: Couples with child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	26.6	26.1	27.1	27.4	27.3	28.5	28.7	28.4	28.2	27.9	27.6	27.5	27.4	27.4	27.3	27.2	27.2
	0.0	-0.5	0.4	0.7	0.7	1.9	2.0	1.8	1.6	1.3	1.0	0.9	0.8	0.7	0.7	0.6	0.6
robust-a	26.6	26.1	27.1	27.4	27.3	28.3	27.3	25.9	24.4	23.0	21.5	20.5	19.6	18.8	18.0	17.2	17.1
	0.0	-0.5	0.4	0.7	0.7	1.7	0.7	-0.7	-2.2	-3.7	-5.2	-6.2	-7.0	-7.8	-8.6	-9.4	-9.6
robust-b	26.6	26.1	27.1	27.4	27.3	28.4	27.8	26.8	25.7	24.7	23.6	22.8	22.1	21.5	20.8	20.2	20.0
	0.0	-0.5	0.4	0.7	0.7	1.7	1.2	0.1	-0.9	-2.0	-3.1	-3.8	-4.5	-5.1	-5.8	-6.4	-6.6
Weak	26.6	26.1	27.1	27.4	27.3	28.7	29.9	30.7	31.5	32.3	33.2	34.1	35.0	35.9	36.8	37.7	38.0
	0.0	-0.5	0.4	0.7	0.7	2.1	3.2	4.1	4.9	5.7	6.6	7.4	8.3	9.2	10.2	11.1	11.4

Table A3.19: Lone parents: % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	25.6	28.2	28.4	30.3	31.8	30.9	32.2	31.9	31.6	31.3	30.9	30.9	30.8	30.8	30.8	30.8	30.8
	0.0	2.6	2.8	4.7	6.3	5.4	6.6	6.3	6.0	5.7	5.4	5.3	5.3	5.2	5.2	5.2	5.2
robust-a	25.6	28.2	28.4	30.3	31.8	30.7	30.5	28.7	26.8	24.9	23.0	21.9	21.0	20.0	19.1	18.2	18.0
	0.0	2.6	2.8	4.7	6.3	5.1	4.9	3.1	1.2	-0.7	-2.6	-3.7	-4.6	-5.6	-6.5	-7.4	-7.6
robust-b	25.6	28.2	28.4	30.3	31.8	30.8	31.1	29.9	28.6	27.2	25.9	25.0	24.3	23.6	22.9	22.1	22.0
	0.0	2.6	2.8	4.7	6.3	5.2	5.5	4.3	3.0	1.7	0.3	-0.6	-1.3	-2.0	-2.7	-3.5	-3.6
Weak	25.6	28.2	28.4	30.3	31.8	31.2	33.5	34.5	35.5	36.5	37.5	38.5	39.5	40.5	41.5	42.6	42.9
	0.0	2.6	2.8	4.7	6.3	5.6	7.9	8.9	9.9	10.9	11.9	12.9	13.9	14.9	16.0	17.0	17.3

Table A3.20: Multi adults with child(ren): % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	20.1	21.6	22.5	24.9	24.6	24.9	25.5	25.2	25.0	24.7	24.3	24.0	23.7	23.4	23.0	22.7	22.6
	0.0	1.5	2.4	4.8	4.5	4.8	5.4	5.2	4.9	4.6	4.2	3.9	3.6	3.3	2.9	2.6	2.5
robust-a	20.1	21.6	22.5	24.9	24.6	24.7	24.5	23.5	22.3	21.2	19.9	18.9	17.8	16.8	15.7	14.6	14.4
	0.0	1.5	2.4	4.8	4.5	4.6	4.4	3.4	2.3	1.1	-0.2	-1.2	-2.3	-3.3	-4.4	-5.5	-5.7
robust-b	20.1	21.6	22.5	24.9	24.6	24.8	24.9	24.1	23.3	22.4	21.4	20.6	19.8	18.9	18.0	17.1	16.9
	0.0	1.5	2.4	4.8	4.5	4.7	4.8	4.0	3.2	2.3	1.3	0.5	-0.3	-1.2	-2.1	-3.0	-3.2
Weak	20.1	21.6	22.5	24.9	24.6	25.0	26.1	26.5	26.9	27.2	27.6	28.0	28.3	28.6	29.0	29.3	29.4
	0.0	1.5	2.4	4.8	4.5	4.9	6.0	6.4	6.8	7.1	7.5	7.9	8.2	8.5	8.9	9.2	9.3

Table A3.21: All households: % (upper row), change from 2012 (percentage points; lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Balanced	25.5	26.2	25.8	25.5	26.2	26.5	26.8	26.5	26.2	25.9	25.6	25.5	25.5	25.6	25.6	25.7	25.6
	0.0	0.7	0.4	0.0	0.7	1.0	1.3	1.0	0.8	0.5	0.2	0.1	0.1	0.1	0.2	0.2	0.2
robust-a	25.5	26.2	25.8	25.5	26.2	26.4	25.8	24.7	23.4	22.2	20.9	20.1	19.6	19.1	18.7	18.2	18.1
	0.0	0.7	0.4	0.0	0.7	0.9	0.4	-0.8	-2.0	-3.3	-4.6	-5.3	-5.8	-6.3	-6.8	-7.2	-7.4
robust-b	25.5	26.2	25.8	25.5	26.2	26.4	26.2	25.4	24.5	23.6	22.7	22.2	21.9	21.5	21.2	20.9	20.8
	0.0	0.7	0.3	0.0	0.7	0.9	0.7	-0.1	-1.0	-1.9	-2.8	-3.3	-3.6	-4.0	-4.3	-4.6	-4.7
Weak	25.5	26.2	25.8	25.5	26.2	26.6	27.4	27.8	28.3	28.7	29.1	29.6	30.0	30.5	31.0	31.5	31.6
	0.0	0.7	0.4	0.0	0.7	1.1	2.0	2.4	2.8	3.2	3.7	4.1	4.6	5.0	5.5	6.1	6.1

London: PRS count

Table A3.22: Families with child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	254,528	267,537	280,800	299,409	307,381	316,859	328,161	330,607	332,701	334,222	334,943	336,970	338,881	339,956	340,455	340,650	342,167
	0	13,009	26,272	44,882	52,853	62,332	73,633	76,079	78,173	79,694	80,415	82,443	84,353	85,428	85,928	86,123	87,640
robust-a	254,528	267,537	280,800	299,409	307,381	314,435	313,119	301,464	288,854	275,158	260,285	250,389	241,657	232,183	222,262	212,152	210,607
	0	13,009	26,272	44,882	52,853	59,907	58,591	46,937	34,326	20,630	5,757	-4,138	-12,871	-22,344	-32,265	-42,375	-43,920
robust-b	254,528	267,537	280,800	299,409	307,381	315,251	318,410	311,774	304,329	295,884	286,264	279,730	273,636	266,657	259,087	251,204	250,356
	0	13,009	26,272	44,882	52,853	60,724	63,883	57,247	49,802	41,356	31,736	25,203	19,109	12,130	4,560	-3,323	-4,172
weak	254,528	267,537	280,800	299,409	307,381	318,862	340,466	354,561	369,050	383,711	398,297	412,459	426,121	439,251	452,076	464,893	470,021
	0	13,009	26,272	44,882	52,853	64,335	85,938	100,033	114,522	129,183	143,770	157,931	171,594	184,723	197,549	210,366	215,494

Table A3.23: Couples without child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	136,843	144,152	145,110	142,250	153,294	153,851	154,575	151,938	148,703	145,054	140,963	137,626	134,344	130,702	126,720	122,460	120,975
	0	7,309	8,267	5,407	16,452	17,008	17,732	15,096	11,860	8,211	4,120	783	-2,498	-6,141	-10,123	-14,383	-15,868
robust-a	136,843	144,152	145,110	142,250	153,294	153,484	150,961	144,154	136,334	127,680	118,166	112,287	107,495	102,378	96,989	91,394	89,733
	0	7,309	8,267	5,407	16,452	16,641	14,118	7,312	-508	-9,163	-18,676	-24,555	-29,348	-34,465	-39,854	-45,449	-47,110
robust-b	136,843	144,152	145,110	142,250	153,294	153,597	152,263	147,054	141,040	134,410	127,139	121,970	117,310	112,272	106,899	101,267	99,526
	0	7,309	8,267	5,407	16,452	16,754	15,420	10,211	4,198	-2,433	-9,704	-14,873	-19,533	-24,571	-29,944	-35,575	-37,317
weak	136,843	144,152	145,110	142,250	153,294	154,196	157,585	158,123	158,158	157,874	157,240	156,193	154,852	153,204	151,260	149,072	148,020
	0	7,309	8,267	5,407	16,452	17,353	20,742	21,280	21,315	21,031	20,397	19,350	18,009	16,361	14,417	12,229	11,177

Table A3.24: Multi adult without child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	221,859	228,089	224,691	232,359	234,374	248,992	256,874	262,792	268,552	274,507	280,724	289,066	298,909	309,879	322,234	335,984	342,921
	0	6,230	2,833	10,500	12,516	27,133	35,015	40,934	46,693	52,649	58,866	67,207	77,050	88,020	100,376	114,126	121,063
robust-a	221,859	228,089	224,691	232,359	234,374	248,046	250,373	249,543	247,760	245,300	242,105	243,188	246,155	249,538	253,556	258,269	261,848
	0	6,230	2,833	10,500	12,516	26,187	28,514	27,684	25,901	23,442	20,247	21,329	24,297	27,680	31,698	36,411	39,990
robust-b	221,859	228,089	224,691	232,359	234,374	248,443	253,175	255,273	256,748	257,915	258,770	262,864	268,672	275,274	282,956	291,823	296,962
	0	6,230	2,833	10,500	12,516	26,584	31,317	33,415	34,890	36,056	36,912	41,005	46,814	53,415	61,097	69,964	75,103
weak	221,859	228,089	224,691	232,359	234,374	249,454	260,405	270,195	280,327	291,173	302,826	315,319	328,958	343,893	360,283	377,966	386,390
	0	6,230	2,833	10,500	12,516	27,595	38,546	48,336	58,469	69,315	80,967	93,461	107,100	122,035	138,424	156,107	164,531

Table A3.25: Couples with child(ren): count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	136,450	135,684	142,880	146,347	147,850	156,069	158,760	159,251	159,654	159,855	159,763	160,259	160,715	160,827	160,703	160,458	160,498
	0	-766	6,430	9,897	11,400	19,619	22,310	22,801	23,204	23,405	23,312	23,809	24,265	24,377	24,252	24,007	24,047
robust-a	136,450	135,684	142,880	146,347	147,850	154,830	151,353	145,084	138,500	131,523	124,113	119,187	114,964	110,543	106,044	101,559	100,556
	0	-766	6,430	9,897	11,400	18,380	14,903	8,634	2,050	-4,927	-12,337	-17,263	-21,486	-25,907	-30,407	-34,891	-35,894
robust-b	136,450	135,684	142,880	146,347	147,850	155,222	153,837	149,895	145,708	141,184	136,261	132,831	129,698	126,273	122,673	119,005	118,193
	0	-766	6,430	9,897	11,400	18,772	17,387	13,445	9,258	4,734	-189	-3,619	-6,752	-10,178	-13,777	-17,445	-18,257
weak	136,450	135,684	142,880	146,347	147,850	157,197	165,337	171,817	178,501	185,261	191,984	198,512	204,794	210,810	216,656	222,467	224,026
	0	-766	6,430	9,897	11,400	20,747	28,887	35,367	42,050	48,810	55,534	62,062	68,344	74,359	80,205	86,017	87,576

Table A3.26: Lone parents: count (upper row), change from 2012 (lower row)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	65,201	73,631	75,777	82,741	88,629	87,906	93,310	94,513	95,616	96,580	97,335	98,785	100,347	101,711	102,953	104,139	105,476
	0	8,430	10,576	17,540	23,428	22,705	28,109	29,312	30,415	31,379	32,134	33,584	35,146	36,510	37,752	38,938	40,275
robust-a	65,201	73,631	75,777	82,741	88,629	87,176	88,459	84,936	81,085	76,914	72,417	70,017	68,164	66,077	63,830	61,477	61,534
	0	8,430	10,576	17,540	23,428	21,975	23,258	19,735	15,884	11,713	7,216	4,816	2,963	876	-1,371	-3,724	-3,667
robust-b	65,201	73,631	75,777	82,741	88,629	87,426	90,225	88,454	86,412	84,072	81,382	80,092	79,104	77,851	76,408	74,834	75,204
	0	8,430	10,576	17,540	23,428	22,225	25,024	23,253	21,211	18,871	16,181	14,891	13,903	12,650	11,207	9,633	10,003
weak	65,201	73,631	75,777	82,741	88,629	88,491	97,151	102,129	107,278	112,568	117,926	123,227	128,470	133,655	138,855	144,153	146,879
	0	8,430	10,576	17,540	23,428	23,290	31,950	36,927	42,077	47,366	52,725	58,026	63,269	68,454	73,654	78,952	81,678

Table A3.27: Multi adults with child(ren): count (upper row), change from 2012 (lower row)

|	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	52,876	58,221	62,143	70,321	70,902	72,884	76,091	76,842	77,431	77,787	77,846	77,926	77,818	77,417	76,800	76,054	76,194
	0	5,345	9,266	17,444	18,025	20,008	23,214	23,966	24,555	24,910	24,969	25,050	24,942	24,541	23,923	23,178	23,317
robust-a	52,876	58,221	62,143	70,321	70,902	72,428	73,307	71,444	69,269	66,721	63,754	61,185	58,528	55,563	52,388	49,116	48,517
	0	5,345	9,266	17,444	18,025	19,552	20,431	18,568	16,393	13,844	10,878	8,309	5,652	2,686	-488	-3,760	-4,359
robust-b	52,876	58,221	62,143	70,321	70,902	72,603	74,348	73,425	72,209	70,627	68,620	66,808	64,835	62,534	60,006	57,365	56,959
	0	5,345	9,266	17,444	18,025	19,727	21,472	20,549	19,333	17,751	15,744	13,932	11,959	9,658	7,129	4,488	4,083
weak	52,876	58,221	62,143	70,321	70,902	73,174	77,978	80,615	83,271	85,883	88,387	90,720	92,856	94,786	96,566	98,273	99,115
	0	5,345	9,266	17,444	18,025	20,297	25,101	27,739	30,395	33,006	35,511	37,843	39,980	41,910	43,690	45,397	46,239

Table A3.28: All households: count (upper row), change from 2012 (lower row)

|	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
balanced	852,714	893,057	898,142	903,810	945,012	972,969	999,343	1,005,497	1,010,181	1,013,997	1,016,786	1,027,514	1,041,430	1,056,098	1,072,119	1,089,584	1,100,812
	0	40,343	45,428	51,096	92,298	120,255	146,629	152,783	157,466	161,283	164,072	174,800	188,716	203,384	219,405	236,870	248,098
robust-a	852,714	893,057	898,142	903,810	945,012	968,308	965,230	936,234	903,202	866,832	827,060	809,655	799,990	790,279	781,167	772,887	775,881
	0	40,343	45,428	51,096	92,298	115,594	112,516	83,520	50,488	14,118	-25,654	-43,059	-52,724	-62,435	-71,547	-79,827	-76,833
robust-b	852,714	893,057	898,142	903,810	945,012	969,966	978,277	963,115	944,943	924,371	901,224	893,378	890,998	888,892	887,777	887,938	893,843
	0	40,343	45,428	51,096	92,298	117,252	125,563	110,401	92,229	71,657	48,510	40,664	38,284	36,178	35,063	35,224	41,129
weak	852,714	893,057	898,142	903,810	945,012	976,457	1,024,566	1,056,422	1,088,532	1,121,506	1,155,222	1,189,143	1,223,922	1,260,001	1,297,790	1,337,138	1,354,774
	0	40,343	45,428	51,096	92,298	123,743	171,852	203,708	235,818	268,792	302,508	336,429	371,208	407,287	445,076	484,424	502,060

Annex 4: PRS projections by household type

England (Figures A4.1 – A4.12)

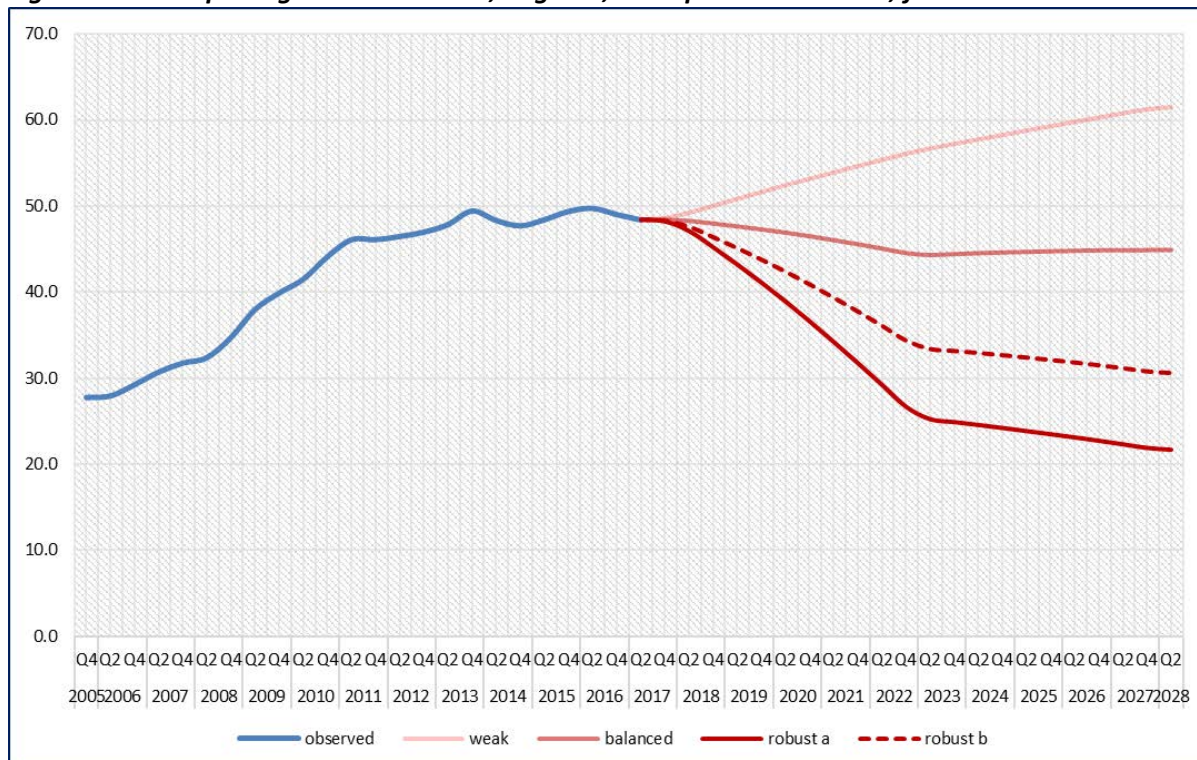*Figure A4.1: Single person households aged 34 and under, England, no dependent children, four scenarios*
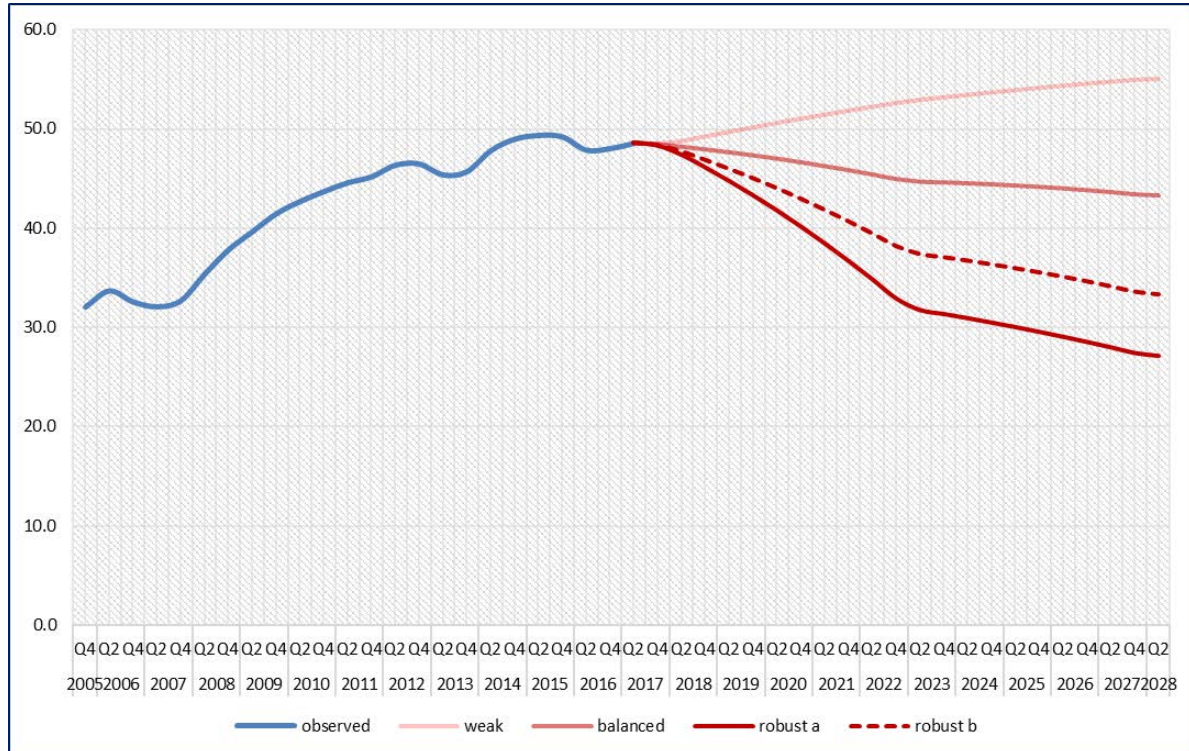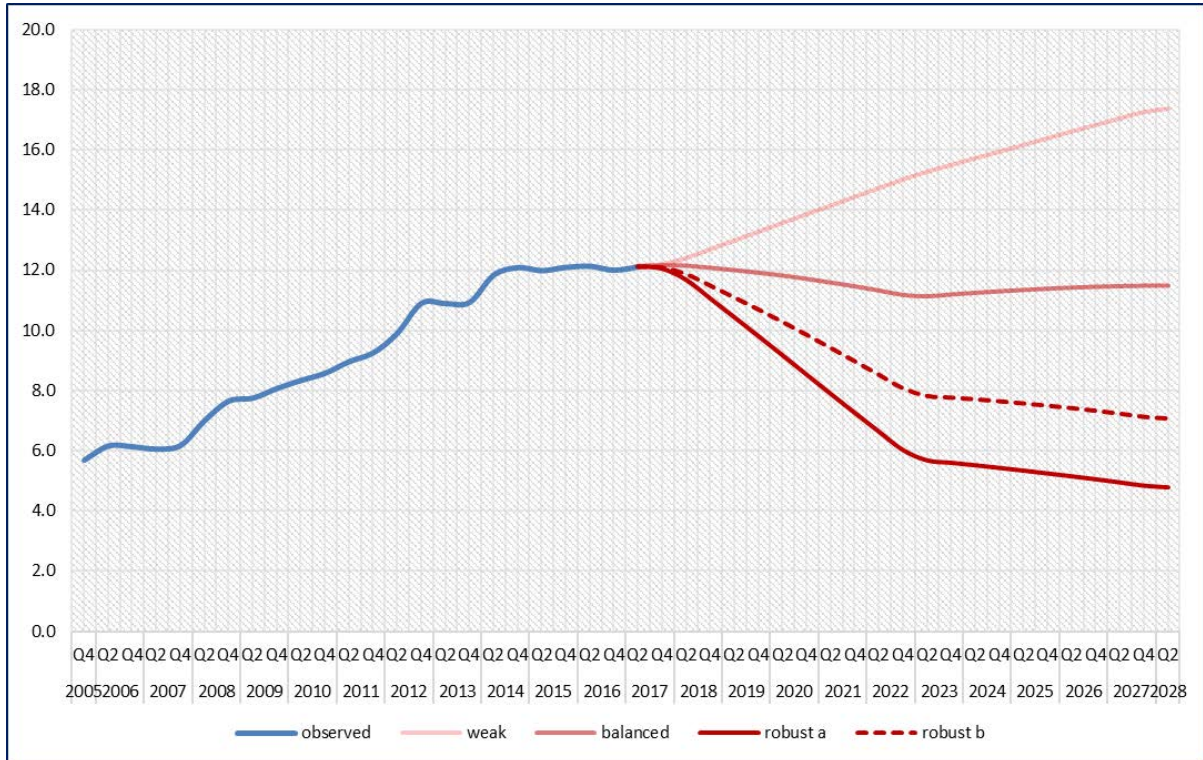
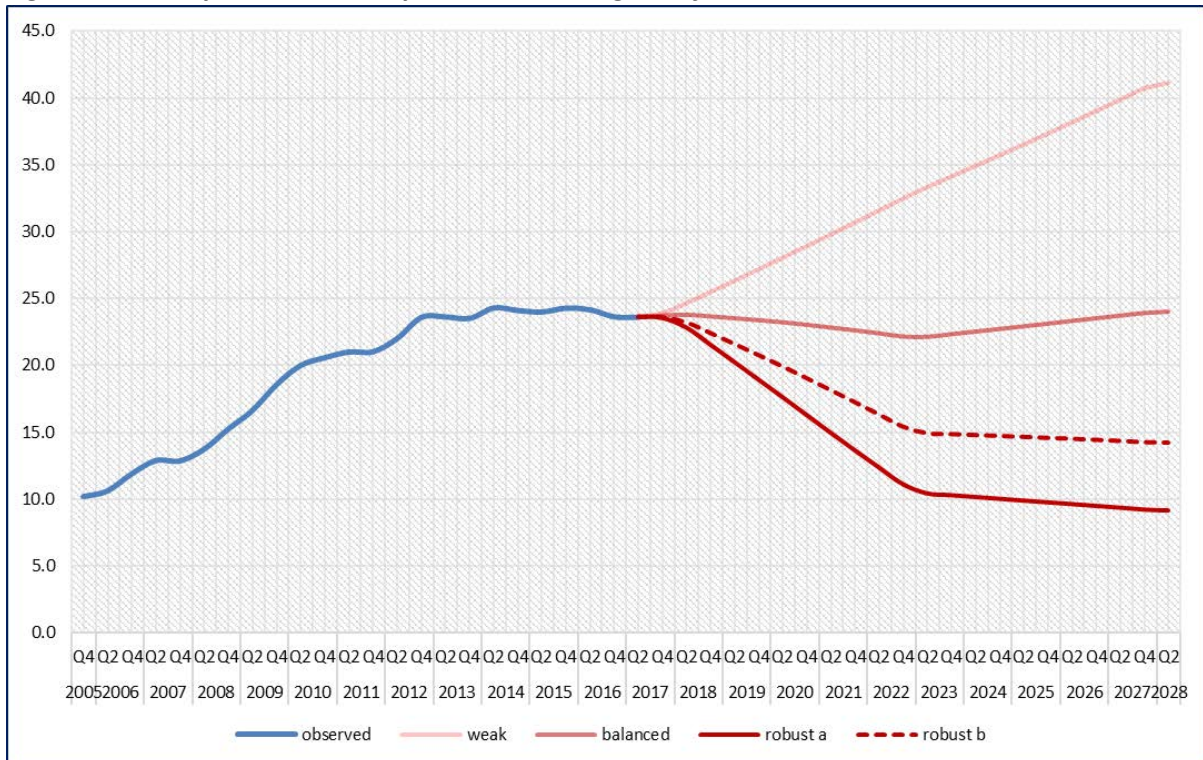**Figure A4.2: Single person households aged 35– 64, England, no dependent children, four scenarios**
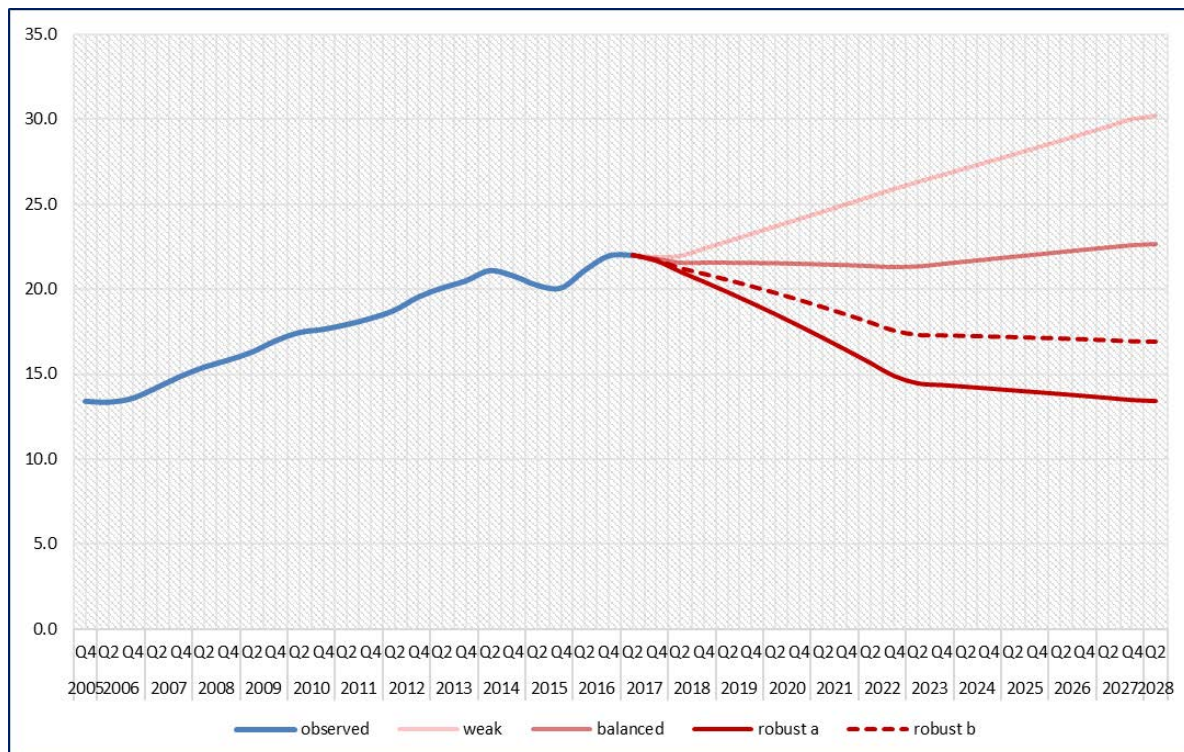
Figure A4.3: Couples aged 34 and under, England, no dependent children, four scenarios
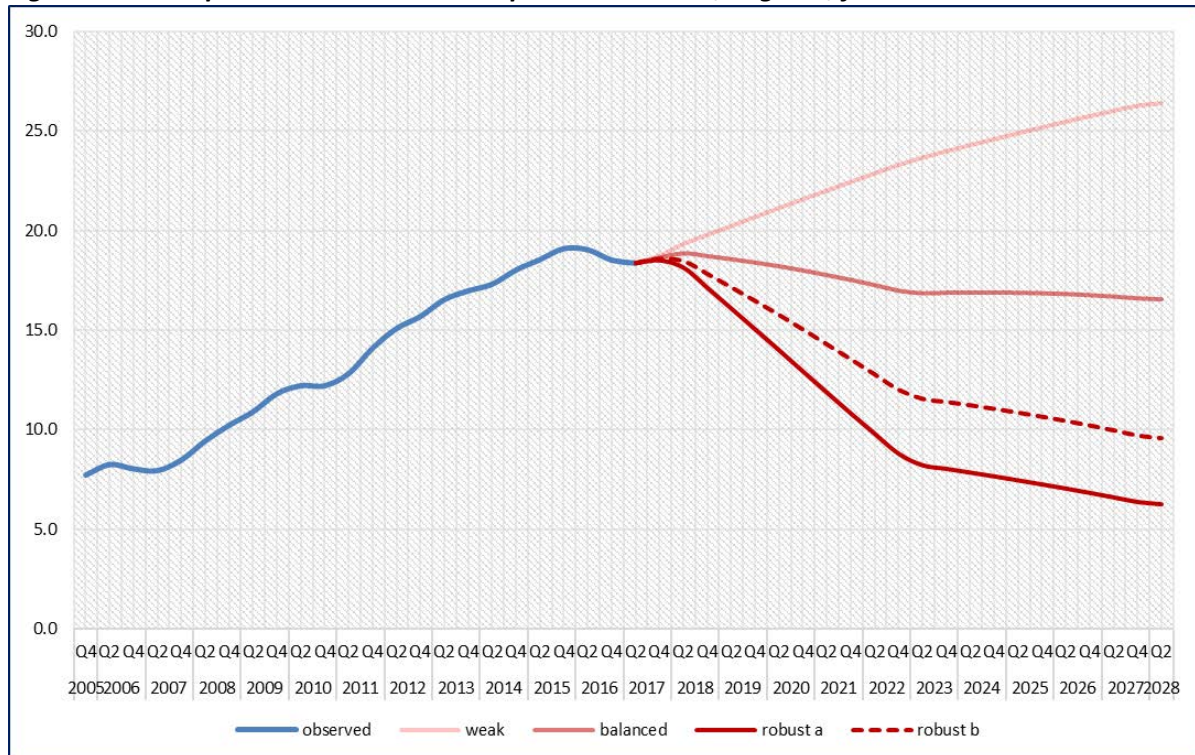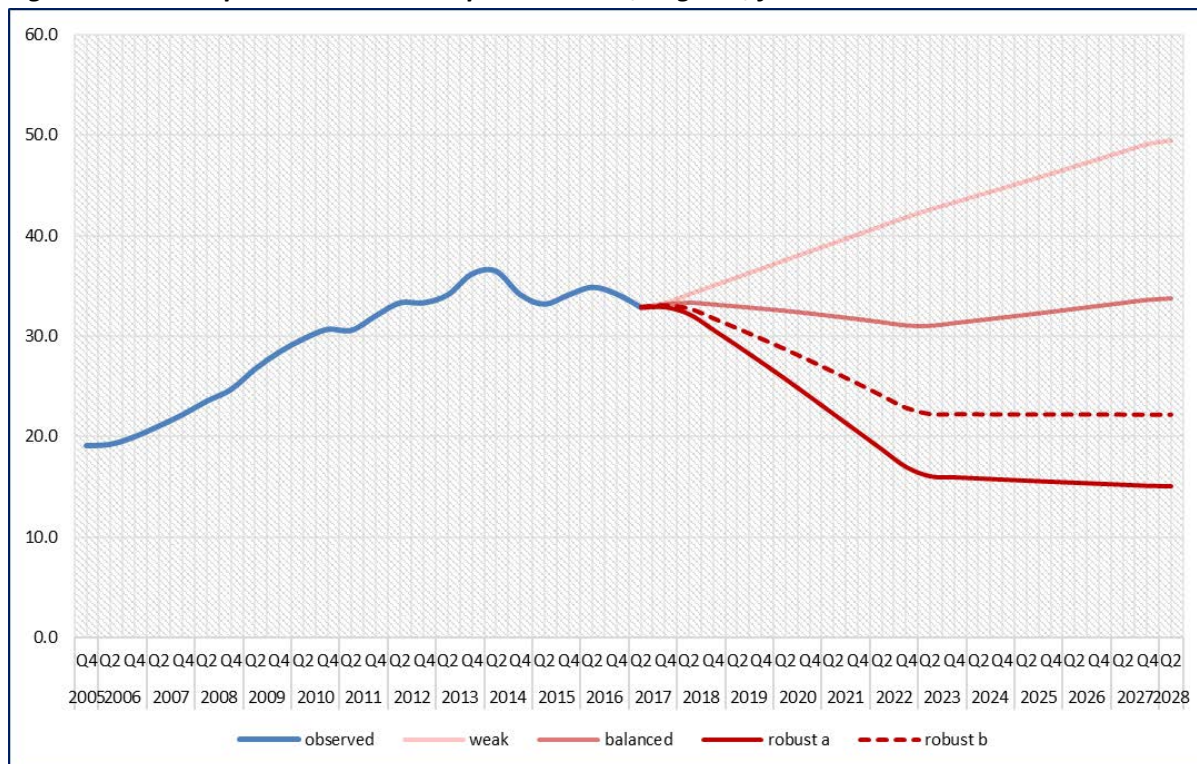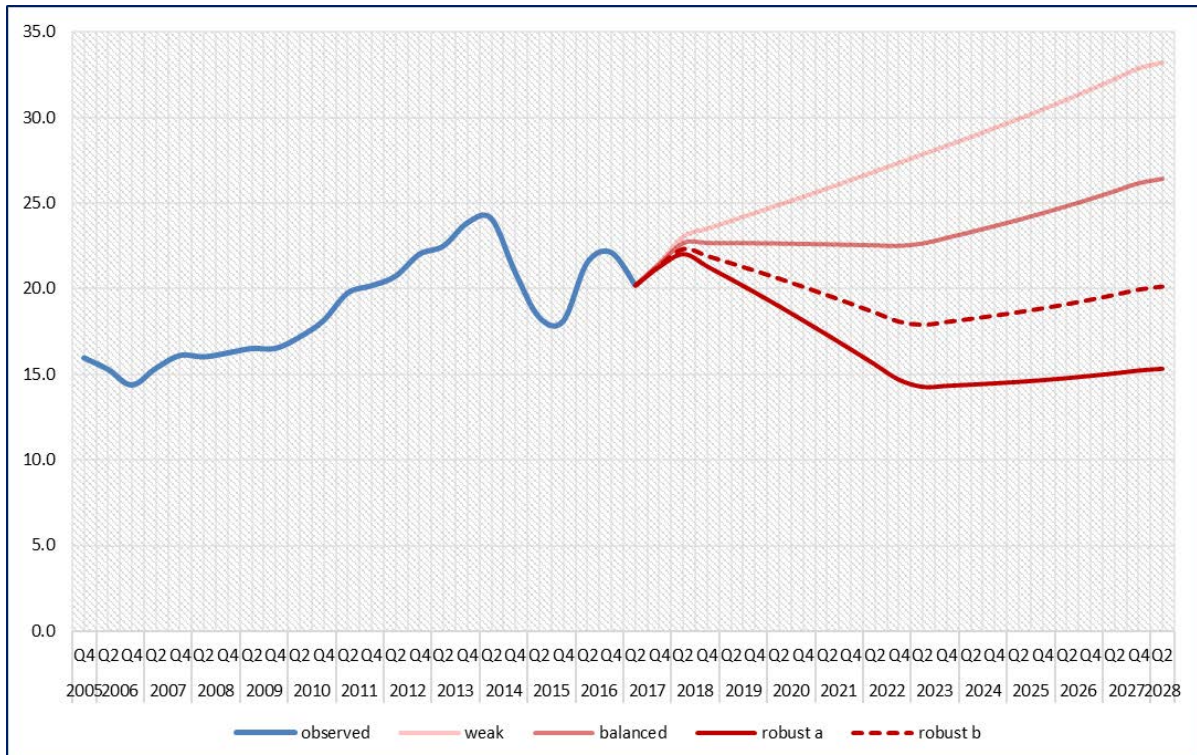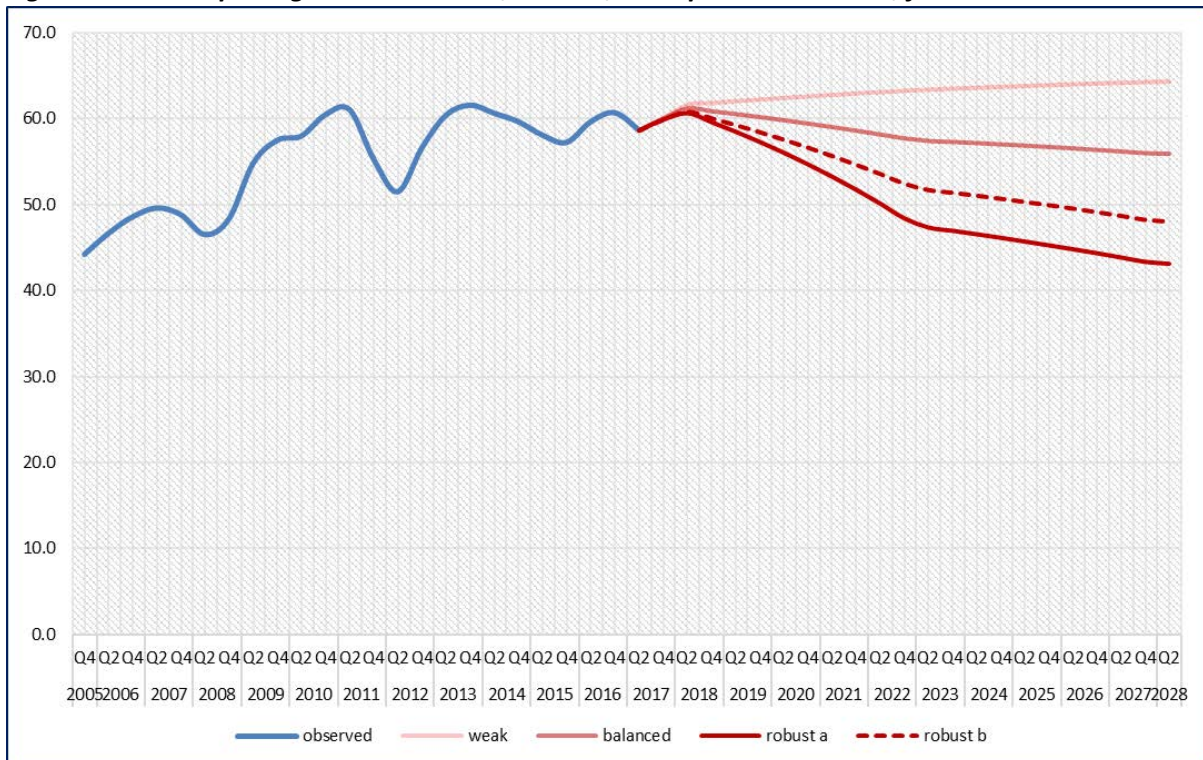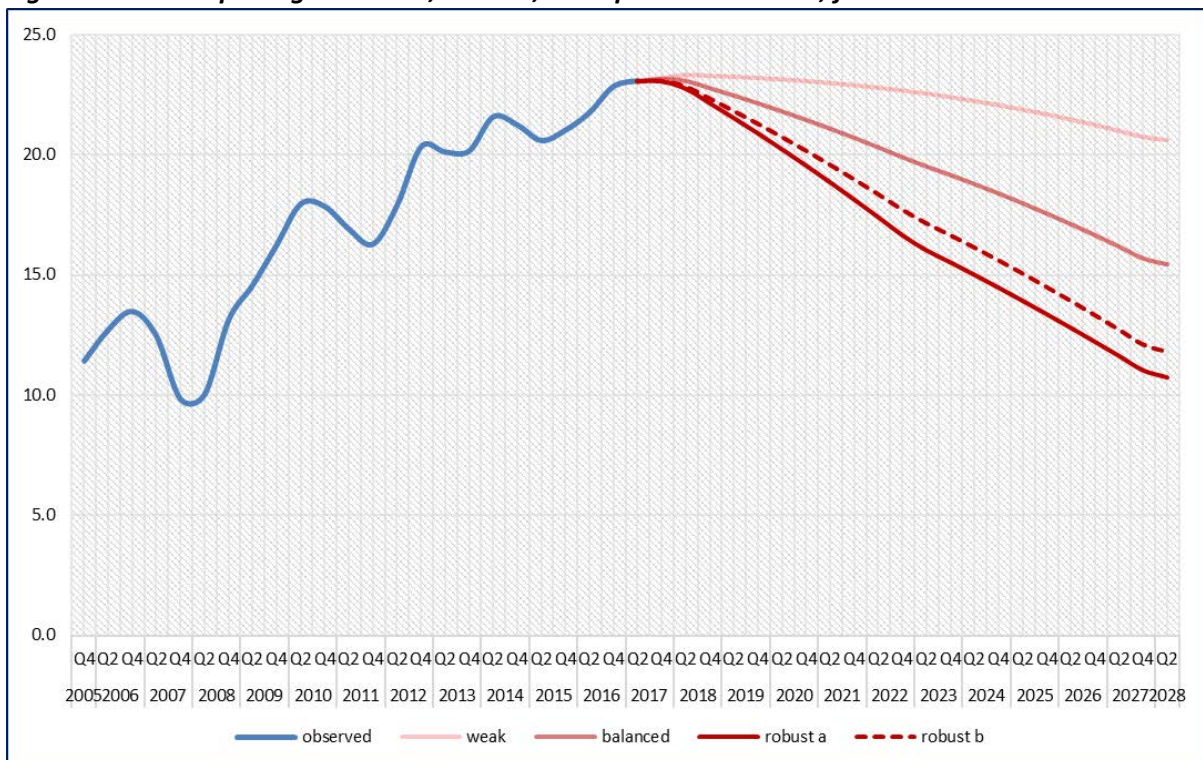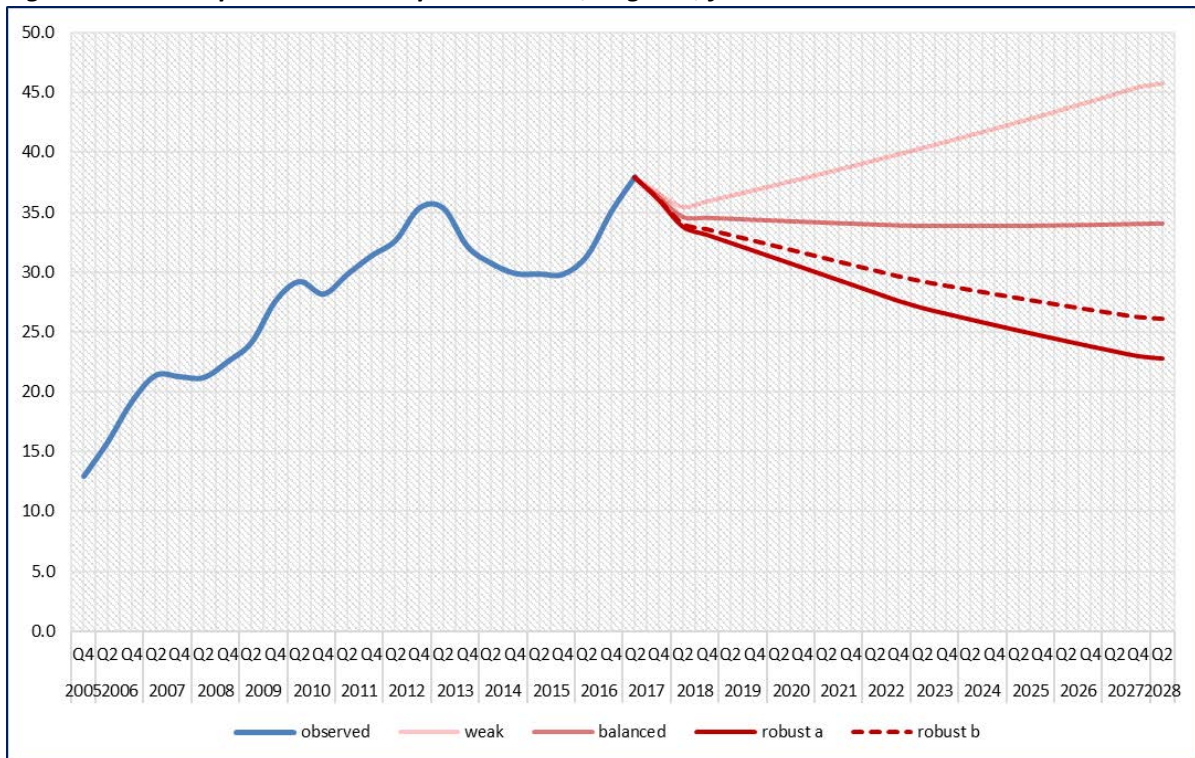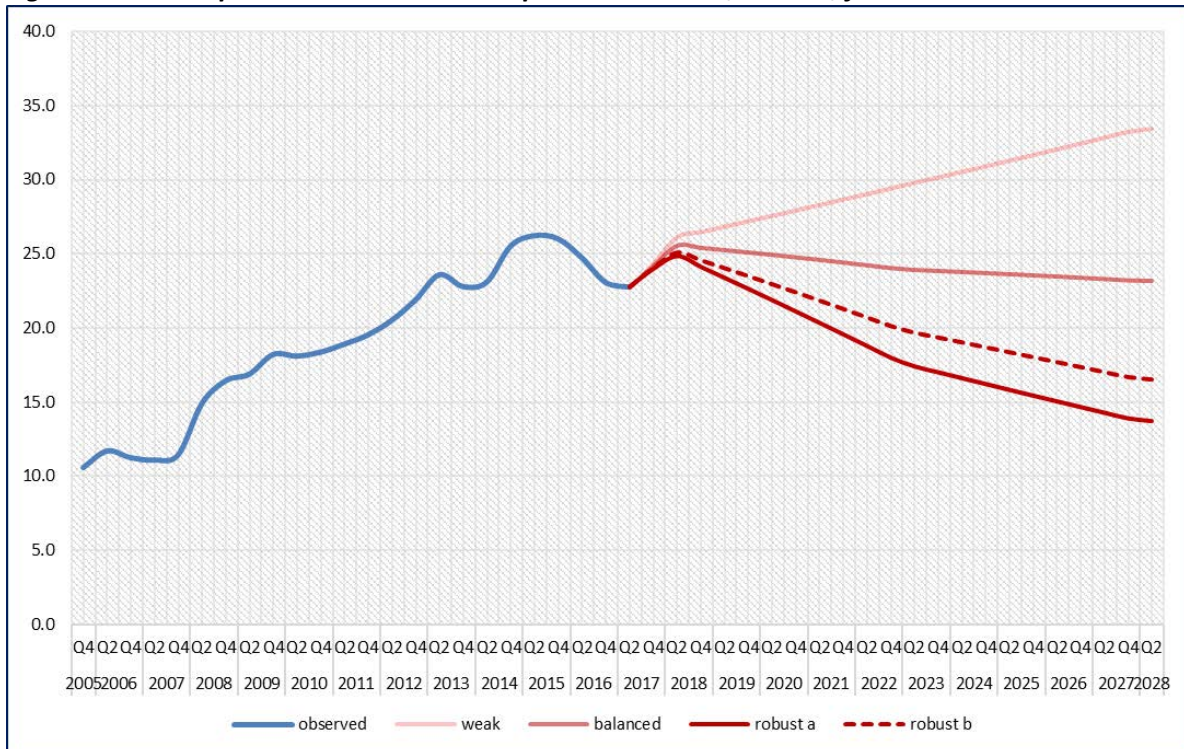
*Figure A4.4 Couples aged 35 – 64, England, no dependent children, four scenarios*

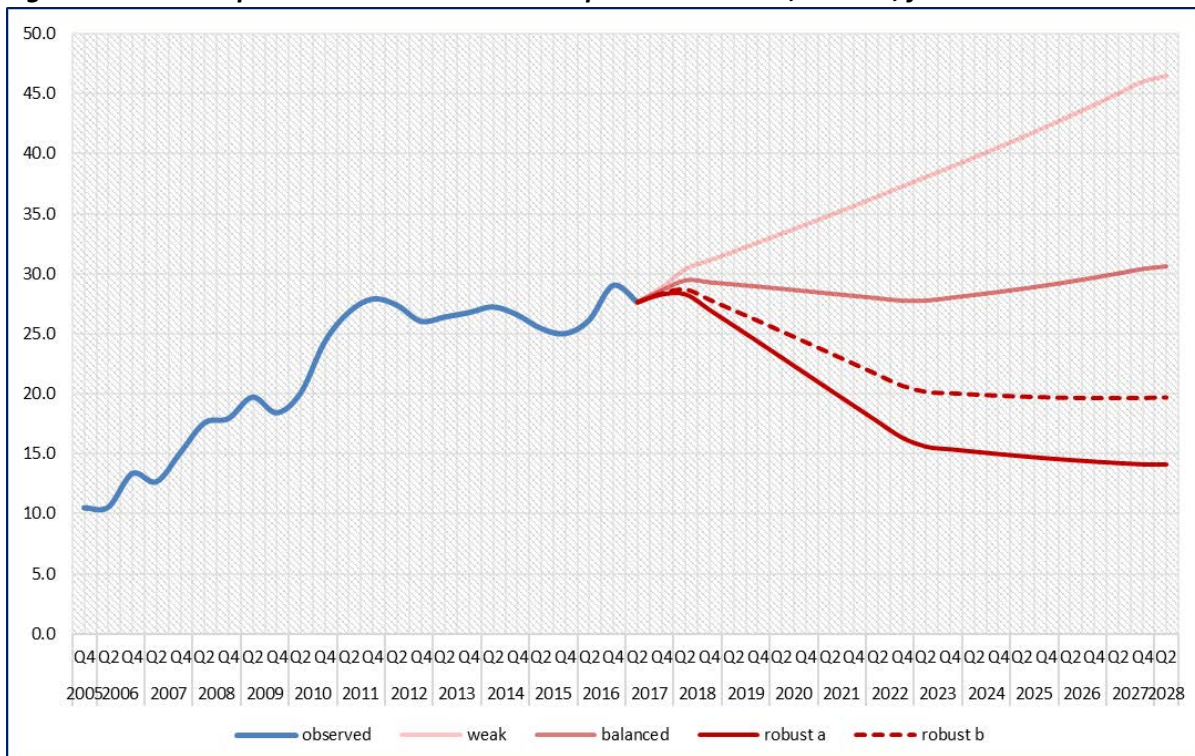*Figure A4.5: Couples with one dependent child, England, four scenarios*

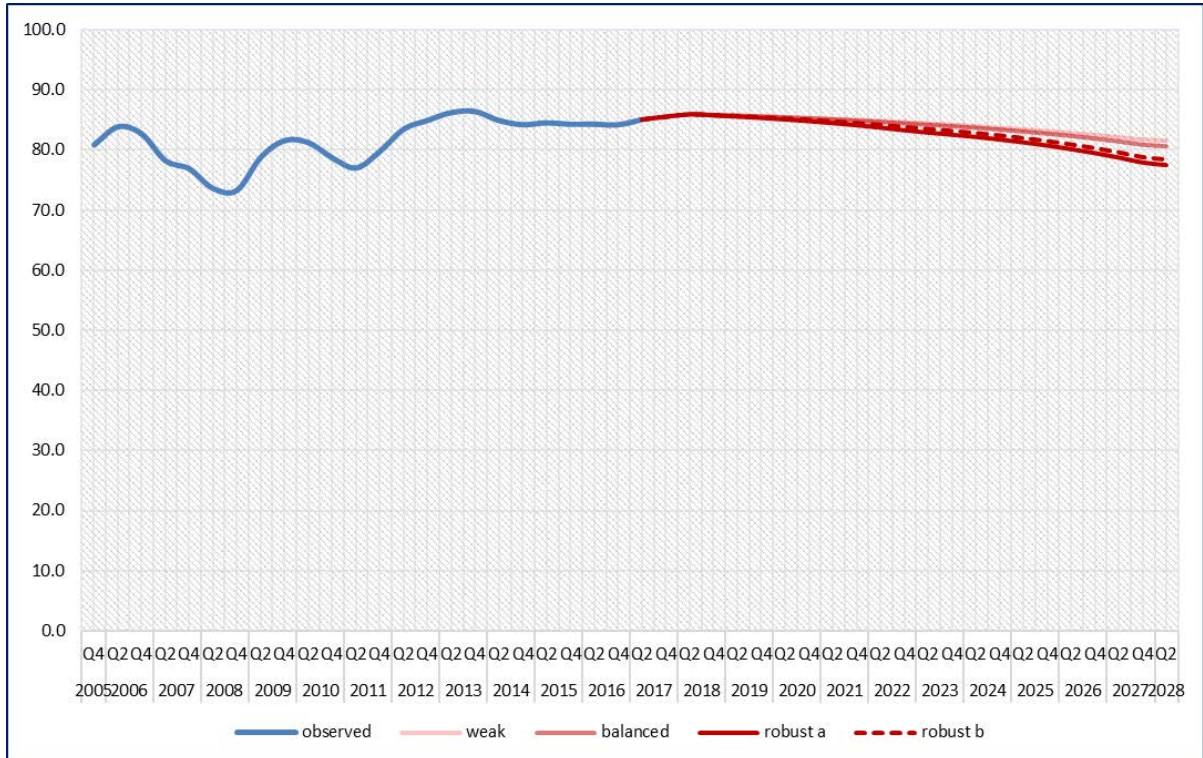**Figure A4.6: Couples with two or more dependent children, England, four scenarios**

Figure A4.7: Lone parents with one dependent child, England, four scenarios

Figure A4.8: Lone parents with two or more dependent children, England, four scenarios
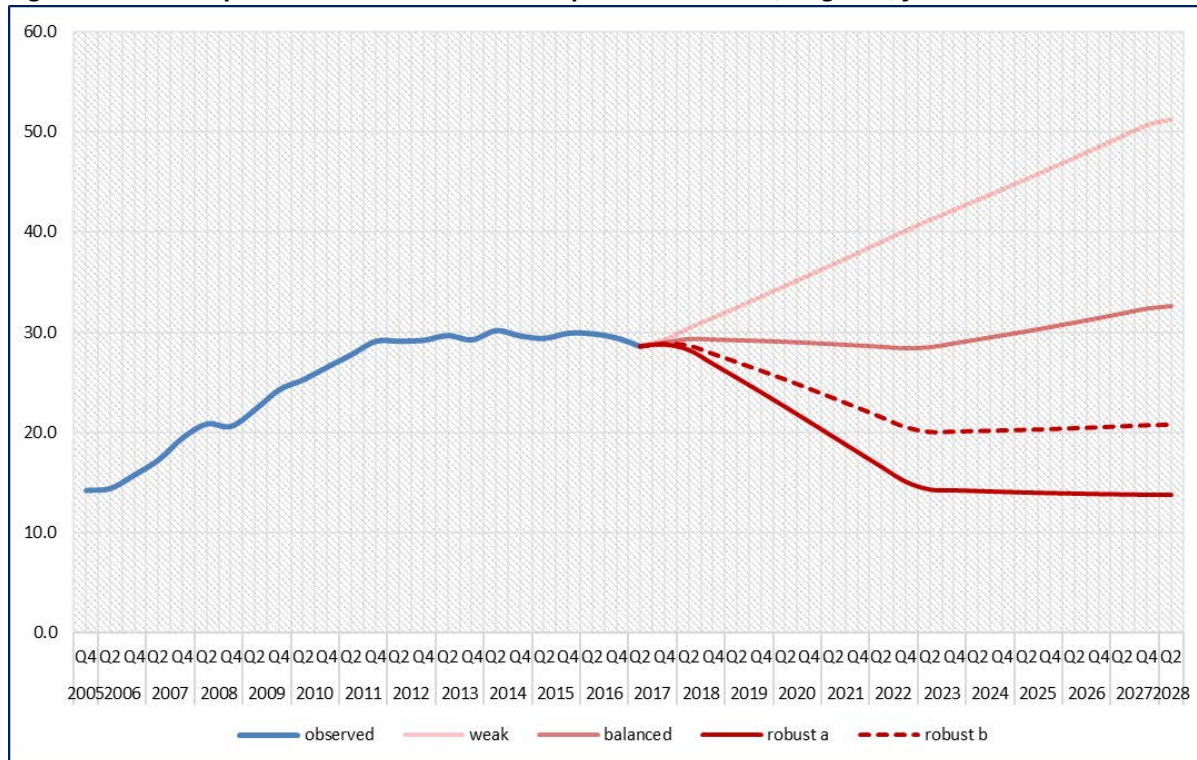
Figure A4.9: Multi-adult households 34 or under, no children, England, four scenarios
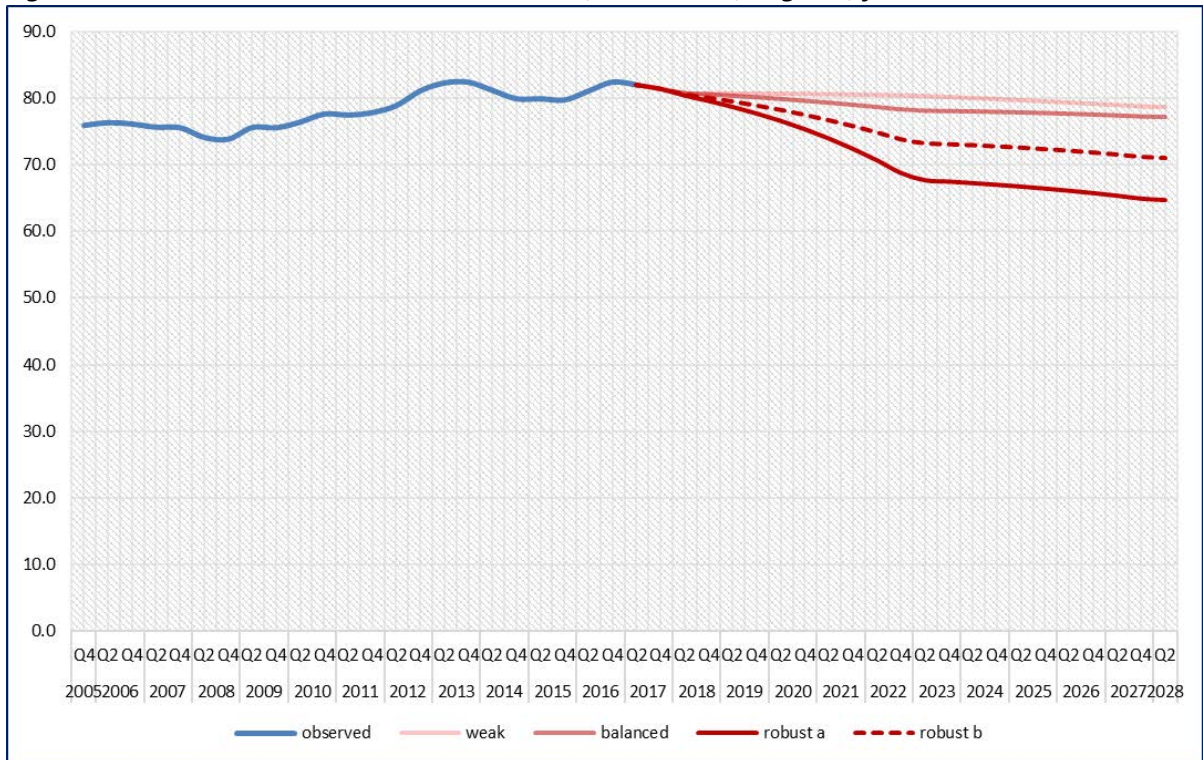
Figure A4.10: Multi-adult households aged 35-64, no children, England, four scenarios
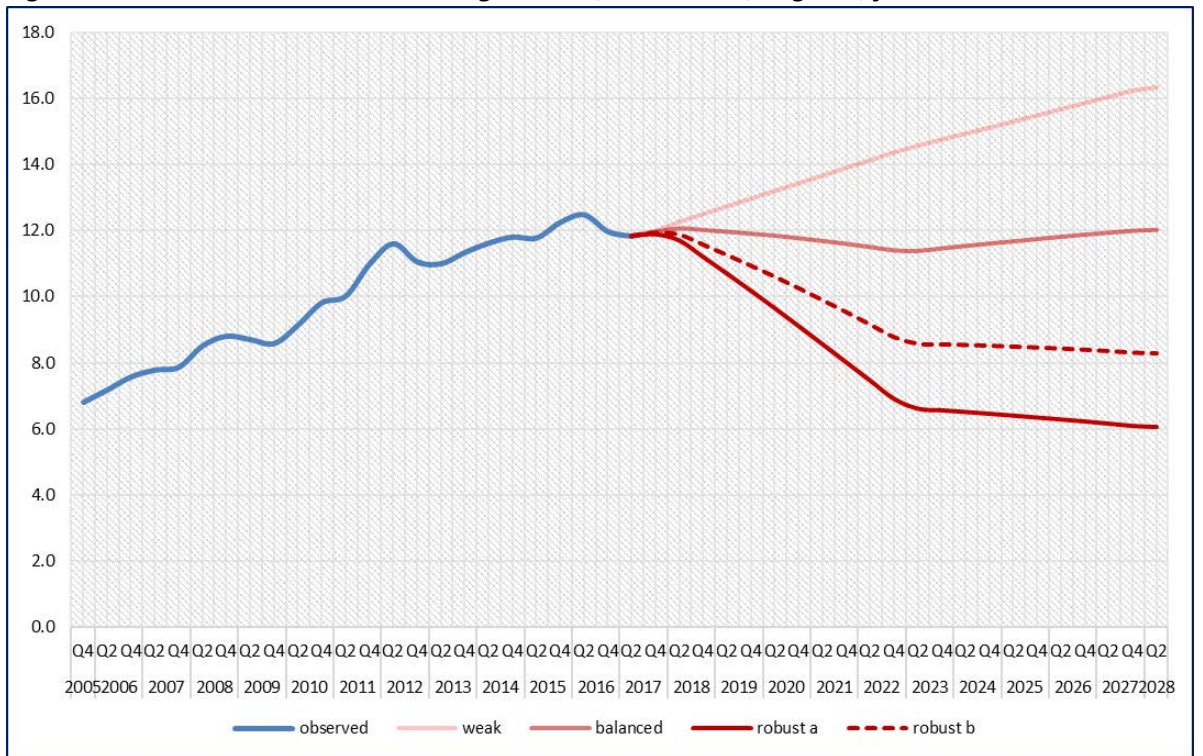
Figure A4.11: Multi-adult households with one dependent child, England, four scenarios
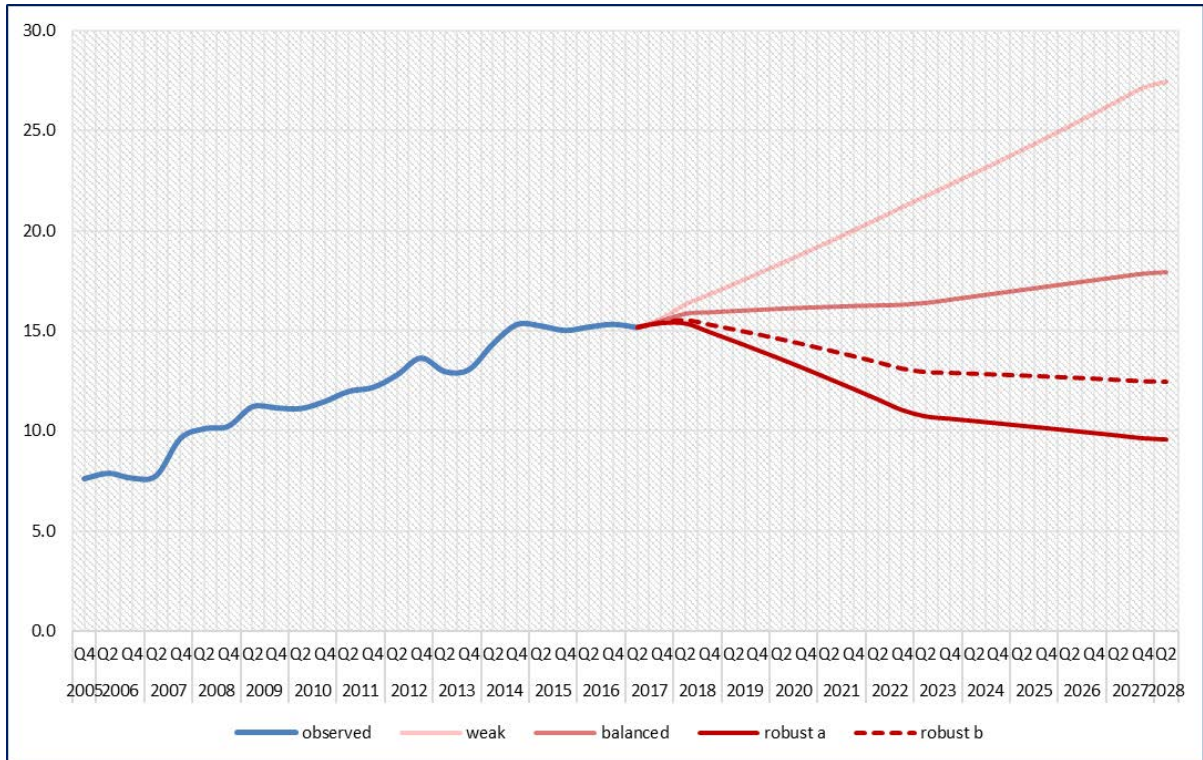
Figure A4.12: Multi-adult households with two or more dependent children, England, four scenarios
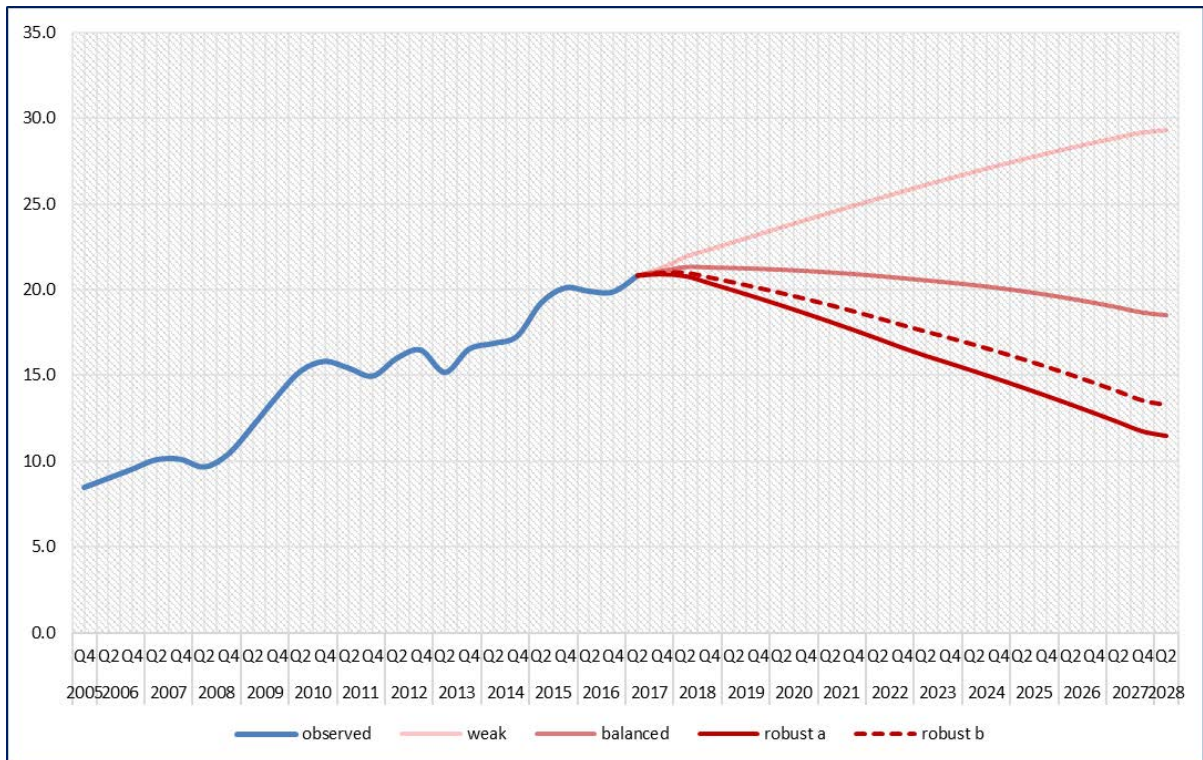
London (Figures A4.13 – A4.24)

Figure A4.13: Single person households aged 34 and under, London, no dependent children, four scenarios
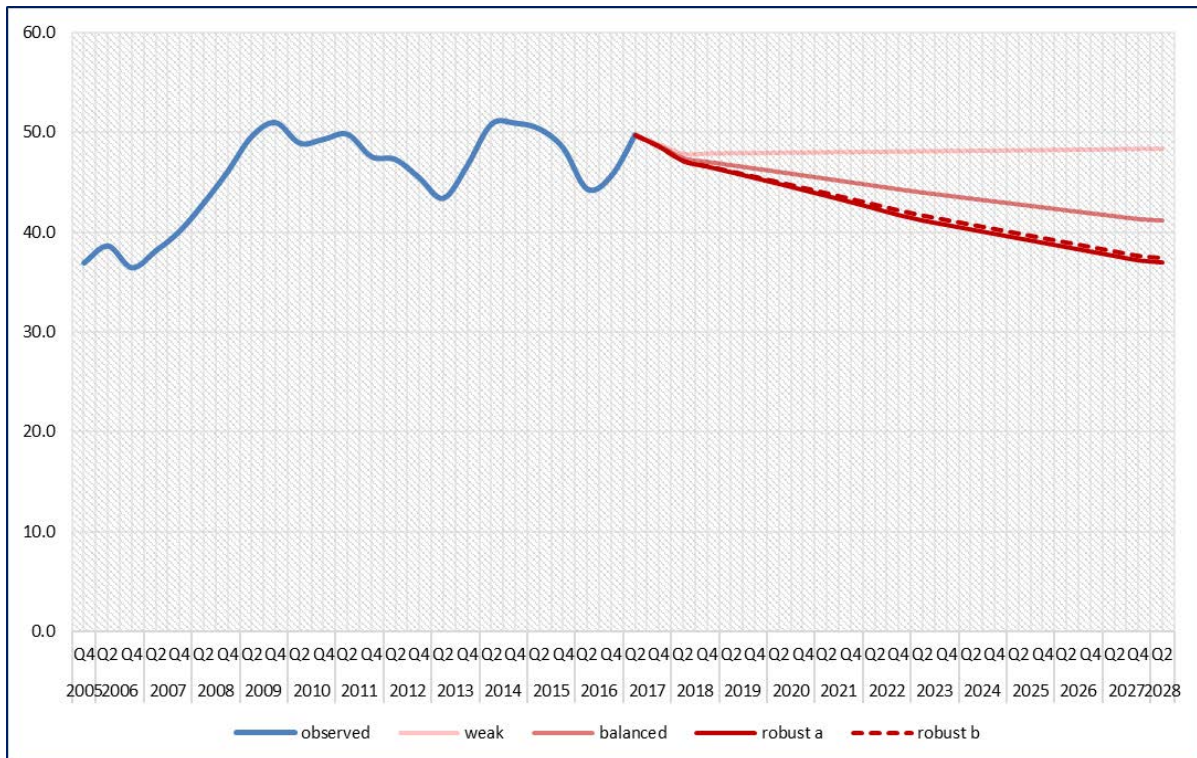
Figure A4.14: Single person households aged 35– 64, London, no dependent children, four scenarios

Figure A4.15: Couples aged 34 and under, London, no dependent children, four scenarios

Figure A4.16: Couples aged 35 – 64, London, no dependent children, four scenarios

Figure A4.17: Couples with one dependent child, England, four scenarios

Figure A4.18: Couples with two or more dependent children, London, four scenarios

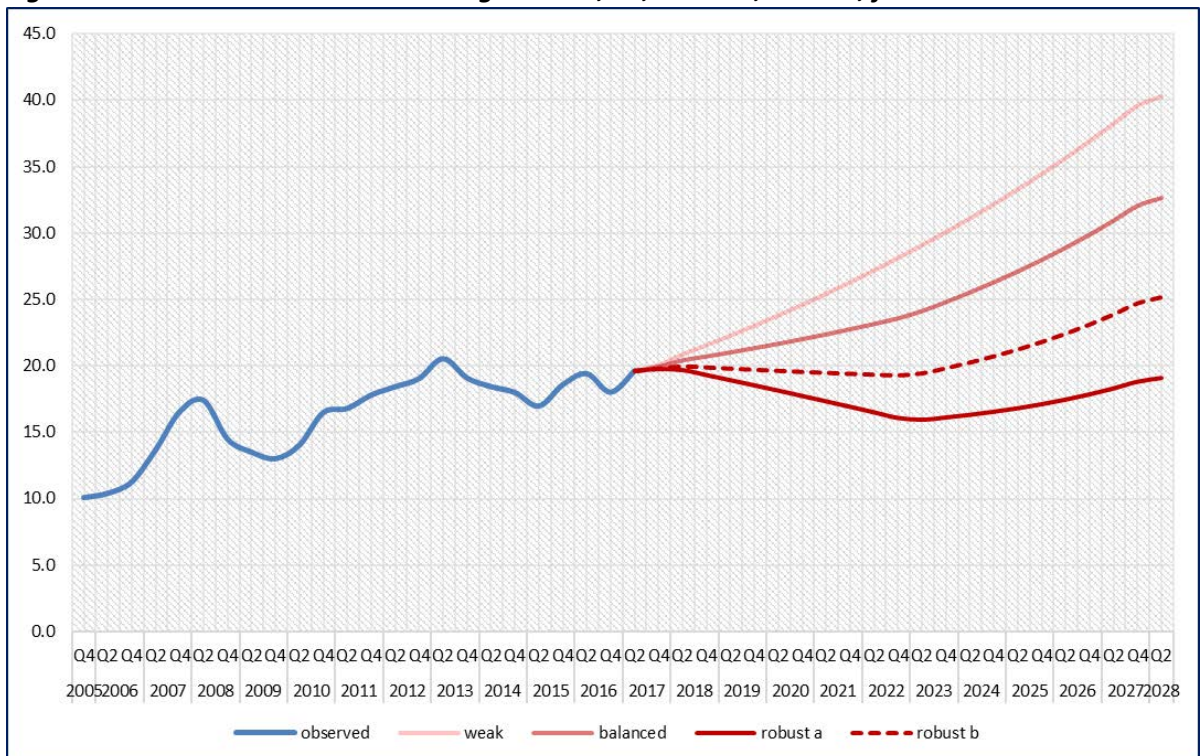**Figure A4.19: Lone parents with one dependent child, England, four scenarios**
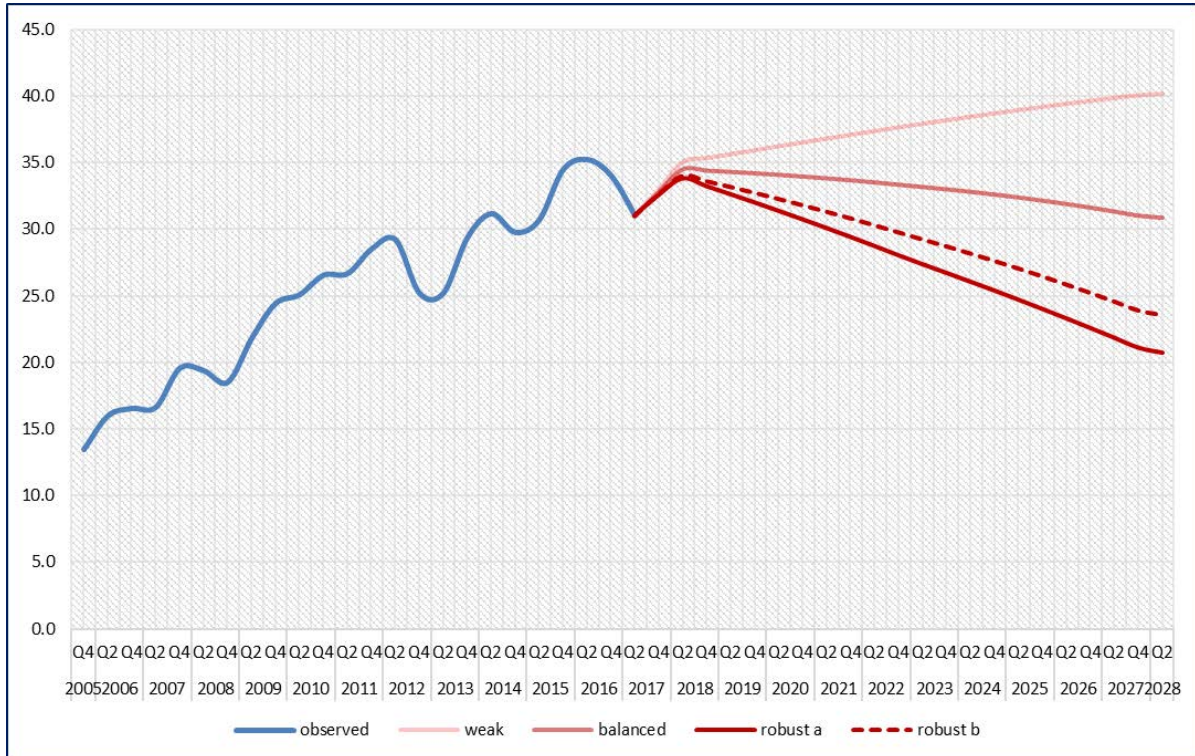
Figure A4.20: Lone parents with two or more dependent children, London, four scenarios
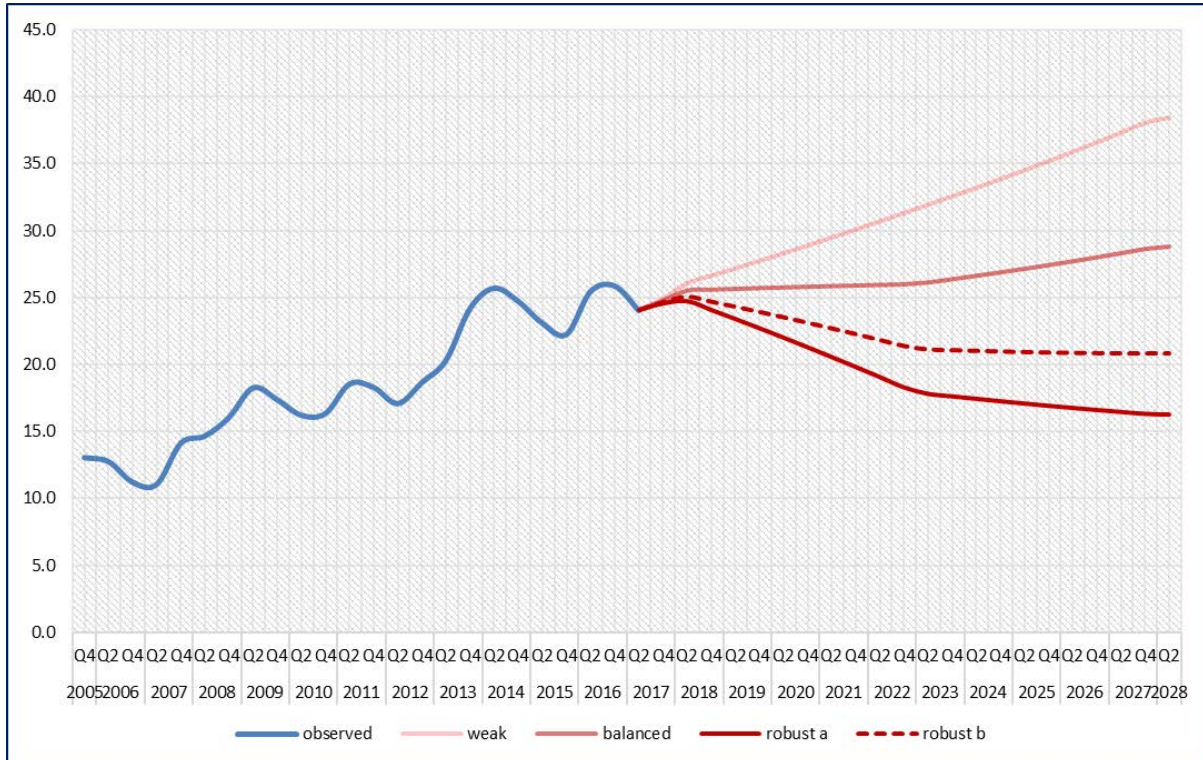
Figure A4.21: Multi-adult households 34 or under, no children, London, four scenarios
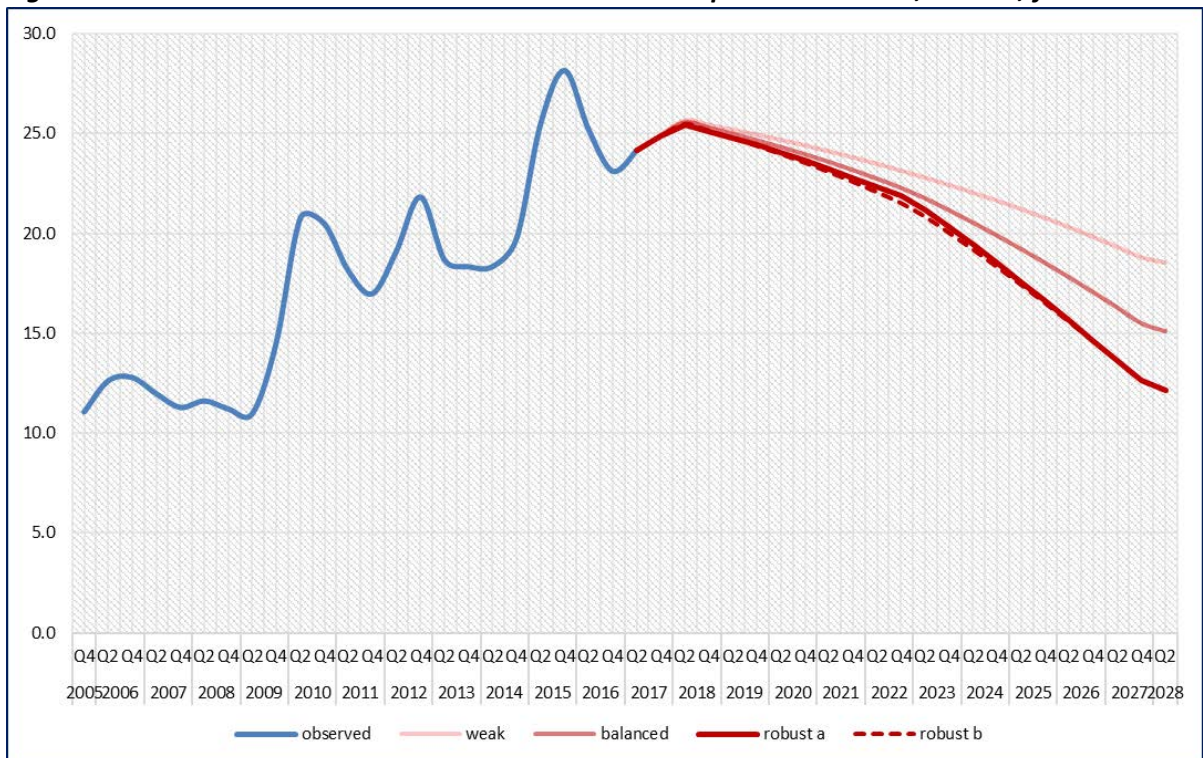

Figure A4.22: Multi-adult households aged 35-64, no, children, London, four scenarios

Figure A4.23: Multi-adult households with one dependent child, London, four scenarios

Figure A4.24: Multi-adult households with two or more dependent children, London, four scenarios

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