













Holding on to Home

Tenancy sustainment in social housing: Final Report



The Holding on to Home study team December 2024

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1. Introduction

This report provides further information about some of the research methods highlighted in the final report of the Holding on to Home: Tenancy Sustainment in Social Housing study. Specifically, it provides more information on the study team's approach to:

- Rent account analysis.
- In-depth interviews with tenants.
- Analysis of landlord/ tenant telephone conversations using conversation analysis.

The document concludes by presenting VIF values² for all the survey and rent account logistic regression models produced by the study team.

¹ Holding on to Home study team (2024) *Tenancy Sustainment in Social Housing: Final report from the Holding on to Home study.*Available at: https://holdingontohome.org/final-outputs/

² Variance inflation factor (VIF) is a statistical measure which indicates whether an independent variable has a strong relationship with other independent variables predictor(s), as will be explained in section 2.

2. Rent account analysis - further information

This section provides a detailed account of the study team's approach to rent account analysis.

2.1. The samples

Following extensive work with the case studies we were able to access tenant-level data from three of the four case studies: CS1; CS2; and CS3. However, the content and timeframe covered by the data from each of these landlords would vary.

CS1 and CS2 were able to provide the most complete and comparable data. This included: weekly rent account data, including opening and closing balances, rent and service charges, adjustments and payments; a flag if the tenant is in receipt of an income-related housing allowance; data relating to the characteristics and circumstances of tenants, such as their age, length of tenancy, ethnicity and whether English is their first language; and information about the tenant's property type and size. In addition to this Stockport Homes were able to provide tenant level information about rent payment methods, tenant contacts with the landlord and actions taken against the tenant.

CS3 provided more limited monthly data. This included the tenant's best rent account balance in the month, the amount of rent charged, the lead tenant's age and ethnicity, and whether the tenant claimed an income related housing allowance. Since the data covers fewer of the key analysis categories due to it being less comparable means it has only been possible to included analysis of whg tenants in a couple of instances. In these cases, their data as also be analysed separately.

The timeframes covered by the tenant data also differed between landlords. CS2 provided information for all of its tenants for a 19-month period from April 2022 to October 2023. The data provided by CS1 was confined to one area (city) where it had stock. It provided data for a 12-month period from April 2023 to March 2024. CS3 provided information on all its tenants for a 14-month period from January 2023 to February 2024.

Given the analysis aimed for the greatest consistency across the landlords a decision was taken to base the analysis on 12 months' worth of data. In the case of CS2, the 12-month timeframe covered November 2022 to October 2023 to provide the maximum overlap with the period covered by the data on CS1's tenants. The timeframe for CS3's data was March 2023 to February 2024.

In total records for 38,456 tenants are used in the analysis. Table 2.1 profiles the characteristics of tenants by landlord. This information is important as it *may* help explain any case study differences in the findings presented in the analysis. The emphasis on 'may' is important because there may be a range of other explanatory factors including:

- 'Other' characteristics of tenants, such as their income level, education, socio-economic grouping, and financial capabilities.
- The socio-economic and physical attributes of the neighbourhoods tenants live in.
- The quality of the civic and support infrastructure within neighbourhoods.
- The broader housing context within them.
- The approach taken to housing management more broadly by landlords.

Table 2.1: Characteristics of CS1, CS1 and combined samples

| | | CS2 | | CS1 | | Combined | |
|-----------------------|-------------------------|--------|----------|--------|----------|----------|----------|
| | | Number | Per cent | Number | Per cent | Number | Per cent |
| | 34 years or younger | 1,437 | 15% | 1,465 | 11% | 2,902 | 13% |
| | 35 years to 54 years | 3,653 | 38% | 5,299 | 39% | 8,952 | 39% |
| Age | 55 years to 69 years | 2,597 | 27% | 4,763 | 35% | 7,360 | 32% |
| | 70 years and over | 1,815 | 19% | 1,902 | 14% | 3,717 | 16% |
| | White British/Irish | 8,211 | 90% | 4,262 | 38% | 12,473 | 62% |
| | White other | 144 | 2% | 765 | 7% | 909 | 4% |
| Ethnicity | Mixed | 156 | 2% | 777 | 7% | 933 | 5% |
| (excludes not stated) | Asian/Asian British | 201 | 2% | 627 | 6% | 828 | 4% |
| , | Black/Black British | 161 | 2% | 4,670 | 42% | 4,831 | 24% |
| | Other | 251 | 3% | 0 | 0% | 251 | 1% |
| English first | English first lang. | 9,407 | 99% | 13,149 | 97% | 22,556 | 98% |
| language | English not first lang. | 96 | 1% | 400 | 3% | 496 | 2% |
| | НВ | 3,615 | 38% | 3,161 | 23% | 6,776 | 29% |
| Housing allowance | UC | 3,856 | 41% | 5,506 | 41% | 9,362 | 41% |
| anowanee | Not HA | 2,032 | 21% | 4,883 | 36% | 6,915 | 30% |
| | Less than £110pw | 4,417 | 46% | 165 | 1% | 4,582 | 20% |
| Rent and | £110pw to £140pw | 4,000 | 42% | 2,731 | 20% | 6,731 | 29% |
| service charges | £140pw to £180pw | 943 | 10% | 7,827 | 58% | 8,770 | 38% |
| | More than £180pw | 143 | 2% | 2,827 | 21% | 2,970 | 13% |
| | House | 4,354 | 46% | 3,412 | 26% | 7,766 | 34% |
| Dranarty type | Flat | 4,171 | 44% | 8,679 | 66% | 12,850 | 57% |
| Property type | Bungalow | 431 | 5% | 30 | 0% | 461 | 2% |
| | Studio / Bedsit | 547 | 6% | 955 | 7% | 1,502 | 7% |
| | 0 | 313 | 3% | 229 | 2% | 542 | 2% |
| | 1 | 3,046 | 32% | 3,614 | 28% | 6,660 | 29% |
| Property bedrooms | 2 | 3,293 | 35% | 5,221 | 40% | 8,514 | 38% |
| Jeardonis | 3 | 2,732 | 29% | 3,175 | 24% | 5,907 | 26% |
| | 4 and more | 119 | 1% | 837 | 6% | 956 | 4% |

Source: Rent account data from CS1 and CS2.

2.2. Key constructs and terms

- **Rent owed.** For the purpose of this research rent owed is an all-encompassing term covering all debits rent and service charges³ going onto rent accounts.
- **Payments.** This represents all credits rent payments, third party payments such as water bills and adjustments to rent accounts.

³ Service charges are payments for, or towards, services or facilities for use or benefit of the tenants. In some instances, service charges are monies collected by landlords on behalf of other companies for things such as: insurance, heating, lighting and hot water for the tenant's accommodation.

- Rent arrears. Rent arrears are accrued when rent payments over a given period are less than the rent owed.
- **Rent arrears rate.** This is the sum of rent arrears as a proportion of the annualised rent roll; where the rent roll has been taken to be the sum of rent, service charges and third party charges.
- Rent payment periods (RPP). Rent payment periods are a construct devised by the study team to facilitate its temporal analysis. They comprise four-week or monthly period depending on whether the tenant typically pays a monthly or one/two/four-weekly amount.
- Rate of payment per rent payment period (ROP). Rate of payment is the rate of period rent payments to rent owed with the value indicating the percentage of debits accounted for by credits in the period. If in a RPP payments equal rent owed then the tenant has not over- or under-paid. In order to make the analysis as digestible as possible, we have presented the ROP as a rate. In this context:
 - A ROP of one implies the value of additional rent owed on the account in the period equals the value of rent paid: payments cover all rent owed. So, if a tenant owed £100 worth of additional rent in a period he/ she had paid £100.⁴
 - If the ROP is greater than one, tenants have paid more than the additional rent owed onto their rent accounts: for every £1 of new rent owed more than £1 in payments was received. Thus, if the ROP is 1.2 a tenant will have paid £1.20 for every £1 of additional rent owed, representing, when scaled-up, £120 of rent payments over a RPP when £100 was due.⁵
 - If the ROP is less than one, tenants have paid less than the rent owed: for every £1 of rent owed less than £1 in payments was received. So, if the rate is 0.8 a tenant has paid 80 pence for every £1 of additional rent owed, representing, when scaled-up, £80 of rent payments over a RPP when £100 was due.
- **Re-basing.** This technique allows the study team to factor into its analysis the important fact that the tenants records provided by the landlord cover different periods which makes disentangling analysis over time more difficult. Without re-basing, the trend analysis over time would be affected by which landlord had provided tenant data for that month. Thus, where appropriate, the data has been reconfigured or re-based so that tenants rent account are analysed over numerical rent periods (i.e. rent period 1, rent period 2, and so on) rather than by calendar months.

2.3. Analysis

The analysis incorporates a mix of descriptive, cross-sectional and longitudinal methods, including:

- Descriptive analysis of payment patterns and rent arrears.
- Developing and exploring typology groups in tenant payment and arrears patterns, using descriptive techniques and principal component analysis.
- Statistical testing of binary relationships.
- Generalised linear modelling to understand tenant factors associated with different payment patterns, including the impact of communications.

The outcomes of the generalised linear modelling are reported in odds ratios, which are used to compare the relative odds of the occurrence of the outcome of interest (e.g. accruing rent arrears), given exposure to the variable of interest (for example, the age of the tenant). Of course, correlations could exist between our independent variables, and therefore we want to avoid problems associated with multicollinearity. Multicollinearity exists when there is a strong correlation between two or more independent variable predictors in a regression model. This is problematic because it makes it difficult to assess the individual importance of an independent variable predictor. We therefore

⁴ Please note tenants may under-pay in a given period because their account is in credit (i.e. has a positive balance).

⁵ Please note tenants may overpay in a given period to repay standing arrears on their account.

ran a collinearity diagnostics test known as the 'variance inflation factor' (VIF). The VIF indicates whether an independent variable has a strong relationship with the other independent variables predictor(s). Field (2013) suggests that a VIF value of 10 or above is problematic, whilst tolerance values below 0.1 indicate serious problems with multicollinearity. As highlighted in Tables 5.3, 5.4, 5.5 and 5.6 at the end of this document, the tolerance values for all the independent predictor variables were noticeably above 0.1 (and never fell below 0.377), well above the criterion for concern. The VIF values are all notably less than 10 and never exceeded 2.654, well below the criterion for concern.

3. In-depth interviews with tenants

The study team interviewed 64 tenants in-depth. Some 11 were tenants of East Riding, 23 rented from Southern Housing, while 30 were Stockport Homes tenants. With regard to the age profile of participants, 13 were under the age of 34, with three aged between 18 and 24. Some 16 were aged between 35-44; 25 were aged between 45-64, and ten were aged 65 or over.

Some 42 of interviewees identified as 'English/Welsh/Scottish/Northern Irish/British' with 22 identifying as being a member of a minoritised ethnic group. The breakdown of the economic status of participants was as follows: full-time employed 30+ hours: 12; long term sick/disabled: 17; looking after home or family: nine; retired: nine; part-time employed: eight; self-employed/freelance: three; and, unemployed and looking for work: three; unemployed and not looking for work: three.

With regard to household type, 24 participants were a member of an adult only household, which could take the form of a couple, a multi-generational or multiple family adult household, or families with older children still living at home. Some 19 were single adult households; 20 were a lone parent family; and one was a member of a two-parent family.

Some 47 participants were in receipt of benefits, of which 11 were on HB and 28 were claiming UC, and 17 were not on benefits. Some 35 interviewees had health problems or a disability, with some having more than one 'condition': 15 had a long-term physical condition or health problem; 14 had a diagnosed mental health condition; three had a learning disability; nine had a physical disability; and, six reporting having an 'other' health condition or disability.

4. Analysis of landlord/ tenant telephone conversations using conversation analysis

This section outlines the approach taken to the analysis of a corpus of telephone conversations between rent/ financial inclusion call operators and tenants in rent arrears/ experiencing financial difficulties. In keeping with the wider project, we loosely adopted a behavioural science lens, thus we conceptualise interpersonal communication, or 'talk', as a form of behaviour. Studying talk in this way enables us to engage with a COM-B framework (Michie *et al.*, 2011), and think about both landlord and tenant *capabilities*, *opportunities* and *motivations* to engage in talk about rent arrears. Researching talk with a view to understanding what effective talk looks like in a given context is challenging because getting talk 'right' happens in the moment. A substantial evidence base reveals that, in order to empirically evaluate what makes for effective talk, there is no substitute for studying talk in naturally occurring, context bound settings (see CARM, 2024). Thus, we used a method designed to meet this challenge, and that also accommodates our approach toward talk as a form of behaviour.

Conversation Analysis (CA) is an empirically robust qualitative method that offers a unique means for examining the sequential and linguistic structure of real-time communicative interactions. Historically, CA developed as a method for pure research grounded in ethnomethodology.⁶ It has amassed over fifty years' worth of knowledge and afforded a robust understanding of regular patterns and routines in all kinds of talk covering diverse topics, different kinds of speakers and across different languages. However, with growing recognition of the importance of getting communications 'right', applied conversation analysis is increasingly valued in real-world settings including health, emergency services and commercial environments. It is used to help identify and address context-bound barriers or challenges that can undermine successful communications (e.g., Hofstetter & Stokoe, 2015; Huma *et al.*, 2019, Sikveland *et al.*, 2020). The strength of this close analytic method lies in the capture of real-time communicative interactions to permit a forensic level analysis of the detail of the talk in the given context and identify common issues where communication derails. Once problem areas are understood, often simple changes to the structure of conversation can avoid such problems and increase the likelihood of desired outcomes.

4.1. The data

Two case study landlords (CS1, CS2) provided the researchers with access to telephone conversations that took place between tenants and rent officers and/or money advisors. The sample was randomly selected from a routine week avoiding any calendar hotspots (e.g. close to the issue of rent account statements). All calls were audio recorded by the respective housing organisations as standard and no changes were made to the routines of how these telephone conversations took place or how they were recorded. Housing organisations did not pre-screen or pre-select the calls they provided to us. In total 140 call recordings were provided to the research team.

CS2 provided dataset 1, comprising 100 calls that were recorded over one week in May 2023. These data comprised a mix of incoming and outgoing calls. In accordance with how rent-related matters were managed by the organisation, the data comprised an equal split of calls between tenants and Money Advisors, and tenants and Rent Recovery Officers. Within the organisation, a Money Advisor's role involves supporting tenants to maximise their income through ensuring they are in affordable housing, advise if they are receiving the correct benefits and support them in any applications they need to make. A Rents Recovery Officer's primary role is to work with a tenant to understand any rent related matters, support tenants in managing rent arrears, and setting up payment plans to ensure a tenant can remain in their home. Fifty calls were inbound calls, or internal call transfers to the Rent Recovery or Money Advice team. The other fifty were outgoing calls made by advisors to a tenant regarding a rent related matter (e.g. to

⁶ Ethnomethodology is a sociological approach that studies the structure of everyday life through analysing the common-sense methods people use to make sense of their daily lives. It includes the study of conversation.

discuss rent arrears). The average call length was six minutes 16 seconds, with the shortest being 48 seconds and longest 25 minutes 59 seconds. The calls were made or received by a team of female and male call handlers.

CS1 provided dataset 2, comprising forty calls. These calls were recorded during one week in August 2023. These data were all incoming calls made by tenants to the Income team or calls internally transferred to the Income team. This team deal with a broad range of rent-related matters which include providing rent account advice, helping tenants with payment set-up and payment plans, and rent arrears management. The average call length was eight minutes 34 seconds, with the shortest being three minutes 25 seconds and longest 21 minutes 27 seconds. The calls were received by a team of female and male call handlers.

4.2. Analysis

The primary research question is: How can landlords best support tenants during spoken interactions concerned with rent payment/ arrears and or debt related matters. Initial analysis was completed in two phases. Phase one concerned dataset 1, phase two concerned dataset 2.

Phase One: All items in dataset 1 (n=100) were reviewed by the lead researcher, with a subset also reviewed by another member of the research team. Each call was listened to in entirety and coded to identify basic details of the call (e.g. call length, call handler identifier, incoming or outgoing call). All calls were then evaluated to assess (i) the gender of both call handler and caller; (ii) if the call was in relation to a new or ongoing matter; (iii) to identify the call purpose (e.g. make a payment, discuss arrears, seek advice). Initial points of analytic interest pertinent to the research objectives were also captured to help refine the dataset. In keeping with the methodological norms of the conversation analytic method, a manageable subset of calls was then selected for detailed empirical analysis.

Twenty-seven calls (27 per cent of dataset 1) were identified for further analysis. The subset was representative of the wider dataset. It incorporated calls from the Money Advice and Rent Recovery team, included a mix of incoming and outgoing calls and was reflective of the differing areas of discussion across the larger dataset. Each audio call within the subset was sent to an external professional transcriber and a verbatim transcription was produced. Once transcribed, each audio file and its respective transcript represented a single data item. In accordance with conversation analytic method, the audio file remains central to the analysis, hence the lead researcher worked iteratively with the audio and transcript for each call to complete detailed line-by-line analysis and capture features of the turn-by-turn interaction that acted as either a barrier or facilitator to progressing the call toward a satisfactory conclusion. The analysis was inductive, all aspects of the interaction between tenant and call handler that was deemed potentially pertinent in relation to the research objectives was coded and explored. Detailed findings were then collapsed under candidate thematic areas and re-assessed to ensure the thematic areas fully captured and conveyed the analytic insights.

Phase two analysis mirrored phase one. After initial refinement of dataset 2, a subset of thirteen calls (32 per cent of dataset 2) were selected for further analysis. As in Phase one, the subset was representative of the wider dataset. The detailed analysis of dataset 2 was inductive, however the candidate themes identified in phase one guided the analysis. Analysis of dataset 2 arrived at findings that closely mirrored those of dataset 1 and were therefore aligned under the existing themes, and findings were developed. Some additional analytic insight developed during phase 2 that did not cohere under the original themes were retained as additional findings.

5. VIF values for logistic regression models

Table 5.1: VIF and tolerance tests for multicollinearity for 'arrears' and 'difficulty affording rent' models (survey data)

| Independent Variables | Rent arrears | | Difficult to afford rent | |
|--|--------------|-------|--------------------------|-------|
| | Tolerance | VIF | Tolerance | VIF |
| Case studies | .516 | 1.937 | .503 | 1.989 |
| Age | .520 | 1.925 | .520 | 1.922 |
| Gender | .913 | 1.095 | .909 | 1.100 |
| How many people live at address | .794 | 1.259 | .793 | 1.257 |
| Health condition | .697 | 1.434 | .688 | 1.454 |
| Ethnicity | .523 | 1.912 | .519 | 1.926 |
| Highest level of education | .694 | 1.441 | .696 | 1.437 |
| Does income fluctuate | .820 | 1.220 | .817 | 1.225 |
| Rent includes a service charge | .718 | 1.392 | .712 | 1.405 |
| Cut back on spending on food | .582 | 1.718 | .580 | 1.724 |
| Cut back on spending on heating | .700 | 1.429 | .703 | 1.423 |
| Cut back on spending on other essentials | .505 | 1.979 | .500 | 1.998 |
| Cut back on spending on non-essentials | .585 | 1.708 | .591 | 1.693 |
| Sold things I/ we owned to raise extra cash | .797 | 1.254 | .775 | 1.291 |
| Borrowed from friends, family or other individuals | .675 | 1.478 | .671 | 1.491 |
| Taken out new loans from commercial lenders | .861 | 1.161 | .856 | 1.168 |
| Delayed making payments on money owed | .833 | 1.201 | .822 | 1.217 |
| Find it difficult to communicate with your landlord about your rent? | .898 | 1.113 | .890 | 1.123 |
| Automatic deductions | .761 | 1.313 | .764 | 1.310 |
| Organised with money | .825 | 1.211 | .826 | 1.210 |
| Use UC/ HB to pay unexpected bill | .285 | 3.504 | .279 | 3.585 |
| Affected by the cost-of-living | .642 | 1.557 | .631 | 1.584 |
| Subject to the Benefit cap | .694 | 1.349 | .693 | 1.443 |
| Any savings | .741 | 1.349 | .739 | 1.353 |
| Run out of money before end of the week | .572 | 1.749 | .573 | 1.744 |
| Won't be evicted if rent not paid | .506 | 1.975 | .498 | 2.009 |
| Other benefit | .364 | 2.748 | .347 | 2.882 |
| Not on benefits | .246 | 4.071 | .236 | 4.233 |
| Universal Credit partial payment | .576 | 1.735 | .573 | 1.746 |
| Housing Benefit partial payment | .628 | 1.592 | .622 | 1.607 |
| Economic status | .430 | 2.326 | .432 | 2.313 |
| Used a foodbank in last 12 months | .721 | 1.397 | .717 | 1.395 |
| Behind on at least two bills | .716 | 1.397 | .717 | 1.395 |
| Precarious employment | .708 | 1.412 | .706 | 1.417 |
| | | | | |

Table 5.2: VIF and tolerance tests for multicollinearity for 'finding it difficult to pay the rent' model (survey data)

| Independent Variables | | |
|--|-----------|-------|
| | Tolerance | VIF |
| Case studies | .565 | 1.768 |
| Age | .628 | 1.591 |
| Gender | .917 | 1.090 |
| How many people live at address | .804 | 1.243 |
| Health condition | .709 | 1.411 |
| Ethnicity | .555 | 1.801 |
| Highest level of education | .713 | 1.402 |
| Does income fluctuate | .869 | 1.151 |
| Rent includes a service charge | .733 | 1.364 |
| Cut back on spending on food | .579 | 1.727 |
| Cut back on spending on heating | .705 | 1.419 |
| Cut back on spending on other essentials | .497 | 2.010 |
| Cut back on spending on non-essentials | .590 | 1.694 |
| Sold things I/ we owned to raise extra cash | .779 | 1.284 |
| Borrowed from friends, family or other individuals | .679 | 1.473 |
| Taken out new loans from commercial lenders | .849 | 1.177 |
| Delayed making payments on money owed | .807 | 1.239 |
| Find it difficult to communicate with your landlord about your rent? | .889 | 1.125 |
| Automatic deductions | .762 | 1.313 |
| Organised with money | .833 | 1.200 |
| Use UC/ HB to pay unexpected bill | .920 | 1.087 |
| Affected by the cost-of-living | .638 | 1.566 |
| Subject to the Benefit cap | .781 | 1.280 |
| Any savings | .713 | 1.402 |
| Run out of money before end of the week | .573 | 1.744 |
| Won't be evicted if rent not paid | .922 | 1.085 |
| Which benefit if any | .640 | 1.563 |
| Economic status | .291 | 3.438 |
| Used a foodbank in last 12 months | .725 | 1.380 |
| Behind on at least two bills | .661 | 1.514 |
| Precarious employment | .288 | 3.469 |

Table 5.3: VIF and tolerance tests for multicollinearity for logistic regression for accruing any additional arrears: CS1 tenants, CS2 tenants and combined sample (rent account data)

| | | Combined CS1 | | CS2 | | | |
|------------------------|--------------------------------|--------------|-------|-----------|-------|-----------|-------|
| | | Tolerance | VIF | Tolerance | VIF | Tolerance | VIF |
| | Credit | | | | | | |
| Rent account position | Arrears less than 4 weeks rent | 0.850 | 1.176 | 0.872 | 1.147 | 0.832 | 1.202 |
| | Arrears more than 4 weeks rent | 0.799 | 1.252 | 0.811 | 1.233 | 0.786 | 1.273 |
| | Less than £110pw | | | | | | |
| Rent and service | £110pw to £140pw | 0.560 | 1.785 | | | 0.900 | 1.111 |
| charges | £140pw to £180pw | 0.498 | 2.007 | | | 0.900 | 1.111 |
| | More than £180pw | 0.629 | 1.590 | | | 0.978 | 1.023 |
| | НВ | | | | | | |
| Housing allowance | UC | 0.526 | 1.903 | 0.495 | 2.021 | 0.545 | 1.836 |
| | Not in receipt of a HA | 0.660 | 1.515 | 0.588 | 1.700 | 0.775 | 1.290 |
| | 34 years or younger | | | | | | |
| Ago | 35years to 54 years | 0.390 | 2.563 | 0.352 | 2.843 | 0.438 | 2.286 |
| Age | 55 years to 69 years | 0.377 | 2.649 | 0.342 | 2.925 | 0.425 | 2.353 |
| | 70 years and over | 0.417 | 2.398 | 0.426 | 2.349 | 0.409 | 2.445 |
| Faloricia. | White British | | | | | | |
| Ethnicity | Non-White British | 0.868 | 1.152 | 0.946 | 1.057 | | |
| English first language | English first language | | | | | | |
| English first language | English not first language | | | 0.978 | 1.023 | | |

Table 5.4: VIF and tolerance tests for multicollinearity for logistic regression for accruing any additional arrears: CS2 tenants (rent account data)

| | | Tolerance | VIF |
|---------------------------|--------------------------------|-----------|-------|
| | Credit | | |
| Rent account position | Arrears less than 4 weeks rent | 0.830 | 1.204 |
| position. | Arrears more than 4 weeks rent | 0.767 | 1.304 |
| | HA paid to landlord | | |
| Housing allowance | HA paid to tenant | 0.802 | 1.247 |
| anowanie | Not in receipt of a HA | 0.878 | 1.139 |
| Contact with | No | | |
| landlord | Yes | 0.829 | 1.206 |
| | 34 years or younger | | |
| A === | 35years to 54 years | 0.447 | 2.238 |
| Age | 55 years to 69 years | 0.450 | 2.223 |
| | 70 years and over | 0.455 | 2.198 |
| English first language | English first language | | |

Table 5.5: VIF and tolerance tests for multicollinearity for logistic regression for accruing sizable additional arrears: CS1 tenants, CS2 tenants and combined sample (rent account data)

| | | Comb | oined | CS1 | | CS2 | |
|-----------------------|--------------------------------|-----------|-------|-----------|-------|-----------|-------|
| | | Tolerance | VIF | Tolerance | VIF | Tolerance | VIF |
| | Credit | | | | | | |
| Rent account position | Arrears less than 4 weeks rent | 0.850 | 1.176 | 0.872 | 1.147 | 0.832 | 1.202 |
| position | Arrears more than 4 weeks rent | 0.798 | 1.253 | 0.811 | 1.233 | 0.786 | 1.273 |
| | НВ | | | | | | |
| Housing allowance | UC | 0.526 | 1.903 | 0.495 | 2.021 | 0.545 | 1.836 |
| | Not in receipt of a HA | 0.660 | 1.516 | 0.588 | 1.700 | 0.775 | 1.290 |
| | Less than £110pw | | | | | | |
| Rent and service | £110pw to £140pw | 0.560 | 1.785 | | | 0.900 | 1.111 |
| charges | £140pw to £180pw | 0.498 | 2.007 | | | 0.900 | 1.111 |
| | More than £180pw | 0.629 | 1.590 | | | 0.978 | 1.023 |
| | 34 years or younger | | | | | | |
| 0.77 | 35years to 54 years | 0.390 | 2.565 | 0.352 | 2.843 | 0.438 | 2.286 |
| Age | 55 years to 69 years | 0.377 | 2.654 | 0.342 | 2.925 | 0.425 | 2.353 |
| | 70 years and over | 0.416 | 2.401 | 0.426 | 2.349 | 0.409 | 2.445 |
| Fall of size | White British | | | | | | |
| Ethnicity | Non-White British | 0.845 | 1.184 | 0.946 | 1.057 | | |
| English first | Yes | | | | | | |
| language | No | 0.967 | 1.035 | 0.978 | 1.023 | | |

Table 5.6: VIF and tolerance tests for multicollinearity for logistic regression for accruing sizable additional arrears: CS2 tenants (rent account data)

| | | Tolerance | VIF |
|-----------------------|--------------------------------|-----------|-------|
| | No | | |
| Contact with landlord | Yes | 0.825 | 1.213 |
| | Credit | | |
| Rent account position | Arrears less than 4 weeks rent | 0.830 | 1.205 |
| | Arrears more than 4 weeks rent | 0.766 | 1.305 |
| | 34 years or younger | | |
| | 35 years to 54 years | 0.444 | 2.252 |
| Age | 55 years to 69 years | 0.446 | 2.243 |
| | 70 years and over | 0.451 | 2.216 |
| | Less than £110pw | | |
| Rent and service | £110pw to £140pw | 0.894 | 1.118 |
| charges | £140pw to £180pw | 0.896 | 1.117 |
| | More than £180pw | 0.976 | 1.025 |
| | HA paid to landlord | | |
| Housing allowance | HA paid to tenant | 0.789 | 1.268 |
| | Not in receipt of a HA | 0.854 | 1.171 |
| Tananay | Sole | | |
| Tenancy | Joint | 0.967 | 1.034 |
| Falls and address | White British | | |
| Ethnicity | Non-White British | 0.966 | 1.035 |

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Tenancy sustainment in social housing: Final report - additional information about the research methods used by the study team

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