Unemployment Insurance for Mortgage Borrowers: Is it viable and does it cover those most in need?*

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ABSTRACT:

One of the principal downside risks of financial deregulation is the possible deleterious effect it may have on the incidence of mortgage arrears and possessions. Successive UK governments have enthusiastically pursued both financial deregulation and the promotion of private mortgage payment protection insurance (MPPI) as the primary safety-net for mortgage borrowers. As such, the UK is an important test case for other European countries considering either or both avenues of policy. With this motivation, we review the mortgage payment protection insurance (MPPI) debate in the UK and examine whether mortgage borrowers who choose to remain uninsured do so because they are in the most stable forms of employment and/or have sufficient financial resources to cover periods of unemployment, or because their employment risks are not covered by MPPI and/or they cannot afford the premium. These are important questions because if affordability proves to be a key driver of take-up, then private mortgage insurance is fundamentally flawed as an antidote to the risks that follow from financial deregulation. Family Resources Survey data are used to examine the characteristics of the uninsured which are then compared to data on employment stability in an attempt to identify those groups of mortgage borrowers most at risk. Income and savings of the uninsured are also examined to establish whether borrowers consider personal financial resources to be substitute for insurance. We find that neither those in the riskiest categories of employment, nor those with the least financial resources, have the highest rates of MPPI take-up. We also find a surprisingly large variation in the take-up across household types. In particular, we find that households with a greater number of children relative to adults have significantly lower MPPI take-up rates. These findings provide evidence that affordability is an important driver of MPPI take-up, for whilst there is no obvious reason why having more children reduces the default risk of a household, it is clear that the number of children *will* have a direct effect on the ratio of outgoings to earnings and hence on a households ability to afford MPPI. Inability of certain borrowers to afford MPPI may explain why the highest risk groups do not have the highest levels of take-up. The corollary of our results is that MPPI is not viable as a widespread safety net for mortgage borrowers, and so the assumption that private mortgage insurance can be a substitute for state provided protection is fundamentally flawed.

INTRODUCTION

In the UK post war period, homeownership has been promoted by both mainstream political parties as the preferred tenure. The 1953 Conservative White Paper stated that, 'One object of future housing policy will be to continue to promote, by all possible means, the building of new houses for owner occupation. Of all forms of saving this is one of the best. Of all forms of ownership this is one of the most satisfying to the individual and the most beneficial to the nation' (quoted in Hamnett, 1999, p.53). The Labour 1965 White Paper demonstrated similar enthusiasm, 'The expansion of building for owner occupation ... is normal: it reflects a long term social advance…' (ibid). Perhaps the strongest expression of the British preoccupation with owner occupation, however, came under the 1980s Thatcher government which was responsible for both the introduction of Right to Buy (a policy which allowed Local Authority tenants to purchase their own homes), and financial deregulation of the mortgage market. As homeownership rates have risen, however, so have the concerns over the downside risks of financial deregulation and the associated sustainability of home ownership (Maclennan et al 1997).

These concerns are not limited to the UK. The internationalisation of credit (Ritzer 1980) and the general growth in pervasiveness of market forces has resulted in mortgage markets everywhere facing pressures to liberalise and so both the positive and negative aspects of the UK experience will be of interest to policy makers across Europe. Britain

is effectively a test case for the consequences of financial liberalisation and flexible labour markets, for "even if not directly paralleled elsewhere, [these developments] are nonetheless, an exemplar of the influences on, and outcomes of, change in owner occupied markets' (Ford and Quilgars 2001, p.148). That there has been a significant rise in the incidence of house repossession Britain following housing-finance restructuring is therefore of European and not just UK concern. As Figure 1 shows, although the number of repossessions as a proportion of the total mortgage stock has recently stabilised, there is evidence that the long-term trend is strongly upward. Each successive economic slump since 1970 (measured by the unemployment rate) has been accompanied by successively higher peaks in the repossession rate, and each economic boom has been accompanied by successively higher troughs in the repossession rate.

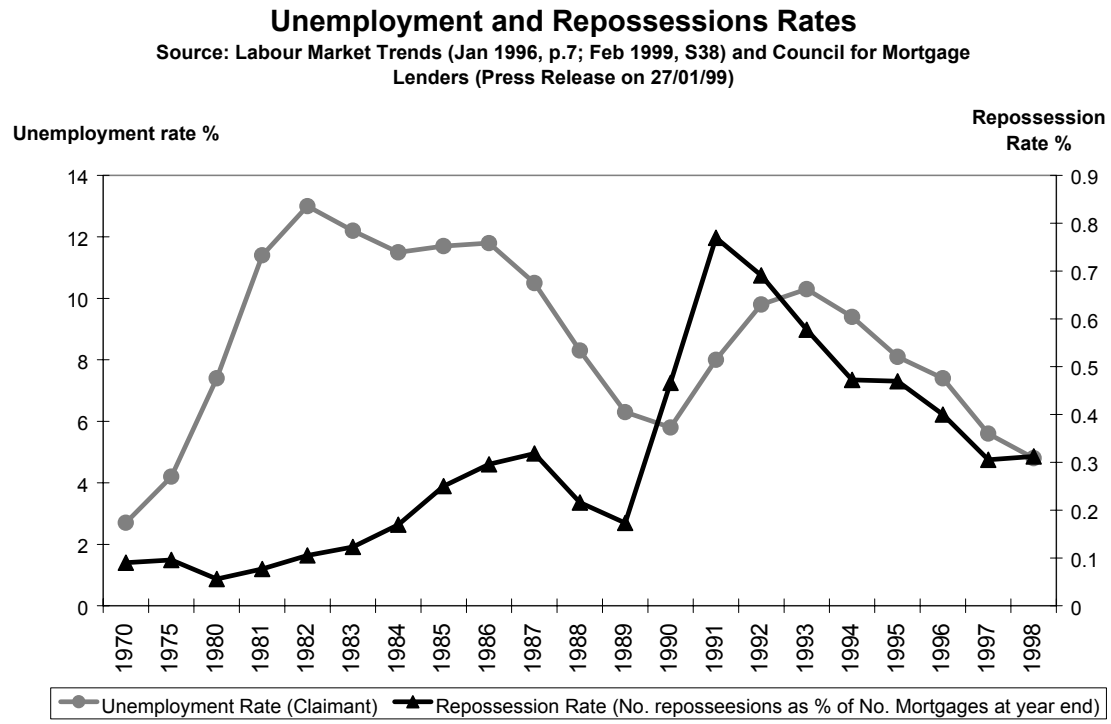
Although financial deregulation is cited as a cause of this trend (on the basis that the rising supply of mortgage credit has broadened the risk base of borrowers to include those previously considered too risky to be eligible for mortgage finance -- Stephens 1993; Hamnett 1999 p. 55-57), it is not the only cause. Structural changes to the labour market resulting in more 'flexible' forms of employment (Ford, 1989, 1998; Maclennan and Pryce, 1996; Ford et al 2001 chapter 3), and relationship breakdown (Bull, 1995) have also been listed as drivers. (See Ford et al 2001 chapters 2,3,5,6 and 7 for a full examination of the causes and consequences of mortgage arrears and possessions).

A further factor, and one most relevant to the focus of the current paper, is the role of, and reforms to, the welfare safety net for mortgage borrowers. The *state* safety net for mortgagors was first introduced into the UK in 1948 and for almost forty years remained substantially unchanged, covering full mortgage interest for those eligible for means tested welfare benefits. This provision, which came to be called ISMI (Income Support for Mortgage Interest), remained relatively unchanged until 1987 when mortgage borrowers claiming Income Support became entitled to only half interest payments for the first two months, and full eligible interest thereafter. These changes, however, were insignificant compared with the reforms that were to follow in October 1995, from which time existing mortgagors receive no support for eight weeks, followed by up to 50 per cent of their eligible interest for the next 18 weeks and full coverage thereafter; and new mortgagors (including re-mortgagors) receive no support for 39 weeks followed by full eligible interest thereafter. (It should be noted, however, that many mortgagors are unaffected by these changes because they would not be entitled to Income Support in the event of job loss or ill health, due to savings over the ISMI threshold or the income of a second earner).

In reducing ISMI, the government's aim was to promote the take-up of Mortgage Payment Protection Insurance (MPPI), a private mortgage insurance product. MPPI had been available in the UK since the 1970s as a means of covering monthly repayment costs (usually for 12 months following a 30-60 day waiting period) in the event of unemployment or ill-health, but take-up was relatively low even into the early nineties

(Ford and Quilgars 2001). In one sense, MPPI is more comprehensive than ISMI because it covers not just interest payments, but amortization also. Thus, it was hoped that the ISMI reforms would boost take-up of MPPI particularly amongst high risks and actually reduce arrears and repossessions (Oldman & Kemp, 1996, p.44). Increasingly, however, the product's structure, claims procedure and interface with ISMI has come under criticism (Ford et al 1995; Ford and Kempson 1997; Keoghan and Pryce, 1999; Kempson et al, 1999, Ford and Quilgars 2001, Ford et al 2001), and the viability of MPPI as a long term, widely used product has been called into question due to some of the fundamental problems associated with any type of private unemployment insurance (Walker et al 1995).

Figure 1



Emerging from the debate over ISMI and MPPI is a return to the fundamental question over whether the pursuit of a 'property owning democracy' (Mrs Thatcher's stated policy goal for the sale of council housing—see Hamnett, 1999, p.54) is intrinsically compatible with a simultaneous shift towards private insurance based mortgage safety net. This is an important question because it asks whether it is efficacious to expand the role and freedom of the private financial sector as the major recipient of housing expenditures, whilst at the same time increasing society's reliance on the sector as the primary insurers of those expenditures. In a sense, one could argue that the answer lies in the market's response: if consumers are increasingly sovereign, then the efficacy of being in possession of MPPI will be reflected in take-up. The evidence so far has suggested that

borrowers have been slow to be persuaded of MPPI's value, and take-up is still some way short of the predicted "need" for cover (estimated by Holmans & Whitehead, 1999, to be 55 per cent). Estimates of overall take-up are still below 30 per cent, leaving the majority of borrowers with a significantly less comprehensive safety net than they had before the 1995 ISMI reforms.

It is possible that take-up of MPPI is low, however, because only a minority of mortgagors are sufficiently at risk to require protection. The corollary of this argument would be that those who choose to remain uninsured, do so because they are in stable employment, or have sufficient financial resources to cover periods of unemployment. However, there are two rather less optimistic explanations: first, that take-up is low because some of the most important risks are not covered by MPPI policies; and second, that MPPI is not affordable by those most at risk. If there is evidence to support either of the latter two explanations, then the case for MPPI as a viable substitute for ISMI is substantially weakened.

Whilst fairly extensive work has been done on the true extent of cover offered by MPPI through an examination of the claims process (Kempson et al 1999; Ford and Quilgars 2001, Ford et al 2001), relatively little has been done to examine in detail the take-up of MPPI across different types of claimant. The econometric models of take-up (Pryce 1998a,b; Pryce and Keoghan 2001) that have been developed so far may have proved useful in shedding light on the responsiveness of take-up to premiums, the risks of

unemployment and a range of other financial factors, but the techniques used have tended to mask or simplify the complexities of the relationship between take-up and household structure. The aim of the current paper is to provide the first detailed examination of MPPI take-up across a broad spectrum of borrower types using large sample evidence. By using both the 1994/95 and 1995/96 Family Resources Surveys, we achieved a combined sample of over 18,000, and this allowed us to provide the first robust estimates of take-up amongst a number of relatively small groups of borrowers which normally would have to be subsumed into broader categories. We have, for example, been able to consider whether for single parents take-up of MPPI declines with the number of children and this has helped to illuminate the affordability versus risk question raised by Pryce (1998) and others (see discussion of Table 6 in section 3).

The remainder of the paper will be structured as follows: section 1 will provide a background to the MPPI debate summarising the arguments for and against MPPI, and outlining the theoretical explanations of why those most at risk may not be the most likely to take out insurance. Section 2 compares the employment characteristics of the uninsured using 1994/95 and 1995/96 Family Resources Survey data, with recent labour market data and research to establish whether those most at risk are indeed the most likely to take out insurance. Section 3 examines the affordability issue by utilizing FRS data on the personal financial resources of borrowers in order to investigate whether mortgagors in unstable employment, who decide to refrain from taking out MPPI, do so because savings and surplus earnings provide adequate protection.

SECTION 1: BACKGROUND TO THE MPPI DEBATE

In this section we summarise some of the issues surrounding MPPI, including the problem of only bad risks applying ("adverse selection"), the problem of "favourable selection" (the converse of adverse selection), the implications of mass unemployment; and finally, affordability.

Only bad risks apply – "Adverse Selection"

One criterion for profitable insurance is that the risk being insured has to be reasonably constant across individuals, or at least, that the insured do not know more about his/her risk than the insurer. Should either of these conditions be violated, there may be perverse incentives associated with insurance contracts. Bad risks may have greater incentive to purchase insurance than good risks, for example, particularly if information asymmetry results in all risks being charged the same premium (see Rothschild and Stiglitz, 1976; Brueckner, 1985; Clauretie and Jameson, 1990; Hirshleifer and Riley,1995). This tendency has become known in the economics literature as 'adverse selection' and it is potentially a major barrier to insurance against unemployment.

Fairly complex theoretical variations on the adverse selection theme have been proposed by Chiu and Karni (1998) which show that the market outcome in the absence of state intervention may actually be to provide no unemployment insurance whatsoever. In the UK, of course, there is no question that a market for unemployment insurance exists, and

indeed has done so in some form or another since 1911 (Walker et al, 1995) and in the form of MPPI since the late 1970s (Kempson et al 1999). But it has always been a niche market, and the question remains as to whether this is due to some fundamental characteristic of unemployment insurance, or whether it is due to the existence of publicly provided safety nets for the unemployed (ISMI crowds-out MPPI by stifling demand, for example). If crowding-out is the cause, then the curtailment of ISMI in the mid-1990s would have produced a large rise in take-up. That this has not happened does not necessarily invalidate the crowding-out argument, however, because there has, at the same time, been a substantial reduction in unemployment risk in most parts of the country due to a prolonged economic boom. However, logistic regression analysis by Pryce (1998a, b) and Pryce and Keoghan (1999, 2001) controlled for the effect of falling unemployment and still found take-up to be insensitive to changes in ISMI. These results, therefore, appear to support the argument that low take-up of MPPI is due to some fundamental characteristic of unemployment insurance, and not simply to crowding-out.

One 'fundamental characteristic' of MPPI which might be preventing take-up is the possibility that insurers are effectively rationing cover in order to screen out bad risks, or are charging premiums at a high enough rate to preclude widespread take-up. Interestingly, the investigation into adverse selection using the British Household Panel Survey by Burchardt and Hills (1997a,b; 1998) found that policy holders did not have significantly greater unemployment risks than uninsured mortgagors. This may be

indicative of the success that insurers have achieved at structuring policies in such a way as to screen out bad risks and identify a profitable niche market.

Certainly, one of the problems highlighted by both Walker et al (1995) and Ford and Kempson (1997) is the plethora of clauses written into MPPI contracts precluding certain categories of claims. Walker et al, cite the following as being categories typically excluded from mortgage protection policies: (i) the first 30 days of unemployment or financial insolvency; (ii) unemployment occurring during the first 90 days of the plan (with a new mortgage) or 180 days (for a further advance or re-mortgage); (iii) unemployment beyond twelve months; (iv) those without regular and continuous work for at least twelve months prior to claiming; (v) voluntary unemployment or insolvency; (vi) unemployment that is a recurrent, regular or seasonal feature of the job; (vii) unemployment at the end of a fixed-term contract; (viii) periods when a payment is taken instead of notice; and (ix) unemployment occurring outside the United Kingdom. Walker et al (op cit.) go on to note that 'While the financial rationale for these exclusions is self-evident, the net result is to exclude many of those whose circumstances result from the trends towards a more flexible labour market: the long term unemployed and those in precarious forms of employment." Because of the extensive clauses attached to MPPI policies, many policy holders do not even make a claim (Ford et al 1995 found that 'only a quarter of those in arrears and with insurance, had tried to claim'), and of those that do, many find their claims to be unsuccessful (only a third of claims were successful in the Ford et al sample). This led Ford et al to conclude in 1995 that MPPI policies 'at present

offer inadequate cover to people who need them most' (p.61). More recent research has reached similar conclusions,

> 'A third of borrowers have arrears for reasons not covered by MPPI. MPPI is not able to insure certain unemployment risks, nor does it normally provide long-term cover for those with ongoing health problems. Private insurance works best for those out of work for short periods of time, who have someone else in the household with earned income, redundancy or savings. It benefits most those who need the support the least. It provides the worst cover for those with unstable work histories and ill-health – that is those who need it most.' (Quilgars, 1999; see also Kempson et al, 1999)

Problems such as these have prompted the recent move to set baseline standards for MPPI products (ABI and CML, 1999; Armstrong, 1999) though the new clauses are not so different from those of existing mainstream policies (they include a maximum 60 day qualifying period, exclusions for pre-existing medical conditions, and only a limited broadening of cover for self employed and contract workers). It is inevitable, however, that extensive clauses will remain a permanent feature of MPPI arrangements since (in the words of the CML/ABI 1999): 'Lenders and insurers are both in business. They cannot get into undertakings that do not offer a profit.' It is because private insurance may be fundamentally unprofitable at certain points in time, and for certain groups, that some form of state safety net will always be necessary. If the most severe employment risks are not actually covered by unemployment insurance then this will ultimately be reflected in patterns of take-up across employment categories and even result in the worrying possibility that jobs with the highest risks may not have the highest rate of take-up of MPPI.

Favourable Selection

Whilst there may be economic forces at work which result in adverse selection, there may at the same time be perverse incentives intrinsic to unemployment insurance which result in *favourable* selection of risks. Information asymmetry in the mortgage insurance market may mean that MPPI incurs a greater 'option value' to workers with larger stocks of human capital. First, note that for the uninsured, unemployed mortgagor, any job offer during the 'ISMI gap' period that pays more (net of travel costs) than state welfare benefits, will be difficult to refuse given the risk of repossession. If the borrower has taken out MPPI, however, then he/she may perceive his/her house to be much less at risk for the twelve months of MPPI cover (although Kempson et al 1999 have found that possession of MPPI is not an absolute guarantee against repossession), and even after the twelve months of MPPI cover, the mortgagor may be eligible for ISMI. The insured mortgage borrower thus has the financial option to turn down job offers below his expected wage. The longer he/she waits, the more chance that a higher paid job will be offered, resulting in a 'moral hazard' effect (i.e. having MPPI gives one less incentive to return to work during the insured period than if one did not have MPPI). This effect may be offset by the depreciation of human capital whilst unemployed (the 'wilting flowers' effect), but the moral hazard effect may still dominate.

For those with relatively low levels of education and training, however, the spectrum of wage offers over the twelve month period following redundancy is likely to be very narrow, and so there has been little to gain from the 'option' to reject job offers. This

compares with the much wider spectrum of job offers available to those with a wealth of experience and education. Thus, insured mortgagors with a considerable accumulation of human capital, MPPI may incur a greater 'option value' than for those with little. Because lower skilled workers tend also to have higher unemployment risks, this may actually provide a rationale for 'favourable selection': i.e. employment groups with the highest redundancy rates will not necessarily have the highest take-up of MPPI. This might explain why Burchardt and Hills (1997a, b; 1998) did not find any evidence of adverse selection: the countervailing forces of favourable and adverse selection may effectively cancel each other out. (We will consider this issue again in the empirical section of the paper where we will examine the distribution of MPPI take-up rates across employment categories).

Unemployment cycles

Important factors in the determination of the housing fall-out of recession, include: (1) the extent of ISMI cover; and (2) the pattern of MPPI take-up. The second of these is partly determined by the long-term profitability to insurers of widespread take-up of employment insurance, which in turn is determined *inter alia* by the responsiveness of MPPI take-up to unemployment risks. If responsive, take-up will be unsustainable as a widespread alternative to ISMI. This is because sensitivity to unemployment risks will imply that only mortgagors in high risk areas will take out MPPI and/or that mortgagors will only take out insurance at the outset of a downswing, and insurers will be unable to subsidize bad years with good. Insurers may try to offset losses by raising premiums

during recessions, but this may have the effect of making MPPI too expensive to purchase when most needed, and superfluous when affordable.

Pryce and Keoghan (1999, p.29) found take-up to be fairly insensitive to variations in the local unemployment rate, with take-up only rising by 1% for every 10% increase in the unemployment rate. This evidence may again point simply to the success of insurers at combating the deleterious effects of asymmetric information on the quality of their insurance portfolio. There is evidence (Goodman 1998) that MPPI premiums do indeed rise during slumps and fall during booms, and this may have been sufficient to counter-balance cyclical adverse selection. Pryce's (1998a,b) finding that take-up is relatively responsive to the size of premium is perhaps further evidence in support of this explanation.

Affordability

Sensitivity of MPPI take-up to premiums is linked to another important issue in the MPPI debate: that of affordability. If borrowers do not take out MPPI because they do not feel they can afford the premiums, then they are effectively saying that, despite the risks and the grave personal cost of repossession, other areas of current consumption are sufficiently important to warrant priority. The theoretical model developed by Pryce (1998a) attempts to capture this by allowing insurance choices to be affected by the level of household subsistence consumption (i.e. the minimum household expenditure necessary for a basic standard of living). The greater the mortgage payments and the

larger the number of household members, the greater will be the minimum expenditure (and hence income) necessary to maintain subsistence consumption. In considering whether or not to purchase MPPI, the household has to take into account the consumption foregone in paying the premium. If this foregone consumption is perceived to fall within the category of basic living essentials, then the household is less likely to purchase MPPI, even though the risks of repossession may be high. In effect, the consumer has to decide how to weight current consumption over and against future consumption. Insurance guarantees some level of future consumption at the expense of current consumption. Obviously no consumer will be prepared to starve in order to ensure future mortgage payments.

We will now move on to the empirical section of the paper. We first consider whether there is any evidence that highest risk employment categories do not have the highest rate of MPPI take-up (section 2). We will then consider whether there is any evidence that this is due to affordability (section 3).

SECTION 2: UNEMPLOYMENT RISK AND MPPI TAKE-UP

Although a variety of surveys of mortgage borrowers have been carried out to provide details of MPPI policy holders (for example, Ford and Kempson, 1997; Ford, Kempson, and Wilson, 1995), little work has been done using large sample evidence to investigate the nature of take-up across different types of borrower. The two exceptions are (1) the Burchardt and Hills (1998) study, which is primarily concerned with modeling the

regressive implications of moving to private safety nets for mortgage borrowers using the British Household Panel Survey, and (2) the logistic regression analysis of Pryce and Keoghan (1999) using the Scottish House Condition Survey. Considerably larger than both these samples, however, is the Family Resources Survey which has the added advantage that it is collected annually and so adjacent years can be combined to produce an even larger sample. It should be noted in the following discussion, that figures on MPPI take-up rates from any of the large scale national surveys are likely to be somewhat inflated because of the tendency for respondents to confuse other insurance products with MPPI. However, the FRS data is probably the most reliable of the large scale surveys because of the careful wording of the question and the additional details requested in the survey. In order to boost the number of observations, most of the tables below refer to the combined sample of the FRS for the years 1994/95 and 1995/96. However, for tables and figures employing the income variable, changes in definition over time mean that only 1995/96 results are presented.

First, consider the rates of insurance take-up by socio-economic group listed in Table 1. It can be seen that the highest rates of non-insurance are amongst unskilled manual workers (rate of non-insurance = 74%), non-manual ancillary workers (74%), self-employed non-professionals (73%) and agricultural workers (81%). A similar pattern emerges in Table 2. where unskilled mortgagors are indicated as having the highest rate of non-insurance (74%) of all Standard Occupational Groups (the armed forces excepted).

It is not possible to provide precise figures on the differences in risk between each of these employment categories because the published unemployment rate data uses a slightly different classification system. Nevertheless, it can be seen from the following three tables that unemployment risk is greatest amongst manual and unskilled occupations. Table 3 lists the Industrial Labour Organisation unemployment rates by previous occupation and demonstrates clear variation across employment type, with plant and machine operators and manual workers having the highest unemployment rates (7.6% and 6.9% respectively). The order is slightly different for females for whom craft and related previous employment has the second highest unemployment rate at 7.9%.

These unemployment rates, however, are not necessarily the best guide to the unemployment risks faced by those still in employment because the figures include workers who have been unemployed for a long time, having for example, been made redundant during a period of industrial decline which may have since plateaued. Perhaps a better indicator, therefore, is the redundancy rate listed in tables 4 and 5 by occupation and by industry respectively.

TABLE 1. *MPPI Take-Up Rates Insurance rates by Socio-Economic Group*

Socio Economic Group		Proportion of mortgagors with MPPI	Size of Group as a Proportion of All Mortgagors
1.1	Employers in industry etc. (large establishments)	18.8	0.2
1.2	Managers in government, industry etc. (large establishments)	28.6	16.2
2.1	Employers in industry etc. (small establishments)	26.8	3.2
2.2	Managers in government, industry etc. (small establishments)	30.5	6.5
3	Professional workers – self employed	26.7	2.0
4	Professional workers – employees	27.5	8.0
5.1	Non-manual ancillary workers etc.	25.6	10.0
5.2	Non-manual foremen & supervisors	29.5	2.9
6	Junior non-manual workers	28.0	10.6
7	Personal service workers	30.3	1.4
8	Manual foremen and supervisors	32.6	5.4
9	Skilled manual workers	31.3	14.3
10	Semi-skilled manual workers	30.7	7.4
11	Unskilled manual workers	26.1	2.0
12	Self-employed workers (non-professional)	8.4	8.8
13	Farmers – employers and managers	0.1	0.2
14	Farmers – own account	0.2	0.2
15	Agricultural workers	0.2	0.3
16	Members of armed forces	0.3	0.5
UK		28.7	100

(Source: FRS 1994/95 and FRS 1995/96 combined; sample size of mortgagors = 18,566)

TABLE 2. *Rates of Take-up by Standard Occupational Code Group*

Standard Occupation Code Group		Proportion of mortgagors with MPPI	Size of Group as a Proportion of All Mortgagors
1	Professional	27.5	10.1
2	Managerial & technical	27.9	35.1
3	Non-manual skilled	28.6	14.7
4	Manual skilled	30.6	27.3
5	Partly skilled	29.0	9.9
6	Unskilled	26.2	2.4
7	Armed forces	16.3	0.5
UK		28.7	100

(*Source*: FRS 1994/95 and FRS 1995/96 combined; sample size of mortgagors = 18,566)

TABLE 3. *ILO Unemployment Rates by Previous Occupation*[**]

Occupation	ILO Unemployment Rates by Previous Occupation		
	All	Male	Female
All	6.2	6.8	5.4
Manual	6.9	7.5	5.6
Non-Manual	3.1	3.1	3.1
Managers & Admin	2.3	2.3	2.2
Professional	1.9	1.7	2.2
Associated Professional & Technical	3.0	3.7	2.2
Clerical	4.2	6.7	3.3
Craft & Related	5.4	5.2	7.9
Personal & Protective Services	5.1	6.9	4.2
Selling	5.4	6.1	4.9
Plant & Machine Operators	7.6	7.4	8.7

(*Source*: Labour Market Trends February 1999, S37)

TABLE 4. *Redundancy Rates by Occupation*[#]

	Managers & Administrators	Professionals	Associate professional & Technical	Clerical & Secretarial	Craft & Related	Personal & Protective Services	Sales	Plant & Machine Operatives	Other
Summer 94	0.8	*	0.6	0.7	1.8	0.6	1.1	1.4	1.3
Autumn 94	0.7	0.5	0.6	0.8	1.5	0.5	1.1	1.3	0.9
Winter 94	0.4	0.5	*	0.5	0.8	*	0.8	0.9	0.7
Spring 95	1.0	0.5	0.8	1.0	1.6	0.6	1.3	1.3	1.0
Summer 95	0.9	0.5	0.9	0.8	1.6	0.4	1.2	1.6	1.1
Autumn 95	1.0	0.5	0.7	1.0	1.4	0.7	1.0	1.4	1.0
Winter 95	1.0	*	0.6	0.9	1.6	0.6	1.3	1.8	1.2
Spring 96	0.8	0.7	0.5	0.9	1.4	0.6	1.1	1.4	1.2
Summer 96	1.0	0.5	0.6	0.8	1.7	0.7	1.2	1.4	0.9
Autumn 96	0.8	0.5	0.6	0.8	1.4	0.6	1.0	1.0	1.1
Average	0.76	0.43	0.59	0.75	1.35	0.53	1.01	1.23	0.95

Source: Labour Market Trends Jun 1997 S43 and February 1999, S37

[#] Number of redundancies in each category divided by number employed in each category.

* Fewer than 10,000 redundancies for the quarter in question: estimate not given (N.B. Agriculture & fishing and Energy & water industries had fewer than 10,000 redundancies for all quarters)

TABLE 5. *Redundancy Rates by Industry*[#]

	Manufacturing	Construction	Distribution, Hotels & Restaurants	Transport	Banking, finance & Insurance	Public admin, education & health	Other services
Autumn 95	1.4	1.9	1.1	1.1	0.9	0.5	*
Winter 95	1.4	3.0	1.0	1.1	1.1	0.3	1.1
Spring 96	1.4	2.6	1.0	1.0	0.9	0.3	0.8
Summer 96	1.4	2.1	1.0	0.8	1.0	0.3	1.0
Autumn 96	0.9	2.0	1.0	0.8	0.9	0.3	*
Summer 97	1.3	2.0	0.8	*	0.9	0.3	*
Autumn 97	1.0	1.9	0.7	1.0	0.7	0.3	*
Winter 97	1.3	1.4	1.1	0.7	0.8	0.2	*
Spring 98	1.5	1.1	0.9	1.0	0.9	0.2	1.1
Summer 98	1.4	1.7	0.9	1.0	0.7	0.2	*
Autumn 98	1.6	1.7	0.7	1.0	0.9	0.3	*
All	1.22	1.78	0.85	0.78	0.81	0.27	0.28

[#] Number of redundancies in each sector divided by number employed in each sector.

* Fewer than 10,000 redundancies for the quarter in question: estimate not given (N.B. Agriculture & fishing and Energy & water industries had fewer than 10,000 redundancies for all quarters)

Source: Labour Market Trends Jun 1997 S43 and February 1999, S37

It can be seen from Table 4 that plant and machine operatives and craft and related professions are the highest risk groups with redundancy rates of 1.35% and 1.23% respectively (rates that are several times greater than the redundancy rate for professionals, for example). The differences are even greater when considered by industry (Table 5), with construction and manufacturing sectors (where unskilled and manual workers are most concentrated) having the highest rates (1.78 and 1.22), which are respectively 659% and 452% greater than the rate for those in the 'public admin, education and health' category.

Estimates by Walker et al (1995) of the odds of becoming unemployed in the next three months, only confirm this pattern. Walker et al find the odds for the following categories of male worker in 1992-3 to be: 1 in 31 for professionals; 1 in 27 for clerical workers; 1 in 25 for a skilled manual workers; 1 in 19 for semi-skilled workers; and 1 in 13 for unskilled workers. Moreover, the figures listed in Gregg and Wadsworth (1994a,b) indicate that the proportion of mortgagors who fall into to the categories of workers excluded by many MPPI policies because they are temporary or unstable, may be substantial. Their figures show that though the majority of jobs overall were permanent and full-time, most of the new jobs were not. Walker et al note that, 'because the turnover of temporary jobs is quicker they inevitably constitute a disproportionate number of the vacancies available. Moreover, unemployed claimants have to compete for the comparatively few 'proper' jobs that are on offer with people who are already in employment' (p.42). (It can be seen from the figures presented in Table 1 that non-manual ancillary workers, and self-employed non-professionals – both of which have below average MPPI take-up – constitute nearly a fifth of the workforce).

There remains the question, however, as to why the highest risk groups have the lowest MPPI take-up rates. One explanation (to be considered in the next section) is that these groups have lower income levels and so are less likely to be able to 'afford' MPPI. A second explanation is the 'favourable selection' effect noted earlier (i.e. the option to turn down job offers during the ISMI gap which mortgage protection insurance provides, may be of lower value to the unskilled, and explain why they are less likely to take out the

insurance). Absence of research into this conjecture means that it is not possible to quantify its effect but it may account for some of the variation in take-up across employment. A third explanation is that the risks faced by the most vulnerable groups are not covered by MPPI policies. Employees without a stable employment history or who are already aware of the termination date of their current contract are unlikely to find adequate cover, and so are less likely to consider the purchase of MPPI to be worthwhile.

A group for which this latter cause is particularly pertinent is that of self employed workers, a group that has constituted a growing proportion of the workforce (10% of the workforce in 1980 and 14% in 1996; CIH, 1997) and identified by Ford et al (1995) and Burrows and Ford (1998) to be particularly vulnerable to substantial income reduction during recessions. Burrows and Ford (1998) make a distinction between those self employed who have employees and those without employees. Those without employees are also separated into three categories: self-employed professionals; self-employed non-manual workers; and self-employed manual workers. Their analysis (based on head of household) indicates that the majority of the self-employed are owner occupiers. Across all categories the self-employed are less likely than employees to be in the social rented sector. In general, compared to employees, the self-employed tend to live in larger and more expensive accommodation. The self employed are also much more likely to have a higher mortgage as a percent of their income. A reason for this could be that self-employed workers make use of additional borrowing for the purpose of ‘business

investment rather than just for the purchase or improvement of the home' (op cit), particularly since mortgage finance is one of the cheapest forms of borrowing.

Burrows and Ford also find that the self employed are much more likely than other employment categories to face repayment problems. Using the Survey of English Housing they found that, of the self employed with a mortgage, over one quarter were either in mortgage arrears of some sort or are having difficulties meeting mortgage repayments. Multivariate analysis of the odds of mortgage indebtedness among the self employed, controlling for a range of variables, revealed that, 'We can be confident that the association between self-employment and an increased odds of mortgage indebtedness is real and robust'. Part of the reason for this is the inherently precarious and volatile nature of self employment. Moreover, Burchardt and Hills' (1997a) survey of MPPI policies found that, at the start of 1996, one third of the 103 available policies excluded self employed borrowers. This is in many ways unsurprising since it would not be viable for insurance companies to bear the much higher risks faced by small businesses and yet charge the same flat rate premium as it does to workers in normal employment. What it does perhaps suggest, however, is the need for some form of publicly administered mortgage insurance for self-employed workers (along the lines, for example, of the existing Loan Guarantee Scheme – see Cowling, 1996), particularly since there are general benefits to the economy as a whole from promoting entrepreneurship.

SECTION 3 PERSONAL FINANCIAL RESOURCES

In addition to the unemployment risks faced by mortgage borrowers, an important determinant of the risk of arrears and repossession is the financial resources at the mortgagor's disposal relative to his/her essential outgoings and mortgage payments. For example, a single person with a small mortgage and sizable savings is more likely to be able to survive a short bout of unemployment than someone with many dependents, a large mortgage, and meager savings. One would, therefore, anticipate higher levels of insurance take-up amongst households that have diminutive savings relative to family outgoings. However, this story is complicated by the fact that the ability to save is determined by disposable income, as is the capacity to afford MPPI premiums. Disposable income is in turn determined by gross household income, size of mortgage payments, and the number of persons in the household. The question is whether it is affordability that dominates the MPPI take-up decision (hence the greater the household's financial resources the greater the take-up propensity), or whether it is the risk of arrears/repossession that dominates (i.e. the greater the household's financial resources, the lower the take-up propensity).

This is an interesting socio-economic question since it reflects on the extent to which mortgage borrowers weigh up perceived probabilities against current monetary demands. It is a complex question and one to which we shall only be able to provide a partial answer. Nevertheless, consideration of take-up rates across different brackets of

household structure, savings, income and mortgage payments, will give valuable insight into the fundamental behavioral patterns of mortgage borrowers.

Consider first the rate of take-up of across different household structures. Figure 3 demonstrates that MPPI take-up varies considerably across household size, with take-up declining with the size of household for multi-person households. Table 6 confirms the surprisingly strong variation in of MPPI take-up across household types, and reveals that households with more children relative to the number of adults are less likely to take-out MPPI. For example, hypothesis tests show that the take-up of MPPI is significantly greater amongst households with *one adult* and one child than amongst households with *two adults* and one child (significance level = 0.02). Similarly, the take-up of MPPI is significantly greater amongst households with one adult and *three children* than it is amongst households with one adult and *one child* (significance level = 0.02), or one adult and *two children* (significance level = 0.03). The take-up of MPPI is also significantly greater amongst households with two adults and *three children* than it is amongst households with two adults and *two children* (significance level = 0.02). (The hypothesis tests were done using one-tailed z-score tests of differences between population proportions).

These results strongly support the affordability argument outlined above, for although greater household size has direct implications for household expenditure, there is no obvious rationale why it should reduce the risk of the household facing repayment

problems. For households with more than one adult, it might be possible to argue that interpretation of the result is complicated by the implications for repayment risk of the second adult seeking or continuing in employment should the first adult face redundancy or ill-health. But no such contingency is possible where household size increases because of additional children, particularly for single adult households, and so the data on single parent households (which has not been considered before due to limited sample sizes) would appear to provide the clearest evidence that affordability is an important cause of low take-up of MPPI.

It should be said that the results reported in Table 6 are somewhat surprising given that the econometric models of Pryce (1998a,b) and Pryce and Keoghan (2001) have found take-up to be fairly unresponsive to premiums (Pryce, 1998a, for example finds that for every 10% fall in premiums, take-up would rise by only 5%). One possible explanation is that the lack of variation in the premium and/or significant measurement error associated with this variable dulls the estimated responsiveness of take-up to it in regression analysis. Even more puzzling, however, is the fact that estimates by Pryce and Keoghan (2001) did not find number of children in the household to be a statistically significant determinant of take-up (though the variable did have a negative, if very small, coefficient). It is not likely that this could be put down to measurement error alone, but it could well be the result of non-linearities in the relationship between take-up, affordability and household structure (a possibility reinforced by the results of Figures 3, 4 and 5, and Appendix 1, discussed below). Nevertheless, it is still odd that the strength

of the effect of the number of children suggested by Table 6 is not in some way reflected in econometric estimates.

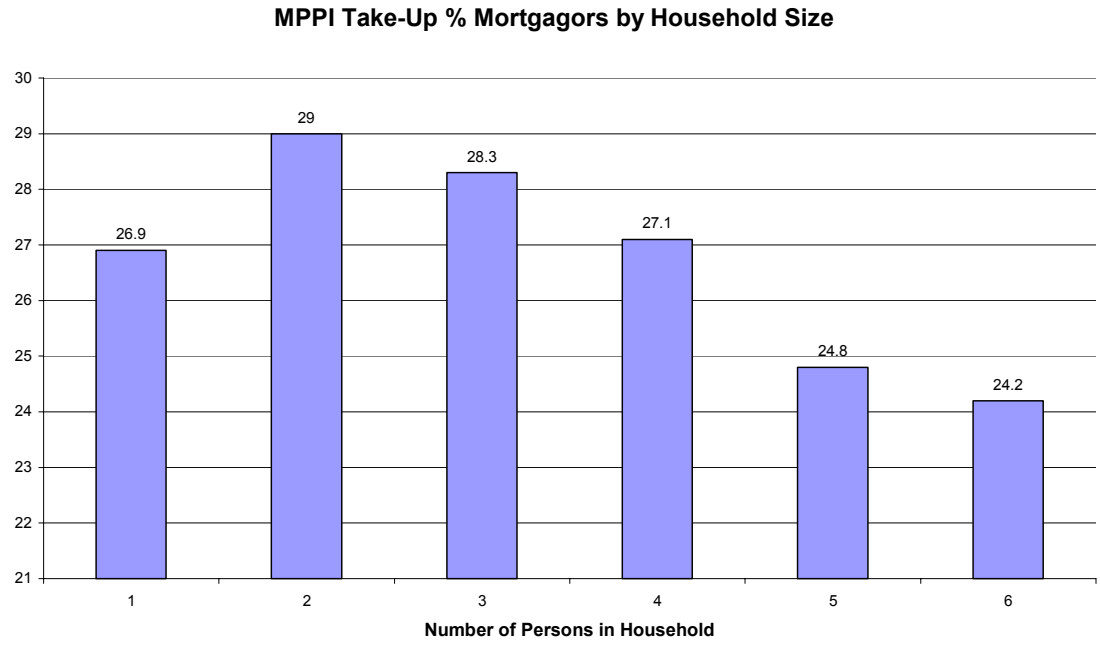
TABLE 6. *Distribution of Take-Up by Household Structure*

Household Composition	Proportion of mortgagors with MPPI	Size of Group as a Proportion of All Mortgagors
One adult	26.6	13.4
Two adults	30.0	25.2
Three or more adults	28.6	8.3
One adult one child	23.6	1.8
One adult two children	23.0	1.8
One adult three or more children	15.4	0.6
Two adults one child	29.2	13.0
Two adults two children	27.1	19.1
Two adults three children	24.1	7.0
Three adults one child	29.7	3.3
Three adults two children	29.0	1.2
Three adults three children	23.8	0.6
UK	27.2	100

Source: Family Resources Survey 1994/95 & 95/96

* Only adults under the pensionable age are considered (retired mortgagors will obviously not need unemployment insurance)

Figure 2



One possible alternative explanation, at least of the strength of the result for single parent households, is that single parents would be more likely to be entitled to ISMI in the event of unemployment than a two adult household. This is because, if both of the adults work and one becomes unemployed, the household may not be entitled to Income Support because of the wage of the second adult, even though this is not sufficient to meet the costs of mortgage payments. Whether this actually affects the insurance decision of lone parents is central to the debate over whether changes to ISMI have any significant effect on the take-up of MPPI. Because the regression models of Pryce (1998a,b) and Pryce and Keoghan (2001) include estimates of the probability of redundancy, the effect of household structure may be captured by, or be interacting with, probability of redundancy, rather than the "number of children" variable. It does seem questionable, however, that this explanation plays a significant role in the light of existing research regarding the levels of ignorance surrounding ISMI rules (Ford and Kempson, 1997) and the results of Pryce (1998a,b) and Pryce and Keoghan (1999) which find ISMI to have little effect on MPPI take-up. It should also be noted that even if ISMI rules were to blame for the low take of MPPI amongst single parent households, the financial implications for the Exchequer are likely to be constrained by the fact that such households constitute less than five per cent of all mortgage borrowers (see column three of Table 6). In fact, large families generally constitute a only a small proportion of the population of mortgage borrowers. Column three of Table 6 shows that in 1994-96 households with more than four members constitute less than ten per cent of all

households with mortgages; and that more than a quarter of owners with a mortgage belong to a two adult household.

Income and Savings

Consider now the take-up rates by category of income and savings (Table 7 and Table 8) It is clear that those in the lowest income bracket are the least likely to have MPPI but also that take-up tends to decline as income rises. (Income is particularly important because, as well as having an important effect on the ability to meet mortgage repayments, it is also indicative of ease of getting another job – Gregg and Wadsworth 1995).

A similar trend is evident across savings categories, although it should be noted that these tables do not reveal the complexities that arise when household structure is taken into account. For example, amongst single parents in the lowest savings category, only 22.5% of households have MPPI, whereas take-up is 34.6% amongst singe parents in the £1,500 to £8,000 category. More than 80 per cent of single parent owners with two children have savings of less than £1,500, and those with savings of between £1,500-£8,000 are least likely to have MPPI and those with savings of between £8,000 - £20,000 are most likely. Perhaps even more importantly, these figures do not consider the impact on take-up of mortgage outgoings relative to income, and it is to this we now turn.

TABLE 7. *MPPI Take-up Rates by Income Group of Head of Household*

Net Weekly Take-Home Pay £	Proportion of Mortgagors with MPPI	Size of Group as a Proportion of All Mortgagors
0 - 49	18.3	0.9
50 – 99	32.6	2.2
100 – 149	30.4	6.1
150 – 199	30.1	14.2
200 – 249	30.7	20.0
250 – 299	28.5	19.9
300 – 349	28.0	13.3
350 – 399	26.7	8.2
400 – 499	27.1	8.3
500 – 599	27.2	3.5
600 – 699	26.2	1.3
700 – 799	26.6	0.6
800 – 899	22.6	0.5
900 – 999	50.0	0.3
1000 +	22.1	0.7
UK	28.9	100

(Source: FRS 1995/96)

TABLE 8. *MPPI Take-Up Rates by Levels of Savings*

Total Savings of Respondent and Partner	Proportion of Mortgagors with MPPI %	Number of Cases with MPPI	Proportion of All Mortgagors
less than £1,500	28.3	2906	51.1
£1,500 - £8000	28.0	1570	27.8
£8,000 - £20,000	25.0	512	10.2
£20,000+	24.3	394	8.1
Non Response	23.1	133	2.9
UK	27.4	5515	100

(Source: FRS 1995/96)

MPPI Take-Up and the Mortgage Payments to Income Ratio

As a means of arriving at a more meaningful breakdown of MPPI take-up without running into sample size problems, we have calculated the ratio of mortgage payments to gross household income and graphed the take-up of MPPI across the deciles of this ratio. Figure 3 shows this relationship as an average across all two to five person households. One person households are excluded because they possess a relationship between MPPI take-up and the mortgage to income ratio (*M*) that is distinct from all other sizes of household (compare Figure 4 with Figure 5). The shape of the curves in Figure 3 and Figure 4 suggests that there is a clearly identifiable non-linear relationship between MPPI take-up and *M*. For households with mortgage payments that are very low relative to income (*M* = 1% to 3%) take-up of MPPI is negatively related to *M*. For households with slightly higher mortgage payments relative to income (*M* = 6% to 13%) the relationship of take-up of MPPI to *M* becomes positive. For multi-person households with mortgage payments in excess of 16% of their income, the affordability effect appears to dominate, since the relationship is consistently positive. Moreover, the affordability argument is reinforced by the strict ordering of MPPI take-up by household size from households with *M* greater than 16%: larger households having noticeably higher take-up rates than smaller ones (see Figure 4).

The complexity of the relationship for multi-person households with *M* less than 13% is likely to be because of the interaction of various factors (affordability, vulnerability to repayment difficulties, favorable selection etc.) each of which has its strongest effect

relative to the other effects at different levels of *M*. An additional complicating factor is the affect of the size of mortgage payment on the MPPI premium. Premiums are calculated per £1 of monthly mortgage payment and so, for borrowers with very small mortgage payments, the premiums are correspondingly small. This perhaps explains the high rates of take-up amongst borrowers in the lowest category of *M*. Conversely, the greater the size of the mortgage payment relative to income, the greater the size of the MPPI premium relative to income – reinforcing the affordability effect. Regression results presented in the Appendix suggest the following cubic relationship between take-up rate and the mortgage payments to income ratio for multi-person households:

$$r = 41 - P - 2M + \tfrac{1}{10}M^2 - \tfrac{3}{100}M^3$$

where *r* is the MPPI take-up rate, *P* is the number of persons per household, and *M* is the ratio of mortgage payments to household income.

For single person households the affordability effect seems to kick-in much higher up the *M* scale – no significant fall in MPPI take-up is evident before the penultimate category of M in Figure 5. Up to that point, the relationship appears to be generally positive (if somewhat uneven), suggesting that factors other than affordability are uppermost in the single person's mind when making the insurance decision.

Figure 3

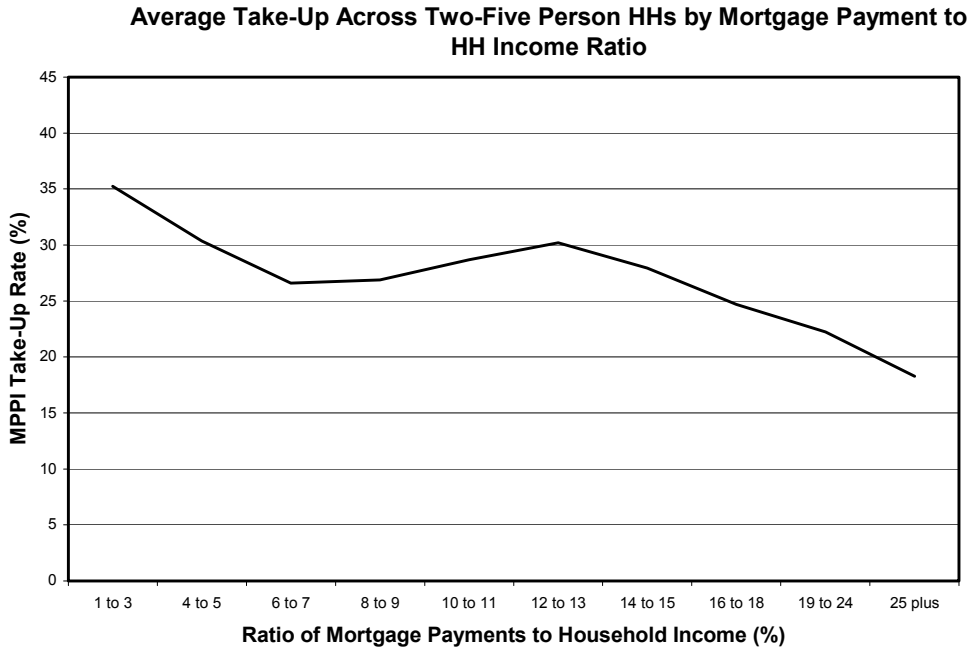


Figure 4

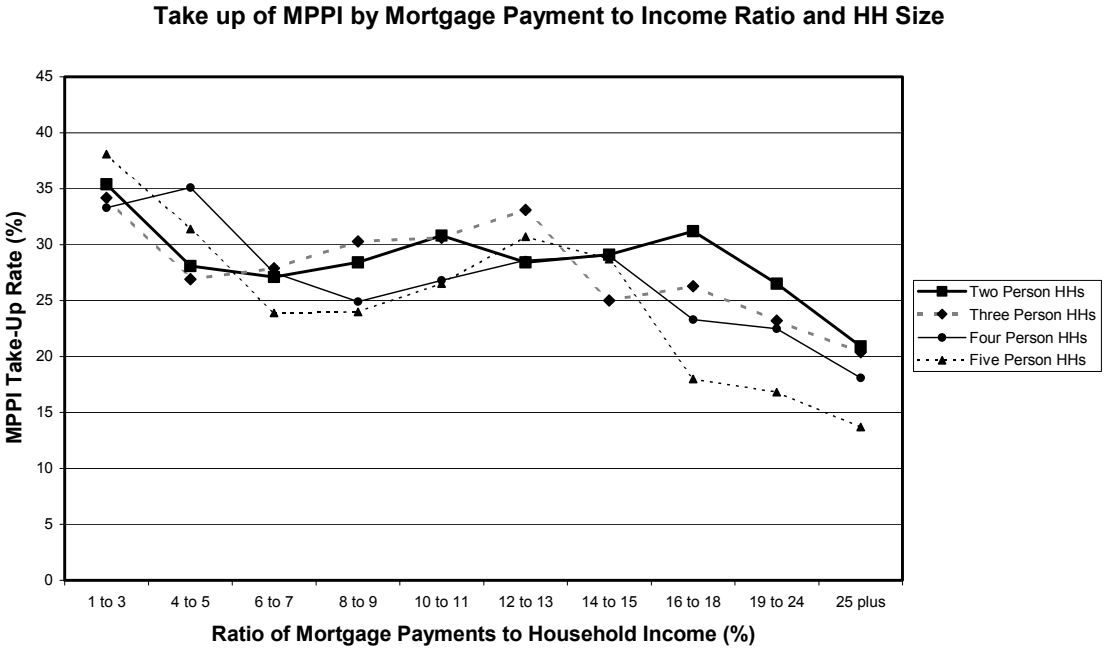
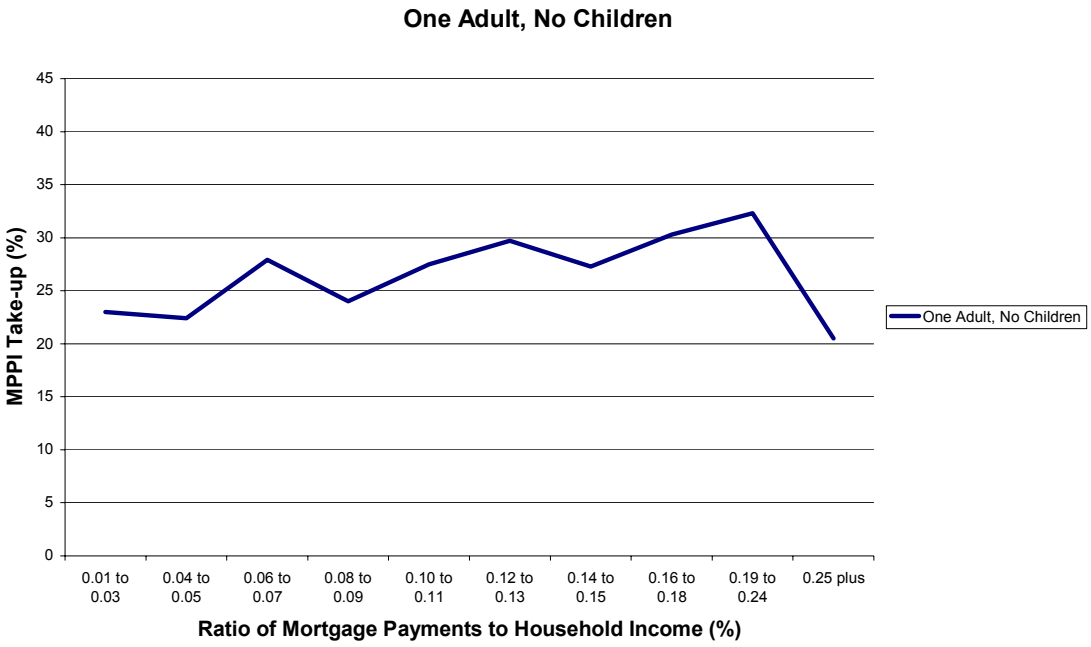


Figure 5


One Adult, No Children
MPPI Take-up (%)
45
40
35
30
25
20
15
10
5
0
0.01 to 0.03
0.04 to 0.05
0.06 to 0.07
0.08 to 0.09
0.10 to 0.11
0.12 to 0.13
0.14 to 0.15
0.16 to 0.18
0.19 to 0.24
0.25 plus
Ratio of Mortgage Payments to Household Income (%)
One Adult, No Children

CONCLUSION

This paper began by noting the changing interface in the UK between housing, employment and welfare, driven in part by financial deregulation and the greater role ascribed to private mortgage insurance. We argued, as Ford and Quilgars (2001) have argued, that the outcome of this shift is of international interest: "These changes are embedded in and flow from global pressures that have implications for all areas of national, regional, local and individual lives" (p. 148). The developments in the UK, "even if not directly paralleled elsewhere, are nonetheless, an exemplar of the influences on, and outcomes of, change in owner occupied markets" (p. 148). The corollary is that the focus of the current paper, on the positives and negatives of the UK policy of promoting mortgage payment protection insurance, will be of interest to policy makers and housing analysts across Europe and not just in Britain. It could be argued that an important measure of the efficacy of greater reliance on private insurance is the consumer response to it. Consumer sovereignty can after all be a double edged sword, and if those most in need of a mortgage safety net have snubbed what the market has to offer, then one could conclude that liberalised mortgage finance has failed to successfully coexist with the privatisation of welfare, at least in the UK context.

With this motivation, the paper has reviewed the mortgage insurance debate and examined whether mortgage borrowers, who choose to remain uninsured, do so because they are in the most stable forms of employment and/or have sufficient financial resources to cover periods of unemployment, or because their main employment risks are

not covered by MPPI policies and/or because MPPI is perceived to be too expensive. Two years of Family Resources Survey data were combined to produce a sample of over 18,000 mortgage borrowers which formed the basis of the most detailed and robust investigation to date of the characteristics of the insured vs the uninsured.

Employment characteristics of borrowers were compared to data on employment stability in an attempt to identify those groups of mortgage borrowers most at risk. We found that those in the riskiest categories of employment were not necessarily those most likely to take out private mortgage protection insurance, and so we conclude that it is not possible to say that all those who remain uninsured do so because of low employment risks. Income and savings of the uninsured were also examined in order to establish whether borrowers were more or less likely to take our insurance if they have high levels of income relative to mortgage payments. We found that those with the least financial resources were not necessarily the most likely to take-out insurance. Part of the explanation of low take-up amongst these groups may be that their risks are not covered by such policies. Affordability of MPPI is also a potentially important explanation, particularly for those on low incomes who abstain from insurance even though they may be most vulnerable to repayment difficulties. We found a surprisingly large variation in the take-up across household types. In particular, we found that households with a greater number of children relative to adults have significantly lower MPPI take-up rates. These findings provide evidence that affordability is indeed an important driver of MPPI take-up, for whilst there is no obvious reason why having more children reduces the

default risk of a household, it is clear that the number of children *will* have a direct effect on the ratio of outgoings to earnings and hence on a households ability to afford MPPI. Analysis of the relationship between the take-up of MPPI and the ratio of mortgage payments to household income suggested a complex interaction of the affordability effect with other factors that affect the MPPI decision, factors such as the reduced risk from greater financial resources, and the higher cost of the premium for households with larger mortgage payments.

Despite their complexity, these results do nothing to alleviate the concerns raised in the existing literature regarding the adequacy of MPPI to protect those left most vulnerable by the 1995 ISMI changes. Of particular policy significance is the issue of affordability which clearly has an important role in determining the take-up of MPPI. If the inability to afford MPPI is an important cause of the low take-up rates of vulnerable groups, then the whole policy of protecting mortgagors using private insurance without subsidy or means tested assistance, is fundamentally flawed. Although the new baseline MPPI product introduced at the start of 1999 may help cover some of the risks previously neglected, it will do nothing to remedy the affordability problem. And, unlike other shortcomings in MPPI products, such as the poor track record on claims and the inadequate interface with ISMI, affordability problems conflict with the very nature of private insurance, and cannot be remedied by the market alone.

These conclusions strike at the very heart of UK housing welfare policy over the past two decades and offer important lessons for other European countries considering financial deregulation. Britain has currently reached a position where 'half the poor are home-owners, yet they receive only 8 per cent of the state help with housing costs targeted on low-income households' (Burrows et al, 2000, p.12). At the same time, there is a clear evidence of an upward trend in house possessions: each successive peak and trough is higher than the previous peak and trough. The corollary of this trend and the findings presented here, is that European policy makers will have to think seriously about whether greater precariousness in housing tenure and employment is an acceptable price to pay for greater financial and labour market efficiency. Whether similar efficiency gains can be achieved without greater reliance on private insurance has yet to be tested. But it may be that the political constraints on the state's ability to bear the risks associated with liberalisation will make financial deregulation and private mortgage insurance forever mutually dependent. And if these two policy goals are inseparable, then the failure of MPPI in the UK will inevitably have implications for the efficacy of financial liberalisation in general.

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APPENDIX 1
Regression Results for Multi Person Households:
Dependent Variable = Take-Up Rates (r)

Variable	Coefficient	t-value	Significance Level
P	-1.111	-2.425	.021
M	-1.685	-2.301	.028
M^2	.104	1.779	.084
M^3	-.003	-1.875	.069
Constant	40.547	13.569	.000
N	40		
Adjusted R^2	0.626		
F	17.332		0.000

The data for different household sizes from Figure 6 was pooled to give forty observations on *M* and *r*. The regression results suggest a cubic relationship between the MPPI take-up rate (*r*) and *M* in multi-person households because the coefficient on M^3 is significant at the 90% level of confidence, and because linear versions of the model had lower Adjusted R^2. It is worth noting that linear versions indicated a negative coefficient on *M* of around –0.8. This suggests that there is an overall negative relationship between *r* and *M*, that is, the relationship is dominated on the whole by the affordability effect. Other variables (such as employment type) have not been included in the regressions because this would result in a greater number of categories for which *M* and *r* have to be calculated, and result in insufficient sample sizes in some categories.